Personality and Social Psychology Bulletin

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Working Models of Attachment and Attribution Processes in Intimate Relationships

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Two studies examined the link between working models of attachment and social construal processes in romantic relationships. In Study 1, individuals high in attachment-related anxiety responded to hypothetical partner transgressions by endorsing relationship-threatening attributions, experiencing emotional distress, and endorsing behavioral intentions that were likely to result in conflict. These effects emerged after controlling for pessimistic explanatory style, depressed mood, and self-esteem. In addition, the association between anxiety and emotional distress was mediated by attributions and attachment-related needs. In Study 2, anxious individuals endorsed relationship-threatening attributions for their partner's transgressions but less so for their partner's positive behaviors, and these effects occurred primarily among those in unhappy relationships. In contrast, avoidant individuals endorsed pessimistic attributions for their partner's positive behavior but less so for their partner's transgressions, and these effects occurred regardless of their level of relationship satisfaction.

Keywords: attachment; attributions; emotion; social cognition; close relationships

The mind is its own place, and in itself can make
a Heaven of Hell, a Hell of Heaven.
—John Milton (1608-1674)

Close relationships are filled with ambiguity, and understanding the behavior of others can sometimes be difficult and frustrating. Nevertheless, most people manage to navigate their interpersonal lives with relative ease, guided by their past experiences and existing social knowledge. Indeed, a large body of research indicates that many aspects of social perception are guided by top-down, theory-driven processes in which people's existing goals, schemas, and expectations shape the way they view new information (Taylor, 1998). Clearly, such processes are adaptive because they allow individuals to process information efficiently and to behave in new situations without evaluating each one from the beginning. Nevertheless, for those who hold unfavorable images of themselves and pessimistic models of relationships, top-down processes can be problematic when they predispose these individuals to perceive their partners in negative ways and to behave in ways that support these perceptions. In this article, we use attachment theory as a framework for exploring these processes by examining the association between working models of attachment and attributions in romantic relationships.

Adult Attachment Theory

Adult attachment theory begins with the assumption that adults enter relationships with a history of interpersonal experiences and a unique set of memories, beliefs, and expectations that shape how they think and feel about their relationships and how they behave in

those relationships. Although there are many mental structures that are relevant to relationship functioning in adulthood (e.g., sex role schemas, social exchange scripts), attachment theory is concerned with mental representations that center on the regulation and fulfillment of attachment-related needs, namely, the maintenance of closeness and felt security in valued relationships. Attachment theorists refer to these cognitive-affective representations as internal working models of attachment, and they are thought to be rooted, at least in part, in the quality of one's early relationships with caretakers and other important attachment figures (Bowlby, 1973). Once developed, these models are thought to operate largely outside of awareness and to play an important role in guiding perception, emotion, and behavior in attachment-relevant contexts (Collins & Allard, 2001; Collins & Read, 1994).

Much of the adult attachment literature has focused on individual differences in styles of attachment. These styles refer to chronic patterns of thinking, feeling, and behaving in close relationships, and they are thought to reflect differences in internal working models of attachment. Adult attachment researchers typically define four prototypic attachment styles derived from two underlying dimensions: attachment-related anxiety and attachment-related avoidance. The anxiety dimension refers to one's sense of relational self-worth and acceptance (vs. rejection) by others. The avoidance dimension refers to one's degree of comfort (or discomfort) with intimacy and interdependence with others. Secure individuals are low in both anxiety and avoidance. They feel valued by others and worthy of affection, and they perceive attachment figures as trustworthy and responsive. Secure individuals are comfortable with closeness and able to depend on others when needed. Preoccupied individuals are high in anxiety but low in avoidance. They are comfortable with closeness but worried about being rejected and unloved. Preoccupied individuals depend greatly on acceptance by others for a sense of personal well-being but they lack confidence in others' regard for them and responsiveness in times of need. Fearful individuals are high in both anxiety and avoidance. Although they desire social contact, their distrust of others and expectations of rejection result in discomfort with intimacy and avoidance of close relationships. Finally, dismissing individuals are low in anxiety but high in avoidance. They feel confident and tend to view themselves as invulnerable to negative feelings; however, they perceive attachment figures as unreliable and uncaring. Dismissing individuals attempt to maintain a positive self-image in the face of potential rejection by denying attachment needs, distancing themselves from others, and restricting expressions of emotionality (Bartholomew & Horowitz, 1991; Collins & Read, 1990;

Fraley, Davis, & Shaver, 1998; Hazan & Shaver, 1987; Mikulincer, 1998a; Mikulincer, Orbach, & Iavnieli, 1998; Simpson, 1990).

As noted above, individual differences in attachment style are presumed to reflect fundamental differences in working models of self and others. Support for this assumption is provided by a number of studies that show that secure adults have more favorable images of themselves and more optimistic expectations about the social world compared to insecure adults (e.g., Baldwin, Fehr, Keedian, Seidel, & Thomson, 1993; Brennan & Bosson, 1998; Carnelley & Janoff-Bulman, 1992; Collins & Read, 1990; Feeney & Noller, 1990; Hazan & Shaver, 1987; Mikulincer, 1995; Pietromonaco & Carnelley, 1994). These differences in models of self and others are assumed to play an important role in shaping individual differences in interpersonal functioning and relationship outcomes. Consistent with this assumption, a large body of research indicates that secure adults experience more satisfying and well-functioning relationships than do their insecure counterparts (see Feeney, 1999, for a review). Furthermore, among the insecure styles, there are distinct patterns of poor adjustment. For example, preoccupied adults tend to experience emotional extremes, jealousy, and conflict, whereas avoidant adults report low levels of intimacy and commitment and tend to have less stable relationships. In response to findings such as these, researchers have begun to turn their attention to understanding the specific mechanisms that may explain these differences in relationship outcomes.

Working Models and Social Perception

There are many mechanisms that may explain why people with different attachment styles experience different relationship outcomes, but one mechanism that may be especially important is the impact of working models on social perception processes. Working models of attachment are highly accessible cognitive-affective structures that, once activated, should play an important role in shaping how individuals construe their social experiences (Collins & Allard, 2001; Collins, Guichard, Ford, & Feeney, 2004; Collins & Read, 1994). Because secure adults have positive self-images and optimistic expectations of others, they are likely to construe their relationship experiences in relatively favorable ways. As a result, secure working models may represent a cognitive strength, or resource, that allows individuals to maintain positive images of both their partner and themselves (assuming, of course, that the raw data of experience can reasonably support these views). In contrast, insecure working models may represent a cognitive vulnerability that predisposes individuals to perceive their relationship experiences more unfavorably. And, if insecure individuals tend to interpret events in pessimistic ways,

they may be apt to experience emotional distress and to choose maladaptive behavioral strategies that contribute to poor relationship outcomes (Collins & Read, 1994). As a result, insecure individuals may behave in ways that unwittingly support and promote their negative perceptions.

Initial support for these ideas was provided in a set of studies reported by Collins (1996) in which participants provided open-ended explanations for a series of hypothetical scenarios describing potentially negative relationship events. Content coding of these responses revealed that individuals tended to explain events in ways that were consistent with their working models. For example, in Study 1, insecure adults were more likely than secure adults to infer that their partner was purposely rejecting closeness and that their relationship was in jeopardy. They also were more likely to blame their partner for the negative events and to attribute their partner's behavior to stable, global, and internal causes—an attributional pattern that has been shown to predict relationship dysfunction (see Bradbury & Fincham, 1990, for a review).

Several subsequent studies provide further evidence of a link between insecure attachment and pessimistic attributions. For example, in a sample of married couples, Gallo and Smith (2001) found that husbands' attachment-related anxiety and avoidance were associated with more negative attributions, and these attributions partially mediated the link between anxiety and perceived relationship conflict. Wives' attachment-related anxiety, but not avoidance, also was associated with negative attributions. Similar patterns were found in two studies of dating couples, which revealed that attachment-related anxiety, but not avoidance, predicted maladaptive attributions for partner transgressions, and these maladaptive attributions were associated with poor relationship functioning (Whisman & Allan, 1996) and partially mediated the link between anxiety and relationship dissatisfaction (Sumer & Cozzarelli, 2004). Finally, Mikulincer (1998b, Study 2) presented college students with a series of hypothetical scenarios that differed in the degree to which they reflected clear or ambiguous cues of hostile intent by the partner. Secure adults attributed hostile intent to their partner only when presented with clear cues of hostility, whereas insecure adults (anxious-ambivalent and avoidant) inferred hostile intent regardless of whether the cues were clear or ambiguous.

Taken together, these studies provide evidence that compared to secure individuals, insecure individuals are predisposed to make more pessimistic attributions for partner transgressions, although attachment-related anxiety is more consistently associated with negative attributions than is attachment-related avoidance. These studies also suggest that attachment style differences in interpersonal behavior and relationship outcomes (e.g., relationship conflict, relationship satisfaction) may be mediated by these biased cognitive appraisals. The current investigation extends this work in several important ways.

