Attachment Working Models Twist Memories of Relationship Events

Jeffry A. Simpson[1], W. Steven Rholes[2], and Heike A. Winterheld[3]

[1]University of Minnesota, Twin Cities Campus; [2]Texas A&M University; and [3]California State University, East Bay

Abstract

The information that people remember about their relationships should be affected by their attachment orientations. This study investigated changes in individuals' memories of their own behavior during conflict-resolution discussions with their romantic partners. One week after each couple engaged in two videotaped conflict discussions, each partner's memory of the discussions was assessed. Memory biases were systematically related to attachment orientations. More avoidant individuals, for example, remembered being less supportive than they reported initially if they were relatively distressed during the discussions, whereas the opposite was true of less avoidant persons. More anxious individuals remembered being less emotionally distant than they reported initially if they were relatively distressed during the discussions, whereas the opposite was true of less anxious persons. We discuss the implications of these memory changes.

Keywords

attachment, working models, memory, conflict resolution

According to attachment theory (Bowlby, 1973, 1980), experiences with caregivers and other attachment figures during development create mental representations, or *working models*, of the self and others. These models encompass autobiographical memories of specific experiences with attachment figures, beliefs and attitudes about attachment figures, and conditional "if/then" rules (e.g., "if I am upset, then my partner will/will not support me") that result in expectations of partners and relationships. These models also contain procedural-knowledge rules about how to regulate emotions and thoughts in order to achieve attachment-related goals (Collins, Guichard, Ford, & Feeney, 2004; Mikulincer & Shaver, 2003). Over time, working models produce unique patterns of affect, cognition, and behavior that reflect different adult attachment orientations.

Adult attachment orientations are measured on two orthogonal dimensions (Brennan, Clark, & Shaver, 1998; Simpson, Rholes, & Phillips, 1996), known as *avoidance* and *anxiety*. Individuals who score high on the avoidance dimension desire psychological autonomy, independence, and sufficient emotional distance from their partners; these desires motivate avoidant individuals to limit and control caregiving, intimacy, and interdependence. Individuals who score high on the anxiety dimension crave psychological closeness and intimacy with their partners, but worry that their partners may be unable or unwilling to provide sufficient care and support. Individuals who score high on one or both of these dimensions are insecurely attached, whereas those who score low on both dimensions are securely attached. Highly secure individuals are comfortable with closeness, are open to depending on others and having others depend on them, and do not worry about being abandoned.

Attachment orientations and the working models that underlie them affect how people process interpersonal information in numerous important ways (Bowlby, 1980; Collins et al., 2004). Several studies have examined how relationship-relevant perceptions and judgments are shaped by attachment orientations (e.g., Belsky, Spritz, & Crnic, 1996; Fraley, Garner, & Shaver, 2000; Kirsh & Cassidy, 1997; Mikulincer & Arad, 1999; Mikulincer & Orbach, 1995; Miller, 1999; Miller & Noirot, 1999; Pietromonaco & Barrett, 1997; Rudolph, Hammen, & Burge, 1997). Collectively, these studies have found that highly avoidant and highly anxious people perceive their social environments more negatively than do securely attached people, and that insecure people tend to perceive negative relationship events more accurately than positive ones (see also Collins & Feeney, 2004; Kirsh & Cassidy, 1997).

Corresponding Author:
Jeffry A. Simpson, Department of Psychology, University of Minnesota, Minneapolis, MN 55455-0344
E-mail: simps108@umn.edu

The effects that attachment orientations have on memory have seldom been studied. One of the few studies that examined such effects (B.C. Feeney & Cassidy, 2003) investigated how adolescents' attachment-related representations of each parent predicted memories of conflict interactions with each parent 6 weeks earlier. The study found that the memories of adolescents who reported less secure representations of their parents became more negative over time than did the memories of adolescents who had more secure representations. Memory-change effects such as these are important because schema-consistent memories are easily assimilated into, and may help to maintain, the working models that underlie adult attachment orientations (Fraley & Brumbaugh, 2004).

