

# Feeling Appreciated Predicts Prosocial Motivation in Avoidantly Attached Individuals

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## Abstract

Prosocial motivation is an important ingredient for satisfying relationships. However, individuals high in attachment avoidance—those who fear closeness and prefer independence—often display reduced prosocial motivation for their romantic partner. In two daily experience studies ( $N_{\text{total}} = 324$ ), we examined whether feeling appreciated by a romantic partner would buffer this negative link. When avoidantly attached individuals felt highly appreciated by their partner, they displayed greater prosocial motivation; specifically, they were more willing to sacrifice, and did so with the intention to benefit their partner (Studies 1 and 2). These effects did not emerge for other, less prosocial motives for sacrifice, such as to benefit oneself or avoid negative outcomes. Furthermore, one reason why avoidantly attached individuals were more prosocial when they felt appreciated is because they felt more committed to the relationship (Study 2). These findings reveal the importance of feeling appreciated, especially among individuals who typically neglect a partner's needs.

## Keywords

attachment, prosociality, sacrifice, commitment, appreciation

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Avoidantly attached individuals—those who are uncomfortable with intimacy and value their autonomy (Mikulincer & Shaver, 2016)—typically less prosocial toward their romantic partners relative to those who are low in attachment avoidance, which can detract from their relationship satisfaction (B. C. Feeney & Collins, 2001). Given that avoidantly attached individuals have self-oriented tendencies that may compromise their ability to cultivate caring relationships, in the current research, we investigate how to promote prosocial motivation toward a romantic partner for individuals high in attachment avoidance. Past research has shown that feeling appreciated by one's partner is an important aspect of maintaining reciprocal prosocial relationships (Gordon et al., 2012). Feeling appreciated by one's romantic partner indicates that the partner cares about and is also willing to meet one's needs, instilling further prosocial motivation.

In the present research, we propose that feeling appreciated by a romantic partner can buffer the low prosocial motivation typically displayed by avoidantly attached individuals. Those higher in attachment avoidance believe their partners are unwilling to meet their needs (Mikulincer & Shaver, 2016). Feeling appreciated by the partner provides an important signal that they are in fact cared about, and therefore can attenuate avoidantly attached individuals' lower commitment to the relationship (Park et al., 2019a). Thus, we also

propose that avoidantly attached individuals' restored levels of commitment will be associated with higher levels of prosocial motivation (Van Lange et al., 1997). In line with Batson's (1987) perspective on prosocial motivation, we explore both the willingness to engage in positive actions and the motivation to do so to enhance the partner's well-being. We also endeavor to distinguish these inclinations toward kind behavior—which are less frequently endorsed by avoidantly attached individuals (Impett & Gordon, 2010)—from other, less prosocial motives such as to feel good about the self or to avoid negative outcomes.

## Attachment and Prosocial Motivation

At a young age, avoidantly attached individuals learn that close others are untrustworthy, unreliable, and unwilling to meet their needs (Mikulincer & Shaver, 2016), contributing

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to their longer-term independence and avoidance of intimacy. Avoidantly attached individuals do not anticipate others to be prosocial toward them (Mikulincer & Shaver, 2016), which may be one reason why they are also less motivated to behave prosocially toward others (B. C. Feeney & Collins, 2001; Mikulincer et al., 2005). For example, avoidantly attached individuals are less willing to help a stranger in a stressful situation (Mikulincer et al., 2005), have lower desire to preserve the well-being of close others (Mikulincer & Shaver, 2016), and are less motivated to provide care for their romantic partners (J. A. Feeney & Hohaus, 2001). Furthermore, individuals higher in attachment avoidance are less likely to sacrifice for prosocial motives, such as to make their partner feel happy and loved (Impett & Gordon, 2010). When avoidantly attached individuals do sacrifice, they are particularly likely to do so to avoid personal costs, such as dealing with a partner's anger or frustration (Impett & Gordon, 2010). Prosociality is a critical ingredient for building caring relationships (Van Lange et al., 1997), particularly when enacted with the intention of enhancing the partner's well-being but not with the intention of boosting self-interest (Batson, 1987; Visserman et al., 2018). Therefore, it is important to understand the factors that may attenuate the low prosocial motivation of avoidantly attached individuals.

Attachment anxiety emerges from an individual's needs being inconsistently met by close others, causing them to both fear rejection but desperately crave validation and approval (Mikulincer & Shaver, 2016). Anxiously attached individuals' main disturbance in their prosocial orientation is that their excessive self-focus prevents them from at times delivering care that is especially helpful toward their partners (Millings & Walsh, 2009). Despite being off base in the execution of prosocial behaviors, anxiously attached individuals are nevertheless motivated toward prosociality. For example, anxiously attached individuals are especially likely to meet their partner's request when they experience a conflict of interest (Shi, 2003) and to make sacrifices with increased frequency (Impett & Gordon, 2010). Furthermore, anxiously attached individuals are similarly likely to report sacrificing for prosocial motives, such as to make their partner feel loved or to enhance the relationship, relative to those who are less anxiously attached (Impett & Gordon, 2010). Because our central research question is how to buffer low levels of prosocial motivation, coupled with the fact that low levels of such motivation are characteristic of those high in attachment avoidance, the present investigation focuses primarily on avoidantly attached individuals.

### **Buffering Attachment Avoidance**

In the present work, we seek to demonstrate that feeling appreciated is one key ingredient in buffering the typically low prosocial motivation of avoidantly attached individuals. This idea is in line with an emerging literature on buffering attachment insecurities which suggests that the poor outcomes

of avoidantly attached individuals can be attenuated if their perceptions that their romantic partner does not care about their needs are challenged (Overall et al., 2022). However, much of the past work aimed at improving the relationship dynamics of avoidantly attached individuals has focused on reducing negative outcomes, such as heightened levels of conflict or distress. For example, in conflict discussions, "softening" the demands for an avoidant partner to change by acknowledging their needs for autonomy, as well as communicating that they are valued, leads them to experience less anger and withdrawal and report more successful discussions about relationship conflict (Overall et al., 2013). In addition, avoidantly attached individuals may be able to lower their defenses and accept their partner's support in times of need if that support is particularly clear and unwavering (Girme et al., 2015). This research indicates that it is particularly important for avoidantly attached individuals to be convinced of their partner's positive regard in order for them to be active participants in their relationship.

Because growing research has emphasized the importance of understanding how to encourage positive relationship processes (Maisel & Gable, 2012), it is critical to examine how to foster these positive outcomes for avoidantly attached individuals as well. The burgeoning investigation on buffering attachment insecurities suggests that engaging in intimacy-promoting experiences can in fact increase avoidantly attached individuals' engagement in positive relationship behavior, such as self-disclosure (Stanton et al., 2017). Furthermore, building trust in the partner's dependability lowers attachment avoidance in the long term (Arriaga et al., 2014), which is associated with providing higher quality care to one's partner (B. C. Feeney & Collins, 2001). Extending this work, we aim to identify a novel pathway that leads to prosocial motivation for avoidantly attached individuals. We propose that feeling appreciated by one's partner may buffer the lowered prosocial motivation of avoidantly attached individuals because of its ability to restore commitment.

### **Appreciation Is Associated With Heightened Prosocial Motivation Through Commitment**

Interpersonal appreciation is the acknowledgment of another person's value and meaning and feeling a positive connection to them (Adler & Fagley, 2005). In romantic relationships, people feel appreciated by their partners when they feel noticed and valued for who they are and what they do (Gordon et al., 2012). Feeling appreciated by one's romantic partner fosters commitment (Barton et al., 2015), defined as the desire and/or intent to persist in the relationship, psychological attachment to the partner, and a long-term orientation toward the relationship (Agnew & Le, 2015). Commitment is an important indicator of how well a relationship is functioning because it helps couples see beyond small moments

of dissatisfaction in the service of maintaining longevity of the relationship (Agnew & Le, 2015).

The main reason why feeling appreciated in a romantic relationship fosters commitment (Barton et al., 2015) is because it is a signal of the partner's care (Gordon et al., 2012). Drawing on risk regulation theory (Murray & Holmes, 2009), Gordon et al. (2012) showed that people feel appreciated when their partner demonstrates that they are invested in the relationship and available to provide support. Evidence of the partner's appreciation indicates that there is a low risk of rejection, allowing people to feel safe to further commit to the relationship (Gordon et al., 2012). Not only do signals of appreciation cue that the partner is unthreatening and unlikely to reject the self, the find-bind-remind theory (Algoe, 2012) suggests that appreciation also serves as an indication that the individual is in a high quality, rewarding relationship. Given that people tend to feel appreciated when their partner is invested and responsive to their needs (Gordon et al., 2012), such feelings should provide evidence that the relationship they are in is one worth having.