STUDY 1

Although the studies reviewed above provide evidence for attachment-style differences in attributions for partner transgressions, it is possible that these differences are an artifact of other chronic factors that covary with attachment style. For example, insecure attachment is associated with increased depression (Carnelley, Pietromonanco, & Jaffe, 1994; Cooper, Shaver, & Collins, 1988; Hammen et al., 1995; Mickelson, Kessler, & Shaver, 1997; Roberts, Gotlib, & Kassel, 1996), higher neuroticism (Shaver & Brennan, 1992), and low self-esteem (Collins & Read, 1990), all of which have been linked to maladaptive attributions for negative events in general (Ickes, 1988; Peterson, Meier, & Seligman, 1993) and for relationship events in particular (e.g., Horneffer & Fincham, 1996; Karney, Bradbury, Fincham, & Sullivan, 1994). Thus, the primary goal of Study 1 was to rule out the possibility that attachment differences in attributions can be explained by these more general personality and mood factors. To address this issue, we examined the link between attachment style and attributions for partner transgressions after controlling for (a) pessimistic attributional style, (b) depressed mood, and (c) low self-esteem. For simplicity, we will refer to this group of variables as negative affectivity. Overall, we predicted that individuals with insecure working models (those higher in anxiety and avoidance) would make more pessimistic attributions for their partner's transgressions, even after controlling for negative affectivity. However, based on theory and prior research, we expected that attachment-related anxiety (which reflects a heightened concern about rejection and is linked to pessimistic expectations about the reliability and trustworthiness of others) would be a stronger predictor than attachment-related avoidance. Thus, we predicted that preoccupied and fearful individuals (those high in anxiety) would endorse the most pessimistic attributions and that secure individuals (those low in anxiety and avoidance) would endorse the least pessimistic attributions.

Our second goal was to further explore attachment-style differences in emotional responses to partner transgressions and to investigate two possible mediators of these differences. On the basis of attachment theory and prior research, we expected that preoccupied and fearful individuals (those high in anxiety) would report the highest levels of emotional distress and that dismissing

individuals (low in anxiety but high in avoidance) would report the lowest levels of distress. We expected this pattern for two primary reasons. First, because anxious individuals are more likely to construct negative explanations for their partner's transgressions, they are likely to feel more threatened by these events and more concerned about their potential implications (Weiner, 1986). Second, because anxious individuals are worried about being rejected and have strong dependency needs, they are likely to place greater value on attachment-related goals and needs (e.g., proximity, comfort, affection) and will therefore be more distressed if their partner fails to meet these needs. For example, they are likely to be more distressed when asked to imagine that their partner did not respond to their expressions of affection. We predicted that anxious individuals would rate these needs as more important and would therefore feel worse when their partner failed to meet them (Berscheid, 1983). Furthermore, we predicted that dismissing adults, who value self-reliance and have the weakest dependency needs, would rate these needs as least important and would therefore experience the least emotional distress.

The final goal of Study 1 was to examine behavioral intentions. Based on theory and prior research, we expected that fearful and preoccupied individuals (those high in anxiety) would respond to their partner's transgressions in ways that were less adaptive and more likely to result in conflict. There are two primary reasons for expecting this pattern. First, if as hypothesized above, anxious individuals are interpreting their partner's behavior in pessimistic ways (e.g., inferring more malevolent motivation or hurtful intent), they are apt to behave in maladaptive ways such as acting suspicious, hostile, emotionally needy, or emotionally withdrawn (Collins, 1996). Second, because the transgressions depicted in our vignettes are likely to violate important attachment-related needs for anxious individuals, they are apt to experience greater emotional distress and to behave in ways that are hostile or punishing toward their partner, perhaps in an effort to discourage similar transgressions in the future.

A summary of our hypothesized model is presented in Figure 1. We predicted that insecure individuals (especially those high in anxiety) would endorse more pessimistic attributions for their partner's transgressions (path a), which would then be associated with greater emotional distress (path b). In addition, we predicted that anxious individuals would experience more emotional distress in part because they placed greater value on the attachment needs being violated in our stimulus vignettes (paths c and d). Finally, we expected that pessimistic attributions and heightened distress would then lead to maladaptive behavioral responses (paths e and f).
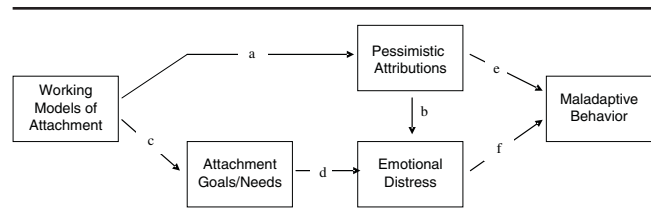

Figure 1   Hypothesized model.

Method

OVERVIEW

Participants were presented with vignettes describing potentially negative partner behaviors.[1] After each vignette, they rated a series of explanations and attributions for their partner's behavior, described how they would feel, predicted the likelihood of conflict, and provided a written description of how they would behave in each situation. Attachment style, self-esteem, pessimistic attributional style, and depression were assessed in a background questionnaire.

PARTICIPANTS

Participants were 181 introductory psychology students (105 men, 76 women) who were currently involved in a romantic relationship. Participants ranged in age from 18 to 37 ($M = 19.6$ years), and relationship length ranged from 1 to 85 months ($M = 16$ months).

MATERIALS AND PROCEDURE

Stimulus events. Participants read five vignettes describing potentially negative partner behaviors (e.g., imagine that your partner "didn't respond when you tried to cuddle," "didn't comfort you when you were feeling down," "left you standing alone at a party where you didn't know anyone"). These behaviors were chosen because they represented violations of common attachment-related needs. Four of these events were taken from Collins (1996).

Possible explanations. Following each vignette, participants were presented with four possible explanations for their partner's behavior. Two were designed to be relationship enhancing and two were intended to be relationship threatening. For example, in response to the behavior "Your partner wanted to spend the evening by himself," a relationship-enhancing explanation was, "My partner is tired and just needs some time to relax at home." A relationship-threatening explanation was, "My partner is losing interest in me." Participants rated the extent to which each statement was likely to explain their partner's behavior on a 7-point scale.

A principal components analysis with orthogonal rotation suggested a two-factor solution. The 10 positive explanations (2 from each of the 5 vignettes) loaded on the first factor, and the 10 negative ones loaded on the second factor. Thus, we computed an index of relationship-enhancing explanations (α = .71) and an index of relationship-threatening explanations (α = .88).

Attribution ratings. For each event, participants rated the cause of their partner's behavior along a series of dimensions used by Collins (1996) and derived from the literature on attributions in marriage (Bradbury & Fincham, 1990). First, they rated the degree to which their partner's behavior was caused by something about (a) the partner (e.g., his or her personality or preferences), (b) themselves (e.g., their personality or preferences), and (c) their relationship. They also rated whether the behavior was caused by something that is (d) global versus specific and (e) stable versus unstable. Finally, they rated (f) how much the partner deserved to be blamed for the behavior, (g) whether their partner behaved that way on purpose, and (h) whether their partner's behavior was motivated by selfish concerns. Ratings on each dimension were averaged across the vignettes. A principal components analysis with oblique rotation suggested two components, which were used as a guide for computing two indexes. First, an index of internal attributions was created by averaging items 1 through 5 (α = .81). High scores indicate that participants located the cause as internal to the relationship. Second, an index of responsibility attributions was created by averaging items 6 through 8 (α = .81). High scores indicate that the partner was held responsible and blamed for the event.

Emotional distress. Participants described how they would feel in response to each event by rating a series of emotions on a 7-point scale. An index of emotional distress (angry, rejected, hurt, worried, confused, nervous, helpless; α = .81) was computed for the present study.

Conflict intentions. Predicted conflict was measured in two ways. First, participants rated the extent to which they thought each event was "likely to result in an argument or a conflict of any kind" on a 7-point scale. An index of predicted conflict was then computed by averaging this rating across the five vignettes (α = .67). Next, participants wrote a brief description of what they would do in response to each situation. Independent coders then rated these descriptions (on 7-point scales) for (a) the degree to which the response was punishing toward the partner and (b) the likelihood that the response would lead to conflict. Each coder rated half of the questionnaires; interrater reliability was assessed by having both coders rate a subset of 20 randomly chosen responses (intraclass correlations were .92 for punishing

and .95 for conflict). To provide the most reliable and valid assessment of predicted conflict, we computed an overall index of conflict intentions by combining participants' ratings with the ratings of our independent coders (α = .77).

Background questionnaire. Attachment style was measured with the revised version of the Adult Attachment Scale (Collins, 1996; Collins & Read, 1990). This 18-item scale includes three subscales: (a) comfort with closeness, (b) comfort depending on others, and (c) anxiety in relationships. Items from the first two scales were combined to provide an index of attachment-related avoidance (α = .88), and the third scale assessed attachment-related anxiety (α = .83).