In the research we report here, we examined how romantic attachment orientations systematically twist individuals' memory for their own behavior in a videotaped attachment-relevant situation. To date, no studies of memory in the attachment literature have examined systematic changes in self-relevant memories. This lack of research represents a significant gap in knowledge because autobiographical memories and associated self-concepts are likely to affect the way in which individuals think, feel, and behave in close relationships.

We first measured the attachment orientations of both partners in romantic relationships. We then had each couple engage in a videotaped conflict-resolution discussion task. This task created an attachment-relevant event that both partners would later be asked to recall. Immediately after each discussion, each partner rated how supportive and emotionally distant he or she had been during the discussion. The constructs of support and emotional distance are both central to attachment theory (Bowlby, 1973, 1980). One week later, each partner completed the same support and distance measures from memory. This allowed us to test the degree to which each partner's memory of his or her behavior differed from his or her immediate postdiscussion perceptions.

We predicted that avoidant individuals would remember being less supportive and more distancing than indicated by their perceptions immediately following the conflict-discussion task, given their needs and goals for achieving and maintaining psychological and emotional distance. We also predicted that anxious individuals would recall being less distancing and more supportive than indicated by their immediate postdiscussion perceptions, given their needs and goals for attaining greater closeness and felt security. These predicted "memory twists" would be consistent with the chronic needs, concerns, and interpersonal goals harbored by highly avoidant and highly anxious people (see Mikulincer & Shaver, 2003). Moreover, we expected that these effects would reflect actual memory twists and therefore would remain significant even when we statistically controlled for observer ratings of each individual's supportiveness and distancing.

We also reasoned, however, that these effects might be moderated by the degree to which individuals were distressed during the conflict-discussion task (Alexander, Quas, & Goodman, 2002; Simpson & Rholes, 1994). According to attachment theory (Bowlby, 1969, 1973), the attachment system should become activated and guide how people think, feel, and behave principally when they are distressed. The effects of distress on observable behavior have been studied extensively. This research has confirmed that attachment orientations affect behavior most strongly when individuals feel threatened, overly challenged, or distressed (J.A. Feeney, 1999; Kobak & Duemmler, 1994; Mikulincer, Florian, & Weller, 1993; Simpson, Rholes, & Nelligan, 1992). These findings support Bowlby's (1969) claim that one major function of the attachment system is to prepare individuals to respond to and deal with threatening or distressing events. In the absence of threat or stress, however, other behavioral systems (e.g., exploration) should govern behavior.

The effects of distress and adult attachment orientations on memory for attachment-relevant information have never been examined. We anticipated, however, that distress would have the same kinds of effects on memory that it does on overt behavior, given that working models become more salient when individuals are distressed.

Method
Participants

Participants were 148 heterosexual couples from a Southwestern university. Mean relationship length was 19.93 months (*SD* = 16.36 months; range = 3–108 months). Eighty-nine percent of the participants were in dating relationships, 8% were engaged, and 3% were married. The mean ages of the men and women were 19.72 and 19.00 years, respectively (ranges = 18–30 for men and 18–30 for women). Eighty percent were Caucasian, 12% were Hispanic, 5% were Asian American, 1% were African American, and 2% were multiracial.

Phase 1: Procedure and measures

Questionnaires. When couples arrived for Phase 1, each partner first completed questionnaires in a private room. Embedded in the questionnaires were demographic questions along with (a) the Adult Attachment Questionnaire (AAQ; Simpson et al., 1996), a well-validated 17-item measure that assesses attachment anxiety (e.g., "I usually want more closeness and intimacy than others do") and avoidance (e.g., "Others often want me to be more intimate than I feel comfortable being"), and (b) the Berkeley Personality Profile (John, Donahue, & Kentle, 1991), which was included to assess neuroticism for discriminant-validity purposes (see Brennan & Shaver, 1995). Alphas for these scales ranged from .72 to .80.