Feeling appreciated may be especially important for those higher (relative to lower) in attachment avoidance because they are less committed to their relationships in the first place (Mikulincer & Shaver, 2016). Felt appreciation might serve as an antidote for avoidantly attached individuals' distrust in their partner's willingness to meet their needs, and signal that their partner is in fact available for high quality, rewarding relationship. Indeed, past research has demonstrated that feeling appreciated is associated with heightened commitment for avoidantly attached individuals because it challenges their negative perceptions of their partner and instills a sense that their partner does, in fact, care about their needs (Park et al., 2019a). Thus, avoidantly attached individuals may come to see their typically unrewarding relationships as a potential for intimacy and connection that is worth investing in after all.

### **Commitment Fosters Prosocial Motivation**

Once commitment is fostered, people tend to have heightened prosocial motivation in their romantic relationship (Agnew & Le, 2015). For example, committed individuals are more willing to sacrifice (Van Lange et al., 1997), accommodate a partner's difficult behavior (Etcheverry & Le, 2005), and forgive a partner's transgressions (Finkel et al., 2002). One reason for this association is that commitment involves a long-term orientation to the relationship, requiring coordinated action for the relationship to last (Van Lange et al., 1997). To maintain the relationship, each individual must act in mutually beneficial ways. Although people must sometimes forgo their own self-interest in the immediate term, this prosocial orientation serves one's best interests in the longer term by maintaining the relationship and ensuring

that it survives. In addition, commitment cultivates communal norms and a tendency to see the relationship dynamics in an unconditional manner (Van Lange et al., 1997). As such, committed individuals may be more likely to adopt a prosocial mind-set because the self as an individuated entity becomes less important (Van Lange et al., 1997), and are able to give in an uncalculated manner without expectation of reciprocation.

### **Overview of Hypotheses and the Current Research**

In the present research, we tested two key predictions concerning attachment avoidance and feeling appreciated in romantic relationships. First, we predicted that the typical link between attachment avoidance and low prosocial motivation would be attenuated when individuals high in attachment avoidance feel especially appreciated by their partner. We used several different measures of prosocial motivation to enhance the generalizability of our findings. In Study 1, prosocial motivation was assessed with sacrificing for partner-focused approach motives, such as to make the partner happy or feel loved. In Study 2, prosocial motivation was assessed with measures of both willingness to sacrifice and motivation to benefit the partner when deciding whether or not to sacrifice. We operationalized prosocial motivation via intentions to sacrifice, because sacrifice may be the strongest form of prosociality in romantic relationships, as it necessitates incurring a personal cost to benefit another (Righetti et al., 2021). Because avoidantly attached individuals are generally less prosocial (e.g., Mikulincer et al., 2005), especially in the face of high personal costs (Farrell et al., 2016), we thought that sacrifice situations would provide a particularly strong test of avoidantly attached individuals' intentions to benefit their partner.

Our second key prediction was that heightened commitment is one mechanism by which feeling appreciated buffers low levels of prosocial motivation typically displayed by avoidantly attached individuals. In Study 2, we tested this mechanism by examining the extent to which avoidantly attached individuals reported feeling committed to maintaining their relationship on days when they feel appreciated by their partner. Past research has demonstrated that avoidantly attached individuals are less committed to their relationships (Simpson, 1990), and commitment is associated with heightened prosocial motivation (Van Lange et al., 1997). Therefore, if feeling appreciated by the partner is one way to attenuate their low commitment (Park et al., 2019a), we should in turn expect this heightened commitment to be associated with increased prosocial motivation. We tested our hypotheses in both studies using a daily diary approach to obtain naturalistic reports of feeling appreciated, commitment, and prosocial motivation. This method decreases retrospective biases and allows us to observe representative

experiences in avoidantly attached individuals' daily lives (Bolger et al., 2003).

## Study 1

The primary aim of Study 1 was to determine whether feeling appreciated buffered the negative link between attachment avoidance and prosocial motivation. Specifically, we assessed prosocial motivation as willingness to engage in relationship behaviors for partner-focused approach motives, such as to make a partner feel loved and happy. We attempted to distinguish these motivations from other, less prosocial, motives that may include self-interest, such as self and relationship-focused motives, as well as more negatively-valenced avoidance motives. Motivation to achieve positive outcomes for the partner (i.e., *partner-focused approach motives*) has been conceptualized as the most prosocial form of sacrifice given that this motivation is solely focused on the partner (Visserman et al., 2018). In contrast, even engaging in generous behavior to benefit the relationship more collectively can be partially motivated by self-interest. Thus, evidence on the dimension of partner-focused motives in particular provides the most robust demonstration of the prosocial effects of feeling appreciated for avoidantly attached individuals.

## Method

All data for the studies in this paper can be viewed at this link: [https://osf.io/wehnf/?view\\_only=b9b5c9b953a647afb473f78560b7dc34](https://osf.io/wehnf/?view_only=b9b5c9b953a647afb473f78560b7dc34).<sup>1</sup>

## Participants

Eighty couples ( $N = 160$  participants) were recruited from the San Francisco Bay Area. Seventy-five couples were heterosexual, one was a gay male couple and four were lesbian. The mean age of participants was 23.9 years ( $SD = 6.4$ , range 18–60 years) and approximately half were university students. Couples had been together for an average of 1.3 years ( $SD = 3.67$  years, range 6 months to 30 years), and 48% lived together. Participants were from diverse ethnic backgrounds: 53% were European or European American, 18% were Chinese or Chinese American, 8% were African or African American, 4% were Mexican or Mexican American, and 17% were of other ethnicities. See Appendix A in the Online Supplemental Materials (OSM) for a list of other publications that have used this data.

## Procedure and Methods

Couples were invited to come into the laboratory to complete a series of background questionnaires and receive instructions for the daily diary portion of the study. Couples were instructed to complete a 10-min daily survey each night for

14 days. Participants were sent an email reminder at 10 p.m. each night to maximize compliance with the study. In the event a participant missed a daily survey, they were instructed to complete the survey the following morning. If the diary entry was still incomplete by the end of the next morning, participants were instructed to skip that day and complete the subsequent diary entries as normal. Participants were compensated with US\$30 at the end of the 14-day study. Participants were also offered an additional incentive of a raffle entry to win an additional US\$100, US\$50, or US\$25 cash prize for each diary entry they completed. A total of 1,686 diary entries were completed on time for an average of 12.2 out of 14 diary entries per participant.

## Background Measures

**Attachment.** Attachment style was measured using the Experiences in Close Relationships scale (ECR; Brennan et al., 1998). The ECR includes 18 items for attachment anxiety (e.g., "I worry that others won't care about me as much as I care about them,"  $\alpha = .89$ ,  $M = 2.81$ ,  $SD = .58$ ) and 18 items for attachment avoidance (e.g., "I am nervous when another person gets too close to me,"  $\alpha = .90$ ,  $M = 2.03$ ,  $SD = .57$ ), measured on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*).

## Daily Measures

### Actor variables

**Feeling appreciated.** Participants completed a single item measure of feeling appreciated (Park et al., 2019a; "My partner made sure I felt appreciated today";  $M = 3.35$ ,  $SD = 1.21$ ) on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*).

**Daily relationship satisfaction.** We measured daily relationship satisfaction with a single item ("I feel satisfied with my relationship today";  $M = 3.60$ ,  $SD = 1.05$ ) on a 5-point scale (1 = *not at all* to 5 = *a lot*).

**Motives for sacrifice.** Each day, participants answered the 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., 2014). On days participants made a sacrifice (yes/no), they were asked to respond to 12 items assessing their motives for sacrifice on a 5-point scale (1 = *not at all* to 5 = *a lot*). Because items were measured within participants over time, we calculated within-person reliability of the items representing each subscale (indicated by  $R_c$ ; Bolger & Laurenceau, 2013).