Pessimistic attributional style. Pessimistic attributional style was measured with the short form of the Attributional Styles Questionnaire (Whitley, 1991). Participants were asked to imagine 10 negative events (e.g., "You are fired from your job") and to write down the one major cause of each event. They then rated this cause across three attribution dimensions: (a) locus (internal vs. external), (b) stability, and (c) globality. An index of pessimistic explanatory style was computed by averaging all 30 items (α = .72) so that high scores reflect attributions to internal, stable, and global causes.

Self-esteem. Self-esteem was measured with the Rosenberg (1965) Self-Esteem Scale (α = .88), which measures global self-worth and self-regard.

Depressed mood. Depressed mood was measured with the Center for Epidemiological Studies Depression Scale (Radloff, 1977). This 20-item scale asks respondents to indicate the frequency with which they experienced various depressive symptoms during the previous week (α = .91).

Attachment-related needs. Finally, participants rated the importance of five specific attachment-related needs within their relationship. One question corresponded to each of the five vignettes that had previously been presented. For example, respondents were asked, "In general, how important is it to you that your partner comforts you when you are feeling down?" Ratings were made on a scale from 1 (*not at all important*) to 7 (*extremely important*). An index of attachment needs was computed by averaging these five items (α = .68).

Results

PRELIMINARY ANALYSES AND DATA ANALYTIC STRATEGY

Preliminary analyses revealed that insecure attachment was indeed associated with heightened negative affectivity. Individuals higher in anxiety reported more pessimistic explanatory style (r = .21, p = .01), higher depression (r = .42, p < .001), and lower self-

TABLE 1: Study 1: Hierarchical Regression Analyses

	Step 1				Step 2			Step 3	
Outcome Variable	Esteem	Depress	PAS	ΔR^2	Anxiety	Avoidance	ΔR^2	Anxiety × Avoidance	ΔR^2
Explanations/attributions									
Relationship enhancing	−.068	−.185*	.030	.03	−.119	−.020	.01	.171*	.03*
Relationship threatening	−.144†	.295***	−.016	.14***	.305***	.065	.08***	−.108†	.01†
Internal relationship	−.026	.261**	.213**	.16***	.211*	.041	.04*	−.122†	.02†
Responsibility/blame	−.090	.187*	.124	.09**	.186*	.117	.05**	−.099	.01
Emotional distress	−.160*	.222**	.134†	.16***	.310***	−.137†	.06**	−.084	.01
Attachment needs	.056	.133	.011	.015	.316***	−.242**	.08***	.060	.00
Conflict intentions	−.006	.138†	.121	.05*	.245**	−.032	.04*	−.110	.01

NOTE: *N* = 181. PAS = Pessimistic Attributional Style. Unless otherwise labeled, tabled values are standardized regression coefficients (βs). Coefficients are shown for the point at which they entered the equation.
†*p* < .10. **p < .05. ***p < .01. ****p < .001.

esteem ($r = -.49$, $p < .001$); individuals higher in avoidance reported slightly higher levels of depression ($r = .14$, $p = .06$). Hence, to test whether chronic working models of attachment predicted our dependent variables after controlling for negative affectivity, we conducted hierarchical regression analyses. For each analysis, we entered self-esteem, depression, and attributional style on Step 1, the two continuous attachment dimensions (anxiety and avoidance) on Step 2, and the Anxiety × Avoidance interaction on Step 3. Results are summarized in Table 1. (A correlation matrix of all dependent variables appears in Appendix A.)

*ATTACHMENT STYLE DIFFERENCES IN
EXPLANATIONS AND ATTRIBUTIONS*

After controlling for the significant effects of negative affectivity (Step 1), attachment-related anxiety (but not avoidance) was significantly associated with pessimistic attributions (Step 2). As predicted, individuals who were higher in anxiety (preoccupied and fearful individuals) were more likely to endorse relationship-threatening explanations, to attribute their partner's behavior to something internal to the relationship, and to hold their partner responsible/blameworthy.

In addition to these main effects, there was a significant Anxiety × Avoidance interaction predicting relationship-enhancing explanations, and two marginally significant interactions predicting relationship-threatening explanations ($p = .10$) and internal attributions ($p = .07$). To explore these interactions, we plotted the predicted means for each dependent variable at 1 standard deviation (*SD*) above/below the mean on anxiety and avoidance (Aiken & West, 1991). As shown in Figure 2, individuals low in anxiety and avoidance (a profile associated with secure attachment) were most likely to endorse the relationship-enhancing explanations for their partner's transgressions, whereas those high in anxiety and low in
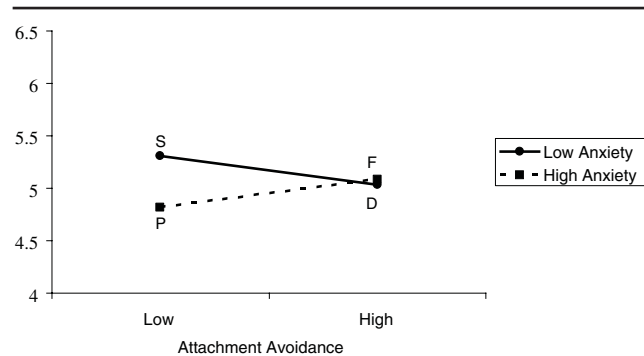

Figure 2 Relationship-enhancing explanations by attachment style (Study 1).
NOTE: S = secure; P = preoccupied; D = dismissing; F = fearful.

avoidance (a profile associated with preoccupied attachment) were least likely to endorse them; individuals who matched the fearful (high anxiety, high avoidance) and dismissing (low anxiety, high avoidance) profiles were in between these two extremes. A similar pattern occurred for relationship-threatening explanations (see Figure 3) and internal attributions (not shown); individuals who matched the secure profile were least likely to endorse relationship-threatening and internal attributions, whereas those who matched the preoccupied and fearful profiles were most likely to endorse them.

EMOTIONAL RESPONSES

After controlling for negative affectivity, the attachment dimensions remained significant unique predictors of distress. Individuals higher in anxiety reported greater emotional distress, whereas those higher in avoidance tended to report less distress ($p = .06$). Figure 4 illustrates the joint (additive) effects of anxiety and avoidance (plotted at 1 *SD* above/below the mean on each dimension). As predicted, individuals who
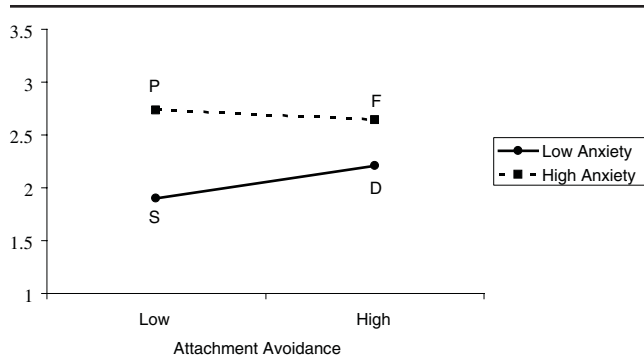
Figure 3   Relationship-threatening explanations by attachment style (Study 1).
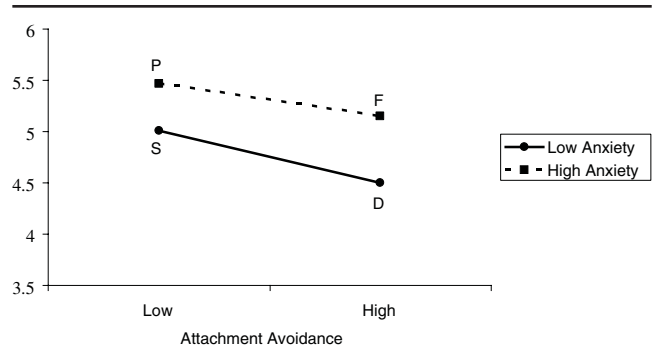NOTE: S = secure; P = preoccupied; D = dismissing; F = fearful.

Figure 5   Attachment-related needs by attachment style (Study 1).
NOTE: S = secure; P = preoccupied; D = dismissing; F = fearful.
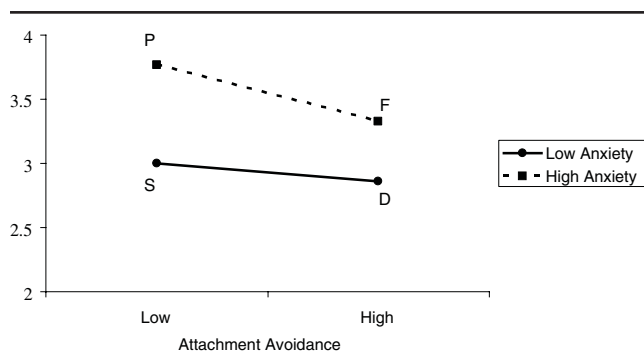

Figure 4   Emotional distress by attachment style (Study 1).
NOTE: S = secure; P = preoccupied; D = dismissing; F = fearful.

matched the preoccupied profile (high anxiety, low avoidance) reported the most distress, whereas those who matched the dismissing profile (low anxiety, high avoidance) reported the least distress.

