

Why do people sacrifice to approach rewards versus to avoid costs? Insights from attachment theory

EMILY A. IMPETT AND AMIE M. GORDON

University of California, Berkeley

Abstract

This research provides the first empirical investigation of how attachment orientations contribute to approach and avoidance goals for engaging in sacrifice. Study 1 is a cross-sectional study of individuals in dating relationships, and Study 2 is a 14-day daily experience study of dating couples. Results showed that attachment anxiety was associated with a greater frequency of sacrifice and more willingness to sacrifice for approach goals (particularly self-focused goals) and avoidance goals. Attachment avoidance was associated with a lower frequency of sacrifice, less willingness to sacrifice for approach goals (particularly partner-focused goals), and more willingness to sacrifice for avoidance goals (both self- and partner-focused). Daily sacrifice goals were also associated with the partner's attachment orientation. Theoretical and practical implications are discussed.

It's Saturday night, and you and your partner can't agree on where to go for dinner. You want to try the trendy new sushi restaurant across town, but your partner is in the mood for a burger and fries.

You had a long day at work and just want to curl up with a good book and go to bed, but your partner wants to go out for a night on the town.

Situations in which partners have conflicting interests and desires are inevitable in close relationships. As the above examples reflect, these situations are oftentimes as mundane as

choosing which type of food to eat or what to do on a particular evening. Couples must learn to negotiate these times successfully if they want their relationships to survive and grow. One way that partners can deal with conflicting interests is to sacrifice, defined as giving up one's own interests in order to promote the well-being of a partner or a relationship (Van Lange, Rusbult, Drigotas, Arriaga, Witcher, & Cox, 1997). Many people include sacrifice, along with caring, respect, and loyalty in their definition of what it means to truly love another person (Noller, 1996).

Research conducted by relationships scholars has shown that sacrifice is integral to couples' abilities to maintain happy and long-lasting relationships (see review by Impett & Gordon, 2008). Several studies of dating and married couples have shown that willingness to sacrifice is associated with greater relationship satisfaction and stability (Van Lange, Agnew, Harinck, & Steemers, 1997; Van Lange, Rusbult, et al., 1997). More specifically, people who are more willing to sacrifice for their partners report more intimacy, better problem solving, and more shared activities. Willingness to sacrifice also predicts people's

Emily A. Impett, Institute of Personality and Social Research, University of California, Berkeley; Amie M. Gordon, Department of Psychology, University of California, Berkeley.

This work has been funded by the Templeton Advanced Research Program, sponsored by the Metanexus Institute on Religion and Science, with the generous support of the John Templeton Foundation. A.M.G. was funded by a predoctoral fellowship from the National Science Foundation. We would like to thank Katie Bishop, Renee Delgado, and Laura Tsang for assistance with data collection.

Correspondence should be addressed to Emily A. Impett, University of California, Berkeley, Institute of Personality and Social Research, Berkeley, CA 94720-5050, e-mail: eimpett@gmail.com.

abilities to maintain their relationships successfully over time. The more willing people are to make sacrifices, the more likely they are to still be together with their partners up to 2 months later (Van Lange, Agnew, et al., 1997; Van Lange, Rusbult, et al., 1997).

Not all sacrifices benefit relationships, however, and recent research has begun to show that people's underlying motivations for making sacrifices influence the quality and stability of relationships (Impett, Gable, & Peplau, 2005; Neff & Harter, 2002). This work is based on an approach–avoidance motivational perspective that distinguishes between goals focused on approaching positive experiences and goals focused on avoiding negative experiences (Carver, Sutton, & Scheier, 2000; Carver & White, 1994; Gray, 1987). Based on the work of early social motivation theorists (e.g., Boyatzis, 1973; Mehrabian, 1976), Gable and colleagues have distinguished between approach and avoidance social goals (Elliot, Gable, & Mapes, 2006; Gable, 2006). Although approach social goals direct individuals toward potential positive outcomes such as intimacy or growth in their relationships, avoidance social goals direct individuals away from potential negative outcomes such as conflict or rejection. For example, in a discussion about child care, a husband who has strong approach goals may be concerned with wanting the discussion to go smoothly and wanting both partners to be happy with the outcome. In contrast, a husband with strong avoidance goals may be more concerned with avoiding conflict about child care and preventing both partners from being unhappy with the outcome (Gable, 2006).

Recent research has applied this approach–avoidance motivational perspective to the study of sacrifice. In a daily experience study of individuals in dating relationships, on days when participants sacrificed for *approach goals* such as to please their partners or create more intimacy in their relationships, they experienced more positive emotions, greater satisfaction with life, and greater relationship satisfaction (Impett et al., 2005). In contrast, on days when they sacrificed for *avoidance goals* such as to avoid their own guilt or

to avoid conflict in their relationships, they experienced more negative emotions, less relationship satisfaction, and more relationship conflict. Further, sacrificing for approach goals over the course of the study led to participants being twice as likely as to still be together at the 1-month follow-up, whereas sacrificing for avoidance goals led to participants being $2^{1/2}$ times as likely as to have broken up by the 1-month follow-up. The results of this study suggest that giving up one's interests and desires may be particularly beneficial for relationships when people sacrifice for approach, as opposed to avoidance, goals.

Given the importance of approach sacrifice goals for relationship functioning (see also Gable, 2006; Impett, Strachman, Finkel, & Gable, 2008), it is critical to understand *why* people sacrifice for different kinds of goals. Social, cognitive, and developmental theorists have suggested that the particular motives that guide people's actions with a romantic partner may partially stem from previous experiences in relationships and subsequent mental representations that they have developed about how to interact in romantic relationships (e.g., Ainsworth, 1989; Feeney, Noller, & Roberts, 2000). Guided by an attachment theoretical perspective (Bowlby, 1969/1982, 1973, 1980), the central goal of the current set of studies was to investigate the influence of adult attachment orientations on people's goals for making sacrifices in their romantic relationships. To develop the rationale for an attachment theory analysis of sacrifice, we begin by presenting an overview of adult attachment theory, paying particular attention to the ways in which the attachment and caregiving systems overlap. We then present the results of two studies designed to test our predictions linking the attachment orientations of anxiety and avoidance to approach and avoidance sacrifice goals in romantic relationships.

Attachment theory

Attachment theory (Bowlby, 1969/1982, 1973, 1980) was first proposed as a way to explain the motivation of infants to rely on their caregivers. Hazan and Shaver (1987) later

extended the research on attachment to caregivers into the realm of romantic relationships, proposing that romantic partners can also serve as attachment figures. An important component of adult attachment theory is the idea that a romantic partner's responsiveness can shape an individual's interaction goals, relational cognitions, and interpersonal behavior. More specifically, individuals who have responsive and available attachment figures during times of need experience attachment security and develop positive internal working models of relationships. Working models are mental representations of how attachment-related interactions should be handled by the individual and attachment figures. In contrast, individuals with attachment figures who are unresponsive, unavailable, and unreliable fail to develop attachment security and, instead, develop negative internal models of relationships and have less than optimal strategies for dealing with stressful situations.

