

**Psychosocial Vulnerability From
Adolescence to Adulthood:
A Prospective Study of Attachment
Style Differences in Relationship
Functioning and Partner Choice**

Nancy L. Collins

University of California, Santa Barbara

M. Lynne Cooper

Austin Albino

University of Missouri, Columbia

Lisa Allard

Phase One, Beverly Hills, CA

ABSTRACT Using a prospective research design, this study explored whether attachment style during adolescence forecasts the nature and quality of romantic relationships in early adulthood and investigated two general pathways for explaining these effects. Black and White community residents

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were first interviewed in adolescence at which time they completed a self-report measure of attachment style. Approximately 6 years later, they participated in a follow-up interview along with their current romantic partners ($N = 224$ couples). Results revealed that insecure attachment in adolescence was a risk factor for adverse relationship outcomes in adulthood, although the effects were most consistent for avoidant attachment. Avoidant adolescents were involved in relationships that they (and their partners) rated as less satisfying overall; they also engaged in fewer pro-relationship behaviors, and perceived that their partners engaged in fewer pro-relationship behaviors. In addition, avoidant adolescents were involved with partners who had less healthy personality profiles. Results for anxious-ambivalent and secure attachment were weaker, more complex, and moderated by gender. This study provides the first prospective evidence that avoidant attachment places individuals at risk for adverse relationship outcomes and highlights potential pathways through which this occurs.

On the way in which an individual's attachment behavior becomes organized within his personality turns the pattern of affectional bonds he makes during his life.

— Bowlby (1980, p. 41)

Establishing a close and intimate bond with a romantic partner is one of the most important developmental tasks of early adulthood and an important predictor of life satisfaction and emotional well-being. Yet, many young adults find it difficult to establish secure and well-functioning intimate relationships. Why are some young adults at greater risk for developing troubled relationships, and what are the origins of this risk? Attachment theory provides a useful theoretical framework for addressing questions such as these. According to this approach, individuals enter new relationships with a history of interpersonal experiences and a unique set of memories, beliefs, and expectations that guide how they interact with others and how they construe their social world. 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 in childhood and adolescence (Bowlby, 1973; Bretherton, 1985). Once developed, working models of attachment are carried forward into new relationships where they continue to shape social perception, affect regulation, and

interpersonal behavior (Collins & Allard, 2001; Shaver, Collins, & Clark, 1996).

In the past decade, attachment theory has become a major theoretical framework for studying intimate relationships in adulthood and for understanding individual differences in personal adaptation across the lifespan (see Cassidy & Shaver, 1999, for a comprehensive review of attachment theory). A substantial body of research indicates that adults with different *attachment styles* differ greatly in the nature and quality of their close relationships. Overall, secure adults have more satisfying and well-functioning intimate relationships compared to adults with various forms of insecure attachment style (see Feeney, 1999, for a review). Most of these findings, however, are based on cross-sectional studies of established relationships, which makes it difficult to determine whether attachment style contributed to relationship outcomes or whether it largely reflects it. In the present study, we extend prior research by exploring whether attachment style during adolescence forecasts the nature and quality of romantic relationships in early adulthood. In doing so, we investigate two possible pathways for explaining these effects over time. First, we examine whether attachment style in adolescence predicts behavioral tendencies (e.g., self-disclosure, jealousy, withdrawal) that facilitate or interfere with an individual's ability to sustain satisfying intimate relationships. Second, we examine whether attachment styles predispose individuals to choose partners whose own personality traits and behavioral tendencies increase or decrease their chances for successful relating. We begin with a brief review of attachment theory.

Attachment Theory and Attachment Styles

Drawing from principles of evolutionary theory, Bowlby (1982) argued that attachment behaviors in infancy and childhood are regulated by an innate behavioral system that functions to promote safety and survival by maintaining a child's proximity to a nurturing caretaker. A child's ability to rely on his or her attachment figure as a safe haven of comfort in times of need and as a secure base from which to explore the environment is considered a key component of well-functioning attachment bonds and a key predictor of healthy emotional development (Bretherton, 1985). Bowlby (1973, 1982) further proposed that early attachment relationships have a profound

impact on the child's developing personality. Through repeated interactions with caretakers, children are thought to develop *internal working models* of themselves as worthy or unworthy of care, and of others as responsive or unresponsive.

Although each child's experiences, and hence working models, are unique, certain regularities have been observed in the nature and quality of infant-caretaker relationships. Attachment scholars identify three distinct patterns or *styles* of attachment—secure, avoidant, and anxious-ambivalent—which are systematically linked to variations in caregiver warmth and responsiveness (Ainsworth, Blehar, Waters, & Wall, 1978). Secure attachment is associated with a caregiver who is sensitive and responsive (thereby, inducing feelings of support and security), avoidant attachment is associated with a caregiver who is cool, rejecting, and unsupportive (inducing premature self-reliance and suppression of neediness and vulnerability), and anxious-ambivalent attachment is associated with a caregiver who responds in an inconsistent manner (inducing anxiety, vigilance, and anger).

These differences in attachment style are thought to reflect systematic differences in the child's internal working models of self and others. Once developed, these models become core features of personality, which are carried forward into new relationships, where they continue to guide cognitive, emotional, and behavioral response patterns in attachment-relevant contexts (Bowlby, 1973; Collins & Read, 1994). This perspective on attachment style is consistent with Mischel and Shoda's (1999) Cognitive-Affective Processing (CAPs) theory of personality, which suggests that the basic structure of personality is organized in terms of stable cognitive-affective units (CAUs) that reflect both the biological and psychosocial history of the individual. Once developed, CAUs guide and constrain cognition, affect, and behavior in response to specific situational features. Working models of attachment can, thus, be viewed as a special type of CAU within the CAPS model of personality (see Zayas, Shoda, & Ayduk, this volume).

Attachment Processes in Adulthood

Individual Differences in Adult Attachment Styles

Drawing from the work of Bowlby and others, Hazan and Shaver (1987) were the first to use attachment theory as a framework for

understanding individual differences in adolescent and adult romantic attachments. They began by developing a simple, self-report measure of attachment style that identifies three prototypical attachment patterns, corresponding to the three attachment types observed in infancy. A large number of studies have now been conducted on adult attachment styles (see Rothbard & Shaver, 1994, for a review), and a portrait has emerged of the three kinds of individuals identified by this measure. *Secure* individuals are comfortable with intimacy, willing to depend on others for support, and confident that they are loved and valued by others. They are socially skilled, perceive attachment figures as warm and responsive, and have positive expectations about relationships. *Anxious-ambivalent* individuals have an exaggerated desire for closeness, coupled with a heightened concern about being rejected and unloved; they have a strong desire to gain approval from others because they depend on acceptance by others for a sense of personal well-being. They perceive others as relatively untrustworthy; yet they are eager to become involved in relationships, despite their perils. Finally, *avoidant* individuals value self-reliance and are uncomfortable with intimacy and interdependence. They perceive attachment figures as unreliable and uncaring, and they prefer not to depend on others for support. They 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. These attachment styles reflect theoretical prototypes or ideals that individuals can approximate to varying degrees.

One important consequence of these profiles of adult attachment lies in their presumed impact on interpersonal functioning in close relationships. Consistent with this proposition, a growing body of research on dating and married couples indicates that adults with different attachment styles differ predictably in the nature and quality of their intimate relationships (see Feeney, 1999, for a review). Relative to their insecure counterparts, secure adults have more positive relationship experiences, characterized by higher levels of trust, satisfaction, and commitment, and lower levels of conflict, jealousy, and emotional ambivalence. In contrast, anxious-ambivalent adults tend to experience emotional extremes, jealousy, and conflict, whereas avoidant adults report low levels of satisfaction, intimacy, and commitment.

The underlying assumption throughout this research is that attachment styles predispose individuals to develop relationships that

differ in their emotional tone and their likelihood for success. From this perspective, secure attachment acts as a stable protective factor and insecure attachment as a chronic vulnerability factor in the development and maintenance of intimate relationships. Although existing research findings are consistent with this view, the absence of *prospective* data makes it difficult to draw confident inferences about the impact of attachment style on relationship quality. Because most prior studies have used cross-sectional designs in which attachment style and relationship quality have been measured concurrently, it is not clear whether individual differences in attachment style contributed to relationship quality or whether they reflect it. Even when longitudinal studies have been conducted, attachment style has been assessed only after a relationship has developed. As a result, the fundamental theoretical assumption that attachment style predates adult relationships and thus predisposes individuals to develop satisfying or dissatisfying intimate bonds has not been convincingly demonstrated.

Linking Attachment Styles to Relationship Outcomes

If we assume that attachment style plays an important causal role in shaping relationship outcomes, it is also not clear how these outcomes arise. Attachment theorists have proposed two general mechanisms linking attachment style to relationship functioning (Bowlby, 1980; Sroufe & Fleeson, 1986). First, working models of self and others may have a direct influence on relationship outcomes by coloring social perception, shaping affective response patterns, and directing interpersonal behavior. In this way, early working models exert their influence on future relationships by predisposing individuals to think, feel, and behave in ways that either facilitate or interfere with relationship functioning.