Conflict discussion task. After completing the questionnaires, both partners were led to the same room. The experimenter then asked each partner to list the two most serious, unresolved problems in the relationship. The two highest-ranked problems (one from each partner's list) were then discussed in separate videotaped discussions. The experimenter gave each couple the following instructions for the first discussion:

Your partner has identified an area of current conflict in your relationship. We would now like both of you to think about this issue for a few moments. Think about what it is that upsets you, why this is an issue of concern in your relationship, and how it might be resolved.

When the first videotaped discussion was finished (6–8 min), the same procedure was used for the second discussion, during which the other partner's highest-ranked conflict issue was discussed.

Perceptions of support and distancing. We assessed partners' perceptions of how supportive and distancing they thought they had been immediately after each discussion. Specifically, each participant rated his or her level of support (e.g., "I was supportive of my partner," "I was sympathetic to my partner's point of view") and distancing (e.g., "I was emotionally distant," "I was withdrawn or disengaged during the discussion") by rating 10 items adapted from a scale by Cutrona (1989). Each item was answered on a 9-point Likert-type scale ranging from 1, *not at all*, to 9, *extremely*. The 10 items loaded on two factors: Supportiveness and Distancing. Ratings on the appropriate items were averaged to create scores for perceived supportiveness and perceived distancing for each participant (perceived supportiveness: α = .92; perceived distancing: α = .69).

Phase 2: Procedure, measures, and behavioral coding

Memories of supportiveness and distancing. When each couple returned for Phase 2, partners were led to separate rooms. Each partner first used a 7-point Likert-type scale to report how much the couple had talked about the videotaped discussion task during the preceding week. Then, on the same 9-point scales used in Phase 1, each partner rated how supportive and distancing he or she remembered being during the conflict discussions 1 week earlier. Factor analyses again revealed a Supportiveness and a Distancing factor for these ratings. Ratings on the appropriate items were averaged to

create memory scores for supportiveness and distancing (recalled supportiveness: α = .91; recalled distancing: α = .74).

Observer ratings. Each discussion was then rated by nine independent observers who were blind to all hypotheses and other data. Observers rated the behavior of each partner using the same supportiveness and distancing scales on which participants had rated themselves. Because the average interrater reliability across all rated items was .81, the ratings for each item were averaged across the nine raters. The items defined two factors: Supportiveness and Distancing. We therefore computed an observer-rated supportiveness score (α = .99) and an observer-rated distancing score (α = .82) for each participant. Observers also rated how distressed or anxious each partner appeared during the discussions, using 9-point Likert-type scales. Factor analysis revealed a single Stress-Anxiety dimension, so a stress-anxiety score (α = .91) was calculated for each participant.

Results

We report the results in three sections. First, we present the results of analyses examining the effects of predictor variables on observer ratings of supportiveness and distancing. Second, we report the results of analyses testing the hypothesized effects of individuals' (actors') attachment orientations and rated levels of distress; these analyses tested whether attachment and distress predicted specific memory twists involving recollections of supportiveness and distancing. Finally, we report the results of analyses that provide discriminant-validity evidence for the findings. The data were analyzed using dyadic multiple regression techniques that take into account the statistical dependency that exists between partners in relationships (the Actor-Partner Interdependence Model, or APIM; Kashy & Kenny, 2000; Kenny, 1996).

Table 1 reports descriptive statistics for the primary variables in the study and results of *t* tests of gender differences. Correlations among the primary variables are provided in Table 2.

Table 1. Mean Ratings for Men and Women and Statistical Tests of Gender Differences