The key motive we assessed was *partner-focused approach* motives, with two items: "to make my partner happy" and "to make my partner feel loved" ( $R_c = .62$ ,  $M = 3.57$ ,  $SD = 1.03$ ). In subsequent discriminant analyses, we

assessed five other types of sacrifice motives to examine if the effect of feeling appreciated for avoidantly attached individuals was specific to partner-focused approach motives, or if it also prompted other types of motives. The five motives were assessed with two items each: *partner-focused avoidance* motives (“to prevent my partner from feeling upset” and “to prevent my partner from feeling let down”;  $R_c = .67$ ,  $M = 2.50$ ,  $SD = 1.14$ ); *relationship-focused approach* motives (“to increase intimacy in our relationship” and “to create more satisfaction in our relationship”;  $R_c = .75$ ,  $M = 2.42$ ,  $SD = 1.21$ ); *relationship-focused avoidance* motives (“to avoid conflict in our relationship” and “to avoid tension in our relationship”;  $R_c = .87$ ,  $M = 2.25$ ,  $SD = 1.23$ ); *self-focused approach* motives (“to feel good about myself” and “to feel like I am a caring person”;  $R_c = .38$ ,  $M = 2.09$ ,  $SD = 0.95$ ); and *self-focused avoidance* motives (“to avoid feeling guilty” and “to avoid feeling selfish”;  $R_c = .72$ ,  $M = 2.10$ ,  $SD = 1.06$ ).

**Partner variables.** We included partner variables to perform exploratory analyses in which we examine the role of the partner in shaping the actor’s feelings of being appreciated.

**Feeling appreciative.** Participants completed a single item measure of feeling appreciative of their partner (Park et al., 2019a; “I made sure my partner felt appreciated today”;  $M = 3.32$ ,  $SD = 1.17$ ) on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*).

**Physical affection.** Participants rated the extent to which they experienced “physical affection” ( $M = 3.31$ ,  $SD = 1.27$ ) in their relationship each day on a 5-point scale (1 = *not at all* to 5 = *a lot*).

**Sacrifice.** Participants indicated whether they made a sacrifice ( $M = 0.25$ ,  $SD = 0.43$ ) for their partner that day (0 = *no*, 1 = *yes*).

## Results and Discussion

### Analytic Strategy

Although we did not conduct an a priori power analysis, our sample size exceeded the multilevel-modeling power recommendations (30–50 Level-2 observations; Maas & Hox, 2005). We conducted a two-level cross-classified multilevel model in R v. 3.4.2 with the lme4 package (Bates et al., 2014) and obtained  $p$ -values with the lmerTest package (Kuznetsova et al., 2017). Participants were nested in couples, and days and couples were crossed to account for the fact that both partners completed the survey on the same day (Kenny et al., 2006). At Level 1, we person-centered feeling appreciated to examine if on days when participants reported feeling appreciated by their partner than they typically did over the course of the study, they reported greater partner-focused approach

sacrifice motives. To control for the between-person variance, our analyses included the Level-2 grand-mean centered aggregate of feeling appreciated that participants reported over the course of the 14-day diary.

To test our predictions, we entered the cross-level interaction between person-centered feeling appreciated (Level-1) and the individual’s grand-mean-centered attachment avoidance (Level-2) in predicting partner-focused approach sacrifice motives. To isolate within-person variance, we controlled for between-person variance by including the interaction between the grand-mean centered, between-person (Level-2) aggregate of feeling appreciated and attachment avoidance. Finally, we included the cross-level and same-level interactions with attachment anxiety to control for an insecure attachment style more generally. Results displayed in text are obtained from the full models but focus on the within-person main effects and the cross-level interaction given our interest in daily fluctuations. We report the results of the full model, including the between-person main effects and interactions in the OSM.

### Prosocial Motivation

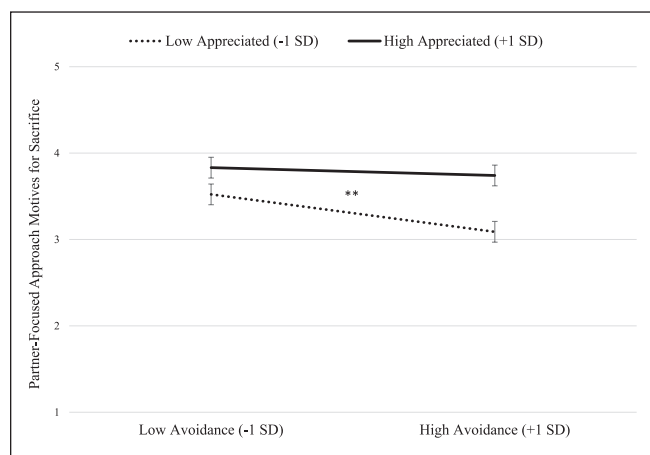
As shown in Table 1, there was a significant main effect of feeling appreciated on partner-focused approach motives. Specifically, on days when people felt more appreciated by their partner than they typically were across the 14-day study, they were more likely to sacrifice for partner-focused approach motives. Replicating previous research (Impett & Gordon, 2010), there was a significant negative main effect of attachment avoidance on partner-focused approach motives, indicating that individuals higher in attachment avoidance were less likely to sacrifice for these types of motives. Consistent with our hypotheses and shown in Figure 1, the main effect of attachment avoidance was qualified by a significant interaction between attachment avoidance and feeling appreciated (see Supplemental Table S1 in OSM for Level-2 effects).

We then conducted simple slope analyses to examine the association between attachment avoidance and approach partner-focused motives at one standard deviation above and below the mean of feeling appreciated (Aiken et al., 1991). At low levels of feeling appreciated, people high in attachment avoidance were significantly less likely to sacrifice for partner-focused approach motives than those low in attachment avoidance,  $b = -.37$ ,  $SE = .12$ ,  $t(430) = -3.00$ ,  $p = .003$ . However, at high levels of feeling appreciated, there was not a significant effect of attachment avoidance predicting prosocial motivation,  $b = -.08$ ,  $SE = .12$ ,  $t(431) = -.63$ ,  $p = .532$ . These results provide evidence that feeling appreciated buffered the low partner-focused approach motivations for sacrifice typically shown by those higher in attachment avoidance. Examined differently, we then examined the effects of feeling appreciated predicting partner-focused approach motives at one standard deviation above and below the mean of

**Table 1.** Feeling Appreciated and Attachment Predicting Partner-Focused Approach Motives for Sacrifice (Study 1).

Predictors	Criterion				
	Partner-focused approach motives for sacrifice				
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Feeling appreciated	0.29	0.05	6.26	<.001	[0.20, 0.37]
Attachment avoidance	-0.22	0.10	-2.25	.025	[-0.42, -0.03]
Attachment anxiety	-0.22	0.09	-2.40	.017	[-0.40, -0.03]
Feeling appreciated × attachment avoidance	0.17	0.09	2.01	.046	[0.004, 0.34]
Feeling appreciated × attachment anxiety	-0.02	0.09	-0.23	.821	[-0.19, 0.15]

Note. Estimates are derived from a multilevel model in which all five predictors in the table were simultaneously entered to predict the outcome. *b* coefficients reflect unstandardized multilevel-modeling coefficients.



**Figure 1.** The moderating effect of feeling appreciated on the link between attachment avoidance and daily partner-focused approach motives for sacrifice (Study 1).

\*\* $p < .01$ .

attachment avoidance. In these analyses, feeling appreciated was positively associated with partner-focused approach motives at low levels of attachment avoidance,  $b = .18$ ,  $SE = .06$ ,  $t(412) = 3.04$ ,  $p = .003$ , but more strongly so at high levels of attachment avoidance,  $b = .39$ ,  $SE = .07$ ,  $t(414) = 5.16$ ,  $p < .001$ . These findings suggest that feeling appreciated is associated with heightened prosocial motivation, and this effect was especially pronounced at high levels of attachment avoidance.

### Alternative Motives for Sacrifice

In a set of discriminant analyses, we next sought to examine if the effect of feeling appreciated was specific to partner-focused approach motives, which are considered the most prosocial of the motives for sacrifice. There were no significant interactions between feeling appreciated and attachment avoidance for any of the other five types of sacrifice motives (all  $bs \leq .06$ , all  $ps \geq .602$ ; see Supplemental Tables S2 to S6 in OSM for full results). These findings suggest that the interactive effect between feeling appreciated and

attachment avoidance was unique to the motives to pursue positive outcomes for their partner. We did not find evidence that feeling appreciated was associated with heightened desires to pursue positive outcomes or avoid negative outcomes for the self or for the relationship at higher levels of attachment avoidance.