Consistent with this argument, a number of studies have shown that insecure adults engage in less adaptive interpersonal behavior across a variety of domains, including problem-solving communication (e.g., Feeney, Noller, & Callan, 1994; Pistole, 1989), self-disclosure (Keelan, Dion, & Dion, 1998; Mikulincer & Nachshon, 1991), social support and caregiving (e.g., Collins & Feeney, 2000, Feeney & Collins, 2001; Simpson, Rholes, & Nelligan, 1992), coping with conflict (Feeney, 1998; Simpson, Rholes, & Phillips, 1996), sexual behavior (e.g., Feeney, Noller, & Patty, 1993; Hazan, Zeifman, & Middelton, 1994), and interpersonal violence (Dutton, Saunders,

Starzomski, & Bartholomew, 1994). Other studies indicate that insecure adults are prone to maladaptive patterns of social perception and emotion regulation (e.g., Collins, 1996; Davila, Bradbury, & Fincham, 1998; Feeney, 1999). Taken together, these studies suggest that insecure adults may behave in ways that make it difficult for them to sustain satisfying relationships, although the lack of prospective data once again limits our ability to draw confident inferences about the impact of attachment style on these behavioral patterns.

A second pathway linking attachment style to relationship outcomes is through the differential selection of social environments. That is, working models of attachment may predispose individuals to select romantic partners who, because of their own personality or behavioral styles, are more or less vulnerable to relationship difficulties (Bowlby, 1980; Sroufe & Fleeson, 1986). Thus, insecure individuals may be at greater risk for adverse outcomes in part because they become involved with partners whose personality predisposes them to maladaptive styles of relating and who (at least in part because of their personality) are more likely to engage in behavioral patterns that are detrimental to relationship functioning. For example, avoidant individuals may be more likely to become involved with (or more willing to tolerate) partners who lack emotional warmth and supportiveness. In addition to choosing relationship environments that differ in their potential for successful relating, individuals may also create different environments by behaving in ways that elicit predictable responses from their intimate partners. For example, avoidant individuals may withhold affection and open communication, which may inspire their partners to become critical and demanding.

Consistent with this idea, there is some evidence that individuals with different attachment styles differ in their selection of romantic partners. This work, however, has been limited to exploring partner matching on attachment style. For example, several correlational studies of dating and married couples have shown that secure individuals tend to be paired with secure partners (e.g., Collins & Read, 1990; Feeney, 1994), and that avoidant individuals tend to be paired with anxious partners (Collins & Read, 1990; Kirkpatrick & Davis, 1994). Other studies have used an experimental paradigm in which participants rate their attraction to hypothetical partners who vary systematically in their attachment style (e.g., Chappell, & Davis, 1998; Frazier et al., 1996; Pietromonaco & Carnelley, 1994). Not surprisingly, these studies reveal that insecure partners (relative to

secure partners) are rated as less desirable, regardless of the respondent's attachment style. However, although insecure partners are less attractive overall, they are rated as relatively more attractive and acceptable by insecure than secure participants. Taken together, these studies suggest that insecure individuals may be more attracted to, or more willing to accept, insecure partners. Nevertheless, methodological weaknesses limit our ability to draw clear inferences about partner choice. Correlational studies do not provide clear tests of the direction of causal flow, whereas experimental studies may not generalize to natural social environments where ideal and actual partner choices often diverge. In addition, both types of studies are limited by their narrow focus on the partner's attachment style to the exclusion of other aspects of partner personality and behavior that are likely to influence relationship functioning.

The Present Study

The present study investigates whether attachment style during adolescence forecasts the nature and quality of one's romantic relationships in early adulthood and explores two general mechanisms that may explain these effects over time: behavioral predispositions and partner choice. In doing so, this study differs from prior work in several important ways. First, we provide the first prospective investigation of romantic attachment style and relationship outcomes. By measuring attachment style in adolescence—*prior* to relationship development—we are better equipped to test the assumption that insecure attachment places individuals at risk for developing poorly functioning relationships in adulthood and better able to identify the possible mechanisms through which these outcomes arise. Second, we gathered data from both members of each couple, which allowed us to validate each partner's report and to identify shared and non-shared experiences. Finally, unlike previously published studies that have relied on either convenience samples of college students or predominantly White, well-educated community samples, our diverse, community-based sample is more broadly representative of the population of interest.

Data for this study come from a larger, ongoing longitudinal study. At baseline, during adolescence, respondents completed an interview that included a self-report measure of attachment style. Approximately 6 years later, they participated in a follow-up interview along with their current romantic partner. For ease of reference, we refer to

individuals involved in the longitudinal study as “respondents” and to their romantic partners as “partners.”

Our first goal was to examine whether attachment style in adolescence forecasts the quality of romantic relationships in early adulthood. In doing so, we explored four domains of relationship functioning that are theoretically relevant to attachment processes: (a) satisfaction and commitment, (b) intimacy and shared disclosure, (c) problem-solving communication, and (d) conflict. Based on theory and past research, we expected that secure respondents would have better functioning relationships overall, and that insecure respondents would experience distinct patterns of relationship dysfunction. Although we predicted that both avoidant and anxious respondents would have relationships that were low in satisfaction and high in conflict, we expected that avoidant individuals (who are uncomfortable with closeness and emotional expression) would also experience low intimacy and poor problem-solving communication.

The second goal of this study was to explore several mechanisms through which working models carry their influence from adolescence to adulthood. A model summarizing these mechanisms is presented in Figure 1. First, secure and insecure adults may differ in relationship quality because they enter their relationships with distinct behavioral predispositions (Path *a*). We investigated four behavioral domains that are important to relationship functioning and likely to be influenced by attachment style: (a) intimacy and closeness, (b) communication, (c) anger and hostility, and (d) trust. We predicted that secure respondents would behave in a more pro-relationship manner overall and that insecure respondents would exhibit distinct patterns of maladaptive behavior. We hypothesized that avoidant respondents, who are typically uncomfortable with closeness and emotional expressiveness, would be less affectionate, less disclosing, more critical, and more

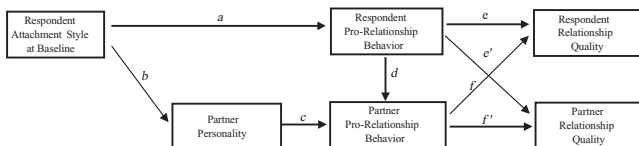


Figure 1

Hypothesized model linking respondent attachment style at baseline to respondent and partner relationship quality at follow-up.

likely to withdraw from their partner's attempts to discuss relationship issues. In addition, we expected that avoidant men would be more aggressive during conflict. (Relationship aggression was not assessed among women.) Finally, we hypothesized that anxious respondents, who desire closeness but are typically concerned about rejection, would be more affectionate and disclosing, but also more critical and jealous.

A second way in which attachment style may influence relationship outcomes is by leading individuals to select romantic partners whose personality increases or decreases their risk of poor outcomes. To address this possibility, we explored whether respondents' attachment style in adolescence predicted the attachment style and personality characteristics of the partner with whom they become involved in adulthood (Path *b*). In addition to measuring the partner's attachment style, we assessed three broadly defined conceptual clusters of personality variables that are most relevant to interpersonal functioning (Karney & Bradbury, 1995; Robins, Caspi, & Moffitt, 2000; Wiggins & Trobst, 1999): (a) agency/competence, (b) neuroticism/negative emotionality, and (b) warmth/communion. Based on theory and past research, we predicted that secure respondents would later be involved with partners who exhibited healthier personality profiles (i.e., more agentic, more communal, and less neurotic) than partners of insecure respondents.

Finally, individuals with different attachment styles may differ in relationship outcomes because they elicit predictable behavioral responses from their romantic partner (Path *d*) or because they choose partners whose personality predisposes them to adaptive or maladaptive patterns of behavior (Path *c*). To explore these possibilities, we examined whether respondents' attachment style in adolescence predicted their partner's behavior toward them in adulthood, using the same behavioral domains described above. We asked partners to report their own behavior, and we asked respondents to tell us their perception of their partner's behavior. We predicted that secure respondents would have partners who behaved in a more pro-relationship manner and that insecure respondents would have partners who behaved in less adaptive ways. We predicted that both avoidant and anxious respondents would be involved with partners who were less affectionate and more critical. However, we expected that avoidant (but not anxious) respondents would be involved with partners who were less disclosing and more jealous in response to the respondent's emotional withdrawal. We also predicted that anxious (but not avoidant) respondents would have partners who were more likely to withdraw in response to the

respondent's heightened demand. In addition, we predicted that anxious female respondents (who fear rejection and who may be more tolerant of their partner's hostile behavior) would have male partners who acted aggressively during conflict.

METHOD

Sample and Procedure

Sample

Data for this study were collected as part of an ongoing longitudinal study of health risk behaviors in adolescence and young adulthood. In 1989–1990, 2,052 randomly selected, Black and White adolescents (81% of eligibles), 13 to 19 years old, who lived in the Buffalo, N.Y., area were interviewed. In 1994–1995, 1,815 (89%) of these respondents were re-interviewed for a second time. (See Cooper & Orcutt, 1997a, and Cooper, Shapiro, & Powers, 1998a, for details on sample selection and attrition across waves.) As part of a substudy on safe-sex communications, 299 of our Time 2 respondents, along with their current partners, were interviewed a third time approximately 1 1/2 years after their second interview.