Variable	Men	Women	Mean difference	Matched-pairs *t* test
Avoidance	24.55 (7.85)	23.20 (8.75)	1.35	$t(147) = 1.45$, n.s.
Anxiety	29.26 (8.30)	26.84 (9.53)	2.42	$t(147) = 2.41$, $p < .02$
Neuroticism	16.49 (4.61)	21.59 (5.77)	–5.10	$t(147) = -8.23$, $p < .001$
Self-perceived supportiveness (Phase 1)	52.00 (9.47)	52.51 (10.87)	–0.51	$t(146) = -0.57$, n.s.
Self-perceived distancing (Phase 1)	7.11 (4.53)	7.00 (4.54)	0.11	$t(147) = 0.22$, n.s.
Observer-rated supportiveness (Phase 1)	38.87 (9.35)	35.22 (9.61)	3.65	$t(146) = 4.71$, $p < .001$
Observer-rated distancing (Phase 1)	9.64 (2.75)	9.44 (3.64)	0.20	$t(146) = 0.52$, n.s.
Change in self-perceived supportiveness (Phase 1 to Phase 2)	–1.43 (6.27)	–2.02 (6.64)	0.59	$t(144) = 0.81$, n.s.
Change in self-perceived distancing (Phase 1 to Phase 2)	0.16 (3.89)	–0.27 (4.31)	0.44	$t(145) = 0.96$, n.s.
Observer-rated distress	2.63 (0.85)	3.05 (1.02)	–0.42	$t(148) = -5.40$, $p < .001$

Note: N = 148 men and 148 women. Standard deviations of the ratings are given in parentheses.

Table 2. Correlations Among the Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Male avoidance	—	.40**	−.04	−.29**	.31**	−.02	.10	.01	.22**	.06	−.01	−.05	.01	.01	.00	.17*	.05	.16
2. Male anxiety		—	.05	−.13	.14	−.05	.07	.03	.12	.17*	.06	−.11	.00	.02	−.12	.20*	.04	.08
3. Male distress			—	−.28**	.10	−.60**	.27**	−.21*	.16	.01	.06	.53**	−.36**	.02	−.57**	.04	−.12	.06
4. Male perceived support (P1)				—	−.35**	.41**	−.25**	.00	−.24**	−.06	−.21**	−.25**	.40**	−.05	.31**	−.08	.07	−.11
5. Male perceived distancing (P1)					—	−.33**	.41**	−.11	.00	.10	.13	.12	−.21*	.11	−.21*	.20*	.09	.07
6. Male support						—	−.76**	.34**	−.16	−.08	−.05	−.37**	.41**	−.02	.53**	−.17*	.07	−.08
7. Male distancing							—	−.16*	.09	.07	.04	.17*	−.30**	.04	−.32**	.16	.03	.14
8. Change in male perceived support								—	−.03	.01	.06	−.14	.14	.00	.12	.02	.11	−.04
9. Change in male perceived distancing									—	.01	−.05	.04	−.14	−.03	−.23**	.19*	−.18*	.12
10. Female avoidance										—	.27**	−.03	−.12	.26**	.15	.27**	−.01	−.14
11. Female anxiety											—	.23**	−.10	.18*	−.12	.08	.09	.03
12. Female distress												—	−.38**	−.06	−.52**	.00	−.04	−.03
13. Female perceived support (P1)													—	−.11	.51**	.00	.00	−.04
14. Female perceived distancing (P1)														—	−.20*	.29**	−.08	.00
15. Female support															—	−.34**	.28**	−.05
16. Female distancing																—	.18*	.20*
17. Change in female perceived support																	—	−.28**
18. Change in female perceived distancing																		—

Note: *N* = 148 women and 148 men. All correlations are two-tailed. Anxiety and avoidance were measured by the Adult Attachment Questionnaire (AAQ; Simpson, Rholes, & Phillips, 1996). "Perceived support" and "perceived distancing" refer to participants' self-report on these measures; "distress," "support," and "distancing" refer to observers' ratings. P1 = Phase 1.
*$p < .05$. **$p < .01$.

Predicting observer ratings of conflict-discussion behavior

The predictor variables in the first set of APIM analyses were actor gender, actor and partner avoidance and anxiety, and actor and partner observer-rated distress. The dependent variables were the observer ratings of each individual's (each actor's) supportiveness and distancing in the discussions. More avoidant individuals (actors) were rated as behaving in a less supportive and more distancing manner during the discussions, $\beta = -0.12$, $t(252) = -2.12$, $p < .04$, and $\beta = 0.07$, $t(261) = 2.88$, $p < .005$, respectively. In addition, less anxious individuals (actors) were rated as behaving more supportively when they had partners who were rated as less distressed, $\beta = 0.18$, $t(240) = 2.37$, $p < .02$. The analyses also indicated that individuals (actors) who were rated as more distressed, $\beta = -4.58$, $t(242) = -8.24$, $p < .001$, and individuals (actors) who had more distressed partners, $\beta = -2.55$, $t(242) = -4.63$, $p < .001$, were both rated as behaving less supportively. Finally, individuals (actors) who were rated as more distressed and had more avoidant partners were rated as behaving less supportively, $\beta = 0.17$, $t(265) = 1.97$, $p < .05$.