### Ruling Out Alternative Explanations

We sought to rule out an alternative explanation that the observed effects for prosociality were simply due to the fact that feeling appreciated was enhancing state self-esteem for avoidantly attached individuals. Past work has demonstrated that feeling appreciated reduces avoidantly attached individuals' concerns that their partner is unwilling to meet their needs (Park et al., 2019a). It is also possible, however, that feeling appreciated simply further strengthens avoidantly attached individuals' positive working models of the self, and therefore their ability to meet their partner's needs. The interaction between feeling appreciated and attachment avoidance predicting partner-focused approach motives for sacrifice remained significant when controlling for state self-esteem,  $b = .18$ ,  $SE = .09$ ,  $t(372) = 2.10$ ,  $p = .043$ . These results indicate that any boosts in self-esteem do not drive the effect of feeling appreciated predicting partner-focused approach motivations for sacrifice for avoidantly attached individuals (see Supplemental Table S7 in OSM for full results).

### Additional Analyses: Partner Effects

In a final set of analyses, we sought to examine the partner's role in the process by which people, including avoidantly attached individuals, feel more appreciated. In exploratory analyses, we tested the effect of the partner's appreciative feelings, physical affection, and sacrifice. We chose the partner's appreciative feelings because these expressions are perhaps the most direct route to the actor feeling appreciated, and have been demonstrated to be detected by avoidantly attached individuals (Park et al., 2019a). However, given that

people also feel valued when the partner provides physical affection (Debrot et al., 2012), or engages in kind deeds (Kubacka et al., 2011), which we operationalize as sacrifice, we examined whether these partner behaviors might be associated with feeling appreciated as well, including for avoidantly attached individuals. All predictors were entered into the model simultaneously (see Supplemental Table S8 in the OSM for results).

Results indicated that the partner's appreciative feelings, physical affection, and sacrifice were all associated with feeling appreciated. In this model, attachment avoidance did not interact with the partner's appreciative feelings or physical affection, suggesting that the partner's appreciative feelings and physical affection are associated with the actor feeling more appreciated for both individuals lower and higher in attachment avoidance. There was, however, a significant interaction between the partner's sacrifice and the actor's attachment avoidance in predicting feeling appreciated. As such, we examined whether there was evidence of the partner's sacrifice buffering the association between the actor's attachment avoidance and feeling appreciated. Simple slopes did not reveal this pattern, as attachment avoidance was not associated with feeling appreciated on non-sacrifice,  $b = -0.57$ ,  $SE = .05$ ,  $t(1,567) = -0.01$ ,  $p = .994$ , or sacrifice days,  $b = .20$ ,  $SE = .23$ ,  $t(1,570) = 0.862$ ,  $p = .389$ . These results suggest that those higher in attachment avoidance felt similarly appreciated to those lower in attachment avoidance on both non-sacrifice as well as sacrifice days. Instead, examining the simple slopes in the other direction, the partner's sacrifice was associated with feeling more appreciated for those higher in attachment avoidance,  $b = .29$ ,  $SE = .08$ ,  $t(1,500) = 3.10$ ,  $p = .002$ , but not for those lower in attachment avoidance,  $b = -.18$ ,  $SE = .08$ ,  $t(1,501) = -0.02$ ,  $p = .982$ . Taken together the partner's appreciative feelings and physical affection were associated with feeling appreciated regardless of the actor's attachment avoidance, whereas sacrifice was uniquely associated with feeling more appreciated for actors higher (vs. lower) in attachment avoidance.

Because the partner's sacrifice was uniquely associated with avoidantly attached individuals' feelings of being appreciated, we examined whether there was an indirect effect predicting prosocial motivation. We tested the indirect effect using the Monte Carlo Method of Assessing Mediation (MCMAM) with 20,000 simulated resamples (Selig & Preacher, 2008). For the *a* path, we inputted the coefficients for the interaction between the actor's attachment avoidance and the partner's sacrifice (Level-1) predicting the actor feeling appreciated,  $b = .22$ ,  $SE = .10$ ,  $t(1,500) = 2.17$ ,  $p = .030$ ; see Supplemental Table S8 in the OSM for full model. For the *b* path, we inputted the coefficient for the actor feeling appreciated (Level-1) predicting prosocial motivation,  $b = .26$ ,  $SE = .07$ ,  $t(360) = 3.74$ ,  $p < .001$ ; see Supplemental Table S9 in the OSM for full model. The 95% confidence intervals did not cross zero [0.005, 0.13], indicating that the interaction between the actor's attachment avoidance and

the partner's sacrifice behavior indirectly predicted prosocial motivation through the actor's feelings of being appreciated. There was not a significant total effect of the partner's behaviors interacting with the actor's attachment avoidance to predict prosocial motivation (see Supplemental Table S10 in the OSM for full model). These results suggest that while the partner's behaviors do not predict avoidantly attached individuals' prosocial motivation directly, their sacrifice may do so indirectly through the actor's feelings of being appreciated.

## Study 2

In Study 2, we sought to replicate the key finding from Study 1 that feeling appreciated buffered the low prosocial motivation of avoidantly attached individuals. Furthermore, we aimed to replicate whether these prosocial motives were focused specifically on benefiting the partner as opposed to other less prosocial motives, such as to benefit the self, or to minimize costs for the self or the partner. Similar to Study 1, we suggest that the best test of prosocial motivation for avoidantly attached individuals is considering the benefits to one's partner, as opposed to sacrificing with the intention of benefiting oneself or to prevent negative outcomes. We also sought to test commitment as a mechanism for the effect of feeling appreciated on prosocial motivation for those high in attachment avoidance.

## Method

### Participants

A total of 164 undergraduate students (89 females, 74 males, 1 other or preferred not to disclose) at a large Canadian university participated in a 14-day daily diary study for course credit. The range of relationship length was 3 months (minimum requirement) to 10 years and 2 months ( $M = 21$  months,  $SD = 18$  months), and 11.7% lived together. Participants ranged in age from 17 and 43 ( $M = 19.30$ ,  $SD = 3.13$ ). The sample was ethnically diverse: 26% were European, 5% were African American, 33% were Asian, 7% were Latino or Mexican, 1% were Native American, 9% were Middle Eastern, and 19% were multiethnic or self-identified as "other."

### Procedure

All participants came into the lab to complete an initial background survey. Then, participants completed brief 5 to 10 min surveys at home each night for 14 consecutive nights. Participants were sent an email reminder each night to log on to the survey to complete their daily measures. Participants were informed that missed diary entries could not be made up to ensure that participants were in fact reporting on experiences from the current day. Thus, they were instructed to

complete the survey on the following day as normal if they missed a previous day. After 14 consecutive days, an email was sent to participants to inform them they could stop completing the surveys. Participants completed between 2 and 17 diary entries ( $M = 10.24$ ,  $SE = 3.87$ ), as some participants continued to fill out the surveys beyond the end of the 14-day study.

### Background Measures

**Attachment.** Attachment style was assessed with the 12-item Experiences in Close Relationships Short Form (Wei et al., 2007). Six items assessed attachment avoidance (e.g., "I try to avoid getting too close to my partner";  $M = 2.23$ ,  $SD = 0.98$ ,  $\alpha = .76$ ) and six items measured attachment anxiety (e.g., "My desire to be very close sometimes scares people away";  $M = 3.60$ ,  $SD = .80$ ,  $\alpha = .74$ ). Items were assessed on 7-point scales (1 = *strongly disagree* to 7 = *strongly agree*).

### Daily Measures

**Feeling appreciated.** Each day, participants were asked to respond to the single item "I felt appreciated by my partner today" ( $M = 5.14$ ,  $SD = 1.70$ ) on a 7-point scale (1 = *not at all* to 7 = *a lot*).

**Willingness to sacrifice.** We gave participants a definition of sacrifice and asked them whether or not they had an opportunity to sacrifice for their partner each day, and if so, how willing they were to do so. Specifically, participants were told that a sacrifice was doing something they did not wish to do (e.g., spending time with your partner's friends), or giving up something that they did not wish to give up (e.g., spending time with your own friends) to benefit their partner or relationship. Participants indicated whether or not there was an opportunity to sacrifice (43.3% of 730 total days) with a dichotomous measure (coded as 0 = *no*, 1 = *yes*). On days when participants reported "yes" to having an opportunity to sacrifice, they were asked subsequently asked "How willing were you to make this sacrifice for your partner?" ( $M = 5.10$ ,  $SD = 1.67$ ) on a 7-point scale (1 = *not at all* to 7 = *a lot*).