Data for the present study were taken from the first wave of interviews (1989–90), and from the follow-up partner study (1995–96). The two assessments were separated by 5.47 ($SD = .51$) years, on average. We chose to focus on these two assessments because only 7% of respondents were in the same relationship at Time 1 and at follow-up, compared with 68% of respondents from Time 2 to follow-up. Thus, by focusing on these two assessments, stronger causal inference is enabled because attachment style clearly preceded partner choice and relationship initiation for the vast majority (93%) of individuals.

For the purposes of the present study, 17 respondents (6%), who did not complete the attachment measure at Time 1, and 58 respondents (19%) who gave inconsistent answers to the attachment measures (described below), were excluded from analyses, leaving an N of 224 heterosexual couples, or 448 individuals. Demographic information on the subset of included respondents and partners is summarized in Table 1.

Interviewing Procedures

At Time 1, respondents were screened over the phone to ascertain eligibility (based on age and residence) and then brought to the university, where face-to-face interviews were conducted using a structured-interview schedule. Interviewers and respondents were always matched on sex and, when

Table 1
Demographic Information on the Study Sample

Variable	Respondents	Partners
Age at baseline	16.80 (1.96)	NA
Age at follow-up	22.25 (2.00)	24.08 (4.84)
Racial Identity		
Black	44.6%	43.3%
White	55.4%	54.9%
Other	0.0%	1.7%
Gender		
Female	62.9%	37.1%
Male	37.1%	62.9%
Relationship length (in years) at follow-up ^a	2.85 (2.29)	—
Relationship status at follow-up		
Married	13.4%	—
Engaged	17.0%	—
Exclusive dating	61.6%	—
Non-exclusive dating	6.7%	—
Other	1.3%	—
Cohabiting	47.3%	—
Raising at least one child	42.9%	—

Note. $N = 224$ couples. ^a Relationship length ranged from 1 month to 9 years. All couple information is based on the respondent's report. Standard deviations appear in parentheses, where applicable.

possible, on race (about 75% of the interviews). Respondents were paid \$25 for their participation.

A subset of Time 2 respondents who were 18 years old or older and sexually experienced (i.e., had ever had intercourse) were screened over the phone to determine eligibility for the follow-up study. To participate, respondents had to be involved with an opposite sex partner who was at least 18 years old and with whom they had had sexual relations. Respondents who met the criteria and agreed to participate were then brought to the university where they and their romantic partners were interviewed individually and in private by a same-sex interviewer. The interview was administered on a

laptop computer, and included both interviewer- and self-administered portions. More sensitive questions (e.g., those on relationship violence) were self-administered. Couples were paid \$50 for their participation.

Measures

Attachment Style

Attachment style was measured in two ways using a slightly modified version of Hazan and Shaver's (1987, 1990) questionnaire, the only self-report measure available when the baseline study was designed. Respondents were first asked whether they had ever been involved in a serious romantic relationship. If the answer was yes, they were asked to answer the attachment questions with respect to experiences during those relationships. If the answer was no, they were asked to imagine what their experiences would be like in such relationships. Respondents then read each of three attachment style descriptions (avoidant, anxious-ambivalent, secure) and rated how self-characteristic each was on a 7-point scale, and finally chose which of the three styles was most self-descriptive (a categorical measure).

Correlations among the three attachment ratings were $r = .20$ for avoidant with anxious, $r = -.35$ for avoidant with secure, and $r = -.32$ for anxious with secure (all $ps < .01$). In the present study, a procedure used by Mikulincer and others (e.g., Mikulincer, Florian, & Tolmacz, 1990; Mikulincer & Nachshon, 1991) was used to distinguish consistent from inconsistent responders. Inconsistent respondents (21% of the 282 respondents who completed the attachment measure) were excluded from further analyses because their highest Likert rating failed to correspond to the attachment style chosen as most self-characteristic (see Cooper, Shaver, & Collins, 1998b, for a detailed comparison of consistent and inconsistent respondents).

Relationship Quality

Three aspects of relationship functioning were assessed using a total of five different measures. All measures were completed by both members of the couple.

- (1) Overall satisfaction and commitment was assessed with eight items ($\alpha = .89$) adapted from standard marital satisfaction inventories (Locke & Wallace, 1959; Spanier, 1976) and measures of relationship commitment (Rusbult, 1980). Respondents indicated how satisfied or happy they were with their relationship, and how easy or difficult it would be to end their relationship.
- (2) Two aspects of relationship intimacy were assessed. Emotional closeness was assessed by five items ($\alpha = .82$). Two items came from the Intimacy

subscale of Sternberg's (1988) Triangular Love Scale, and the remaining items were written for the present study to capture Reis and Shaver's (1988) conceptualization of intimacy. Respondents indicated how warm and comfortable their relationship was and the extent to which their partner knows and understands them. Intimate disclosure was assessed by seven items ($\alpha = .79$) adapted from the Miller Topic Survey (Miller, Berg, & Archer, 1983). Respondents indicated how much they as a couple had talked about seven different topics, such as "your goals and dreams for the future" and "your deepest and most private feelings."

- (3) Relationship conflict and problem solving were assessed by two different measures. Both sets of items were drawn from standard relationship satisfaction scales, as described above. Conflict was assessed by four items ($\alpha = .90$). Respondents indicated how often they "get on each other's nerves," "have serious fights or arguments," and so on. Effective problem solving communication was assessed with seven items ($\alpha = .83$), four of which were taken from the Mutual Constructive Communication subscale of the Communication Patterns Questionnaire (Christensen, 1988). The remaining items were adapted from standard relationship satisfaction scales (cited above). Respondents indicated how effectively they talk over conflicts and disagreements, solve problems, and deal with stresses in their relationship.¹

Relationship Behaviors

Six behaviors relevant to attachment style were assessed. In all cases but one (aggressive behaviors), self- and partner ratings were completed by both couple members. (1) Affectionate behaviors were assessed by three items ($\alpha = .83$ for self-ratings and $.84$ for partner ratings). A representative item included: "How often do you kiss, hug, or cuddle with ___ outside of sexual intimacy?" (2) Extent of self-disclosure was assessed by two items ($\alpha = .88$ for self-ratings and $.85$ for partner ratings). A representative item included: "How often do you open up to him/her about things that are really important to you?" (3) Jealous behaviors were assessed by three items ($\alpha = .86$ for both self- and partner ratings). A representative item included: "How often do you act possessive?" (4) Critical and conflictual behaviors were assessed by three items ($\alpha = .67$ for self-ratings and $.64$ for partner ratings). A representative item included: "How

1. For the respondent, correlations among the five relationship quality measures ranged from $-.13$ (for conflict and shared disclosure) to $.81$ (for satisfaction and intimacy), with an average (absolute) correlation of $.51$. For the partner, correlations ranged from $-.06$ (for conflict and shared disclosure) to $.65$ (for satisfaction and intimacy), with an average correlation of $.44$. A complete correlation matrix of all study variables can be obtained from the first author.

often do you criticize him/her or put him/her down?" All items were developed by the authors and were rated on a 6-point frequency scale (from *never* to *all of the time*). (5) The Demand-Withdraw Communication pattern was assessed by three items from the Demand-Withdraw subscale of the Communication Patterns Questionnaire (Christensen, 1988; $\alpha = .67$ for self-ratings and $.69$ for partner ratings). A representative item included: "When a problem arises in your relationship, how likely is it that ____ tries to start a discussion, while you try to avoid one?" For each of the above measures (1–5), corresponding partner items were worded in a like manner, but referred to the partner's behavior instead (e.g., "How often does ____ kiss, hug, or cuddle with you?"). (6) Finally, male perpetration of both verbal and physical aggression against the female partner was assessed by an adapted version of the Conflict Tactics Scale (Straus, 1979; eight items, $\alpha = .76$ for female report, and $.80$ for male report). Although male and female perpetration of violence against relationship partners is thought to be equally common, we elected to focus on male perpetration because the consequences are typically more severe (Dutton, 1988; Pedersen & Thomas, 1992). Male respondents indicated how often they put their partner down or called her names, pushed, grabbed, or shoved her, and so on. Female respondents completed a parallel set of items referencing their partner's behavior toward them.²

Partner Personality Dimensions

Four broad dimensions of personality were assessed: (1) attachment style, (2) agency/competence, (3) negative emotionality, and (4) warmth/communion. Personality measures were completed by both members of each couple, but because this study is concerned only with the partner's personality, only partner reports are included.

Attachment style was assessed with Bartholomew and Horowitz's (1991) Relationship Questionnaire. Participants rated (on a 7-point scale) the extent to which each of four brief paragraphs corresponding to four attachment prototypes (secure, preoccupied, fearful, dismissing) characterized their general style in romantic relationships. Following procedures outlined by Griffin & Bartholomew (1994), we computed two attachment dimensions. A "model of self" dimension was computed by adding together scores on the two prototypes hypothesized to represent positive self-models (secure and

2. For self-reported behavior, correlations among the five behavior measures ranged from $.01$ (for affection and jealousy) to $.53$ (for affection and self-disclosure), with an average (absolute) correlation of $.22$ for respondents and $.26$ for partners. For other-reported behavior, correlations ranged from $.04$ (for affection and jealousy) to $.59$ (for affection and self-disclosure), with an average of $.34$ for respondents (reporting on partners) and $.33$ for partners (reporting on respondents).

dismissing) and subtracting scores on the two prototypes hypothesized to represent negative self-models (fearful and preoccupied). High scores on this index represent greater confidence in others' love and acceptance of the self. A "model of other" dimension was computed by adding together scores on the two prototypes hypothesized to represent positive other-models (secure and preoccupied) and subtracting scores on the two prototypes hypothesized to represent negative other-models (fearful and dismissing). High scores on this index represent greater comfort with closeness/dependency, and greater trust in others. The correlation between the two attachment dimensions was $-.05$.