ATTACHMENT-RELATED NEEDS

Negative affectivity was not significantly related to attachment needs, but the attachment dimensions were. As predicted, individuals who were higher in anxiety rated the attachment needs as more important, and those higher in avoidance rated them as less important. Figure 5 illustrates the joint (additive) effects of anxiety and avoidance. As predicted, preoccupied individuals (high anxiety, low avoidance) rated the attachment needs as most important, whereas dismissing individuals (low anxiety, high avoidance) rated them as least important.

BEHAVIORAL INTENTIONS

After controlling for negative affectivity, individuals higher in attachment anxiety were more likely to express behavioral intentions that were likely to result in conflict.

TESTING THE PATH MODEL

The results reported thus far indicate that individuals with different working models of attachment responded to the same relationship events in different ways. The final step in our analyses was to tie these outcomes together by testing the hypothesized model.

Specifying the model. The following variables were used as indicators of the model: attachment anxiety, attachment needs, an index of pessimistic attributions (which was the average of our three negative explanation/ attribution variables), emotional distress, and conflict intentions. The only variables excluded from this analysis were attachment-related avoidance (because it was not consistently related to attributions or behavioral intentions) and relationship-enhancing explanations (because it was uncorrelated with the other explanation/attribution variables).

The hypothesized model was identical to the one shown in Figure 1. To control for negative affectivity, all of the variables used in the path analysis were residual variables in which we partialed out the effects of all control variables. The resulting variance/covariance matrix appears in Appendix B. Preliminary data screening indicated that the assumption of multivariate normality was reasonably met by our data. In addition, our sample size ($N = 181$) was adequate for testing the proposed model (with 11 free parameters in the model, we had a 16:1 ratio of participants to parameters).

Estimating the model. The hypothesized model was tested using AMOS software (Arbuckle & Wothke, 1999) and maximum likelihood estimation. Goodness of fit was assessed with a joint consideration of the chi-square statistic, the Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA). Good model fit is evidenced by a nonsignificant chi-square, a
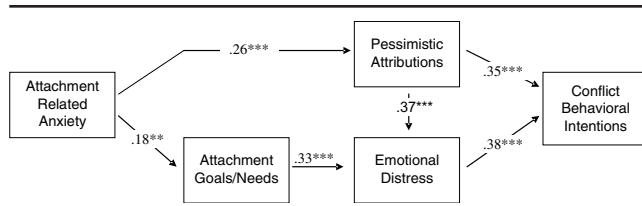
Figure 6   Path analysis testing the hypothesized model (Study 1).
NOTE: N = 181. Path values are standardized regression coefficients (βs). $\chi^2(4) = 6.75$; $p = .15$, Comparative Fit Index (CFI) = .98, Root Mean Square Error of Approximation (RMSEA) = .06.
$**p < .01$. $***p < .001$.

CFI of at least .95, and a RMSEA of .05 or less (Kline, 2005).

Estimation of the hypothesized model resulted in good model fit as evidenced by $\chi^2(4) = 6.746$, $p = .15$, CFI = .98, and RMSEA = .06. Standardized parameter estimates are shown in Figure 6. Consistent with results reported above, individuals higher in anxiety made more pessimistic attributions (β = .26, $p < .001$) and rated the attachment needs as more important (β = .18, $p < .05$). In addition, as predicted, individuals who made more pessimistic attributions and who rated the attachment needs as more important experienced more emotional distress (βs = .37 and .33, respectively, $p < .001$). Finally, as predicted, individuals who made more pessimistic attributions and who experienced more emotional distress expressed more conflict intentions (βs = .35 and .38, respectively, $p < .001$).

To determine whether the hypothesized model fit the data better than plausible alternative models, we estimated three additional models. First, we tested a nested model in which we added a direct path between anxiety and emotional distress. The addition of this path did not significantly improve model fit, $\Delta\chi^2(1) = 1.52$, $p > .05$. Moreover, the direct path from anxiety to emotional distress was small and not statistically significant (β = .08), but the paths from pessimistic attributions to emotional distress (β = .35, $p < .001$) and from attachment goals/needs to emotional distress (β = .31, $p < .001$) remained strong and significant. This model provided increased support for the hypothesis that the link between anxiety and heightened emotional distress was mediated by pessimistic attributions and attachment-related goals/needs.

Second, we tested a nested model in which we added a direct path between anxiety and conflict behavior. The addition of this path did not significantly improve model fit, $\Delta\chi^2(1) = 0.16$, $p > .05$. Moreover, the direct path from anxiety to conflict behavior was small and not statistically significant (β = .02), but the paths from pessimistic attributions to conflict behavior (β = .34, $p < .001$) and from emotional distress to conflict behavior (β = .38, $p < .001$)

remained strong and significant. This model provided increased support for the hypothesis that the link between anxiety and heightened conflict intentions was mediated by pessimistic attributions and emotional distress.

Finally, we tested a nonnested alternative model. Our original model hypothesized that individuals who interpreted their partner's behavior in more pessimistic ways would experience greater emotional distress; thus, we had a causal path leading from attributions to emotions. However, it is equally plausible that emotional distress is a cause rather than a consequence of pessimistic attributions. Individuals who are prone to experience emotional distress in response to their partner's transgressions (perhaps because these transgressions violate important needs) may be apt to construct pessimistic attributions for their partner's behavior (perhaps because their negative affect provides information when constructing their attributions; Clore & Tamir, 2002). Thus, we tested a model that reversed the causal path between pessimistic attributions and emotional distress. As would be expected, the path coefficient from emotional distress to attributions was strong and significant (β = .35, $p < .001$); however, the overall model failed to fit the data as well as the original model, as evidenced by $\chi^2(4) = 13.35$, $p = .01$, CFI = .94, and RMSEA = .11. In addition, the path linking attachment anxiety to pessimistic attributions remained significant (β = .18, $p < .01$), indicating that anxious individuals were more likely to construct pessimistic attributions even after controlling for their tendency to experience greater emotional distress. Thus, although it is theoretically and empirically reasonable to assume that emotional distress may cause pessimistic attributions, the data are more consistent with (and more parsimoniously described by) the alternative causal pathway (at least in the context of the variables specified in the current model). Nevertheless, it is reasonable to assume that attributions and emotional distress have bidirectional effects on one another in most natural contexts.

Discussion

Study 1 provides further evidence that working models of attachment shape attributions in close relationships and extends prior work by ruling out the possibility that these effects can be explained by general negative affectivity. As predicted, compared to secure individuals, insecure individuals made more pessimistic attributions for their partner's transgressions. Among those with insecure working models, those who matched the preoccupied (high anxiety, low avoidance) and fearful (high anxiety, high avoidance) profiles exhibited the most negative pattern of attributions compared to those who matched the dismissing profile (low anxiety, high avoid-

ance). Consistent with prior work, anxiety was a more consistent predictor of attributions than was avoidance.

A second goal of this study was to examine the link between working models of attachment and emotional responses to partner transgressions and to explore two potential mediators of this link. Attachment style was strongly linked to emotional distress, even after controlling for negative affectivity. As predicted, individuals high in anxiety (preoccupied and fearful adults) reported the most emotional distress, and dismissing adults (low anxiety and high avoidance) reported the least distress. In addition, consistent with our hypotheses, these differences were mediated by attributions and attachment-related needs. Specifically, our path model suggested that anxious individuals felt more distressed because they tended to construct pessimistic attributions for their partner's behavior and because their partner failed to meet their important attachment-related needs. These findings point to the importance of identifying the specific needs and goals of individuals with different attachment styles and exploring their role in shaping intra- and interpersonal experience.

Finally, we found that attachment anxiety was associated with less constructive behavioral intentions and that this effect was mediated by cognitive and affective responses. Specifically, our path model suggested that anxious individuals were more likely to endorse negative behavioral intentions because they made more negative attributions for their partner's behavior and because they experienced more emotional distress, and emotional distress was greater in individuals who rated the attachment needs as more important. This pattern of findings suggests that anxious individuals may choose hostile or punishing behavior, at least in part, to control their partner's behavior and prevent similar transgressions in the future. And, although expressions of anger may be a functional protest to an attachment figure's lack of responsiveness, insecure individuals—who may feel they lack control over others' behavior—may be prone to dysfunctional expressions of anger and destructive behavior that may ultimately weaken attachment bonds (Bowlby, 1973, 1988; Mikulincer, 1998b).