Individuals with unresponsive attachment figures generally go on to form secondary strategies that come into play when their primary attachment strategy—proximity seeking—is unsuccessful (Mikulincer & Shaver, 2007). These strategies may take the form of hyperactivating strategies, where the individual persistently seeks proximity and attention from their attachment figure, often resulting in an obsessive need for intimacy, as well as clinging and intrusive behaviors. The extent to which an individual relies on hyperactivating strategies is associated with their level of *attachment anxiety*. Secondary strategies may also take the form of deactivating strategies, in which an individual attempts to shut down their attachment system, resulting in avoidance of intimacy and closeness. The extent to which an individual relies on deactivating strategies during times of need is associated with their level of *attachment avoidance*. Individuals who are low in both attachment anxiety and attachment avoidance are considered to be securely attached.

Attachment and caregiving

Attachment theorists have proposed that romantic love consists of three innate behav-

ioral systems: attachment, caregiving, and sex (Bowlby, 1969/1982; Shaver, Hazan, & Bradshaw, 1988). Most relevant to the current investigation, researchers have suggested that the attachment system and the caregiving systems are closely linked. Specifically, research has examined how different attachment orientations influence individuals' abilities to provide care, or a "safe haven," for their relationship partners (e.g., Carnelley, Pietromonaco, & Jaffe, 1996; Collins & Feeney, 2000; Kunce & Shaver, 1994; Simpson, Rholes, Oriña, & Grich, 2002).

Research has found that securely attached individuals are more successful at giving care, whereas individuals with less attachment security are not able to provide care with the same effectiveness (Mikulincer & Shaver, 2007). Individuals high in attachment anxiety are more likely than their less anxiously attached counterparts to experience personal distress when their relationship partner is in need and often end up internalizing the distress so much that they are unable to see that their partner is the one who really needs help. As a result, anxiously attached individuals tend to be compulsive in their caregiving style due in part to their own feelings of distress (Kunce & Shaver, 1994). Individuals high in attachment avoidance generally try to maintain distance from their partner (especially when they are experiencing distress) relative to those individuals low in attachment avoidance and are less likely to react to their partner's needs for help. Individuals high in attachment avoidance tend to be non-responsive in their caregiving style (Kunce & Shaver, 1994). In short, high levels of attachment avoidance generally lead individuals to be unresponsive caregivers, whereas high levels of attachment anxiety generally lead individuals to be persistent but ineffectual caregivers to their partners (Carnelley, Pietromonaco, & Jaffe, 1996).

The attachment orientations of anxiety and avoidance not only influence people's desires and abilities to help their partners, but they also influence their individual *motivations* for helping. Research on attachment and caregiving behavior has shown that individuals high

in attachment anxiety tend to endorse caregiving goals focused on expressing a desire for intimacy and closeness, getting a partner's approval, and increasing a partner's commitment (Collins, Guichard, Ford, & Feeney, 2006; Feeney & Collins, 2003). In contrast, highly avoidant individuals are more likely to endorse goals that reflect their desire to avoid intimacy, to get something in return, and to provide support out of feelings of obligation rather than genuine desire. Closely paralleling the results of the studies on caregiving (Collins et al., 2006; Feeney & Collins, 2003), several studies have also documented associations between the attachment system and motives in the third behavioral system—the sexual system (Davis, Shaver, & Vernon, 2004; Impett, Gordon, & Strachman, 2008; Schachner & Shaver, 2004). A recent daily experience study showed that attachment anxiety was positively associated with approach sexual goals such as to express love or enhance intimacy, whereas attachment avoidance was negatively associated with these approach goals and positively associated with avoidance goals such as to avoid conflict and a partner's anger (Impett, Gordon, et al., 2008).

Overview of the current research

Research on attachment, caregiving, and sexuality suggests that attachment orientations may influence people's willingness and motivation to engage in sacrifice, a type of caregiving behavior that requires the caregiver to incur a cost by either doing something they do not want to do or giving up something that they personally desire (Van Lange, Rusbult, et al., 1997). Situations that require sacrifice occur when two partners have opposing needs or desires. These situations can be distressing for both partners as they attempt to navigate the best way to resolve the dilemma, and the distress may be especially strong for people who are insecurely attached. Imagine a married couple trying to decide whose family to visit for Thanksgiving dinner, with each partner preferring to visit their own family and not particularly wanting to go to the in-laws. Individuals who are high in attachment anxiety may be particularly likely to wonder

whether their partner cares enough about them to take their needs into account, whether sacrificing for their partner will bring their partner closer to them, and what these conflicting desires mean for the relationship. Ultimately, these individuals may choose to sacrifice both to feel closer to their partner and to avoid feeling bad. On the other hand, individuals higher in attachment avoidance may be particularly likely to choose distance in this situation, thinking about how they would rather not give up their own self-interest but also not want to deal with potential conflict. Ultimately, avoidant individuals are probably less likely to sacrifice, but when they do sacrifice, it may be to avoid negative consequences in their relationships.

To the best of our knowledge, this is the first set of studies to investigate individual differences in attachment orientations as a predictor of willingness to sacrifice and sacrifice goals in romantic relationships. Study 1 uses cross-sectional data from a study of college students in dating relationships to examine the link between attachment anxiety and avoidance and both willingness to sacrifice and approach and avoidance goals for sacrifice. In addition, people's goals for sacrifice may be influenced not only by their own attachment orientation but also by the attachment orientation of the partner. Research on romantic relationships has begun to show strong links between one person's attachment orientation and his or her partner's evaluation of satisfaction with the relationship (e.g., Banske, 2004; Campbell, Simpson, Boldry, & Kashy, 2005; Campbell, Simpson, Kashy, & Rholes, 2001) and with the partner's goals for engaging in sexual activity (Impett, Gordon, et al., 2008). Thus, Study 2 uses data from a 14-day daily experience study to examine the contribution of both partner's attachment orientations to one partner's daily sacrifice goals in dating relationships. Specifically, Study 2 examines approach and avoidance goals for daily sacrifice, as well as whether the goal is self-focused or partner focused. Taken together, we hope these studies will provide a preliminary understanding of how attachment orientations shape sacrifice in romantic relationships.

Study 1

We tested four main predictions in a cross-sectional study of college students in dating relationships based on previous research and theory on attachment, relationship goals, and caregiving behavior (Feeney & Collins, 2001, 2003; Impett, Gordon, et al., 2008, Locke, 2008). First, given that high levels of attachment anxiety are associated with engaging in hyperactivating strategies such as persistent attempts at closeness and a fear of rejection, we predicted that individuals higher in attachment anxiety would report a *higher* frequency of sacrificing for their partners than those lower in attachment anxiety. Second, given that attachment avoidance is associated with deactivating strategies, such as a desire to avoid intimacy, and a general distrust of closeness, we predicted that individuals higher in attachment avoidance would report a *lower* frequency of sacrificing for their partners than their more secure counterparts. We also predicted that differences in attachment orientations would influence individuals' goals when actually engaging in sacrifice. Specifically, we predicted that, third, based on their desires to both gain intimacy and to avoid rejection, individuals higher in attachment anxiety would be more likely to sacrifice for approach goals, such as gaining intimacy and appreciation, and also for avoidance goals such as avoiding conflict. Finally, our fourth prediction was that because individuals higher in attachment avoidance are more likely to avoid intimacy, when they do actually sacrifice, they will be less likely to do so for approach goals and more likely to do so for avoidance goals such as avoiding conflict and upsetting one's partner, than will those lower in attachment avoidance.