Five conceptually distinct but related measures were included to represent the broad construct of agency/competence: masculinity, self-esteem, social competence, assertiveness, and active coping. (1) Masculinity was assessed by six items ($\alpha = .73$) from the Personality Attributes Questionnaire (PAQ; Spence & Helmreich, 1978). The PAQ Masculinity scale assesses the extent to which an individual sees him or herself as possessing "instrumental" traits that have been identified with the traditional male role, such as independence and decisiveness. (2) Global self-esteem was measured by five items ($\alpha = .85$) from Rosenberg's (1965) self-esteem scale. (3) Social competence was assessed by eight items ($\alpha = .86$) indexing the degree of perceived confidence in one's ability to make friends and to interact comfortably in a range of social situations. Items were taken from several standard social competence measures (Blascovich & Tomaka, 1991), and adapted to a common format. (4) Assertiveness was measured by five items ($\alpha = .68$) indexing the extent to which one can stand up for him or herself and speak his or her own mind. Items were adapted from the Rathus Assertiveness Scale (Rathus, 1973). (5) Finally, four items ($\alpha = .75$) from the Health and Daily Living Form (Moos, Cronkite, Billings, & Finney, 1986) were included to assess the extent to which the individual typically uses active, problem-focused coping efforts when "under a lot of stress." These five measures were standardized and averaged to form an overall index of partner agency/competence ($\alpha = .80$).

Three related but distinct measures were included to represent the broad construct of Neuroticism/negative emotionality. (1) Neuroticism (defined by heightened stress reactivity, emotional fragility, hypersensitivity to criticism, self-doubt, and feelings of alienation) was measured by a short (10 item) form of Eysenck and Eysenck's (1985) Neuroticism scale ($\alpha = .73$). (2) Negative affect was assessed by a composite of the General Anxiety and Depression subscales ($\alpha = .83$ for the composite) from the Brief Symptom Inventory (Derogatis & Melisaratos, 1983). Respondents indicated how anxious, worried, depressed, and so on, they had been over the past month. (3) Finally, avoidant styles of coping with negative emotions were assessed by 10 items ($\alpha = .75$) from the Moos et al. Health and Daily Living Form and supplemented with items from the Cope scale (Carver, Scheier, & Weintraub, 1989). Items assessed the tendency to deny, avoid, withdraw, and disengage

when confronted with situations that are stressful and arouse negative emotion. These three measures were standardized and averaged to form an overall index of partner negative emotionality ($\alpha = .82$).

Consistent with the conceptualization of Wiggins (1979), warmth/communion was represented by three measures. (1) Femininity was assessed by seven items ($\alpha = .80$) from the PAQ (Spence & Helmreich, 1978). PAQ Femininity assesses the extent to which an individual sees him or herself as possessing “expressive” traits traditionally associated with the female role, such as gentle, kind, and helpful to others. (2) Need for intimacy was assessed by five items ($\alpha = .79$) developed by Bernstein, Hoffman, Santiago, & Diebolt (1989) indexing the degree to which the individual values and seeks a close, intimate relationship. (3) Finally, the tendency to seek support from others when “under a lot of stress” was assessed by five items ($\alpha = .90$) from the Health and Daily Living Form (Moos et al., 1986). These three measures were standardized and averaged to form an overall index of partner warmth ($\alpha = .50$).

RESULTS

Preliminary Analyses and Data Analytic Procedures

Preliminary analyses were conducted to determine if attachment ratings were associated with a variety of demographic factors. Attachment ratings were not systematically associated with the respondent’s race, income, education, relationship length, or amount of elapsed time between baseline and follow-up. Women were, however, more avoidant than men ($M_{\text{women}} = 3.12$, $M_{\text{men}} = 2.53$), $t(222) = 2.28$, $p < .05$, and younger respondents tended to be more avoidant than older respondents ($r = -.168$, $p < .05$). There were no significant associations between the respondent’s attachment ratings and his or her partner’s age, race, income, or education.

Because attachment style was correlated with the respondent’s age and gender, we explored whether these demographic factors were associated with our outcome variables. Gender was significantly associated with many dependent variables, but age was associated with only two of them.³ Thus, we controlled for gender in all analyses and for age in those analyses where it was significantly related to the outcome variable. In addition, given past evidence that attachment

3. Respondent age was significantly correlated with only 2 of 39 dependent variables. Older respondents reported higher levels of self-disclosure ($r = .143$, $p < .05$) and were dating partners who scored lower in negative emotionality ($r = -.157$, $p < .05$).

processes can be differentially expressed by men and women in close relationships (e.g., Collins & Read, 1990; Kirkpatrick & Davis, 1994), we also examined whether the links between attachment style and relationship outcomes were moderated by gender.

To explore our primary research questions, we conducted a series of hierarchical regression analyses predicting four sets of outcome variables: relationship quality, respondent behavior, partner behavior, and partner personality. In each analysis, we entered Gender (0 = female, 1 = male) and respondent age (if relevant) on Step 1, respondent's baseline Attachment Style ratings (avoidant, anxious-ambivalent, secure) on Step 2, and all two-way Attachment \times Gender interactions on Step 3. To reduce non-essential collinearity (Aiken & West, 1991), continuous variables were centered before the interactions were computed and tested. We probed significant interactions following procedures outlined by Aiken and West (1991), and plotted simple slopes (for men and women) at the 10th and 90th percentiles on the predictor variable. Finally, we tested the hypothesized structural model (Figure 1) using path analysis.

Does Attachment Style at Baseline Predict Relationship Functioning at Follow-up?

Respondent Report

As shown in the upper portion of Table 2, respondents who were higher in avoidance at baseline viewed their relationship as more poorly functioning overall; they were lower in satisfaction, intimacy, and shared disclosure. They also reported less effective problem-solving communication and greater conflict. There were no significant associations between relationship functioning and attachment-related anxiety or security, and there were no significant Attachment \times Gender interactions.

Partner Report

As shown in the lower portion of Table 2, respondents' degree of avoidance at baseline also significantly predicted their partners' evaluation of relationship functioning. Respondents who were higher in avoidance at baseline had partners who were less satisfied and committed and who reported less effective problem solving commu-

Table 2
Hierarchical Regression Analyses Predicting Respondent and Partner Relationship Quality

Outcome	Step 2			Step 3		
	Avoidant	Anxious	Secure	Avoidant × Gender	Anxious × Gender	Secure × Gender
<i>Respondents</i>						
Satisfaction/commitment	-.292***	.097	-.064	.019	-.035	-.095
Intimacy	-.217**	.058	.023	.029	.032	-.092
Shared disclosure	-.226***	.017	-.005	-.008	.010	-.078
Problem solving	-.282**	.027	-.023	-.067	-.062	-.136
Conflict	.241**	-.081	.108	.101	-.010	.047
<i>Partners</i>						
Satisfaction/commitment	-.166*	.060	.018	-.116	.065	-.058
Intimacy	-.087	.072	.102	-.212*	.056	-.060
Shared disclosure	-.109	.052	.132 [†]	-.075	-.077	-.140
Problem solving	-.135 [†]	-.006	.026	-.220**	.013	-.092
Conflict	.082	-.003	.008	.168*	-.081	.120

Note: $N = 224$. Respondent gender (0 = Female, 1 = Male) was entered on Step 1 in each analysis. Tabled values are standardized regression coefficients (β s). [†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

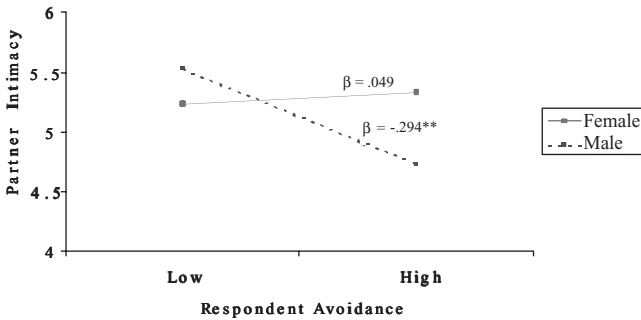


Figure 2
Respondent avoidance \times respondent gender predicting partner ratings of relationship intimacy. ** $p < .01$.

nication. (This latter finding was marginally significant and qualified by gender.) In addition to these main effects, there were three significant Avoidant \times Gender interactions predicting intimacy, shared problem solving, and conflict. In all three cases, female partners of male avoidants rated their relationship as more troubled and less satisfying than did male partners of female avoidants. Specifically, as shown in Figure 2, men who were high in avoidance at baseline had female partners who experienced their relationship as less intimate at follow-up, whereas no such effect was found among female respondents. Similarly, avoidance was significantly, negatively related to problem solving for male respondents ($\beta = -.329$, $p < .01$) but not for female respondents ($\beta = -.006$, *n.s.*). Finally, higher avoidance was associated with increased conflict for male respondents ($\beta = .238$, $p < .05$) but not for female respondents ($\beta = -.049$, *n.s.*).