Differences between immediate perceptions and later recollections

To test for the hypothesized memory changes, we created residualized scores in which each self-perception measure (collected immediately after each discussion) was partialed from the appropriate memory measure (collected 1 week later). Using residualized (partialed) scores to assess change avoids several problems inherent in raw difference scores (Cohen & Cohen, 1983). The predictor variables in this set of APIM analyses were actor gender, actor and partner avoidance and anxiety, and actor and partner observer-rated distress. We also included the appropriate observer ratings of supportive or distancing behavior displayed by the actor and the partner as control variables. No significant main effects were found in these analyses.[1,2]

As predicted, avoidance and anxiety were both related to changes in memory, but the effects were contingent on how distressed individuals (actors) had been during the discussions. As Figure 1 shows, for the analysis in which residualized change in supportiveness was the dependent measure, an interaction confirmed that more avoidant individuals (actors) remembered being less supportive 1 week after the discussion than they reported immediately after the discussion, but only if they had been rated by observers as being relatively distressed during the discussion, $\beta = -0.19$, $t(260) = -3.59$, $p < .001$. This interaction also revealed that less avoidant individuals remembered being more supportive 1 week after the discussion than they reported immediately after the discussion, again only if they had been relatively distressed during the discussion. As Figure 2 shows, for the analysis in which residualized change in distancing was the dependent measure, less anxious individuals (actors) recalled being more distant from their
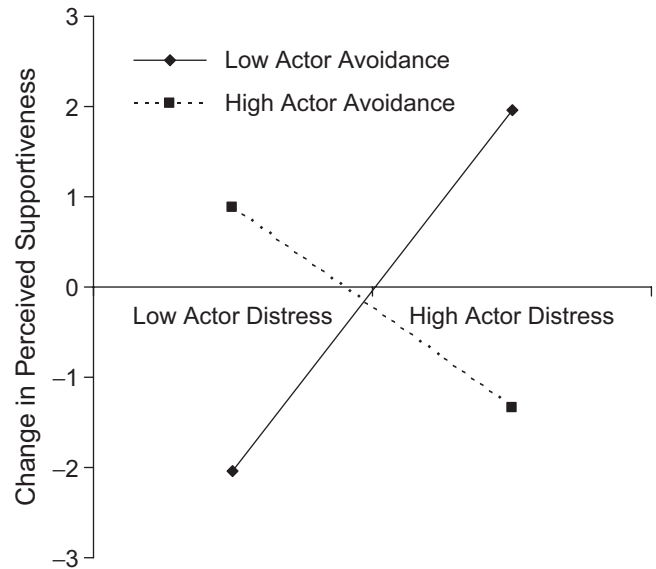

Fig. 1. The interaction of actor's distress and attachment avoidance in predicting change in actor's self-perceptions of supportiveness from Phase 1 to Phase 2. Slopes were computed for values 1 standard deviation above and 1 standard deviation below the mean on each independent variable.

partners than they had initially reported if they had been relatively distressed during the discussion, $\beta = -.06$, $t(258) = -2.00$, $p < .05$. This interaction also indicated that more anxious individuals (actors) remembered being less distant from their partners (i.e., closer to their partners) than they had initially reported if they had been relatively distressed.