Method

Participants and procedure

To obtain a sample of individuals in dating relationships, we relied on a convenience sample of undergraduate psychology students from the University of California, Los Angeles, a large urban university with an ethnically diverse student body in the United States.

The participants were 122 undergraduates (45 men and 77 women) with ages ranging from 18 to 37 years ($M = 19.8$, $SD = 2.2$). Four percent were African American, 39% were Asian or Pacific Islander, 10% were Hispanic, 34% were White, and 13% were self-identified as multiethnic or "other." To be eligible, participants had to be currently involved in a dating relationship ($M = 1$ year 7 months). All participants identified as heterosexual.

Measures

Attachment. Attachment anxiety and avoidance were assessed with the experiences in close relationships scale developed by Brennan, Clark, and Shaver (1998). Both members of the couple responded to such statements as "I need a lot of reassurance that I am loved by my partner" (anxiety) and "I try to avoid getting too close to my partner" (avoidance) on 7-point scales (1 = *disagree strongly* to 7 = *agree strongly*). The reliability for both measures was quite high ($\alpha = .89$ for attachment anxiety and $\alpha = .92$ for attachment avoidance).

Frequency of sacrifice. Before completing the measure of sacrifice frequency, participants were first provided with two working definitions of sacrifice used in previous research (Van Lange, Rusbult, et al., 1997): (a) instances when they do something that they are personally not interested in doing either for their partner (e.g., going to the library to pick up a book for your partner) or with their partner (e.g., going to a movie) and (b) instances when they give up something that they are interested in doing (e.g., spending time with your friends). Then, participants answered the question "How often do you make sacrifices for your partner?" on a 5-point scale (1 = *never* to 5 = *all the time*).

Sacrifice goals. Sacrifice goals were assessed with a 15-item measure developed by Impett and colleagues (2005) for cross-sectional research. Participants indicated the extent to which they sacrificed for such reasons as "I want my partner to be happy" and "I want

to develop a closer relationship with my partner" (approach goals; eight items; $\alpha = .72$) and "I feel guilty if I do not sacrifice" and "I want to avoid negative consequences from my partner (e.g., anger)" (avoidance goals; seven items; $\alpha = .68$) on 5-point scales (1 = *never* to 5 = *all the time*).

Results

In three separate regression equations, we entered attachment anxiety and avoidance as simultaneous predictors of: (a) frequency of sacrifice, (b) approach sacrifice goals, and (c) avoidance sacrifice goals. As predicted, attachment anxiety was positively associated with frequency of sacrifice ($\beta = .32$, $p < .001$), and attachment avoidance was negatively associated with frequency of sacrifice ($\beta = -.24$, $p < .01$). Attachment anxiety was not associated with approach sacrifice goals ($\beta = .08$, $p > .05$) and was positively associated with avoidance sacrifice goals ($\beta = .34$, $p < .001$). Attachment avoidance was negatively associated with approach sacrifice goals ($\beta = -.37$, $p < .001$) and was positively associated with avoidance sacrifice goals ($\beta = .24$, $p < .01$). In subsequent analyses, we controlled for frequency of sacrifice and relationship duration, and each of these associations remained significant. In another set of follow-up analyses, we added interactions between gender and both attachment anxiety and attachment avoidance. The only interaction that was significant was between gender and attachment anxiety in predicting frequency of sacrifice ($\beta = .18$, $p < .05$). Follow-up tests revealed that after controlling for attachment avoidance, whereas the association between anxiety and frequency of sacrifice was significant for women ($\beta = .45$, $p < .001$), it was not significant for men ($\beta = .10$, $p = .52$).

Discussion

In summary, in this cross-sectional study of young adults in dating relationships, we found that attachment anxiety was associated with more frequent sacrifice among women, consistent with research showing that anxiously attached individuals tend to

have a compulsive caregiving style (Kunce & Shaver, 1994). We had expected to find an association between anxiety and frequency of sacrifice for both women and men, but it is possible that attachment anxiety may specifically activate *women's* desires to take care of a partner, given that women are often cast in the role of maintaining valued relationships (Impett & Peplau, 2006). In contrast, attachment avoidance was associated with less frequent sacrifice among both women and men, consistent with research showing that individuals high in attachment avoidance are less likely to provide care and support for their partners in times of need (Kunce & Shaver, 1994, Simpson et al., 2002).

Further, consistent with research on attachment and caregiving (Collins et al., 2006; Feeney & Collins, 2003), both attachment anxiety and avoidance were positively associated with avoidance sacrifice goals such as to avoid their partner's anger or to avoid conflict in the relationship. People high in attachment avoidance were less likely to sacrifice for approach goals such as to make their partner happy or to feel good about themselves. We did not find support for our prediction that anxiety would be positively associated with approach sacrifice goals, possibly because people low in anxiety (i.e., individuals who are relatively more securely attached) are also likely to sacrifice for approach goals such as promoting intimacy in their relationships (Collins & Feeney, 2000).

Study 2

Study 1 provided support for links between attachment orientations and both frequency of sacrifice and goals for sacrifice, but it had several limitations. Thus, Study 2 builds on Study 1 in three main ways. First, Study 1 relied on participants' retrospective reports of the sacrifices that they have made for their partner over the course of their relationships. To address this limitation, in Study 2, we used a daily experience method to obtain daily reports of sacrifice goals in dating relationships. Second, Study 1 was conducted with only one member of the romantic couple. In Study 2, both members of dating couples

reported on their attachment orientation in order to examine the simultaneous contributions of both partner's attachment styles to one partner's daily sacrifice goals. Third, approach and avoidance goals can differ in their focus, that is, the extent to which people are trying to approach rewards or avoid costs for themselves or for their partner. Thus, the third main goal of Study 2 was to differentiate between goals that focus on approaching or avoiding outcomes for the *self* (e.g., to feel good about myself or to avoid feeling guilty) and goals that focus on approaching or avoiding outcomes for the *partner* (e.g., to avoid upsetting my partner, to avoid conflict). In short, in Study 2 we measured four types of sacrifice goals: (a) approach self-focused goals, (b) approach partner-focused goals, (c) avoidance self-focused goals, and (d) avoidance partner-focused goals.