Although we cannot draw causal inferences from these data, our findings highlight the importance of studying the links between cognition, emotion, and behavior in close relationships, and they provide insight into the complex mechanisms that may explain why anxious individuals tend to experience greater emotional distress and greater conflict in their relationships. These results also contribute to the broader literature on attributions in close relationships by identifying an important individual difference variable (attachment style) that appears to predispose individuals to make maladaptive attributions and by specifying the potential

causal mechanisms that link these attributions to long-term relationship outcomes. Specifically, our data suggest that pessimistic attributional tendencies will heighten emotional distress and lead to maladaptive behavioral responses that are likely to erode relationship functioning over time. Thus, the importance of understanding attributions in close relationships may lie in their potential to shape the emotional lives of couples and the resulting action tendencies that are the more proximal predictors of relationship quality.

STUDY 2

Study 2 investigated two specific research questions. First, we examined attachment differences in attributions for both positive and negative relationship events. Much of the literature on attributions in close relationships (and all of the work on attachment and attributions) has focused on responses to partner transgressions or relationship conflict (see Bradbury & Fincham, 1990, for a review). However, there is growing evidence that positive relationship experiences are not simply the opposite of negative ones and that responses to positive events play a unique role in shaping relationship processes (Reis & Gable, 2003). Will secure and insecure individuals differ in how they construe their partner's acts of kindness and care? We predicted that individuals with more secure working models (who have positive self-images and optimistic expectations of others) should be predisposed to interpret their partner's positive behavior as motivated by generous (rather than selfish) concerns, and they should be apt to experience positive emotional responses and to express their appreciation in ways that promote relationship trust and intimacy. In contrast, we predicted that individuals with insecure working models (who lack confidence in other's regard for them or who have pessimistic beliefs about others) may have doubts about their partner's benevolent motivation. For example, they may find it difficult to believe their partner's behavior reflects genuine love and affection, or they may be more likely to infer selfish motivation behind their partner's generosity. Such doubts may then undermine the positive consequences of support and care and may make it more difficult for insecure individuals to fully benefit from their partner's kindness and goodwill.

The second goal of Study 2 was to explore whether the association between working models and social perception would be moderated by relationship quality. Specifically, when insecure adults are involved in satisfying and well-functioning intimate relationships, will their tendency to make maladaptive attributions be attenuated or will their chronic doubts continue to color their perceptions? Attachment theory assumes that chronic working models of attachment will guide social perception such

that new experiences will be assimilated into existing working models. This assumption provided the basis for our prediction that insecure individuals would be predisposed to interpret their partner's behavior in a less generous light than would secure participants. However, attachment theory also assumes that working models of self and others should be sensitive to new information and should be able to accommodate an ever-changing environment, especially new relational circumstances. Moreover, Bowlby (1988) argued that one's current functioning will always be determined "by the interaction of the personality as it has so far developed and the environment in which it is then finding itself" (pp. 171-172). From this perspective, insecure attachment may best represent a psychological vulnerability that may or may not be expressed depending on one's current relational context (see Collins et al., 2004, for additional discussion). This perspective is compatible with contemporary theories of personality (Andersen & Chen, 2002; Mischel & Shoda, 1995) and relationship interdependence (e.g., Holmes, 2002) that emphasize the importance of studying stable Person × Situation interactions.

Consistent with this idea, there is some evidence that insecure attachment may be linked to adverse outcomes primarily in the context of threatening situations or vulnerable relationships. For example, in a longitudinal study of couples during the transition to parenthood, women who were high in anxiety and who perceived that their husband was unsupportive during their pregnancy experienced decreases in marital satisfaction (Rholes, Simpson, Campbell, & Grich, 2001) and increases in depressive symptoms (Simpson, Rholes, Campbell, Tran, & Wilson, 2003) 6 months postpartum. However, when spousal support was perceived to be high, anxious women were as well-adjusted as nonanxious women. A similar pattern occurred in a laboratory study in which the quality of partner support was experimentally manipulated (Collins & Feeney, 2004). In this study, insecure individuals perceived more hurtful intent, felt worse, and performed worse on a subsequent task, but only when they were given relatively unsupportive messages from their partner. When they received highly supportive messages, secure and insecure adults perceived these messages as equally favorable and performed equally well on a subsequent task. Likewise, in a daily diary study, Pierce and Lydon (2001) found that the social interactions of anxious individuals were lower in quality and less intimate than those of secure individuals, but only when they were interacting with partners who were relatively unresponsive.

Taken together, these studies suggest that insecure adults may function relatively well in nonthreatening contexts but may function relatively poorly in situations, or relationships, that are potentially threatening. In the current study, we explored this issue by examining whether the association between attachment style and social construal processes would be moderated by relationship satisfaction. In this regard, we conceptualized relationship satisfaction as an indicator of the general relational context within which the individual was currently operating. Based on theory and prior research, we expected that attachment differences in social construal may be less pronounced in happy relationships and more pronounced in unhappy relationships. However, because chronic insecurities are likely to be activated in response to attachment-relevant events (especially partner transgressions), it is possible that insecure attachment would continue to be associated with maladaptive attributions (although not as strongly) even in relationships that are relatively happy. That is, insecure adults may find it difficult to set aside their doubts and, as a result, may continue to be influenced by their chronic fears (to some degree) despite their positive expectations concerning their current relationship and their current partner.

Methods

PARTICIPANTS

Participants were 194 undergraduate students (109 women, 85 men) who were involved in a romantic relationship of at least 3 months. Participants ranged in age from 18 to 25, with a mean of 18.8, and relationship length ranged from 3 to 50 months, with a mean of 13.3 months.

MATERIALS AND PROCEDURE

Stimulus events. Participants were presented with eight vignettes (counterbalanced) reflecting common attachment-related themes. Four of these (from Study 1) were designed to represent negative events (violations of attachment-related goals and needs) and four new events were designed to represent positive attachment events, such as receiving support and care from one's partner (e.g., imagine that your partner "brought you dinner when you were feeling sick," "tried to cheer you up after an upsetting day at work or school").

Explanations and attributions. Following each vignette, participants rated six possible explanations for their partner's behavior. Three of these were intended to be relationship enhancing and three were relationship threatening. For example, in response to the following positive event, "Your partner brought you dinner when you were sick," a relationship-enhancing explanation was "My partner is a caring and thoughtful person," and a relationship-threatening explanation was "My partner feels guilty about something and is trying to make up for it." Participants rated the extent to which each item was likely to explain their partner's behavior on a 7-point

scale. We computed an index of relationship-enhancing and -threatening explanations for positive and negative events, respectively, by averaging ratings across the four stimulus events within each category. For each vignette, participants also rated the cause of the event along a series of attribution dimensions similar to Study 1. Ratings for each dimension were averaged across the four stimulus events within each category.

To reduce the number of explanation/attribution variables (many of which were highly correlated), we computed several conceptually distinct indices. Due to the nature of the events, the indices for negative events differed somewhat from those for positive events. For the negative events, we computed the following three indices: (a) relationship-enhancing attributions (which included only the relationship-enhancing explanations, α = .83), (b) relationship-threatening attributions (which included the relationship threatening-explanations plus the following attribution ratings: partner deserves to be blamed, partner intended to make you feel bad, partner behaved this way on purpose, partner was motivated by selfish concerns; partner's behavior was caused by something about his or her personality/preferences, something about your relationship or how your partner feels about you, something global, something stable; α = .87), and (c) internal to the self attributions (which included the following attribution ratings: partner's behavior was caused by something about you, you deserved to be blamed for the event; α = .57). For the positive events, we computed the following three indices: (a) relationship-enhancing attributions (which included the relationship-enhancing explanations plus the following attribution ratings: partner deserves credit/praise, behavior was intended to make you feel good, partner was motivated by unselfish/ altruistic concerns, and partner behaved on purpose; α = .84), (b) relationship-threatening attributions (which included the relationship-threatening explanations plus the following attribution ratings: negative explanations, partner's behavior was intended to make you feel bad, partner was motivated by selfish concerns, and was insensitive; α = .79), and (c) internal to the relationship attributions (which included the following attribution ratings: behavior was caused by something about your partner's personality/preferences, something about your relationship or how your partner feels about you, something global, something stable; α = .74).

Emotional responses. Participants rated how they would feel in response to each event by rating a series of emotions on a 7-point scale. For the negative events, we computed an index of emotional distress (angry, tense, irritated, rejected, worried, hurt, anxious; α = .94). For the positive events, we computed three indices: (a) happiness (pleased, happy, content, loved; α = .87), (b) distress

(angry, tense, irritated, rejected, worried, hurt, anxious; α = .91), and (c) guilt (a single item).

Attachment-related needs. After imagining each event, participants rated how important each behavior was to them (e.g., "How important is it to you that your partner bring you dinner when you are sick?") and how much they wanted their partner to engage in each behavior (e.g., "How much do you want your partner to bring you dinner when you are sick?"). Ratings were averaged to form an index of attachment-related needs for negative events (in which the partner failed to meet the need, α = .86) and positive events (in which the need was met, α = .80).