**Commitment.** Each day participants were asked with a single item "How committed were you to maintaining your relationship today?" ( $M = 5.39$ ,  $SD = 1.70$ ) on a 7-point scale (1 = *not at all committed* to 7 = *extremely committed*).

**Motivations for sacrifice.** If participants had a conflict of interest, they were asked about their motivations to resolve this conflict. The primary motivation we measured was the motivation to benefit the partner, assessed with a 7-item composite of specific benefits the partner might obtain if the participant were to sacrifice (e.g., "My partner would have

been able to spend time on something else," "My partner would have been able to spend more time with his or her family or friends";  $R_c = .52$ ,  $M = 3.54$ ,  $SD = 1.10$ ). In discriminant analyses, we examined whether feeling appreciated would promote the motivation to sacrifice to benefit the self or the motivation to avoid costs for the self or partner. We measured motivations to benefit the self with nine items (e.g., "I would have gained the respect of my partner," "I would have had the chance to engage in a more desirable activity";  $R_c = .62$ ,  $M = 3.68$ ,  $SD = 1.13$ ), costs to the partner with six items (e.g., "I would have complained to my partner," "It would have taken away my partner's sense of self-reliance";  $R_c = .71$ ,  $M = 2.16$ ,  $SD = 1.16$ ) and costs to the self with 11 items (e.g., "I would have felt resentful towards my partner," "I would have missed out on another more desirable activity"  $R_c = .71$ ,  $M = 2.48$ ,  $SD = 1.03$ ). We assessed all items on a 7-point scale (1 = *not at all* to 7 = *a lot*).

**Daily relationship satisfaction.** We measured daily relationship satisfaction with a single item ("I felt satisfied with my relationship with my partner today";  $M = 5.54$ ,  $SD = 1.46$ ) on a 7-point scale (1 = *not at all* to 7 = *a lot*).

## Results and Discussion

### Analytic Strategy

Our sample size exceeded the multilevel-modeling power recommendations (30–50 Level-2 observations; Maas & Hox, 2005). We analyzed the data with a two-level multilevel model in R v. 3.4.2 with the nlme package (Pinheiro et al., 2009). In our model, days were nested within participants to account for the interdependence between diary responses completed by each person (Kenny et al., 2006). To capture the unique within-person variance, we person-centered our Level-1 predictor (i.e., daily feeling appreciated) and controlled for between-person variance with the Level-2 aggregated daily responses of each participant, which were grand mean-centered.

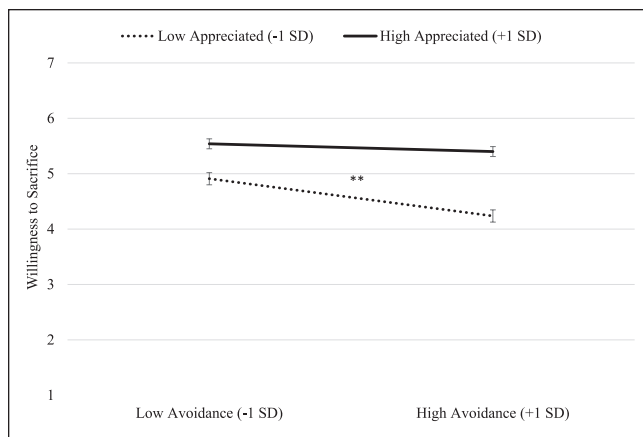
We tested our hypothesis in a multilevel mediated moderation model (Muller et al., 2005) in which the cross-level interaction between person-centered daily feeling appreciated (Level-1) and grand mean-centered attachment avoidance (Level-2) predicted commitment (Level-1), which in turn predicted prosocial motivation (Level-1). To account for the between-person variance and ensure we isolated our key within-person effects, we also controlled for the Level-2 interactions between attachment avoidance and the aggregate, grand mean-centered version of feeling appreciated. As in Study 1, to ensure we were capturing the unique effect of attachment avoidance, as opposed to insecure attachment more generally, we controlled for the analogous cross-level and same-level interactions between feeling appreciated and attachment anxiety.



**Table 2.** Feeling Appreciated and Attachment Predicting Willingness to Sacrifice (Study 2).

Predictors	Criterion				
	Willingness to sacrifice				
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Feeling appreciated	0.33	0.04	7.89	<.001	[0.25, 0.41]
Attachment avoidance	-0.20	0.09	-2.34	.020	[-0.37, -0.03]
Attachment anxiety	0.13	0.10	1.33	.185	[-0.06, 0.32]
Feeling appreciated × attachment avoidance	0.09	0.04	2.44	.015	[0.02, 0.17]
Feeling appreciated × attachment anxiety	0.01	0.06	0.08	.933	[-0.10, 0.11]

Note. Estimates are derived from a multilevel model in which all five predictors in the table were simultaneously entered to predict the outcome. *b* coefficients reflect unstandardized multilevel-modeling coefficients.



**Figure 2.** The moderating effect of feeling appreciated on the link between attachment avoidance and daily willingness to sacrifice (Study 2).

\*\* $p < .01$ .

### Willingness to Sacrifice

As shown in Table 2, the results revealed a significant main effect of feeling appreciated such that on days when participants feel appreciated by their partner than they typically did across the 14-day study, they were more willing to sacrifice for their partner (see Supplemental Table S11 in OSM for Level-2 effects). There was also a main effect of attachment avoidance, indicating that those who were higher (relative to lower) in attachment avoidance reported being less willing to sacrifice. Consistent with our hypotheses, there was a significant interaction between feeling appreciated and attachment avoidance (see Figure 2). Collectively, these results replicate those found in Study 1.

Simple slopes analyses revealed that at low levels of feeling appreciated, participants high in attachment avoidance were significantly less willing to sacrifice than those low in attachment avoidance,  $b = -.33$ ,  $SE = .11$ ,  $t(150) = -3.08$ ,  $p = .002$ . However, at high levels of feeling appreciated, there was not a significant association between attachment avoidance and willingness to sacrifice,  $b = -.07$ ,  $SE = .09$ ,

$t(150) = -.76$ ,  $p = .447$ . These results suggest that feeling appreciated buffered the low willingness to sacrifice associated with attachment avoidance. Examined differently, we then examined the effects of feeling appreciated predicting willingness to sacrifice at one standard deviation above and below the mean of attachment avoidance. Feeling appreciated was associated with willingness to sacrifice at low levels of attachment avoidance,  $b = .24$ ,  $SE = .06$ ,  $t(545) = 4.10$ ,  $p < .001$ , but even more strongly so at high levels of attachment avoidance,  $b = .42$ ,  $SE = .05$ ,  $t(545) = 7.70$ ,  $p < .001$ . These analyses suggest that feeling appreciated was associated with heightened willingness to sacrifice, especially for those high in attachment avoidance.

### Motivation to Benefit the Partner

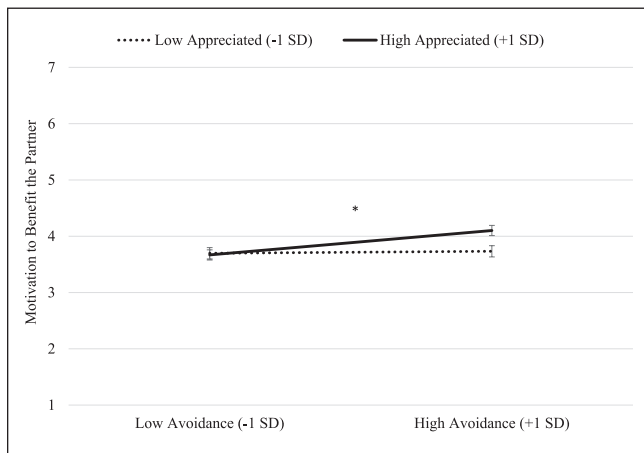
As shown in Table 3, there was a marginally significant main effect of feeling appreciated predicting motivation to benefit the partner. Unexpectedly, we did not find a significant main effect of attachment avoidance predicting motivation to benefit the partner, suggesting that those higher in attachment avoidance were no more or less likely to endorse the motivation to benefit the partner relative to those lower in attachment avoidance. However, these effects were qualified by a significant feeling appreciated by attachment avoidance interaction predicting motivation to benefit the partner (see Figure 3; see Supplemental Table S12 in OSM for Level-2 effects).