Discriminant analyses

We reconducted all of the reported analyses to statistically control for each individual's (each actor's) scores on
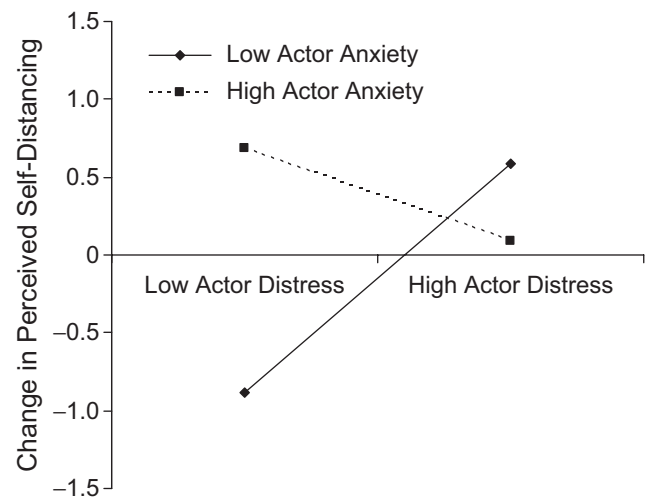

Fig. 2. The interaction of actor's distress and attachment anxiety in predicting change in actor's perceptions of self-distancing from Phase 1 to Phase 2. Slopes were computed for values 1 standard deviation above and 1 standard deviation below the mean on each independent variable.

neuroticism and for how much each individual (each actor) talked about the discussion task with his or her partner between Phase 1 and Phase 2. When we did so, all of the significant effects reported remained significant. The observed attachment effects, therefore, are not attributable to shared variance with neuroticism or to how much partners talked about the discussion topic during the intervening week.

Discussion

This study provides several novel and theoretically important findings. The results for observer ratings of the discussions are consistent with prior research showing that attachment orientations are linked to actual behavior in attachment-relevant situations (e.g., Collins & Feeney, 2000; Simpson et al., 1996). More avoidant individuals were rated as displaying less support and more distancing behavior during their discussions. These results are consistent with studies that have documented what highly avoidant people do behaviorally to keep their attachment systems deactivated and quiescent (e.g., Mikulincer et al., 1993; Simpson et al., 1992). In addition, more anxious individuals were rated as less supportive when their partners were more distressed. When their partners are distressed, highly anxious persons may want to provide high-quality support, but they should find it difficult to do so because stressful events—especially interpersonal ones—cognitively overload anxious persons (Mikulincer & Shaver, 2003), reducing their ability to orient toward and effectively soothe their partners.

Memory changes were tested by partialing each individual's Phase 1 score from his or her Phase 2 score on each focal measure (support and distancing). The change findings, therefore, reflect memory changes after encoding, once working models had already started to twist perceptions. Results for avoidant individuals were consistent with their working models, as more avoidant individuals remembered being less supportive in Phase 2 than they had reported initially if they had been relatively distressed during the discussion a week earlier. Less avoidant persons, in contrast, recalled being more supportive in Phase 2 than they had reported initially if they had been relatively distressed during the discussion. These findings are consistent with the needs and goals of highly avoidant people, who yearn to limit intimacy and maintain control and autonomy in their relationships. They are also in line with the needs and goals of less avoidant (i.e., more secure) persons, who strive to increase intimacy in their relationships (Mikulincer, 1998). These findings also mesh nicely with earlier behavioral observation studies of avoidance. For example, we (Simpson et al., 1992) found that when romantic partners are waiting to do a stressful activity, less avoidant people offer more support if their partners appear distressed, whereas more avoidant people offer less support if their partners appear distressed—even though this is precisely the situation in which partners need support the most.

Schema-consistent memory changes were also associated with attachment anxiety. Less anxious individuals recalled being more distant in Phase 2 than they had reported initially if they had been relatively distressed during the discussion. Results for more anxious individuals displayed the opposite pattern, and were consistent with such individuals' irrepressible desire to become closer to their partners and achieve greater felt security; that is, in Phase 2, more anxious individuals remembered being less distant from (emotionally closer to) their partners than they had reported initially if they had been relatively distressed during the discussion.