Behavioral intentions. Finally, participants rated how likely they were to engage in various behaviors on a 7-point scale. Rather than focus only on conflict/hostile behavior, as we did in Study 1, these items were designed to assess a broader range of adaptive and maladaptive behavioral responses that might differentiate secure and insecure individuals. For the negative events, we computed three indices: (a) conflict minimizing (e.g., "Discuss the issue with your partner to explain how you feel"; α = .79), (b) reassurance seeking (e.g., "Seek reassurance that your partner still loves you and cares about you"; α = .85), and (c) hostile/punishing (e.g., "Snap or yell at your partner"; α = .93). For the positive events, we computed two indices: (a) appreciative behaviors (e.g., "Tell your partner how much you appreciate his/her thoughtfulness"; α = .91) and (b) distancing (e.g., "Tell your partner that you would rather be alone when you are sick"; α = .85).

Background questionnaire. Attachment style was measured with a modified version of Brennan, Clark, and Shaver's (1998) Experiences in Close Relationships Scale. This 28-item scale (shortened from 36 items) includes two subscales: anxiety (α = .90) and avoidance (α = .88). Consistent with prior work, the two dimensions were only weakly correlated (r = .16, p < .05).

Relationship satisfaction. Relationship satisfaction was assessed with the five-item satisfaction subscale from the Investment Model Scale (Rusbult, Martz, & Agnew, 1998). This subscale (α = .85) assesses the degree to which one feels happy in one's relationship and the degree to which one's relationship satisfies one's needs (e.g., "My relationship makes me very happy," "My relationship does a good job of fulfilling my needs for companionship, intimacy, and so on").

Results

PRELIMINARY ANALYSES

Preliminary analyses revealed that relationship satisfaction was unrelated to attachment anxiety (r = –.08)

TABLE 2: Study 2: Hierarchical Regression Analyses Predicting Responses to Negative Relationship Events

	Step 1			Step 2		
Outcome Variable	Satisfaction	Anxiety	Avoidance	Anxiety × Avoidance	Anxiety × Satisfaction	Avoidance × Satisfaction
Explanations/attributions						
Relationship enhancing	.181*	.019	−.089	.032	.116	.016
Relationship threatening	−.327***	.344***	.070	−.111†	−.176**	.097
Internal self	−.073	.205**	.153*	−.041	.012	.062
Emotions						
Distress	−.109†	.537***	.022	.002	.012	.056
Attachment needs	.258***	.466***	−.177**	.146*	−.028	−.051
Behavioral intentions						
Conflict minimizing	.224**	.143*	−.249***	.064	−.036	.105
Seek reassurance	.018	.485***	−.078	.083	.005	.107
Hostile/punishing	−.129†	.283***	.067	−.073	.011	.115

NOTE: *N* = 194. Tabled values are standardized regression coefficients (βs).
†*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

TABLE 3: Study 2: Hierarchical Regression Analyses Predicting Responses to Positive Relationship Events

	Step 1			Step 2		
Outcome Variable	Satisfaction	Anxiety	Avoidance	Anxiety × Avoidance	Anxiety × Satisfaction	Avoidance × Satisfaction
Explanations/attributions						
Relationship enhancing	.404***	.021	−.216***	.071	.118†	−.033
Relationship threatening	−.241***	.147*	.201**	−.093	−.136*	.048
Internal relationship[a]	.275***	.083	−.051	.054	.114	−.021
Emotions						
Happiness	.298***	.088	−.227**	−.017	−.108	.041
Distress	−.179*	.141*	.150*	−.019	−.048	−.043
Guilt	−.031	.272***	.066	.018	.013	−.023
Attachment needs[a]	.266***	.411***	−.061	.066	−.060	.097
Behavioral intentions						
Appreciation	.212**	.223**	−.202**	.105	−.025	.033
Distancing	−.207**	−.006	.302***	−.071	.038	−.055

NOTE: *N* = 194. Tabled values are standardized regression coefficients (βs).
a. There was also a significant Anxiety × Avoidance × Satisfaction interaction (*p* < .05) at Step 3 for this dependent variable.
†*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

and only weakly related to avoidance (r = −.16, p < .05). Thus, it was appropriate to test the interaction of the attachment dimensions and relationship satisfaction in further analyses. As such, we conducted hierarchical regression analyses to explore whether the effects of attachment style on each dependent variable were moderated by relationship satisfaction. We entered the main effects of anxiety, avoidance, and satisfaction on Step 1, all two-way interactions on Step 2, and the three-way interaction on Step 3. We ran separate analyses for positive (see Table 2) and negative (see Table 3) events. For simplicity, we tabled the regression coefficients for Step 1 and Step 2 only. (A correlation matrix of all dependent variables appears in Appendix C.)

ATTACHMENT STYLE DIFFERENCES IN
EXPLANATIONS AND ATTRIBUTIONS

Negative events. Relationship-enhancing attributions were predicted only by relationship satisfaction; as would be expected, individuals in satisfying relationships were more likely to make relationship-enhancing attributions for their partner's transgressions (see Table 2).

For relationship-threatening attributions, there were significant main effects of relationship satisfaction and anxiety, but these main effects were moderated by a significant Anxiety × Satisfaction interaction. As shown in Figure 7, simple slopes analysis revealed a strong positive association between anxiety and relationship-
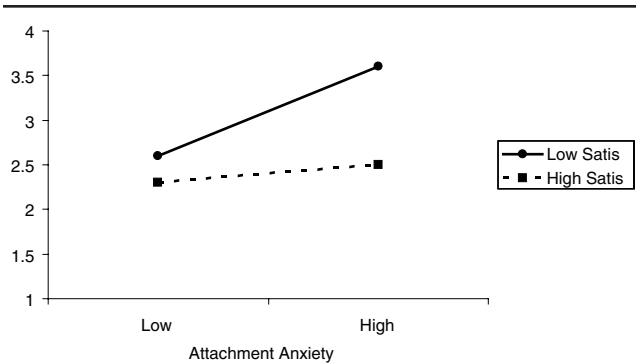
Figure 7 Attachment anxiety by relationship satisfaction predicting relationship-threatening attributions for negative events (Study 2).
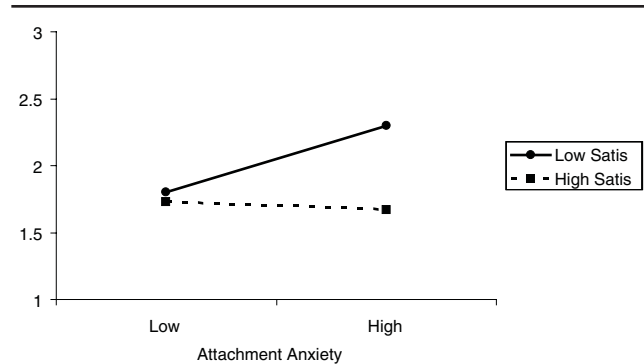
NOTE: Satis = relationship satisfaction.

Figure 8 Attachment anxiety by relationship satisfaction predicting relationship-threatening attributions for positive events (Study 2).

NOTE: Satis = relationship satisfaction.

threatening explanations for those low in relationship satisfaction ($\beta_{unhappy}$ = .55, p < .001) and a much weaker (but still significant) association for those high in satisfaction (β_{happy} = .19, p < .05).[2] Thus, the tendency for anxious individuals (preoccupied and fearful) to make relationship-threatening attributions for their partner's transgressions occurred primarily for those in unhappy relationships. Finally, there was also a marginally significant (p = .08) Anxiety × Avoidance interaction predicting relationship-threatening attributions. The predicted means (computed at 1 *SD* above/below the mean on each dimension) revealed that individuals who matched the secure profile were least likely to endorse the relationship-threatening attributions (M = 2.4), whereas those who matched the preoccupied (M = 3.1) and fearful (M = 3.1) profiles were most likely to do so. The dismissing (M = 2.7) profile fell in between these points.

Attachment style also was related to internal attributions to the self. Individuals who were higher in anxiety and avoidance were more likely to blame themselves for their partner's transgressions, and these effects were not moderated by relationship satisfaction. The predicted means based on the joint (additive) effects of anxiety and avoidance indicated that individuals who matched the secure profile (M = 2.4) were least likely to blame themselves, whereas those who matched the fearful profile (M = 3.3) were most likely to do so. The dismissing (M = 2.8) and preoccupied (M = 2.9) profiles fell in between these points.

Positive events. As would be expected, individuals in satisfying relationships endorsed much more generous explanations for their partner's caring behavior (see Table 3), but attachment style was also an important predictor of these attributions. First, there was a significant main effect of avoidance on relationship-enhancing attributions; avoidant individuals were less likely to

endorse relationship-enhancing attributions for their partner's caring behavior. There was also a marginally significant Anxiety × Satisfaction interaction (p = .07), which indicated that anxious individuals were somewhat less likely than nonanxious individuals to endorse relationship-enhancing attributions for their partner's caring behavior, but only if they were in unhappy relationships.