Individuals high in attachment anxiety often have strong desires to be close to their partners but at the same time need constant reassurance and expressions of commitment (Shaver & Mikulincer, 2006). As such, we predicted that individuals high in attachment anxiety will be more likely to sacrifice to gain rewards and recognition (approach self-focused goals), to avoid feeling bad about themselves (avoidance self-focused goals), and to avoid upsetting or letting down their partner (avoidance partner-focused goals) relative to individuals lower in attachment anxiety. Based on the results of Study 1, we did not predict that attachment anxiety would be associated with approach partner-focused goals, as we expected that those people who are low in anxiety (i.e., relatively more securely attached individuals) would also be likely to sacrifice for approach partner-focused goals such as to make their partner happy or create intimacy in the relationship.

Individuals high in attachment avoidance try to maintain distance from partner and are less likely to react to their partner's needs for help (Shaver & Mikulincer, 2006). However, when they choose to respond to their partner by sacrificing, we predict that they will most likely do so as a way to enhance their own ego (approach self-focused goals), avoid feeling bad about themselves (avoidance self-focused

goals), or to avoid dealing with or upsetting their partner (avoidance partner-focused goals). Furthermore, we predict that they will be less likely than their less avoidant counterparts to sacrifice for approach partner-focused goals.

An important goal of Study 2 was to investigate the influence of the partner's attachment orientation on sacrifice goals, a topic that has not been addressed in previous research. Based on attachment theory, we predicted that individuals with partners higher in attachment anxiety will be more likely to sacrifice to assuage their needy partners (avoidance partner-focused goals). We also predicted that individuals with partners higher in attachment avoidance will be less likely to sacrifice to make their partner feel better (approach partner-focused goals) or to avoid having their partner feeling bad (avoidance partner-focused goals), because their partners are less likely to express needs for intimacy or allow the relationship to upset them.

Finally, based on attachment research and the results of Study 1, we predicted that attachment anxiety would be associated with more frequent sacrifice over the course of the 2-week study, whereas attachment avoidance would be associated with a lower frequency of sacrifice.

Method

The data for Study 2 were taken from a larger study that included daily experience data from 153 participants and cross-sectional data from 107 of their romantic partners.¹ Both members of the couple completed a standard measure of attachment style, and one member of the couple completed a measure of sacrifice goals each time they made a sacrifice across 14 consecutive days. In this particular study, we focus only on the 107 couples in which both partners provided data.

Participants and procedure

We again relied on a convenience sample of undergraduate psychology students from

1. More detailed information about the parent study is provided in Impett and colleagues (2005).

the University of California, Los Angeles to obtain a sample of individuals in dating relationships. One hundred and seven participants (47 men and 60 women) took part in a 14-day daily experience study and received credit toward psychology coursework in exchange for participation. Participants ranged in age from 17 to 38 ($M = 20.2$, $SD = 2.7$). The sample was ethnically diverse: One percent of the participants in the daily experience study were African American, 45% were Asian or Pacific Islander, 14% were Hispanic, 35% were Caucasian, and 6% were self-identified as multiethnic or "other." All participants were currently involved in a dating relationship ($M = 1$ year 6 months) and saw their partner at least 5 days per week (i.e., no long-distance relationships). All participants identified as heterosexual.

During an initial session in the study, each participant was given 14 booklets, each containing the daily measures, one for each night of the week. A researcher then reviewed the procedures for completing the daily logs, specifically emphasizing that participants should begin completing their logs that evening, that they should complete the logs before going to bed, that their responses were anonymous and confidential, that they should not discuss their logs with their partner, and that if they missed a day, they should leave that particular log blank.

To bolster and verify compliance with the daily schedule, participants were asked to return completed logs every 2–3 days to a locked mailbox located outside the laboratory. As an incentive, each time participants handed in a set of logs on time, they received a lottery ticket for one of several cash prizes (\$100, \$50, and \$25) to be awarded after the study. Participants who did not return a particular set of logs on time were reminded by phone or e-mail. Only daily logs returned on time were treated as valid and retained in the data set. In total, participants completed 1,348 daily logs on time, an average of 12.6 days (out of 14) per person. Ninety percent of the participants

completed all 14 daily reports on time.² All participants were asked to return on the day after they completed their final log (i.e., Day 15) for an "exit" session. During this session, they handed in their last two or three daily logs, completed a short questionnaire about their experiences in the study, and were asked to take a short questionnaire to their partner to be completed privately at home and mailed back in exchange for a \$5 payment.³ The partners ranged in age from 16 to 41 ($M = 20.7$, $SD = 3.6$), and the ethnic breakdown was comparable to that reported for their partners.

Person-level measure of attachment

Attachment anxiety and avoidance were assessed with the same measure used in Study 1 (Brennan et al., 1998). The reliability for both subscales was quite high ($\alpha = .89$ for attachment anxiety and $\alpha = .91$ for attachment avoidance). Although there was not a significant correlation between couple members in attachment anxiety ($r = -.15$, $p > .05$), there was a small but significant

-
2. Paper-and-pencil daily experience methods have been criticized because of difficulties with confirming compliance rates. However, three recent studies showed that paper-and-pencil and electronic forms of data collection yield comparable compliance rates and that compliance is more dependent on participant motivation than on the particular method of data collection (Green, Rafaeli, Bolger, Shrout, & Reis, 2006). In this study, participants were enlisted as "coexperimenters" as has been done in previous research (Gable, Reis, & Elliot, 2000), as we took time in the initial session to interest and personally involve participants in the research. In addition, participants were instructed to return their daily surveys to the laboratory every 2–3 days instead of once a week as is common in other research. Thus, although we could not verify daily compliance, we feel confident that our research produced valid data.
 3. Of the 153 individuals who participated in the parent study, 79% of their partners initially agreed to complete the take-home survey, and of those, 88% mailed their surveys back within 1 week. In total, 70% ($N = 107$) of the partners completed the survey in a timely manner. All analyses in the current article are based on the smaller number of couples in which both participants provided data. We should note that participants who provided partner data did not have partners who were more (or less) anxious or avoidant than participants who provided partner data (both $ps > .05$).

correlation between couple members in attachment avoidance ($r = .20, p < .05$). Consistent with previous research (Kirkpatrick & Davis, 1994), the participant's attachment anxiety was positive correlated with his or her partner's attachment avoidance ($r = .29, p < .01$); likewise, the participant's attachment avoidance was associated with his or her partner's attachment anxiety ($r = .27, p < .05$). No significant differences were found in attachment anxiety or attachment avoidance between male and female partners.

Daily sacrifice goals

Each day, participants in the daily experience study answered the following questions: "Today did you do anything for or with your partner that you were personally not interested in doing?" (called "doing" sacrifices) and "Today, did you give up anything that you were personally interested in doing for the sake of your partner?" (called "giving up" sacrifices). For each sacrifice reported, participants completed a measure of daily sacrifice goals developed by Impett and colleagues (2005). Participants rated the importance of 10 reasons in influencing their decision to make a sacrifice on 7-point scales (1 = *not at all important* to 7 = *extremely important*). Because previous research did not uncover any meaningful distinctions between "doing" and "giving up" types of sacrifices (Impett et al., 2005), the goals items were aggregated over these two types of sacrifices. The items were designed to capture four different types of sacrifice goals: (a) *approach self-focused goals* (to feel good about myself, and to gain my partner's appreciation; $\alpha = .55$), (b) *approach partner-focused goals* (to make my partner happy, to enhance intimacy in my relationship, and to express love for my partner; $\alpha = .73$), (c) *avoidance self-focused goals* (to avoid feeling guilty, to prevent my partner from getting angry at me, and to prevent my partner from losing interest in me; $\alpha = .76$), and (d) *avoidance partner-focused goals* (to avoid conflict in my relationship and to prevent my partner from becoming upset; $\alpha = .88$).