Simple slope analyses revealed a different pattern than the one that emerged for willingness to sacrifice. At low levels of feeling appreciated, there was not a significant association between attachment avoidance and motivation to benefit their partner when making the decision to sacrifice,  $b = .03$ ,  $SE = .10$ ,  $t(150) = 0.33$ ,  $p = .739$ . At high levels of feeling appreciated, attachment avoidance was associated with higher motivation to benefit the partner,  $b = .21$ ,  $SE = .09$ ,  $t(150) = 2.39$ ,  $p = .018$ . These analyses indicated that there was no negative association between attachment avoidance and motivation to benefit the partner to buffer. However, when they felt highly appreciated by their partner, avoidantly attached

**Table 3.** Feeling Appreciated and Attachment Predicting Motivation to Benefit Partner (Study 2).

Predictors	Criterion				
	Motivation to benefit partner				
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Feeling appreciated	0.05	0.03	1.87	.062	[-0.003, 0.11]
Attachment avoidance	0.12	0.08	1.43	.154	[-0.05, 0.29]
Attachment anxiety	0.20	0.10	2.11	.037	[0.01, 0.39]
Feeling appreciated × attachment avoidance	0.06	0.03	2.54	.011	[0.01, 0.12]
Feeling appreciated × attachment anxiety	-0.02	0.04	-0.48	.630	[-0.09, 0.05]

Note. Estimates are derived from a multilevel model in which all five predictors in the table were simultaneously entered to predict the outcome. *b* coefficients reflect unstandardized multilevel-modeling coefficients.



**Figure 3.** The moderating effect of feeling appreciated on the link between attachment avoidance and daily motivation to benefit the partner (Study 2).

\* $p < .05$ .

individuals reported a greater motivation to benefit their partner. Interpreted differently, we then examined the effects of feeling appreciated predicting motivation to benefit the partner at one standard deviation above and below the mean of attachment avoidance. At lower levels of attachment avoidance, feeling appreciated was not significantly associated with motivation to benefit the partner,  $b = -.01$ ,  $SE = .12$ ,  $t(545) = -0.29$ ,  $p = .774$ . However, at higher levels of attachment avoidance, feeling appreciated was associated with heightened motivation to benefit the partner,  $b = .12$ ,  $SE = .04$ ,  $t(545) = 3.18$ ,  $p = .002$ . As such, it appears that feeling appreciated was associated with heightened motivation to benefit the partner, but only for those high in attachment avoidance.

### Alternative Motivations for Sacrifice

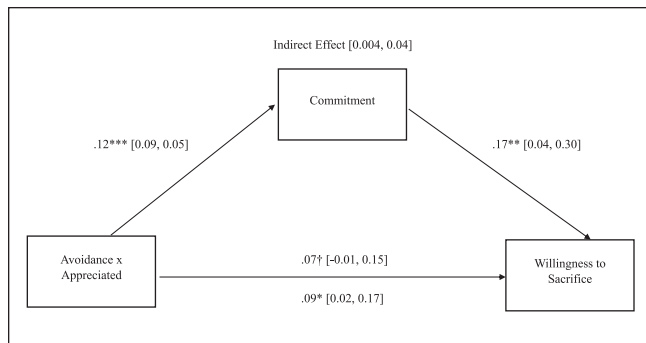
In a set of discriminant analyses, we next sought to examine if the effect of feeling appreciated was specific to motivation to benefit the partner or if appreciation might

similarly motivate avoidantly attached individuals to sacrifice for other types of motivations. There were no significant interactions between feeling appreciated and attachment avoidance for any of the other three motivations for sacrifice: to pursue benefits to self, to avoid costs for the self, or to avoid costs for the partner (all  $b$ s  $\leq .03$ , all  $p$ s  $\geq .223$ ; see Supplemental Tables S13 to S15 in OSM for full results). As in Study 1, these findings suggest that the motivations of avoidantly attached individuals stimulated by feeling appreciated were specific to the desire to benefit the partner, and we did not find evidence of enhancement of other, less prosocial motives.

### Mediated Moderation: Commitment

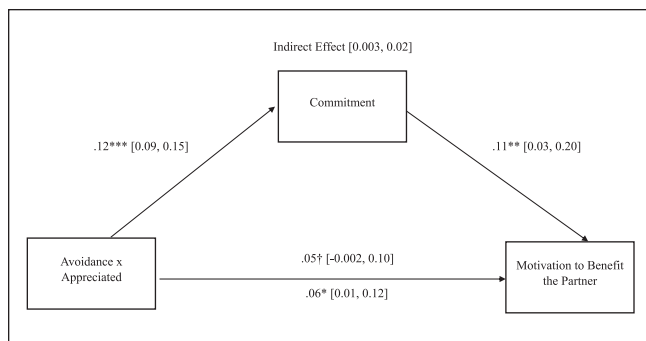
Next, we tested our predicted mediated moderation model in which daily feeling appreciated and attachment avoidance interact to predict commitment, which is then associated with willingness to sacrifice and motivation to benefit the partner. We tested three models, one in which we entered feeling appreciated and attachment avoidance predicting commitment. Then, we entered the main effects and interactions between feeling appreciated and attachment avoidance as well as between feeling appreciated and commitment predicting willingness to sacrifice. We then tested the indirect effects between the interaction of feeling appreciated and attachment avoidance predicting commitment and in turn willingness to sacrifice using the MCMAM with 20,000 simulated resamples (Selig & Preacher, 2008). We then repeated the same process testing motivation to benefit the partner as the outcome variable (See Figures 4 and 5 for indirect effects).

In a model predicting daily commitment, the interaction between daily feeling appreciated and attachment avoidance was significant (see Table 4 in main text for results, and Supplemental Table S16 in OSM for Level-2 effects). As shown in Figure 6, there was a negative association between attachment avoidance and commitment on days when individuals felt appreciated by their partner,  $b = -.46$ ,  $SE = .06$ ,  $t(161) = -8.25$ ,  $p < .001$ , which was weakened on days



**Figure 4.** Indirect effects of attachment avoidance and feeling appreciated predicting willingness to sacrifice through commitment.

Note. *b* coefficients reflect unstandardized multilevel-modeling coefficients. The *a*-path coefficient was derived from a model in which the independent variable (IV), moderator, and their interaction term predicted the mediator. The total effect was derived from a model in which the IV, moderator, and their interaction term predicted the outcome variable. The direct and indirect effects are derived from a model in which the IV, moderator, their interaction term, and the mediator predicted the outcome variable. All models control for attachment anxiety and the corresponding interaction terms. †*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.



**Figure 5.** Indirect effects of attachment avoidance and feeling appreciated predicting motivation to benefit the partner through commitment.

Note. *b* coefficients reflect unstandardized multilevel-modeling coefficients. The *a*-path coefficient was derived from a model in which the IV, moderator, and their interaction term predicted the mediator. The total effect was derived from a model in which the IV, moderator, and their interaction term predicted the outcome variable. The direct and indirect effects are derived from a model in which the IV, moderator, their interaction term, and the mediator predicted the outcome variable. All models control for attachment anxiety and the corresponding interaction terms. †*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

when they felt more appreciated,  $b = -.12$ ,  $SE = 0.06$ ,  $t(161) = -2.17$ ,  $p = .031$ . Commitment significantly mediated the interaction between feeling appreciated and attachment avoidance predicting willingness to sacrifice (95% CI [0.004, 0.04]), and motives to benefit the partner (95% CI [0.003, 0.02]; see Supplemental Tables S17 and S18 in the OSM for full results of *b* paths).