In sum, the memory-change findings are consistent with the needs, goals, concerns, and motives harbored by highly avoidant and highly anxious persons, but only if these individuals were relatively distressed when the memory was created. The tenor of these findings is also consistent with what B.C. Feeney and Cassidy (2003) found. The current study, however, differs in several important respects from their study. Feeney and Cassidy, for example, did not examine the effects of distress on memory, did not study romantic partners, did not assess the two dimensions of adult attachment (anxiety and avoidance), and did not test individuals' memory changes for their own behavior in relation to the two types of insecurity (anxiety and avoidance).

These findings have several important implications. First, they shed light on how working models may buffer and stabilize attachment orientations across time. Attachment orientations remain stable, at least in part, because of schema-consistent memory storage and retrieval processes. These findings also help explain why it is difficult for people—even those in therapy—to change their attachment orientations. Even if individuals want to disconfirm and alter their insecure working models, their models are likely to twist their memories in model-congruent ways, particularly in stressful attachment-relevant situations.

Second, our findings indicate that attachment-based memory distortions depend on the degree to which individuals are distressed when memories are initially formed. These findings are consistent with a core principle of attachment theory, namely, that working models ought to affect how individuals think, feel, and behave most strongly when the attachment system is activated (Bowlby, 1969, 1973; Simpson & Rholes, 1994). They are also consistent with a recent review of children's memory for distressing events. Alexander et al. (2002) found that attachment models affect the type and amount of information young children encode, store, and retrieve primarily when children experience stressful events. Much as we found, children typically remember stressful events in a manner that is aligned with their attachment schemas (working models).

In conclusion, what individuals respond to in relationships is not what they actually said or did during an interaction with their partner; rather, what they respond to is memories of the interaction filtered through their working models. The current findings highlight the important role of working models and

the motivations that underlie them in generating a "model-consistent reality" of a relationship.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interests with respect to their authorship and/or the publication of this article.

Funding

Notes

1. Partner variables were included in these analyses so we could perform better and more precise tests of the hypothesized actor effects.
2. Gender was a significant predictor in two interactions. Even though highly avoidant individuals recalled being more emotionally distant in Phase 2 relative to Phase 1, this effect was smaller for women than for men, $\beta = 0.11$, $t(260) = 3.18$, $p < .003$. Also, women recalled being more distant in Phase 2 if their partners were more avoidant, whereas men recalled being less distant if their partners were more avoidant, $\beta = -0.07$, $t(260) = -1.97$, $p < .05$.

References

Alexander, K.W., Quas, J.A., & Goodman, G.S. (2002). Theoretical advances in understanding children's memory for distressing events: The role of attachment. *Developmental Review*, *22*, 490–519.

Belsky, J., Spritz, B., & Crnic, K. (1996). Infant attachment security and affective-cognitive information processing at age 3. *Psychological Science*, *7*, 111–114.

Bowlby, J. (1969). *Attachment and loss: Attachment*. New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss: Separation, anxiety, and anger*. New York: Basic Books.

Bowlby, J. (1980). *Attachment and loss: Sadness and depression*. New York: Basic Books.

Brennan, K.A., Clark, C.L., & Shaver, P.R. (1998). Self-report measurement of adult attachment: An integrative overview. In J.A. Simpson & W.S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York: Guilford Press.

Brennan, K.A., & Shaver, P.R. (1995). Dimensions of adult attachment, affect regulation, and romantic relationship functioning. *Personality and Social Psychology Bulletin*, *21*, 267–283.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.

Collins, N.L., & Feeney, B.C. (2000). A safe haven: An attachment theory perspective on support seeking and caregiving in intimate relationships. *Journal of Personality and Social Psychology*, *78*, 1053–1073.

Collins, N.L., & Feeney, B.C. (2004). Working models of attachment affect perceptions of social support: Evidence from experimental and observational studies. *Journal of Personality and Social Psychology*, *87*, 363–383.

Collins, N.L., Guichard, A.C., Ford, M.B., & Feeney, B.C. (2004). Working models of attachment: New developments and emerging themes. In W.S. Rholes & J.A. Simpson (Eds.), *Adult attachment: Theory, research, and clinical implications* (pp. 196–239). New York: Guilford Press.