Frequency of sacrifice

Each day, participants indicated if they made two types of sacrifices, a "doing" and "giving up" sacrifice). If participants made a "doing" and/or a "giving" sacrifice, they were coded as having made a sacrifice that day. Each participant then received a score for the percentage of days on which he or she made a sacrifice over the course of the 14-day study.

Results

Data analysis plan

In this study, we measured the attachment orientations of participants and their partners in order to examine the influence of participants' own attachment orientation on their own daily sacrifice goals (an actor effect) and the influence of their partner's attachment orientation on the participants' daily sacrifice goals (a partner effect). The actor and partner effects in all of our analyses are estimated simultaneously, controlling for each other. For example, an actor effect for anxiety in this study would assess the types of sacrifice goals associated with highly anxious participants compared with low anxious participants, controlling for the participant's level of avoidance and the partner's level of anxiety and avoidance. A partner effect for anxiety in this study would assess whether participants with highly anxious partners differ in their sacrifice goals from participants with less anxious partners, controlling for the participants' own anxiety and avoidance and the partners' level of avoidance.

We analyzed the data using multilevel modeling in the HLM computer program (HLMwin version 6.0; Kenny, Kashy, & Bolger, 1998; Raudenbush & Bryk, 2002) because sacrifice goals were assessed on multiple days within person, and HLM addresses this nonindependence within the data. All variables were standardized prior to analyses; consequently, the coefficients represented changes in standard deviation units of the dependent variables (i.e., daily sacrifice goals) associated with a standard deviation unit of the predictor variables (i.e., attachment anxiety and avoidance). Thus, the coefficients are

a convenient measure of effect size. In addition, both attachment dimensions were analyzed simultaneously in order to control for their covariance. The equations testing the association between each partner's attachment anxiety and avoidance, and the four types of sacrifice goals are as follows:

$$\text{(Level 1)} \quad Y = \beta_0 + r,$$

$$\begin{aligned} \text{(Level 2)} \quad \beta_0 = & \gamma_{00}(\text{Actor Anxiety}) \\ & + \gamma_{01}(\text{Partner Anxiety}) \\ & + \gamma_{02}(\text{Actor Avoidance}) \\ & + \gamma_{03}(\text{Partner Avoidance}) + u_0. \end{aligned}$$

The Level 1 equation predicts the value of sacrifice goals (Y) for a given couple from an average level term (β_0 ; the intercept) and an error term (r). In the Level 2 equation, the intercept is then estimated based on the individual's scores on the anxiety and avoidance attachment dimensions (γ_{00} and γ_{02}), the individual's partner's scores on the anxiety and avoidance attachment dimensions (γ_{01} and γ_{03}), and an error term (u_0). All significance tests in HLM were conducted using robust standard errors, which adjust for non-normal data.

Attachment and daily sacrifice goals

Table 1 displays the means and standard deviations for variables, and Table 2 depicts the actor and partner effects of attachment anxiety and avoidance on daily sacrifice goals. Confirming our predictions, actor anxiety was positively associated with both approach and avoidance sacrifice goals. More specifically,

Table 1. Descriptive statistics for all study variables (Study 2)

	<i>M (SD)</i>	<i>Range</i>
Attachment orientations		
Actor anxiety	3.49 (1.02)	1.61–6.50
Actor avoidance	2.50 (0.89)	1.00–5.39
Partner anxiety	3.57 (1.03)	1.06–5.78
Partner avoidance	2.50 (0.99)	1.11–5.83
Sacrifice goals		
Approach self-focused	3.33 (1.10)	1.00–6.29
Approach partner focused	4.43 (1.08)	1.00–6.46
Avoidance self-focused	2.17 (1.07)	1.00–5.50
Avoidance partner focused	2.70 (1.47)	1.00–6.27

Note. Means for daily goals are aggregated across the 14-day study. All measures used 7-point Likert scales.

the higher people were in attachment anxiety, the more likely they were to sacrifice for approach self-focused goals such as to feel good about themselves and to gain appreciation from a partner, for avoidance self-focused goals such as to avoid feeling guilty, and for avoidance other-focused goals such as to prevent their partner from becoming upset or to avoid conflict in the relationship.

Replicating the results of Study 1, actor avoidance was negatively associated with approach sacrifice goals but was positively

Table 2. Actor and partner effects of anxiety and avoidance predicting daily sacrifice goals (Study 2)

Predictor	Sacrifice goals			
	Approach self	Approach partner	Avoidance self	Avoidance partner
Actor anxiety	.23**	.12	.28**	.21*
Actor avoidance	-.07	-.18*	.21**	.27**
Partner anxiety	.06	-.04	.12 [†]	.15 [†]
Partner avoidance	.06	-.04	-.04	-.14*

[†] $p < .07$. * $p < .05$. ** $p < .01$.

associated with avoidance sacrifice goals. More specifically, in line with our predictions, the higher people were in attachment avoidance, the less likely they were to sacrifice for approach other-focused goals such as to make their partner happy or to promote intimacy in the relationship, and the more likely they were to sacrifice for avoidance self-focused goals such as to prevent a partner's anger and avoidance other-focused goals such as to avoid conflict in the relationship. In contrast to our predictions, however, higher levels of attachment avoidance were not associated with approach self-focused goals. In subsequent analyses, we controlled for frequency of sacrifice and relationship duration, and each of these associations remained significant.

In terms of partner effects, we found that partner anxiety was positively associated with avoidance sacrifice goals (marginal significance). The higher people's partners were in attachment anxiety, the more likely they were to sacrifice for avoidance self-focused goals such as to avoid feeling guilty and the more likely they were to sacrifice for avoidance partner-focused goals such as to avoid conflict or prevent their partner from becoming upset. On the other hand, partner avoidance was significantly associated with less avoidance sacrifice goals. More specifically, the higher people's partners in attachment avoidance, the less likely they were to sacrifice for avoidance other-focused goals such as to prevent conflict. In subsequent analyses, we controlled for frequency of sacrifice and relationship duration, and each of these associations remained significant.^{4,5}

Attachment and frequency of sacrifice

To examine the predictions linking attachment anxiety and avoidance with frequency of sacrifice, we used multiple regression. Actor anxiety, actor avoidance, partner anxiety, and partner avoidance were all entered simultaneously to predict frequency of sacrifice aggregated over the course of the 2-week study. Contrary to the results of Study 1, the frequency of sacrifice was not associated with actor anxiety or actor avoidance; furthermore, neither partner anxiety nor avoidance predicted individuals' frequency of sacrifice over the course of the study. Given that in Study 1 we only found an association between attachment anxiety and frequency of sacrifice for women, we tested interactions with gender, and none of the interactions reached significance.