## Additional Analyses

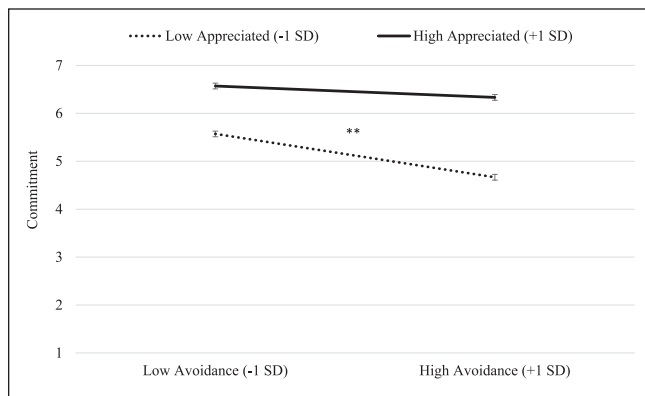
In additional analyses, we examined whether feeling appreciated buffered the low prosocial motivation of avoidantly attached individuals because it affects commitment specifically, or relationship quality more generally (see Supplemental Tables S19 to S24 in the OSM for full models). Because feeling appreciated can buffer avoidantly attached individuals from experiencing low relationship satisfaction (Park et al., 2019a), it is possible that relationship satisfaction might account for the observed effects. When controlling for daily relationship satisfaction, the interaction between attachment avoidance and feeling appreciated predicting commitment remained significant,  $b = .08$ ,  $SE = .01$ ,  $t(1,407) = 5.93$ ,  $p < .001$ . In the *b* path, commitment continued to predict willingness to sacrifice,  $b = .13$ ,  $SE = .08$ ,  $t(523) = 1.71$ ,  $p = .088$ , though the effect became marginally significant, and motivation to benefit the partner remained significant,  $b = .11$ ,  $SE = .05$ ,  $t(523) = 2.23$ ,  $p = .026$ . We also examined whether relationship satisfaction operated as a mechanism for the effect of feeling appreciated buffering avoidantly attached individuals' lowered prosocial motivation. When accounting for the effects of commitment, feeling appreciated did not interact with attachment avoidance to predict relationship satisfaction,  $b = .02$ ,  $SE = .01$ ,  $t(1,407) = 1.07$ ,  $p = .284$ . Furthermore, relationship satisfaction no longer predicted willingness to sacrifice,  $b = .09$ ,  $SE = .08$ ,  $t(523) = 1.19$ ,  $p = .235$ , and did not predict motivation to benefit the partner,  $b = -.01$ ,  $SE = .05$ ,  $t(523) = -0.13$ ,  $p = .898$ . These findings suggest the buffering effect of feeling appreciated predicting prosocial motivation may be better explained by the construct of commitment rather than by relationship satisfaction.

We also conducted two sets of lagged analyses to assess directionality (see Supplemental Tables S25 to S32 in the OSM for full results).<sup>3</sup> In the first set of analyses, we examined whether feeling appreciated today buffered avoidantly attached individuals' prosocial motivation tomorrow, as well as the reverse direction. Results did not provide strong evidence for either direction. In the second set of analyses, we controlled for yesterday's outcome to examine whether the buffering effects of feeling appreciated for avoidantly attached individuals' prosocial motivation are due to heightened prosocial motivation carrying over from yesterday (as has been done in previous research on gratitude; see Algoe et al., 2010). There was a marginally significant interaction between feeling appreciated and attachment avoidance for one out of the two outcomes (i.e., willingness to sacrifice). Neither of the two models were significant in the reverse direction. These results provide slightly more (albeit not robust) evidence for the proposed theoretical direction, though the reverse model cannot be ruled out.

**Table 4.** Feeling Appreciated and Attachment Predicting Commitment (Study 2).

Predictors	Criterion				
	Commitment				
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Feeling appreciated	0.48	0.02	30.14	<.001	[0.45, 0.51]
Attachment avoidance	-0.29	0.05	-5.67	<.001	[-0.39, -0.19]
Attachment anxiety	-0.04	0.06	-0.64	.523	[-0.15, 0.08]
Feeling appreciated × attachment avoidance	0.12	0.02	7.67	<.001	[0.09, 0.15]
Feeling appreciated × attachment anxiety	0.08	0.02	3.53	<.001	[0.04, 0.12]

Note. Estimates are derived from a multilevel model in which all five predictors in the table were simultaneously entered to predict the outcome. *b* coefficients reflect unstandardized multilevel-modeling coefficients.



**Figure 6.** The moderating effect of feeling appreciated on the link between attachment avoidance and commitment (Study 2). \*\**p* < .01.

## General Discussion

In two daily diary studies, we found evidence that feeling appreciated buffered the typically low prosocial motivation of avoidantly attached individuals. Our investigation also documented that feeling appreciated is uniquely associated with motivation to benefit the partner. These are precisely the types of motives that are typically the lowest among avoidantly attached individuals (Impett & Gordon, 2010) and promote relationship satisfaction in couples (Impett et al., 2014). Furthermore, we were able to distinguish these effects from other, less prosocial motives. Specifically, feeling appreciated did not interact with attachment avoidance to predict the propensity to sacrifice for motives that directly benefited the self (e.g., feel good about oneself), nor for motives that indirectly benefited the self through benefiting the relationship. We also demonstrated that feeling appreciated was not associated with avoidance motives for avoidantly attached individuals, including motives that focused on preventing negative outcomes for the partner, the self, or the relationship. Avoidantly attached individuals typically sacrifice for self-focused motives, particularly for avoidance reasons (Impett & Gordon, 2010), which predicts reduced

relationship satisfaction in couples (Impett et al., 2014). Therefore, it is especially important that feeling appreciated acts upon purely prosocial motives, as opposed to encouraging self-interested behavior under the guise of generosity.

Although the general pattern was that feeling appreciated buffered avoidantly attached individuals' low prosocial motivation, there was one surprising finding. In Study 2, attachment avoidance was not associated with low motivation to benefit the partner as would be expected from past literature (e.g., Impett & Gordon, 2010) and from the other measures of prosocial motivation in the present research. In other words, those higher (vs. lower) in attachment avoidance were similarly likely to indicate that they considered the benefits to their partner when deciding if they should make a sacrifice. Furthermore, on days when they felt particularly appreciated by their partner, avoidantly attached individuals were actually more likely, rather than similarly likely, to have considered the benefits to the partner relative to those lower in attachment avoidance. Because this pattern only emerged on one of three measures of prosocial motivation, we suspect that this finding was either spurious, or due to the specific way motivation to benefit the partner was assessed. While the outcome measure was not specifically chosen to assess autonomy-related themes, many of the items captured the idea that if the avoidantly attached individual sacrificed, their partner would have the opportunity to choose how they spent their time (e.g., on other desirable activities, with friends or family). Because avoidantly attached individuals highly value autonomy (Mikulincer & Shaver, 2016), they may view supporting their partner's autonomy and ability to choose their activities as an especially prosocial behavior. This possibility is probable given that feeling appreciated typically also boosts prosocial motivation at low levels of attachment avoidance, but we did not see that effect emerge with this specific measure. Despite the fact that this finding did not follow a buffering pattern, it is still the case that feeling appreciated positively predicted prosocial motivation at higher levels of attachment avoidance.

Given the importance of feeling appreciated for avoidantly attached individuals' prosocial motivation, we

explored whether the partner's behaviors played an important role in giving rise to these feelings. In Study 1, we found that the partner's own appreciative feelings and affectionate behaviors predicted the actor feeling appreciated regardless of the actor's level of attachment avoidance, and that the partner's sacrifice behavior uniquely predicted the actor feeling appreciated for actors higher (relative to lower) in attachment avoidance. The partner's behaviors did not directly buffer avoidantly attached individuals' low levels of prosocial motivation. However, the partner's sacrifice indirectly predicted increased prosocial motivation for avoidantly attached individuals through the actor's feelings of being appreciated. These results suggest that the buffering of avoidantly attached individuals' low prosocial motivation are driven by the actor's feelings of being appreciated, and that these feelings can and do emerge from behaviors enacted by the partner.

We also identified an important reason why feeling appreciated buffered avoidantly attached individuals' typically low levels of prosocial motivation. We found evidence that feeling appreciated by one's partner attenuated avoidantly attached individuals' typically lowered levels of commitment. Commitment, in turn, was associated with willingness to sacrifice and doing so specifically to benefit the partner. Our findings are in line with previous research that demonstrates that feeling appreciated is associated with heightened perceptions that the relationship is communal, especially for those high in attachment avoidance (Park et al., 2019a). In light of the fact that this research demonstrates that feeling appreciated can also buffer avoidantly attached individuals' reduced relationship satisfaction (Park et al., 2019a), we examined whether the effects upon prosociality were driven by commitment specifically, or relationship quality more generally. When controlling for relationship satisfaction, the indirect effects through commitment continued to remain significant. Furthermore, relationship satisfaction was not an explanatory mechanism when simultaneously accounting for the effects of commitment in the model. Taken together, these results suggest that commitment may be a more robust mechanism explaining the buffering effects of feeling appreciated for avoidantly attached individuals' typically lower levels of prosocial motivation than other indices of relationship quality, such as satisfaction.