There were no significant associations between the respondent's anxiety or security and the partner's report of relationship functioning, with the exception of one marginally significant effect. Respondents who were higher in security at baseline had partners who reported more shared disclosure.⁴

4. To what extent did respondents and partners agree on their subjective perception of their relationship? Although the correlation between respondent and partner ratings was significant and positive for all five outcome variables, it was clear that each member of a couple had a unique view of their relationship. The correlation for intimacy was $r = .18$ ($p < .01$), for satisfaction, $r = .29$ ($p < .001$), for mutual disclosure, $r = .33$ ($p < .001$), and for both conflict and problem-solving communication, $r = .44$ ($p < .001$).

Table 3

Hierarchical Regression Analyses Predicting Respondent Behavior as Reported by Respondent and His/Her Partner

Respondent Behavior	Step 2			Step 3		
	Avoidant	Anxious	Secure	Avoidant × Gender	Anxious × Gender	Secure × Gender
<i>Respondent Report</i>						
Affectionate	-.187**	.105	.027	.037	-.005	.021
Disclosing	-.213**	-.103	-.048	-.068	.087	-.155 [†]
Demand-withdraw	.180*	-.031	.061	.165*	-.088	.091
Jealous	.058	-.001	-.030	-.015	-.030	.162 [†]
Critical	.191**	-.059	-.031	.062	-.109	-.034
Male aggression (<i>N</i> = 83)	.192 [†]	-.140	-.040	–	–	–
<i>Partner Report</i>						
Affectionate	-.054	.050	.023	-.179*	.031	-.063
Disclosing	-.160*	.093	.033	-.074	-.010	-.104
Demand-withdraw	.137 [†]	-.010	.058	.181*	-.286**	-.079
Jealous	.177*	-.031	.038	.108	-.028	.202*
Critical	.232***	.023	.042	.216**	-.048	.003
Male aggression (<i>N</i> = 83)	.253*	-.192 [†]	.024	–	–	–

Note: *N* = 224, unless otherwise noted. Respondent gender (0 = Female, 1 = Male) was entered on Step 1 in each analysis. Tabled values are standardized regression coefficients (β s). [†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

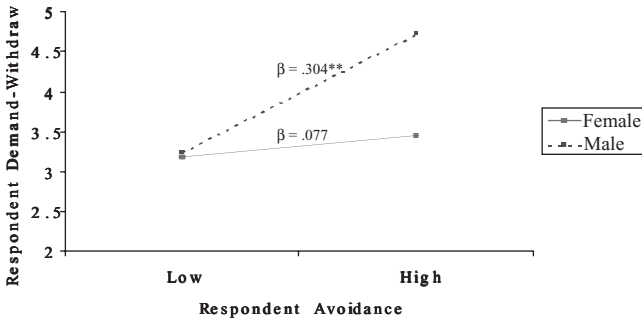


Figure 3

Respondent avoidance \times respondent gender predicting respondent reports of own demand-withdraw behavior. $**p < .01$.

Does Attachment Style at Baseline Predict the Respondent's Behavior at Follow-up?

Respondent Report

As shown in the upper portion of Table 3, respondents who were higher in avoidance at baseline reported less adaptive behavioral tendencies at follow-up; they were less affectionate, less disclosing, and more likely to engage in demand-withdraw communication (although this latter effect was qualified by gender). In addition, respondents who were higher in avoidance were more critical toward their partner and, among male respondents ($N = 83$), they reported more aggressive behaviors during conflict.⁵ In addition to these main effects, there was one significant Avoidant \times Gender interaction. As shown in Figure 3, avoidance was associated with higher levels of demand-withdraw behavior (partner demand, respondent withdraw) for male respondents but not for female respondents.

Neither attachment-related anxiety nor security was significantly associated, at the main-effect level, with self-reported behavioral

5. Recall that our measure of aggressive behavior focused only on aggression expressed by men and received by women. Thus, in this analysis, we examined the association between the respondent's attachment ratings and aggressive behavior as reported by male respondents and their female partners ($N = 83$). The correlation between the male respondent's self-reported aggression and his female partner's report of his aggression was $r = .42$, $p < .001$.

patterns at follow-up. There were, however, two marginally significant Secure \times Gender interactions predicting self-disclosure and jealousy. Plotting these interactions showed that men who were more secure at baseline were less self-disclosing at follow-up ($\beta = -.222, p < .05$), whereas security was unrelated to self-disclosure among women ($\beta = .060, n.s.$). The pattern of predicted means indicated that it was secure men who stood out as particularly low in disclosure. A slightly different pattern emerged for jealousy: there was a positive association between security and jealousy for men ($\beta = .164, n.s.$) but a negative one for women ($\beta = -.127, n.s.$). Although neither of these slopes was statistically significant, the pattern of findings was corroborated by the partner's report of the respondent's jealous behavior (reported below).

Partner Report

As shown in the lower portion of Table 3, the respondent's self-reported behavior was largely confirmed by his or her partner's report.⁶ Partners of avoidant respondents viewed the respondent as less self-disclosing, more jealous, more likely to withdraw in response to partner demands, and more critical (these last two effects were moderated by gender). In addition, female partners ($N = 83$) reported that male respondents who were higher in avoidance behaved more aggressively during conflict.

In addition to these main effects, there were three Avoidant \times Gender interactions, which were similar in form to those shown in Figures 1 and 2. In all three cases, men who were more avoidant at baseline were perceived by their female partners to display significantly fewer pro-relationship behaviors than their less avoidant counterparts, whereas no such relationship was observed for female respondents. Specifically, similar to Figure 1, the simple slope relating respondent's avoidance at baseline to partner's report of respondent's affectionate behavior was significant for male ($\beta = -.233, p < .05$) but

6. To what extent did respondents and partners agree in their reports of the respondent's behavioral patterns? The correlation between the respondent's self report and the partner's report was $r = .26$ ($p < .001$) for self-disclosure, $r = .27$ ($p < .001$) for critical, $r = .29$ ($p < .001$) for affectionate, $r = .42$ ($p < .001$) for jealous, and $r = .51$ ($p < .001$) for demand-withdraw pattern of communication.

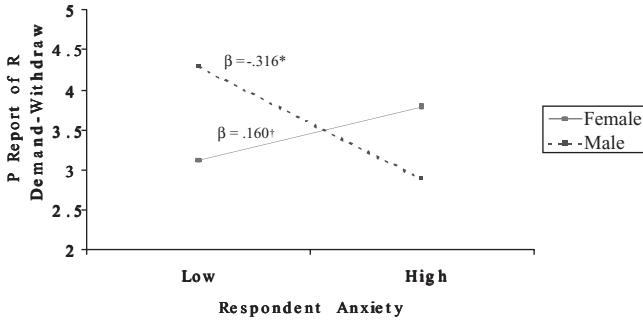


Figure 4

Respondent anxiety \times respondent gender predicting partner reports of the respondent's demand-withdraw behavior. $\dagger p < .10$, $*p < .05$.

not for female ($\beta = .065$, *n.s.*) respondents. Similar to Figure 2, the associations between avoidance and demand-withdraw communication ($\beta = .322$, $p < .05$) and critical behavior ($\beta = .379$, $p < .001$) were significant and positive for male respondents, but not for female respondents ($\beta = .041$ for demand-withdraw and $\beta = .132$ for critical, both *n.s.*). In summary, when men were high in avoidance at baseline, their female partners later perceived them to be less affectionate and more critical, and they reported higher levels of demand-withdraw communication (partner demand, respondent withdraw).

There were no significant main effects for respondent anxiety, but there was one significant Anxious \times Gender interaction. As shown in Figure 4, when female respondents were higher in anxiety at baseline, their male partners reported more demand-withdraw communication (partner demand, respondent withdraw). In contrast, when male respondents were higher in anxiety, their female partners reported less demand-withdraw communication. As shown in Table 3, their female partners also perceived them as somewhat less aggressive during conflict (marginally significant).

Finally, there were no significant main effects for respondent security, but there was one significant Secure \times Gender interaction. As shown in Figure 5, men who were more secure at baseline were later perceived by their female partners as more jealous, whereas security was unrelated to jealousy among women. The pattern of means indicated, however, that it was low-secure men who stood out as particularly low in jealousy. This pattern corroborates the respondent's self-report of jealousy.

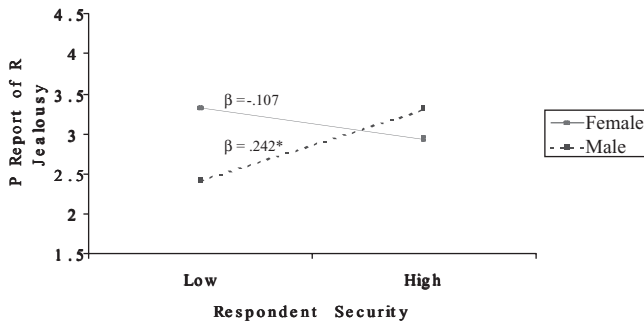


Figure 5

Respondent security \times respondent gender predicting partner reports of the respondent's jealous behavior. * $p < .05$.

Does the Respondent's Baseline Attachment Style Predict Partner Behavior at Follow-up?

Partner Report

As shown in the upper portion of Table 4, there were no significant main effect associations between the respondent's attachment style and the partner's self-reported behavior.⁷ There were, however, four significant Attachment \times Gender interactions. First, there was a significant Avoidance \times Gender interaction predicting partner jealousy. Similar to the pattern shown in Figure 1, men who were high in avoidance at baseline had female partners who reported more jealous behavior ($\beta = .212, p < .10$); however, avoidance among female respondents was unrelated to their male partner's self-reports of jealousy ($\beta = -.076, n.s.$).