Discussion

In short, the findings from this daily experience study of individuals in dating relationships largely replicated the findings of Study 1. Both attachment anxiety and avoidance were associated with avoidance sacrifice goals, and attachment avoidance was associated with less approach-motivated sacrifice. There are a couple of findings, however, that did not replicate across studies. First, whereas anxiety was not associated with approach goals in Study 1, it was associated with partner-focused approach goals in Study 2. We believe that this inconsistency actually reflects one of the underlying strengths of Study 2 in that we included a more nuanced measure of sacrifice goals that allowed us to distinguish between self-focused and partner-focused goals. It is possible that the reason why we did not find an association between anxiety and approach goals in Study 1 is because we were not able to distinguish between self-focused and partner-focused goals. In line with our predictions, highly anxious participants were more likely to sacrifice for approach self-focused goals such as to feel better about themselves than less anxious participants. Second, in contrast to our findings in Study 1 linking attachment anxiety with more frequent sacrifice for

4. In one set of follow-up analyses, we tested for interactions of each of the attachment variables with gender for the four sacrifice goals. Of the 16 possible interactions, only two reached significance (and they were not theoretically meaningful), so we will not discuss them.

5. In another set of follow-up analyses, we tested for interactions between attachment and partner attachment by adding four interaction terms to our HLM analyses (i.e., anxiety by partner anxiety, avoidance by partner avoidance, anxiety by partner avoidance, and avoidance by partner anxiety). Out of 16 possible interactions, only three reached significance (and again were not theoretically meaningful), so we will not discuss them further.

women, we did not find that anxiety was associated with frequency of sacrifice for either women or men in Study 2. It is possible that highly anxious participants (or highly anxious women, in particular) may report sacrificing multiple times a day—something that our measure of daily sacrifice (which assesses two sacrifices at the most—“doing” and “giving up” types of sacrifices) did not enable us to capture. Is it also possible that 2 weeks was not a long enough time period to see the effects of anxiety and avoidance on frequency of sacrifice, or that there is a difference between what highly anxious and avoidant individuals say they do (as assessed in the cross-sectional study) and what they actually do in daily life.

General Discussion

Recent research has begun to investigate links between the attachment and caregiving systems in adult romantic relationships (e.g., Feeney & Collins, 2001; Kuncie & Shaver, 1994). By extending this work to the domain of sacrifice, the current set of studies makes two important contributions to the existing research on sacrifice (Impett et al., 2005; Van Lange, Agnew, et al., 1997; Van Lange, Rusbult, et al., 1997). First, the daily experience study allowed us to look at sacrifice not as a feature of individuals (i.e., that there is one person who tends to be the one who always “gives in” in a relationship) but as a fluctuating aspect of daily life, a phenomenon that deserves more research attention. Second, the fact that we examined the influence of both partners’ attachment orientations on daily sacrifice allowed us to begin to explore the dyadic aspects of sacrifice in romantic relationships. We will now discuss the results in terms of the effects of a person’s own attachment orientation (i.e., actor effects) and the effects of the partner’s attachment orientation (i.e., partner effects) on sacrifice goals in dating relationships.

Actor effects

In terms of frequency of sacrifice, in Study 1 attachment anxiety was associated with more

frequent sacrifice (but only among women), consistent with research showing that anxiously attached individuals tend to have a compulsive caregiving style (Kuncie & Shaver, 1994). In contrast, attachment avoidance was associated with less frequent sacrifice, consistent with research showing that individuals high in attachment avoidance are less likely to provide care and support for their partners in times of need (Kuncie & Shaver, 1994; Simpson et al., 2002). These results were not replicated in the daily experience study, and as we suggested earlier, may reflect methodological differences between the two studies.

In terms of sacrifice goals, as predicted, attachment anxiety and avoidance were associated with different types of sacrifice goals. In Study 1, we found that people high in attachment anxiety and people high in attachment avoidance were both more likely to sacrifice for avoidance goals such as to avoid their partner’s anger or out of feelings of obligation. Further, people high in avoidance were less likely to sacrifice for approach goals such as to make their partner happy or to feel good about themselves. However, contrary to predictions, individuals higher in attachment anxiety were not more likely to sacrifice for approach goals than individuals lower in attachment anxiety possibly because more secure individuals (those lower in attachment anxiety) were also more likely to sacrifice for approach goals.

In Study 2, links between attachment orientation and sacrifice goals were again examined while taking into account several new factors: the daily nature of sacrifice, the influence of one’s partner’s attachment orientation, and the extent to which sacrifices were made in pursuit of self-focused or partner-focused goals. As predicted and replicating what we found in Study 1, individuals higher in attachment anxiety were more likely to sacrifice for avoidance goals, both to avoid feeling bad about themselves (self-focused goals) and to avoid upsetting their partner (partner-focused goals). They were also more likely to sacrifice to feel better about themselves (approach self-focused goals) relative to those lower in attachment anxiety. These findings suggest

that anxiously attached individuals' hyperactivating strategies lead them to adopt goals that will make them feel better about themselves while avoiding conflict or upsetting their partner.

Also in line with our predictions, individuals higher in attachment avoidance were more likely to endorse both self-focused and partner-focused avoidance sacrifice goals than their less avoidant counterparts. They also were less likely to report sacrificing for approach goals, specifically partner-focused goals such as gaining intimacy or pleasing their partner. These findings support the idea that individuals high in attachment avoidance have deactivating strategies that lead them to adopt goals that will minimize closeness and intimacy with their partner, both by not approaching their partner and by avoiding conflict. Furthermore, the findings suggest that they may be more likely to adopt goals that are self-soothing, such as avoiding feeling bad about themselves, perhaps because individuals higher in attachment avoidance are less likely to rely on their partner to soothe them during times of stress (Simpson et al., 2002). Contrary to our predictions, however, we did not find that attachment avoidance was associated with more approach self-focused goals. This may be because individuals high in attachment avoidance are generally more focused on avoiding negative outcomes than on gaining positive outcomes, whether they are self-focused or partner focused in nature.

Partner effects

In Study 2, we examined the influence of the partner's attachment orientation on people's goals for engaging in sacrifice. As predicted, we found that individuals whose partners were higher in attachment anxiety were marginally more likely to report sacrificing for avoidance partner-focused goals such as avoiding conflict. Furthermore, the results showed that people with anxious partners were also marginally more likely to sacrifice for self-focused avoidance goals such as to avoid feeling selfish. Indeed, people with partners who are high in attachment anxiety have to deal with partners who are more clingy, needy,

and easily upset by relational strife (Mikulincer & Shaver, 2007), making it more likely that they would engage in sacrifice to avoid conflict and to avoid upsetting their anxious partners than people whose partners are more securely attached.