We did not make predictions for attachment anxiety because past literature suggests that anxiously attached individuals can be quite motivated to perform kind deeds (J. A. Feeney & Hohaus, 2001) and do so with their partner or relationship in mind (Impett & Gordon, 2010), indicating that buffering may not necessarily be required for this particular outcome. Our research, however, revealed mixed results regarding the link between attachment anxiety and prosocial motivation. Although we found that anxiously attached individuals were as willing to sacrifice as those who were less anxiously attached (Study 2), Study 1 revealed that anxiously attached individuals were less likely to sacrifice for

partner-focused motives, whereas Study 2 showed that they were more motivated to benefit the partner. One possibility for the discrepant findings is that some measures of partner-focused motives may include elements of relationship benefits. Given that anxiously attached individuals are particularly interested in enhancing intimacy and connection, they may be motivated to benefit the partner if there are any overlapping relationship benefits that they may enjoy. Once these relationship benefits are disentangled, as we were able to specifically isolate in Study 1, anxiously attached individuals may in fact be less motivated to exclusively benefit their partner without any spillover effects for the self. In line with these findings, some research has found that anxiously attached individuals are less likely to support their partner out of love for them and more likely to support them to pursue feelings of connection than those who are less anxiously attached (B. C. Feeney et al., 2013).

Despite the negative link between attachment anxiety and partner-focused approach motives for sacrifice, we identified in Study 1, feeling appreciated did not buffer this link. Attachment anxiety did, however, interact with feeling appreciated to buffer lowered commitment in Study 2. It is possible that feeling appreciated may not directly affect anxiously attached individuals' prosocial motivation, but indirectly if and when commitment is buffered. These mixed buffering findings are in line with past work on gratitude that shows that perceiving a partner's gratitude inconsistently attenuates the negative link between attachment anxiety and commitment (Park et al., 2019a). Because anxiously attached individuals experience relational ambivalence, wanting intimacy and connection while simultaneously fearing rejection (Joel et al., 2011), feeling appreciated might have conflicting effects on their levels of commitment. On one hand, feeling appreciated may indicate to them that they are in fact loved and cared about by their partner (Park et al., 2019a). At the same time, anxiously attached individuals' low self-worth (Mikulincer & Shaver, 2016) may make them doubt that their partner anything to appreciate them for, and therefore fear their negative state when these feelings come to an end. Such thoughts may undermine some of the relational benefits of feeling appreciated.

This research adds to recent literature on buffering attachment insecurities, which indicates that tailored relationship dynamics that address the unique needs of avoidantly attached individuals can be effective at mitigating the negative outcomes they typically experience (see review by Overall et al., 2022). Although the initial buffering work focused mostly on reducing negative outcomes, such as conflict and distress (Girme et al., 2015; Overall et al., 2013), there have been relatively few studies highlighting how to enhance positive relationship behaviors among avoidantly attached individuals (e.g., Stanton et al., 2017). To the best of our knowledge, only one other study has examined instances under which avoidantly attached individuals may be prompted to be more prosocial (e.g., see Farrell et al., 2016)

and our research identifies a novel pathway (i.e., commitment) for achieving this outcome.

### *Limitations and Future Directions*

The present research relied exclusively on daily report surveys, which have a number of strengths, such as enhancing ecological validity and reducing retrospective biases (Bolger et al., 2003). However, there are also some limitations to consider. Although we observed instances of feeling appreciated when they spontaneously arose in daily life, it is unclear what the effects would be if people were explicitly instructed to express their feelings of appreciation toward their partner. It is possible that these increased opportunities to perceive their partner's appreciative feelings may enhance the effect upon prosocial motivation. Alternatively, it is also possible that intentional expressions of feeling appreciative may appear contrived and therefore less authentic, which may weaken the potency of the message. Future research would benefit from an experimental paradigm to assess if intentional expressions of feeling appreciative can buffer prosocial motivation for avoidantly attached individuals.

An experimental design would also help to establish more evidence of the directionality of the effects. Indeed, Study 2 provided some evidence that the observed buffering effects were due to feeling appreciated, as opposed to prosocial motivation carrying over from 1 day into the next. We cannot rule out, however, the possibility that prosocial motivation buffers avoidantly attached individuals' lower levels of feeling appreciated. There is conceptual reason to believe that there is bidirectionality in these effects. Past research demonstrates an "upward spiral" between appreciation and prosocial motivation, such that these two constructs mutually reinforce each other (Ramsey & Gentzler, 2015). Therefore, on days when people are more prosocially motivated, their partner is likely to respond in ways that would buffer avoidantly attached individuals' lower feelings of being appreciated. Future research would benefit from establishing the temporal links of these effects in both directions, as well as providing evidence for causality.

Another limitation that should be addressed is that the results of these studies were obtained over a short, 2-week span of time. Thus, the long-term effects of feeling appreciated are unclear. It is possible that avoidantly attached individuals would require repeated instances in which they feel appreciated over time to be more consistently motivated to be prosocial. Alternatively, it is possible that the benefits of feeling appreciated are strong enough that lower "maintenance" doses would be required to continue reaping the benefits. Given that feeling appreciated is thought to challenge avoidantly attached individuals' negative working models of others by increasing their feelings of their partner's care (Park et al., 2019a), it is possible that these cues might reduce attachment avoidance over time. Although the impact on attachment avoidance has not been examined, past research

has indicated that feeling appreciated reduces attachment anxiety over time (Park et al., 2019b). If the power of feeling appreciated to shift attachment insecurities also applies to attachment avoidance, their reduced attachment avoidance would necessarily be associated restored levels of prosocial motivation. Future research would benefit from a longitudinal design to examine these questions.

Future work should also examine the impact of communicating appreciation on the avoidantly attached individual's partner. Even if feeling appreciated is important for promoting avoidantly attached individuals' prosocial motivation, intentional expressions may potentially be emotionally taxing for the partner to make. Especially when dealing with avoidantly attached individuals who actively try to reduce intimacy and closeness (J. A. Feeney & Noller, 1990), expressing appreciation for one's partner may be especially burdensome because avoidantly attached individuals may appear withdrawn or distant when receiving such expressions. Thus, while the receipt of appreciation may ultimately result in prosocial motivation for avoidantly attached individuals, the expression itself may be uncomfortable or unrewarding for the partner to deliver in the moment.

Finally, our samples were comprised of primarily white, heterosexual couples in a North American context. Recent discussion has brought to light the lack of diversity in relationships science (e.g., Williamson et al., 2022), which raises concerns about generalizability. Indeed, group differences have been found in common relationship-relevant communication processes, such as the demand-withdrawal pattern of communication (Ross et al., 2019). Thus, it is possible that the effects we documented here might not replicate in more diverse samples (e.g., in same-gender couples, in couples of lower social class, in different cultures) and future research is certainly needed.

### **Conclusion**

Prosocial motivation is an important aspect of strengthening intimate bonds, but those high in attachment avoidance often lack such motivation. We found that feeling appreciated prompted avoidantly attached individuals to be more committed, which in turn was associated with prosocial motivation with specific intentions to benefit the partner. Accepting these positive messages may lower their defenses, and ultimately allow avoidantly attached individuals to engage in behaviors that benefit their partners and support happy and healthy relationships.

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### Supplemental Material

Supplemental material is available online with this article.

### Notes

1. Neither study in this manuscript was preregistered.
2. Due to the low reliability of self-focused avoidance goals, we also conducted the discriminant analyses with the individual items that comprised the subscale. Feeling appreciated did not interact with attachment avoidance to predict the individual item “to feel good about myself,”  $b = .07$ ,  $SE = .09$ ,  $t(421) = 0.77$ ,  $p = .443$ , of with the individual item “to feel like a caring person,”  $b = -.11$ ,  $SE = .10$ ,  $t(411) = -1.12$ ,  $p = .263$ .
3. We could not conduct lagged analyses in Study 1, as prosocial motivation was only assessed on days when participants already made a sacrifice (only 21% of days). Given that this analysis would require that participants sacrifice 2 days in a row (which was a rarity in our data), our statistical power would be severely restricted.

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