There were also three significant Secure \times Gender interactions. In general, these interactions indicated that security was associated with less favorable outcomes for men, but more favorable outcomes for women. Specifically, men who were more secure had female partners who were somewhat less affectionate ($\beta = -.170, p < .10$) and more critical ($\beta = .246, p < .05$). In contrast, women who were more secure

7. Recall that our measure of aggressive behavior focused only on aggression expressed by men and received by women. Thus, in this analysis, we examined the association between the respondent's attachment ratings and the partner's aggressive behavior as reported by male partners and female respondents ($N = 141$). The correlation between the male partner's self-reported aggression and the female respondent's report of his aggression was $r = .39, p < .001$.

Table 4

Hierarchical Regression Analyses Predicting Partner Behavior as Reported by the Partner and the Respondent

Partner Behavior	Step 2			Step 3		
	Avoidant	Anxious	Secure	Avoidant × Gender	Anxious × Gender	Secure × Gender
<i>Partner Report</i>						
Affectionate	-.048	.042	.041	-.032	-.001	-.208*
Disclosing	-.099	.109	.084	.005	.007	-.024
Demand-withdraw	-.025	.047	-.039	.009	.066	.112
Jealous	.065	-.002	.107	.176*	-.022	.181*
Critical	.054	-.067	.049	.092	.036	.182*
Male aggression (<i>N</i> = 141)	-.043	-.004	-.125	–	–	–
<i>Respondent Report</i>						
Affectionate	-.150*	.094	.032	.029	-.086	-.099
Disclosing	-.141 [†]	-.021	.016	.062	-.036	-.161
Demand-withdraw	.076	-.010	.056	-.013	.111	.135
Jealous	.230**	-.068	-.013	-.059	-.060	.034
Critical	.224**	-.107	.023	-.044	.029	.070
Male aggression (<i>N</i> = 141)	-.082	-.112	-.061	–	–	–

Note: *N* = 224, unless otherwise noted. Respondent gender (0 = Female, 1 = Male) was entered on Step 1 in each analysis. Tabled values are standardized regression coefficient (β s). [†]*p* < .10, **p* < .05, ***p* < .01, ****p* < .001.

had male partners who were more affectionate ($\beta = .190, p < .05$), but degree of security was unrelated to partner criticism ($\beta = -.080, n.s.$). In addition, secure men had partners who were somewhat more jealous ($\beta = .167, n.s.$), whereas secure women had partners who were somewhat less jealous ($\beta = -.136, n.s.$). Although these simple slopes did not reach significance, this pattern was consistent with the other variables in suggesting that security was linked to more favorable outcomes for women than for men.

Respondent Report

As shown in the lower portion of Table 4, avoidant respondents perceived their partner's behavior more negatively; they rated their partner as less affectionate, somewhat less disclosing (marginally significant), more jealous, and more critical.⁸ Among female respondents ($N = 141$), attachment style at baseline was not related to perceiving her male partner as aggressive. Finally, there were no significant Attachment \times Gender interactions predicting respondent's perceptions of the partner's behavior.

Does the Respondent's Baseline Attachment Style Predict Partner Personality at Follow-Up?

In our next analysis, we examined whether the respondent's attachment style at baseline predicted the partner's attachment style and personality at follow-up. As shown in Table 5, respondents who were avoidant at baseline were later involved with partners who had more negative attachment-related models of self, and who were higher in negative emotionality and lower in agency. There were no significant associations between respondent avoidance and the partner's level of warmth and no significant Avoidant \times Gender interactions.

There were no significant associations between respondent anxiety and the partner's personality at the main effect level, but there was one (marginal) Anxious \times Gender interaction predicting partner agency. Female respondents who were higher in anxiety were dating male

8. To what extent did partners and respondents agree in their reports of the partner's behavioral patterns? The correlation between the partner's self-reported behavior and the respondent's report of the partner's behavior was $r = .29$ ($p < .001$) for self-disclosure, $r = .28$ ($p < .001$) for critical, $r = .32$ ($p < .001$) for demand-withdraw, $r = .37$ ($p < .001$) for affectionate, and $r = .49$ ($p < .001$) for jealousy.

Table 5
Hierarchical Regression Analyses Predicting Partner Personality

Personality variable	Step 2			Step 3		
	Avoidant	Anxious	Secure	Avoidant × Gender	Anxious × Gender	Secure × Gender
<i>Attachment dimension</i>						
Model of self	-.200**	.051	.025	-.110	.117	-.053
Model of other	-.073	.112	.052	.062	-.038	-.017
<i>Personality composites</i>						
Negative Emotionality	.199*	-.075	-.026	.023	-.104	-.037
Agency	-.192**	-.072	.007	.041	.144 [†]	.166 [†]
Warmth	.056	-.088	.030	-.085	.099	.031

Note: $N = 223$. Respondent gender (0 = Female, 1 = Male) was entered on Step 1 in each analysis. Tabled values are standardized regression coefficients (β s). [†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

partners who were lower in agency ($\beta = -.173, p < .05$), but anxiety was not significantly related to partner agency among male respondents ($\beta = .082, n.s.$).⁹

Finally, there were no significant associations between respondent security and partner personality at the main effect level, but there was one (marginal) Secure \times Gender interaction predicting partner agency. Male respondents who were higher in security were dating female partners who were higher in agency ($\beta = .171, p < .15$); for female respondents, there was a weak negative association between security and partner agency ($\beta = -.11, n.s.$). However, neither of these simple slopes reached significance.¹⁰

Testing the Mediational Model

Specifying the Model

In the final series of analyses, we conducted path analyses to test the hypothesized mediational model shown in Fig. 1. However, because respondent avoidance at baseline was the only attachment dimension that was consistently associated with relationship outcomes at follow-up, we limited our analysis to the mediators of this association.

9. When we explored the individual components of the agency index, we found that this effect was driven primarily by partner assertiveness and instrumentality/masculinity. Specifically, female respondents who were higher in anxiety were dating male partners who were less assertive ($\beta = -.255, p < .01$) and less instrumental/masculine ($\beta = -.183, p < .01$). In addition, although there was no association between respondent anxiety and the negative emotionality index, there was a significant association with one element of that index, neuroticism. Anxious-ambivalent respondents were involved with partners who were lower in neuroticism ($\beta = -.144, p < .05$). Finally, although there was no association between anxiety and the partner warmth index, there was one marginally significant association with one element of that index, intimacy motivation. Anxious-ambivalent respondents were involved with partners who were somewhat lower in intimacy motivation ($\beta = -.124, p < .10$).

10. Once again, when we explored the individual components of the agency index, we found that this effect was driven primarily by partner assertiveness and instrumentality/masculinity. Specifically, male respondents who were higher in security were dating female partners who were more assertive ($\beta = .294, p < .05$) and somewhat (though not significantly) more instrumental/masculine ($\beta = .13, n.s.$). There were no significant or marginal associations between respondent security and any individual element of the partner negative emotionality or partner warmth indexes. (A detailed set of results relating respondent attachment style to partner personality using the individual measures, rather than the composite measures, can be obtained from the first author.)

In the interest of parsimony, we created the following composite variables for the remaining constructs in the model: (a) An index of *pro-relationship behavior* was computed by standardizing and averaging five of the six relationship behavior measures ($\alpha = .58$ for respondent, $\alpha = .62$ for partner). Male aggression was excluded from this index because we did not have a comparable measure of female aggression. In addition, for clarity, we used only self-reports of own behavior. Several measures were reverse scored so that higher scores represent more pro-relationship behavior. (b) An index of *partner healthy personality* was computed by standardizing and averaging measures of agency, negative-affectivity, and attachment models of self ($\alpha = .84$). Higher scores on this index represent a healthier personality profile. Measures of partner warmth and attachment models of other were excluded from this index because they were unrelated to respondent avoidance (see Table 5) and were therefore not viable mediators. (c) Finally, an overall index of *relationship quality* was computed by standardizing and averaging the five measures of relationship quality ($\alpha = .84$ for respondents, $\alpha = .80$ for partners). Higher scores on this index represent better relationship quality.

Testing the Model

Path analyses were conducted using Amos software (Arbuckle, 1997) and maximum likelihood estimation. Model 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 non-significant chi-square, a CFI of at least .95, and a RMSEA of .05 or less (Kline, 1998).

We began by testing the fully mediated model shown in Figure 1 in which there were no direct paths between avoidance and relationship quality (Model A).¹¹ This model fit the data reasonably

11. Because we hypothesized that insecure adolescents may elicit negative responses from their partners as a result of their own poor relationship behavior (Path *d* in Figure 1), our model specified a regression path linking respondent pro-relationship behavior to partner pro-relationship behavior. This regression path tested the plausibility of our causal hypothesis. However, it is important to note that the association between respondent and partner behavior over time is undoubtedly reciprocal, and we cannot draw causal inferences from the present data. A model that includes correlated errors (rather than a regression path) between respondent and partner pro-relationship behavior is a reasonable alternative model and, when tested, provided an equally good fit to the data.

well [$\chi^2(7) = 12.69, p = .08; CFI = .98; RMSEA = .06$], but the fit statistics indicated that the model could be improved. Next, we tested two nested models to determine whether the addition of direct paths from avoidance to relationship quality would significantly improve model fit. First we added a direct path from avoidance to the respondent's relationship quality (Model B). This model resulted in a significant improvement in model fit [$\Delta\chi^2(1) = 7.06, p < .01$], and the direct path between avoidance and respondent relationship quality was significant ($\beta = -.12, p < .01$). In addition, this model provided a very good fit to the data [$\chi^2(6) = 5.63, p = .47; CFI = 1.0, RMSEA = 0.0$]. Next, we added a direct path between avoidance and partner relationship quality (Model C). This path was not statistically significant ($\beta = -.07, p = .15$) and did not significantly improve model fit [$\Delta\chi^2(1) = 2.11, p > .10$]. Model B was therefore retained as the final model.