Cutrona, C.E. (1989). Ratings of social support by adolescents and adult informants: Degree of correspondence and prediction of depressive symptoms. *Journal of Personality and Social Psychology*, *57*, 723–730.

Feeney, B.C., & Cassidy, J. (2003). Reconstructive memory related to adolescent-parent conflict interactions: The influence of attachment-related representations on immediate perceptions and changes in perceptions over time. *Journal of Personality and Social Psychology*, *85*, 945–955.

Feeney, J.A. (1999). Adult romantic attachments and couple relationships. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 355–377). New York: Guilford Press.

Fraley, R.C., & Brumbaugh, C.C. (2004). Predictors of change in attachment security. In W.S. Rholes & J.A. Simpson (Eds.), *Adult attachment: Theory, research, and clinical implications* (pp. 133–156). New York: Guilford Press.

Fraley, R.C., Garner, J.P., & Shaver, P.R. (2000). Adult attachment and the defensive regulation of attention and memory: Examining the role of preemptive and postemptive processes. *Journal of Personality and Social Psychology*, *79*, 1–11.

John, O.P., Donahue, E.M., & Kentle, R.L. (1991). *The Big Five Inventory—Versions 4a and 54*. Berkeley: University of California, Berkeley, Institute for Personality and Social Research.

Kashy, D.A., & Kenny, D.A. (2000). The analysis of data from dyads and groups. In H.T. Reis & C.M. Judd (Eds.), *Handbook of research methods in social psychology* (pp. 451–477). New York: Cambridge University Press.

Kenny, D.A. (1996). Models of interdependence in dyadic research. *Journal of Social and Personal Relationships*, *13*, 279–294.

Kirsh, S.J., & Cassidy, J. (1997). Preschoolers' attention to and memory for attachment-relevant information. *Child Development*, *68*, 1143–1153.

Kobak, R.R., & Duemmler, S. (1994). Attachment and conversation: Toward a disclosure analysis of adolescent and adult security. In K. Bartholomew & D. Perlman (Eds.), *Attachment processes in adulthood* (pp. 121–149). London: Jessica Kingsley.

Mikulincer, M. (1998). Attachment working models and the sense of trust: An exploration of interaction goals and affect regulation. *Journal of Personality and Social Psychology*, *74*, 1209–1224.

Mikulincer, M., & Arad, D. (1999). Attachment working models and cognitive openness in close relationships: A test of chronic and temporary accessibility effects. *Journal of Personality and Social Psychology*, *77*, 710–725.

Mikulincer, M., Florian, V., & Weller, A. (1993). Attachment orientations, coping strategies, and posttraumatic psychological distress: The impact of the Gulf War in Israel. *Journal of Personality and Social Psychology*, *64*, 817–826.

Mikulincer, M., & Orbach, I. (1995). Attachment orientations and repressive defensiveness: The accessibility and architecture of

affective memories. *Journal of Personality and Social Psychology*, *68*, 917–925.

Mikulincer, M., & Shaver, P.R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 53–152). New York: Academic Press.

Miller, J.B. (1999). Attachment orientation and memory for attachment-related events. *Journal of Social and Personal Relationships*, *16*, 773–801.

Miller, J.B., & Noirot, M. (1999). Attachment memories, models and information processing. *Journal of Social and Personal Relationships*, *16*, 147–173.

Pietromonaco, P.R., & Barrett, L.F. (1997). Working models of attachment and daily social interactions. *Journal of Personality and Social Psychology*, *73*, 1409–1423.

Rudolph, K.D., Hammen, C., & Burge, D. (1997). Cognitive representations of self, family, and peers in school-age children: Links with social competence and sociometric status. *Child Development*, *66*, 1385–1402.

Simpson, J.A., & Rholes, W.S. (1994). Stress and secure base relationships in adulthood. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships: Vol. 5. Attachment processes in adulthood* (pp. 181–204). London: Kingsley.

Simpson, J.A., Rholes, W.S., & Nelligan, J.S. (1992). Support-seeking and support-giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology*, *62*, 434–446.

Simpson, J.A., Rholes, W.S., & Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality and Social Psychology*, *71*, 899–914.