For relationship-threatening attributions, there were significant main effects of satisfaction, anxiety, and avoidance, and a significant Anxiety × Relationship Satisfaction interaction. The predicted means for the joint (additive) main effects of anxiety and avoidance indicated that secure individuals were least likely to make relationship-threatening attributions for their partner's caring behavior (M = 1.7), whereas fearful individuals were most likely to do so (M = 2.3). Preoccupied (M = 1.9) and dismissing (M = 1.9) individuals fell in between these points. In addition, the simple slopes analysis for the Anxiety × Relationship Satisfaction interaction (see Figure 8) revealed a significant positive association between anxiety and relationship-threatening attributions for those in unhappy relationships ($\beta_{unhappy}$ = .31, p < .01) but no association for those in happy relationships (β_{happy} = .03, *ns*). Thus, the tendency for anxious individuals (fearful and preoccupied) to make pessimistic attributions for their partner's caring behavior occurred primarily for those in unhappy relationships.

Finally, for internal relationship attributions, there was a significant Anxiety × Avoidance × Relationship Satisfaction interaction (p < .05). As shown in Figure 9, there were no differences in attributions for individuals in unhappy relationships. However, in happy relationships, individuals who matched the dismissing profile (high avoidance, low anxiety) were less likely than anyone else to endorse these generous attributions (to believe that their partner's caring behavior reflected
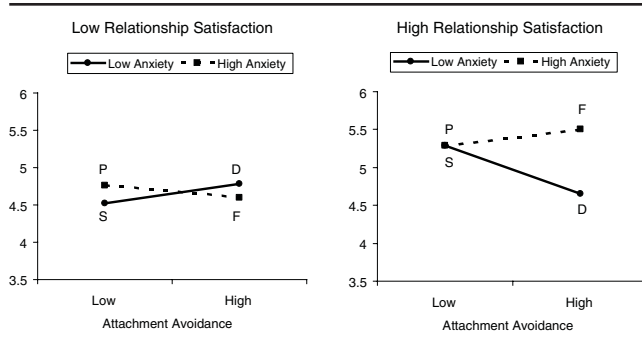
Figure 9   Attachment style by relationship satisfaction predicting internal relationship attributions for positive events (Study 2).
NOTE: S = secure; P = preoccupied; D = dismissing; F = fearful.

something stable and global about their partner or their relationship). Thus, unlike all other groups, dismissing individuals failed to adjust their attributions in line with the quality of their relationship.

EMOTIONAL RESPONSES

Negative events. Anxious individuals were much more likely to report emotional distress in response to partner transgressions (see Table 2). Avoidance was unrelated to emotional distress, and there were no significant main effects or interactions involving relationship satisfaction.

Positive events. In response to their partner's caring behavior, anxious individuals reported greater distress and guilt, and avoidant individuals reported less happiness and greater distress (see Table 3). There were no interactions involving relationship satisfaction, although relationship satisfaction was associated with greater happiness and less distress.

ATTACHMENT-RELATED NEEDS/GOALS

Negative events. There was a significant main effect of both anxiety and avoidance, and a significant Anxiety × Avoidance interaction (see Table 2). As expected, the pattern of predicted means indicated that individuals who matched the preoccupied and fearful profiles rated the attachment needs (that their partner failed to meet) as much more important ($M_{preocc} = 6.0$, $M_{fearful} = 5.9$) than individuals who matched the dismissing profile ($M_{dismiss} = 4.8$). Those who matched the secure profile fell in between these points ($M_{secure} = 5.4$). There were no significant interactions involving relationship satisfaction, although individuals in satisfying relationships rated the needs as more important.

Positive events. There were significant main effects of satisfaction and anxiety (see Table 3) and a significant Anxiety × Avoidance × Satisfaction interaction ($p < .05$). Among those in unhappy relationships, preoccupied and fearful individuals ($M_{preocc} = 5.1$, $M_{fearful} = 4.8$) rated

the attachment needs (that were met by their partner) as more important than did secure and dismissing individuals ($M_{secure} = 4.0$, $M_{dismiss} = 3.9$). However, in happy relationships, dismissing individuals ($M_{dismiss} = 4.4$) rated them as less important than did everyone else ($M_{fearful} = 5.5$, $M_{preocc} = 5.1$, $M_{secure} = 4.7$).

BEHAVIORAL INTENTIONS

Negative events. Anxious individuals showed a mixture of adaptive and maladaptive behavioral intentions in response to partner transgressions (see Table 2); they were more likely to minimize conflict but also more likely to seek reassurance and engage in hostile/punishing behavior. Avoidant individuals were less likely to engage in conflict-minimizing behaviors. The predicted means for conflict-minimizing behavior based on the joint (additive) main effects of anxiety and avoidance indicated that individuals who matched the dismissing profile were least likely to engage in such behavior ($M_{dismissing} = 3.9$, $M_{fearful} = 4.4$, $M_{secure} = 4.7$, $M_{preoccupied} = 5.1$). These effects were not moderated by relationship satisfaction, although satisfaction was associated with more adaptive responses overall.

Positive events. In response to their partner's caring behavior, anxious individuals were more likely to express appreciation, whereas avoidant individuals were less likely to express appreciation and more likely to distance themselves from their partner (see Table 2). The predicted means for appreciation based on the joint (additive) effects of anxiety and avoidance indicated that individuals who matched the preoccupied profile ($M = 6.2$) were most likely to express appreciation and gratitude, whereas dismissing individuals ($M = 5.4$) were least likely to do so. The secure ($M = 5.8$) and fearful ($M = 5.8$) profiles fell in between these points. These effects were not moderated by relationship satisfaction, although satisfaction was associated with more adaptive responses overall.

Discussion

Study 2 provides evidence that insecure working models of attachment are associated with less adaptive responses to positive as well as negative events. However, different forms of insecurity were associated with distinct outcomes. When we asked participants to imagine that their partner behaved in ways that were potentially negative (unresponsive or insensitive), the anxiety dimension was more strongly associated with adverse outcomes than was the avoidance dimension. Relative to secure individuals, anxious individuals (especially those who matched the fearful profile) drew more negative inferences about their partner's transgressions and were more likely to blame themselves for their partner's behavior. However, these effects were significantly atten-

uated (although not eliminated) by relationship satisfaction. Anxious individuals in happy relationships made more benign attributions than did those in unhappy relationships. In response to partner transgressions, anxious individuals also reported heightened emotional distress and a mixture of adaptive and maladaptive behavioral intentions, but these outcomes were not moderated by relationship quality. For example, regardless of their level of relationship satisfaction, anxious individuals responded to partner transgressions by endorsing behavioral intentions that would reassure them of their partner's love and protect their relationship from conflict, but they also endorsed hostile/punishing behaviors that may alienate their partners and harm their relationship. One reason for this pattern may be that anxious individuals placed such high importance on the attachment-related needs that were depicted in our stimulus events. Thus, even when their attributions were relatively benign (for those in happy relationships), they still felt disappointed by their partner's failure to meet their needs and endorsed behavioral intentions that were less adaptive.

Consistent with Study 1, the avoidance dimension was not strongly associated with responses to partner transgressions, with a few notable exceptions. Relative to secure individuals, individuals who were high in avoidance (especially fearful avoidant) were more likely to blame themselves for their partner's transgressions. In addition, relative to all other groups, dismissing avoidant individuals rated the attachment needs (which their partner failed to meet) as least important and were least likely to say they would engage in conflict-minimizing behavior (e.g., to discuss the event calmly with their partner).

When we asked our participants to imagine that their partner behaved in ways that were likely to be positive (supportive and caring), the avoidance dimension was more strongly associated with adverse outcomes than was the anxiety dimension. Relative to those low in avoidance, highly avoidant individuals reacted in much less generous ways to their partner's caring behavior; they made less optimistic attributions, reported less happiness and greater discomfort, and were less likely to express appreciation and more likely to distance themselves from their partner (perhaps because they doubted their partner's motives or because their partner's caring behavior activated their sense of discomfort with closeness and interfered with their need for interpersonal distance). Moreover, these effects were not moderated by relationship quality; even in highly satisfying relationships, they responded less favorably to their partner's caring and supportive behavior. Finally, regardless of relationship quality, dismissing (but not fearful) individuals rated the attachment needs as relatively unimpor-

tant, which may explain why they felt least happy in response to their partner's caring behaviors and why they were least likely to say they would express appreciation.