This model, with standardized parameter estimates, is shown in Figure 6. Consistent with our hypotheses, the tendency for avoidant adolescents to develop less satisfying relationships in adulthood appears to be rooted in two general processes. First, avoidant individuals engaged in fewer pro-relationship behaviors, which was directly linked to poor relationship quality for both themselves and their partner. Second, avoidant adolescents selected romantic partners who had less healthy personality profiles. These personality profiles were, in turn, linked to maladaptive relationship behavior, which was

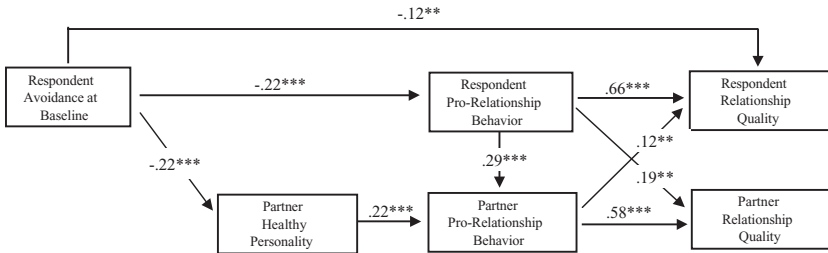


Figure 6

Final parameter estimates linking respondent avoidance at baseline to respondent and partner relationship quality at follow-up. Path values are standardized regression coefficients. $N = 224$ couples. $\chi^2(6) = 5.63, p = .47; CFI = 1.0, RMSEA = 0.0$. The total effect linking respondent avoidance to respondent relationship quality was $r = -.287, p < .001$. The total effect linking respondent avoidance to partner relationship quality was $r = -.170, p < .01$. * $p < .05$, ** $p < .01$, *** $p < .001$.

directly linked to poor relationship quality for both partners and respondents. Finally, the model is consistent with the idea that avoidant individuals also elicit negative behavioral responses from their partners through their own maladaptive behavior. Overall, the model provided evidence of partial mediation of the link between avoidance and respondent relationship quality and full mediation of the link between avoidance and partner relationship quality.

Supplementary Analyses by Gender and Race

We ran the same series of models separately for male ($N = 83$) and female ($N = 141$) respondents. Although, in some cases, the path coefficients for Models A and B did not reach significance for male respondents (due to the reduced sample size), both models provided an adequate fit to the data. In addition, the pattern and magnitude of effects were similar for men and women, and very similar to the effects for the full sample. The only clear exception was that Model C (which included a direct path between avoidance and partner satisfaction) provided a significant improvement in model fit for male but not female respondents. Thus, the link between respondent avoidance and partner satisfaction was partially mediated for men, but fully mediated for women.

Finally, in order to test whether our results were consistent across the two racial groups represented in our sample, we ran the same series of models separately for Black ($N = 101$) and White ($N = 123$) respondents. Models A and B provided an adequate fit to the data in both groups, and the overall pattern and magnitude of effects were similar for Black and White respondents. There were, however, two exceptions. First, the path linking respondent avoidance to partner personality was stronger in magnitude for White respondents than for Black respondents. Thus, the tendency for avoidant respondents to choose partners with less healthy personality profiles was more pronounced for White adolescents. Second, the direct path linking avoidance to respondent satisfaction (in Model B) was stronger in magnitude for Black respondents than for White respondents; and Model B (compared to Model A), resulted in a significant improvement in model fit for Blacks but not for Whites. Thus, although the path models were relatively consistent for Black and White respondents, we should exercise caution in generalizing these particular effects, pending future research with larger samples that can provide more definitive estimates of effects within specific racial groups.

DISCUSSION

This study provides the first prospective evidence that attachment style in adolescence forecasts the nature and quality of intimate relationships in adulthood and offers insights into some of the mechanisms through which this may occur. Results indicated that adolescents with different attachment styles went on to develop distinct relationship profiles in adulthood, although the findings were strongest and most consistent for avoidant attachment.

Relationship Outcomes for Avoidant Adolescents

As predicted, avoidance was clearly a risk factor for adverse relationship outcomes. Approximately 6 years after baseline, avoidant adolescents had relationships that were less satisfying and more poorly functioning overall, as reported by both the respondent and by his or her romantic partner. The tendency for avoidant individuals to develop less satisfying relationships appears to lie both in their own behavioral predispositions and in their choice of romantic partners. Avoidant respondents engaged in fewer pro-relationship behaviors across a variety of domains, and these patterns were largely corroborated by partner reports. Avoidant respondents were also involved with partners who reported less healthy personality profiles. They were higher in negative emotionality, lower in agency, and had more negative attachment-related models of self—all traits that are likely to interfere with good relationship functioning. Accordingly, avoidant respondents perceived that their partners engaged in fewer pro-relationship behaviors including less affection and disclosure, and more jealousy and criticism. Moreover, the path model indicated that partners who had unhealthy personality profiles did indeed engage in less adaptive relationship behaviors.

While these findings indicate that avoidance had deleterious effects on relationships for both men and women, some of these effects were stronger and more pervasive for avoidant men (and their female partners) than for avoidant women (and their male partners). Specifically, female partners of avoidant men characterized their relationship as high in conflict and low in intimacy and effective problem-solving communication. They also perceived the respondent to be less affectionate, more withdrawing, more critical, and more verbally and physically aggressive. Male respondents agreed with these perceptions

by reporting their own behavior to be more withdrawing and aggressive. Finally, female partners of avoidant men characterized themselves as more jealous, perhaps induced by their partner's withdrawal.

The finding that the links between avoidance and relationship quality were stronger for male respondents and their female partners is consistent with several prior studies that found a similar gender pattern (e.g. Collins & Read, 1990; Kirkpatrick & Davis, 1994), and may reflect gender differences in the importance of intimacy and emotional closeness. In the present study, the weaker effects for female respondents and their male partners may also be due to weaknesses in measurement. Specifically, adolescent girls may have interpreted the avoidant prototype in terms of *sexual* rather than *emotional* intimacy (e.g., "I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I am comfortable being"). Hence, high levels of avoidance at baseline may have been more ambiguous, and therefore less predictive, for adolescent girls. Indeed, we found that adolescent girls were significantly more likely to endorse the avoidant prototype than adolescent boys, which differs from prior studies, where either no gender differences or differences in the opposite direction were found. Nevertheless, the fact that prior studies also implicate avoidance as a stronger risk factor for men than for women suggests that the current findings are unlikely to be solely a function of limitations in measurement.

Overall, the pattern of findings suggests that avoidant men and women experienced interpersonal difficulties across a variety of domains including intimacy, communication, and trust. In addition, problems with anger and hostility were especially evident for avoidant men who were perceived by their partners as more critical and more verbally and physically aggressive during conflict—problems that may be linked to difficulties with emotion regulation. Because these patterns emerged in prospective analyses, they are consistent with the idea that avoidant adolescents entered their relationships with maladaptive behavioral tendencies that then contributed to low satisfaction for both themselves and their partners. Our findings are also consistent with the hypothesis that avoidant adolescents become involved with more dysfunctional partners; their partners were higher in negative emotionality, lower in agency, and had more negative attachment models of self (low self-worth and concerns about rejection). This personality profile is reminiscent of

prior cross-sectional studies showing that avoidant adults tend to be paired with anxious partners (Collins & Read, 1990; Kirkpatrick & Davis, 1994).

Relationship Outcomes for Anxious-Ambivalent Adolescents

Contrary to our predictions, there were no associations between anxious-ambivalence and overall relationship functioning for either the respondent or his or her partner. However, when we examined the partner's perception of the respondent's behavior, we found some evidence that high anxiety was detrimental for female respondents, but somewhat beneficial for male respondents. Specifically, female partners of anxious men reported that their male partners were less aggressive and less likely to withdraw from communication demands; whereas, male partners of anxious women reported that their partners were more withdrawing from demands. When we examined characteristics of the partner, we found no associations with the partner's behavior, but we found some evidence that anxious women were involved with partners who had less healthy personality profiles. Specifically, anxious women had male partners who were lower in agency (primarily assertiveness and instrumentality/masculinity).

Thus, the results for anxious-ambivalent attachment were relatively weak overall and depended, in part, on gender. Whereas anxious men tended to behave in ways that could be viewed as somewhat more adaptive (relative to non-anxious men), anxious women behaved in ways that were somewhat less adaptive (relative to non-anxious women). This gender difference, though weak overall, is consistent with several prior studies showing that attachment-related anxiety is more strongly linked to adverse personal and relationship outcomes for women than for men (e.g., Collins & Read; Cooper et al., 1998b; Kirkpatrick & Davis, 1994).