Also as predicted, individuals whose partners were higher in attachment avoidance were less likely to sacrifice for avoidance partner-focused goals. These findings support the notion that individuals with partners high in attachment avoidance are less likely to engage in sacrifices in order to avoid upsetting their partner most likely because their partners are distanced from their relationship and thus not particularly likely to be getting upset or creating conflict in the first place. Contrary to our predictions, the partner's attachment avoidance was not associated with less approach partner-focused goals. Given that these are the first studies to address the connection between attachment orientations and sacrifice goals, more research is needed to address the influence of the partner's attachment orientation to determine if these findings replicate in a new sample.

Theoretical and methodological contributions

The relevance of attachment orientations to people's goals in romantic relationships has been documented in several domains including goals for caregiving (Feeney & Collins, 2001, 2003), sexual goals (Impett, Gordon, et al., 2008), and desires for agency and communion (Locke, 2008). These studies provide more empirical evidence for the overlap between the attachment and the caregiving systems (Bowlby, 1969/1982; Shaver, Hazan, & Bradshaw, 1988) by documenting that individuals with different working models of attachment have different goals for making sacrifices in their romantic relationships. Based on the results of these two studies, we suggest that sacrifice may indeed be one way in which secondary strategies are executed within intimate relationships. More specifically, individuals higher in attachment anxiety engage in sacrifice as a hyperactivating strategy to gain their desired amount of proximity, love, and support, whereas individuals higher

in attachment avoidance were less likely to make sacrifices to promote intimacy than their less avoidant counterparts, a finding consistent with the idea that these individuals are more likely to downregulate their attachment system through deactivating strategies by not seeking proximity and intimacy from others.

A major methodological strength of this research concerns the daily nature of data collection in Study 2. Sacrifice goals can vary from day to day, such that on some days people sacrifice to promote intimacy and on other days they sacrifice to avoid feeling guilty or to avoid conflict (Impett et al., 2005). The research design of the current study allowed for the simultaneous examination of dispositional variables (i.e., attachment orientations) and situational variables (i.e., daily variations in sacrifice goals) to provide a fuller and more nuanced understanding of sacrifice in the daily lives of dating couples.

Another strength of Study 2 stems from examining the simultaneous influence of both partners' attachment orientations on one person's daily sacrifice goals. Previous research on sacrifice has tended to focus on one member of the romantic couple, despite the fact that sacrifices involve both a giver and a recipient. This project is part of an emerging area of research that investigates how partners shape each other's goals, behaviors, and experiences (e.g., Banse, 2004; Campbell et al., 2001, 2005; Impett, Gordon, et al., 2008). The results of this study suggest that information about both partners' attachment orientations is necessary for a more complete understanding of how the attachment system influences goals within close relationships.

Implications, limitations, and future directions

Several limitations of this research and directions for future research deserve comment. First, it will be valuable to extend the attachment framework used in this research to a broader range of couples. Participants in this study were college students in dating relationships, and it will be important to replicate and extend these findings both to nonstudent samples and to married couples and others

involved in relationships of greater duration and commitment. It is likely that long-term married couples may make different kinds of sacrifices than younger couples, particularly sacrifices that involve relationships with children, or may sacrifice more frequently in pursuit of particular goals (e.g., out of a sense of obligation); however, it remains an open question if attachment orientations would differentially predict sacrifice goals in a sample of married couples. In addition, the couples in this study scored relatively low on the dimensions of attachment anxiety and attachment avoidance. Conducting a comparable study among distressed couples who may score higher on both of these dimensions could reveal even stronger patterns of association.

Second, the measure of sacrifice goals included in the daily experience study was necessarily brief. The sacrifice goals measure included only 10 items to capture goals for sacrifice and was not exhaustive. Thus, although the measure of sacrifice goals was limited in its scope, the daily nature of the data collection provides the first assessment of how attachment orientations are associated with sacrifice goals during daily interactions in romantic couples. Further, assessing four types of goals (approach self-focused, approach other focused, avoidance self-focused, and avoidance other focused), we were able to capture theoretically meaningful distinctions in motivation.

Third, although our theoretical framework proposes that attachment orientations shape sacrifice goals, our data do not provide a definitive test of this direction of causality. Other causal connections are possible. For example, research suggests that both early attachment experiences and later experiences within relationships can shape attachment orientations. Therefore, it is possible that interactions with one's partner that involve sacrifice may in fact shape working models of attachment, although attachment orientations have been shown to be fairly stable across the lifespan (Mikulincer & Shaver, 2007). Nevertheless, correlational data, such as those provided in both of our studies, cannot disentangle these causal patterns.

Fourth, although an important strength of this study was that it included attachment data from both members of the couple, future studies should also take both partners' goals for sacrifice into account. Goals for sacrifice are inherently different from goals in other domains such as academic achievement (e.g., Elliot, 2005) in that they require coordination with another person who has his or her own goals. In order to address this complexity, it will be important for future research to collect daily data from both members of couples, sampling them at specific moments in their daily lives as well as over longer periods of time. Furthermore, collecting sacrifice data from both members of the couple will allow researchers to use dyadic analytic strategies such as the actor partner interdependence model (Kashy & Kenny, 2000) to fully assess the impact of actor effects and partner effects within couples.

A final important direction for future research will be to test sacrifice goals as a mechanism by which attachment may influence relationship satisfaction. Recent research has shown that making sacrifices in pursuit of different goals influences the quality and stability of romantic relationships. For example, a recent longitudinal daily experience study showed that approach sacrifice was associated with increased daily relationship satisfaction and more satisfaction and couple stability over time (Impett et al., 2005). In contrast, avoidance sacrifice was associated with increased daily conflict and decreased satisfaction and more break-ups over time. Taken together with the results of the current study showing that attachment orientations predict different sacrifice goals, it seems likely that people's goals for sacrifice will be important mechanisms whereby attachment influences relationship quality on days that couples make sacrifices and over time. In addition, it is also possible that attachment styles influence people's perceptions of a partner's frequency of and motives for sacrifice, and these perceptions may also influence relationship satisfaction and other outcomes. For example, individuals higher in attachment anxiety may

perceive that their partner engages in less frequent sacrifice and does so for less approach-other motivated reasons. These perceptions may influence their relationship outcomes, regardless of the actual frequency and motives of their partners' sacrifices.

Concluding comments

Despite the limitations, these two studies make a number of unique contributions to our understanding of the links between the attachment and the caregiving systems by examining sacrifice during ongoing interactions and by measuring the attachment orientations of both members of romantic couples. Future research should continue to pay close attention to the dyadic aspects of attachment and caregiving in the lives of romantic couples.