In contrast to the pattern of distrust evidenced by avoidant individuals, anxious individuals (especially those who matched the preoccupied profile) responded relatively favorably to their partner's caring behavior; they were no less likely than secure individuals to endorse optimistic attributions, they rated the caring behaviors as highly important to them, and they indicated that they would respond to them in relationship-promoting ways (expressing appreciation and gratitude). However, despite this positive pattern, there were some signs of potential vulnerability. Anxious individuals in unhappy relationships were somewhat less likely to make optimistic attributions for their partner's caring behavior (e.g., to believe that their partner's caring behavior reflected genuine love and concern) and more likely to endorse relationship-threatening attributions (e.g., to believe that their partner was motivated by selfish concerns). Furthermore, although they felt no less pleased by their partner's caring behavior (relative to secure individuals), they reported feeling somewhat guilty and emotionally distressed, perhaps because they worried about being a burden to their partner or because they were uncertain about their partner's motivation (as suggested by their attributions). These findings suggest that although anxious individuals (especially preoccupied) appreciated their partner's acts of kindness, they nevertheless had some doubts that could interfere with their ability to fully benefit from them.

What can we conclude about attachment differences in social construal processes and the moderating role of relationship satisfaction? A fundamental assumption of attachment theory is that new experiences will be construed in ways that are consistent with one's general working models of self and others (a process of assimilation), and the results of Study 2 (and Study 1) are consistent with this assumption in that general attachment models predicted attributions for specific partner behaviors, and many of these effects were not moderated by relationship satisfaction. However, attachment theory also assumes that general working models of self and others should be responsive to new information and experiences (a process of accommodation), and the results of Study 2 provide some evidence for this process. Specifically, although attachment-related anxiety was associated with pessimistic attributions (especially for partner transgressions), this association was attenuated (but not eliminated) for those in happy relationships. Thus, it appears that anxious individuals may be able to set aside their chronic insecurities when they are involved in well-functioning relationships. In contrast, attachment avoid-

ance was associated with pessimistic attributions (especially for partner caring behaviors) regardless of the quality of one's current relationship.

These findings are important for several reasons. At least with respect to attributions, they indicate that anxious individuals were responsive to the specific contingencies in their current relationship and were able to adjust their appraisals accordingly, which is presumed to be a critical element of healthy functioning (Bowlby, 1988; Kobak & Hazan, 1991). In addition, this finding is consistent with several recent studies (reviewed earlier) that indicate that anxious adults may function relatively well in supportive situations or supportive relationships (Collins & Feeney, 2004; Pierce & Lydon, 2001; Rholes et al., 2001; Simpson et al., 2003) and they point to the importance of studying such Person × Situation interactions. Nevertheless, our results also indicate that insecure individuals may remain cognitively and emotionally vulnerable to relationship difficulties even in the face of "corrective" relationship experiences. This vulnerability may surface—even in the best of relationships—whenever a partner's behavior activates one's fears about being rejected (for anxious individuals) or doubts about the trustworthiness or benevolence of others (for both anxious and avoidant individuals).

We saw evidence of this vulnerability in several ways. In response to partner transgressions, anxious individuals blamed themselves, reported emotional distress, and endorsed maladaptive behavioral intentions regardless of relationship quality. In addition, avoidant individuals blamed themselves and were less likely to engage in conflict-minimizing behavior regardless of relationship quality. In response to partner caring behavior, anxious individuals reported feeling more distress and guilt regardless of relationship quality. In addition, avoidant individuals endorsed pessimistic attributions, reported less happiness and more distress, and endorsed behavioral intentions that were likely to damage their relationship (less appreciation, greater emotional distancing) regardless of relationship quality. Hence, although insecure adults may develop positive relationship-specific expectations (as reflected in overall judgments of relationship satisfaction), their less-adaptive chronic expectations may, nonetheless, remain highly accessible and influential in driving their cognitive, emotional, and behavioral responses. Moreover, many of these effects are likely to occur automatically and outside of awareness. For example, maladaptive behavioral responses may result from automatic, if-then procedural rules that link specific attributions and emotions to specific action tendencies.

Of course, further research is needed before we can draw definitive conclusions about such processes, but these findings highlight the value of studying the joint effects of general working models and current relationship expectations (Collins et al., 2004). At a minimum, these results need to be replicated using samples that are more heterogeneous with respect to age and relationship status. In addition, future studies should include more detailed measures of relationship-specific expectations such as expectations about a partner's responsiveness to need, trustworthiness, or commitment.

CONCLUSIONS

Before concluding, it is important to acknowledge the limitations of the vignette methodology used in the current research. Although this methodology is standard in the attribution literature and has the benefit of providing a common set of stimuli to participants, we cannot be certain that findings based on hypothetical vignettes would generalize to actual social interactions. Attributions for hypothetical events may not correspond to the attributions perceivers would make in response to actual events, and individuals may have difficulty accurately forecasting their emotional and behavioral responses to such events. Thus, it would be useful to replicate these findings in the context of authentic social interactions. Fortunately, a recent set of laboratory studies on attachment style differences in perceptions of social support found evidence of social construal biases in response to actual social interactions (Collins & Feeney, 2004). In these studies, insecure individuals were more likely than secure individuals to construe their partner's ambiguous support messages as unhelpful and negatively motivated, and they reported feeling more distressed by them. These findings provide corroborating evidence that insecure working models color perceptions of partner behavior and that such effects are not limited to self-report/vignette methodology.

We began by arguing that individuals with negative self-images and pessimistic models of relationships may be predisposed to construe events in negative ways, to experience emotional distress, and to behave in ways that are likely to be detrimental to relationship functioning. Considered collectively, the present studies provide strong evidence for these hypotheses. Insecure working models of attachment were associated with a pattern of cognitive and emotional vulnerability that helps illuminate why dispositional insecurities may place individuals at risk for poor relationship outcomes. Insecure working models make it difficult for individuals to interpret their partner's behavior in the most favorable light, which may undermine their ability to achieve feelings of security. This research also contributes to the growing interest in the cognitive structures and processes that are relevant to close relationships and highlights the importance of studying the interface of cognition, emotion, motivation, and behavior.

APPENDIX A
Intercorrelations Among All Dependent Variables (Study 1)

Variable	1	2	3	4	5	6
1. Relationship-enhancing explanation	—					
2. Relationship-threatening explanation	−.176	—				
3. Internal relationship attribution	−.010	.613	—			
4. Responsibility/blame attribution	−.149	.564	.608	—		
5. Distress	−.035	.434	.385	.474	—	
6. Attachment-related needs	−.044	.113	.033	.137	.348	—
7. Conflict behavior	−.150	.436	.405	.555	.544	.291

NOTE: $N = 181$.

APPENDIX B
Variance/Covariance Matrix Used in the Path Analysis (Study 1)

Variable	1	2	3	4	5
1. Attachment-related anxiety	.521				
2. Attachment goals/needs	.112	.773			
3. Pessimistic attributions	.140	.039	.567		
4. Emotional distress	.149	.277	.265	.823	
5. Conflict behavior	.106	.182	.277	.349	.551

NOTE: $N = 181$. All variables are residual variables from which self-esteem, depression, and attributional style have been partialed.

APPENDIX C.1
Intercorrelations Among All Dependent Variables for Negative Events (Study 2)

Variable	1	2	3	4	5	6	7
1. Relationship-enhancing attributions	—						
2. Relationship-threatening attributions	−.279	—					
3. Internal to self attributions	−.196	.625	—				
4. Distress	−.241	.541	.342	—			
5. Attachment-related needs	−.020	.062	−.030	.422	—		
6. Conflict-minimizing behavior	.250	−.156	−.082	.077	.392	—	
7. Reassurance-seeking behavior	.030	.295	.236	.513	.394	.273	—
8. Hostile/punishing behavior	−.276	.426	.328	.598	.197	.024	.337

NOTE: $N = 194$.

APPENDIX C.2
Intercorrelations Among All Dependent Variables for Positive Events (Study 2)

Variable	1	2	3	4	5	6	7	8
1. Relationship-enhancing attributions	—							
2. Relationship-threatening attributions	−.554	—						
3. Internal relationship attributions	.562	−.232	—					
4. Happiness	.652	−.351	.433	—				
5. Distress	−.436	.589	−.181	−.519	—			
6. Guilt	−.118	.307	.008	−.182	.545	—		
7. Attachment-related needs	.189	−.007	.283	.360	−.006	.078	—	
8. Appreciative behavior	.465	−.089	.213	.529	−.191	.046	.376	—
9. Distancing behavior	−.344	.467	−.077	−.423	.494	.338	−.185	−.249

NOTE: $N = 194$.

NOTES

1. We asked half of our participants to imagine each vignette with their current romantic partner in mind and half to think of a hypothetical partner. We included this manipulation to determine whether individuals with different attachment styles would respond differently to a current versus hypothetical partner. Regression analyses revealed no significant Attachment Style × Relationship condition (current vs. hypothetical) interactions on any of our dependent variables. Thus, we collapsed across the two conditions and report only the aggregated analyses.

2. Because relationship satisfaction was negatively skewed, we computed the simple slopes (and plotted all interactions) involving satisfaction at values corresponding to the 10th (low satisfaction) and 90th (high satisfaction) percentiles on satisfaction (Aiken & West, 1991).

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