This pattern of findings was further clarified in supplemental analyses (not reported) in which we examined group differences in outcomes based on a categorical measure of attachment style. On this measure, individuals were assigned to a single attachment category (avoidant, anxious-ambivalent, secure) based on the prototype that they chose as most self-descriptive. In these analyses, anxious-ambivalent women had relationship outcomes and behavioral profiles that were significantly more favorable than avoidant women, but less favorable

than secure women. Men who chose the anxious-ambivalent prototype also had relationship outcomes that were more favorable than avoidant men; however their outcomes were not worse than secure men. In fact, in some cases, the pattern of means for anxious-ambivalent men was slightly (but not significantly) more favorable than the pattern for secure men. These findings, along with the regression analyses based on the continuous attachment scores, reveal that anxious-ambivalent individuals had relationship and behavioral profiles that were more favorable than avoidant individuals, and this was true for both men and women. However, anxious-ambivalent women (but not men) had outcomes that were less favorable than their secure counterparts.

Overall, the effects for anxious-ambivalence were weaker than we expected on the basis of both theory and prior research. One possible explanation is that the characteristics of anxious-ambivalent attachment—a desire for intimacy coupled with a fear of rejection—reflect, in part, an age appropriate response to the social and developmental demands of adolescence. As such, high levels of anxiety at baseline may signify adaptive responses to this developmental transition and not just chronic vulnerabilities. Consistent with this idea, mean levels of anxiety in this sample declined significantly from baseline to the Time 2 assessment (not included in this report), and this was especially true for men. In comparison, mean levels of avoidance and security remained stable over this time period. Nevertheless, cross-sectional analyses in the larger sample from which the current sample was drawn indicated that anxious-ambivalence in adolescence was linked to a variety of personal difficulties including depression, hostility, substance use, and risky sexual behavior (Cooper et al., 1998b), and these patterns were replicated in prospective analyses (Cooper & Orcutt, 1997b). Thus, the relatively weak findings are unlikely to be due solely to limitations in measurement.

It may also be that the implications of anxious-ambivalence are more subtle and complex than suggested by prior research and that anxious-ambivalence may not be uniformly detrimental for relationships. For example, our data suggest that anxious-ambivalent men (but not women) engaged in relatively high levels of pro-relationship behavior (including low levels of aggression, more disclosure, and less withdrawal from communication). In some ways, the pattern exhibited by anxious men departs from stereotypic gender-role behavior and may reflect an evolved strategy for gaining approval and avoiding rejection. This idea is, of course, highly speculative, but it highlights

the need for more research on the ways in which working models of attachment may be differentially expressed by men and women.

Relationship Outcomes for Secure Adolescents

Contrary to our predictions, there were no associations between security and overall relationship functioning for either the respondent or his or her partner (with the exception of one marginal effect linking security to greater shared disclosure). However, when we examined the behavioral profiles of respondents and partners, we found that security was negatively associated with pro-relationship behavior for male respondents. Secure men (relative to insecure men) reported less disclosure and greater jealousy, and their partners perceived them as more jealous. In addition, their partners reported being more critical and somewhat less affectionate, and they were also higher in agency (primarily assertiveness and instrumentality/masculinity). In contrast, security was largely unrelated to outcomes for women with one exception: secure women were involved with male partners who described themselves as more affectionate.

In characterizing the relationship profiles of secure men, it would be inaccurate to conclude that security was detrimental to men because secure men had relationship outcomes that were just as positive as secure women (with the exception of low levels of self-disclosure reported by secure men). Instead, the pattern of predicted means based on the regression analyses suggested not that security was linked to poor outcomes, but that *insecurity* was associated with unusually favorable behavioral profiles for men (in the same way that anxious men had somewhat more positive behavioral profiles). Low-secure men were more disclosing and less jealous, and their female partners treated them with greater affection and less criticism. One interpretation of this finding is that insecurity in men may have inspired more nurturing behavior by their female partners. Partner choice may also have played a role; female partners of low secure men were less assertive and less masculine than female partners of secure men. Hence, it appears *not* that security was linked to poor outcomes in men, but that insecurity was associated with better-than-average outcomes, at least with respect to respondent and partner behavior.

This pattern of findings was further clarified in supplemental analyses (not reported) based on the categorical measure of attachment style. In those analyses, men who chose the secure prototype had

relationship outcomes that were significantly better than avoidant men; however, their outcomes were *not* better than those for anxious-ambivalent men. In contrast, secure women had relationship outcomes that were significantly better than avoidant women and also better than anxious-ambivalent women. These findings, along with the regression analyses, reveal that secure individuals had relationship and behavioral profiles that were substantially more favorable than avoidant individuals, and this was true for both men and women. However, secure men had outcomes that were equal to anxious-ambivalent men, whereas secure women had outcomes that were more favorable than anxious-ambivalent women.

Thus, as predicted, secure adolescents went on to have relationships that were substantially more favorable than avoidant adolescents and, in some cases, more favorable than anxious-ambivalent adolescents. But, how can we explain why secure individuals (especially secure men) did not differ more substantially from anxious-ambivalent individuals? As noted earlier, it is possible that anxious-ambivalence during adolescence (an especially complex time in which attachment behavior begins to shift from parents to peers) may not reflect a chronic and pervasive vulnerability. It may also be that differences between secure and anxious-ambivalent individuals depend in large part on context. That is, the outcomes for secure and anxious-ambivalent individuals may diverge primarily under condition of threat or risk. Such person \times situation interactions were not explored in the current study but remain an important topic for future research. Another possible explanation lies in measurement ambiguities. Specifically, the secure prototype may have been endorsed by avoidant and anxious-ambivalent individuals who agreed with different elements of the secure prototype (Brennan, Shaver, & Tobey, 1991).

Psychosocial Vulnerability From Adolescence to Adulthood

A fundamental assumption of attachment theory is that working models of attachment that develop in childhood and adolescence will be carried forward into new relationships. The primary goal of this study was to test this assumption by investigating whether attachment style in adolescence predicted the nature and quality of intimate relationships in adulthood. Overall, our findings provide the strongest evidence to date in support of this major theoretical assumption,

although the effects were most clear for attachment-related avoidance. These data both confirm and extend prior cross-sectional research indicating that attachment-related avoidance—discomfort with closeness and interdependence—is a risk factor for adverse relationship outcomes across a variety of domains. Moreover, although we cannot draw unqualified causal inferences, our prospective research design enables us to rule out alternative explanations (e.g., reverse causality) that have been problematic in prior cross-sectional research. In addition, by gathering data from both members of the couple we can be confident that the patterns we observed reflect, at least to some extent, a shared social reality.

Our data also point to some potentially important pathways of influence. Consistent with our predictions, avoidant adolescents engaged in less adaptive interpersonal behavior in adulthood and tended to perceive their partner's behavior in a negative light (more negatively than their partner's own report). These findings suggest that avoidant individuals develop less satisfying relationships at least in part because they enter their relationships with maladaptive behavioral predispositions and negative perceptual filters (Collins, 1996; Collins & Allard, 2001). Our data also revealed that avoidant teens chose romantic partners who had less healthy personality profiles, and these profiles were associated with less adaptive partner behavior. These findings are consistent with the idea that insecure attachment may have indirect effects on relationship outcomes by leading individuals to select partners who, because of their own personality vulnerabilities, are less able to provide a secure base of love and support.

Before concluding, it is important to acknowledge several limitations of this study. One important limitation lies in our measurement of attachment style. Hazan and Shaver's (1987) simple, three-category measure of attachment style was the only self-report measure available at the time of our baseline interview; and although this measure has been validated and widely used in prior research, it has some important weaknesses. More sensitive and reliable measures of attachment style have now been developed and will be useful in future research (see Brennan, Clark, & Shaver, 1998; Crowell, Fraley, & Shaver, 1999). In the present study, limitations in measurement may be one reason for the relatively weak findings on some of the attachment dimensions. Indeed, in supplementary analyses using latent variable modeling (not reported), we obtained nearly identical patterns as those we reported here, but in many cases the effects were much

stronger. Thus, although the nature of bias introduced by unreliable measures in a multivariate context is complex and multidirectional, these analyses indicate that our findings are most likely attenuated (not inflated) because of measurement error.

Second, although self-reported attachment style in adolescence and early adulthood has been linked to retrospective and concurrent reports of family relationships (Rothbard & Shaver, 1994), we cannot assume that these styles were determined by parent-child interactions or that they have simple and direct links to childhood patterns of attachment. Such links remain speculative until long-term developmental studies are conducted using both observational and self-report measures of attachment. Nevertheless, regardless of how these individual differences first emerged, the present study suggests that working models of attachment play an important role in shaping interpersonal functioning across the lifespan.

Finally, although our prospective research design enables us to rule out some alternative causal processes, these data are correlational and we cannot draw unqualified causal inferences about the impact of attachment style on relationship outcomes over time. It remains possible that some unmeasured third variable may better explain the patterns observed in this study. In addition, although the pattern of direct and indirect effects specified in our hypothesized model provided a good fit to the data, other alternative causal models may fit the data equally well.

Despite these limitations, the present study provides compelling evidence that enduring attachment-related predispositions can lead individuals to both create and select environments that either enhance or inhibit their opportunities for successful relating. Attachment theory is a useful theoretical framework for exploring the nature of these predispositions and the manner in which they carry their influence from adolescence to adulthood.

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