References

- Ainsworth, M. D. S. (1989). Attachments beyond infancy. *American Psychologist*, *44*, 709–716.
- Banse, R. (2004). Adult attachment and marital satisfaction: Evidence for dyadic configuration effects. *Journal of Social and Personal Relationships*, *21*, 273–282.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York, NY: Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3. Sadness and depression*. New York, NY: Basic Books.
- Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York, NY: Basic Books. (Original work published 1969)
- Boyatzis, R. E. (1973). Affiliation motivation. In D. C. McClelland & R. S. Steele (Eds.), *Human motivation: A book of readings* (pp. 252–276). Morristown, NJ: General Learning Press.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York, NY: Guilford.
- Campbell, L., Simpson, J. A., Boldry, J. G., & Kashy, D. (2005). Perceptions of conflict and support in romantic relationships: The role of attachment anxiety. *Journal of Personality and Social Psychology*, *88*, 510–531.
- Campbell, L., Simpson, J. A., Kashy, D. A., & Rholes, S. W. (2001). Attachment orientations, dependence, and behavior in a stressful situation: An application of the actor–partner interdependence model. *Journal of Social and Personal Relationships*, *18*, 821–843.
- Carnelley, K. B., Pietromonaco, P. R., & Jaffe, K. (1996). Attachment, caregiving, and relationship functioning

- in couples: Effects of self and partner. *Personal Relationships*, 3, 257–278.
- Carver, C. S., Sutton, S. K., & Scheier, M. F. (2000). Action, emotion, and personality: Emerging conceptual integration. *Personality and Social Psychology Bulletin*, 26, 741–751.
- Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS scales. *Journal of Personality and Social Psychology*, 67, 319–333.
- Collins, N. L., & Feeney, B. C. (2000). A safe haven: An attachment theory perspective on support-seeking and caregiving in adult romantic relationships. *Journal of Personality and Social Psychology*, 58, 644–663.
- Collins, N. L., Guichard, A. C., Ford, M. B., & Feeney, B. C. (2006). Responding to need in intimate relationships: Normative processes and individual differences. In M. Mikulincer & G. S. Goodman (Eds.), *Dynamics of romantic love: Attachment, caregiving, and sex* (pp. 149–189). New York, NY: Guilford.
- Davis, D., Shaver, P. R., & Vernon, M. L. (2004). Attachment style and subjective motivations for sex. *Personality and Social Psychology Bulletin*, 30, 1076–1090.
- Elliot, A. J. (2005). A conceptual history of the achievement goal construct. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 52–72). New York, NY: Guilford.
- 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.
- Feeney, B. C., & Collins, N. L. (2001). Predictors of caregiving in adult intimate relationships: An attachment theoretical perspective. *Journal of Personality and Social Psychology*, 80, 972–994.
- Feeney, B. C., & Collins, N. L. (2003). Motivations for caregiving in adult intimate relationships: Influences on caregiving behavior and relationship functioning. *Personality and Social Psychology Bulletin*, 29, 950–968.
- Feeney, J. A., Noller, P., & Roberts, N. (2000). Attachment and close relationships. In C. Hendrick & S. S. Hendrick (Eds.), *Close relationships: A sourcebook* (pp. 185–201). Thousand Oaks, CA: Sage.
- Gable, S. L. (2006). Approach and avoidance social motives and goals. *Journal of Personality*, 74, 175–222.
- Gable, S. L., Reis, H. T., & Elliot, A. J. (2000). Behavioral activation and inhibition in everyday life. *Journal of Personality and Social Psychology*, 78, 1135–1149.
- Gray, J. (1987). *The psychology of fear and stress* (2nd ed.). New York, NY: Cambridge University Press.
- Green, A., Rafaeli, E., Bolger, N., Shrout, P. E., & Reis, H. T. (2006). Paper or plastic? Data equivalence in paper and electronic diaries. *Psychological Methods*, 11, 87–105.
- Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511–524.
- 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.
- Impett, E. A., & Gordon, A. (2008). For the good of others: Toward a positive psychology of sacrifice. In S. J. Lopez (Ed.), *Positive psychology: Exploring the best in people* (pp. 79–100). Westport, CT: Greenwood.
- Impett, E. A., Gordon, A., & Strachman, A. (2008). Attachment and daily sexual goals: A study of dating couples. *Personal Relationships*, 15, 375–390.
- Impett, E. A., & Peplau, L. A. (2006). “His” and “her” relationships? A review of the empirical evidence. In A. Vangelisti and D. Perlman (Eds.), *Cambridge handbook of personal relationships* (pp. 273–291). New York, NY: Cambridge University Press.
- Impett, E. A., Strachman, A., Finkel, E. J., & Gable, S. L. (2008). Maintaining sexual desire in intimate relationships: The importance of approach goals. *Journal of Personality and Social Psychology*, 94, 808–823.
- Kashy, D. A., & Kenny, D. (2000). The analysis of data from dyads and groups. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social psychology* (pp. 451–477). New York, NY: Cambridge University Press.
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). *Data analysis in social psychology*. New York, NY: McGraw-Hill.
- Kirkpatrick, L. A., & Davis, K. E. (1994). Attachment style, gender, and relationship stability: A longitudinal analysis. *Journal of Personality and Social Psychology*, 66, 502–512.
- Kunze, L. J., & Shaver, P. R. (1994). An attachment-theoretical approach to caregiving in romantic relationships. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships: Vol. 5. Attachment processes in adulthood* (pp. 205–237). London, England: Jessica Kingsley.
- Locke, K. D. (2008). Attachment styles and interpersonal approach and avoidance goals in everyday couple interactions. *Personal Relationships*, 15, 359–374.
- Mehrabian, A. (1976). Questionnaire measures of affiliative tendency and sensitivity to rejection. *Psychological Reports*, 38, 199–209.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood—Structure, dynamics, and change*. New York, NY: Guilford.
- Neff, K. D., & Harter, S. (2002). The authenticity of conflict resolutions among adult couples: Does women’s other-oriented behavior reflect their true selves? *Sex Roles*, 47, 403–412.
- Noller, P. (1996). What is this thing called love? Defining the love that supports marriage and family. *Personal Relationships*, 3, 97–115.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). London, England: Sage.

- Schachner, D. A., & Shaver, P. R. (2004). Attachment dimensions and sexual motives. *Personal Relationships, 11*, 179–195.
- Shaver, P. R., Hazan, C., & Bradshaw, D. (1988). Love as attachment: The integration of three behavioral systems. In R. J. Sternberg & M. Barnes (Eds.), *The psychology of love* (pp. 68–99). New Haven, CT: Yale University Press.
- Shaver, P. R., & Mikulincer, M. (2006). Attachment theory, individual psychodynamics, and relationship functioning. In D. Perlman & A. Vangelisti (Eds.), *The Cambridge handbook of personal relationships* (pp. 251–271). New York, NY: Cambridge University Press.
- Simpson, J. A., Rholes, S. W., Oriña, M. M., & Grich, J. (2002). Working models of attachment, support giving, and support seeking in a stressful situation. *Personality and Social Psychology Bulletin, 28*, 598–608.
- Van Lange, P. A. M., Agnew, C. R., Harinck, R., & Steemers, G. E. (1997). From game theory to real life: How social value orientation affects willingness to sacrifice in ongoing close relationships. *Journal of Personality and Social Psychology, 73*, 1330–1344.
- Van Lange, P. A. M., Rusbult, C. E., Drigotas, S. M., Arriaga, X. M., Witcher, B. S., & Cox, C. L. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology, 72*, 1373–1395.