Romantic Love Conceptualized as an Attachment Process

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This article explores the possibility that romantic love is an attachment process—a biosocial process by which affectional bonds are formed between adult lovers, just as affectional bonds are formed earlier in life between human infants and their parents. Key components of attachment theory, developed by Bowlby, Ainsworth, and others to explain the development of affectional bonds in infancy, were translated into terms appropriate to adult romantic love. The translation centered on the three major styles of attachment in infancy—secure, avoidant, and anxious/ambivalent—and on the notion that continuity of relationship style is due in part to mental models (Bowlby's "inner working models") of self and social life. These models, and hence a person's attachment style, are seen as determined in part by childhood relationships with parents. Two questionnaire studies indicated that (a) relative prevalence of the three attachment styles is roughly the same in adulthood as in infancy, (b) the three kinds of adults differ predictably in the way they experience romantic love, and (c) attachment style is related in theoretically meaningful ways to mental models of self and social relationships and to relationship experiences with parents. Implications for theories of romantic love are discussed, as are measurement problems and other issues related to future tests of the attachment perspective.

One of the landmarks of contemporary psychology is Bowlby's (1969, 1973, 1980) three-volume exploration of attachment, separation, and loss, the processes by which affectional bonds are forged and broken. Bowlby's major purpose was to describe and explain how infants become emotionally attached to their primary caregivers and emotionally distressed when separated from them, although he also contended that "attachment behavior [characterizes] human beings from the cradle to the grave" (1979, p. 129). In recent years, laboratory and naturalistic studies of infants and children (summarized by Bretherton, 1985, and Maccoby, 1980) have provided considerable support for attachment theory, which was proposed by Bowlby and elaborated by several other investigators. The purpose of this article is to explore the possibility that this theory, designed primarily with infants in mind, offers a valuable perspective on adult romantic love. We will suggest that romantic love is an attachment process (a process of becoming attached), experienced somewhat differently by different people because of variations in their attachment histories.

For our purpose, which is to create a coherent framework for understanding love, loneliness, and grief at different points in the life cycle, attachment theory has several advantages over existing approaches to love (Shaver, Hazan, & Bradshaw, in press). First, although many researchers (e.g., Rubin, 1973; Hatfield & Sprecher, 1985) have attempted to assess love with unidimensional scales, love appears to take multiple forms (e.g., Dion & Dion, 1985; Hendrick & Hendrick, 1986; Lee, 1973; Steck, Levitan, McLane, & Kelley, 1982; Sternberg, 1986; Tennov, 1979). Attachment theory explains how at least some of these forms develop and how the same underlying dynamics, common to all people, can be shaped by social experience to produce different relationship styles. Second, although various authors have portrayed certain forms of love as healthy and others as unhealthy, or at least problematic (e.g., Hindy & Schwarz, 1984; Tennov, 1979), they have not said how the healthy and unhealthy forms fit together in a single conceptual framework. Attachment theory not only provides such a framework, but it also explains how both healthy and unhealthy forms of love originate as reasonable adaptations to specific social circumstances. The portrait of love offered by attachment theory includes negative as well as positive emotions: for example, fear of intimacy (discussed by Hatfield, 1984), jealousy (e.g., Hindy & Schwarz, 1985), and emotional ups and downs (Tennov, 1979) as well as caring (Rubin, 1973), intimacy (Sternberg, 1986), and trust (Dion & Dion, 1985). Third, attachment theory deals with separation and loss and helps explain how loneliness and love are related (Shaver & Rubenstein, 1980; Parkes &

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Weiss, 1983; Weiss, 1973). Finally, attachment theory links adult love with socioemotional processes evident in children and nonhuman primates; it places love within an evolutionary context (Wilson, 1981). (See Sternberg & Barnes, in press, for an anthology of recent approaches to the study of adult love.)

Attachment Theory and Research

Bowlby's attachment theory grew out of observations of the behavior of infants and young children who were separated from their primary caregiver (usually the mother) for various lengths of time. Bowlby noticed what primate researchers had also observed in the laboratory and the field: When a human or primate infant is separated from its mother, the infant goes through a predictable series of emotional reactions. The first is *protest,* which involves crying, active searching, and resistance to others' soothing efforts. The second is *despair,* which is a state of passivity and obvious sadness. And the third, discussed only with reference to humans, is *detachment,* an active, seemingly defensive disregard for and avoidance of the mother if she returns. Because of the remarkable similarities between human infants and other primate infants, Bowlby was led to consider the evolutionary significance of infant–caregiver attachment and its maintenance in the face of separation.

The attachment system, as Bowlby called the complex constellation of attachment feelings and behaviors, seems to have evolved to protect infants from danger by keeping them close to the mother. When very young, a human infant can do little more than cry, make eye contact, smile, and snuggle in to encourage its mother to keep it near. Once mobile, however, it can actively pursue its mother and vocalize to her. Bowlby and other observers of both human and primate behavior have noticed that when an infant is healthy, alert, unafraid, and in the presence of its mother, it seems interested in exploring and mastering the environment and in establishing affiliative contact with other family and community members. Researchers call this using the mother as a secure base.

Attachment theory can be summarized in three propositions, phrased clearly in the second volume of Bowlby's trilogy:

> The first [proposition] is that when an individual is confident that an attachment figure will be available to him whenever he desires it, that person will be much less prone to either intense or chronic fear than will an individual who for any reason has no such confidence. The second proposition concerns the sensitive period during which such confidence develops. It postulates that confidence in the availability of attachment figures, or lack of it, is built up slowly during the years of immaturity—infancy, childhood, and adolescence—and that whatever expectations are developed during those years tend to persist relatively unchanged throughout the rest of life. The third proposition concerns the role of actual experience. It postulates that the varied expectations of the accessibility and responsiveness of attachment figures that individuals develop during the years of immaturity are tolerably accurate reflections of the experiences those individuals have actually had. (Bowlby, 1973, p. 235)

The formation during early childhood of a smoothly functioning (i.e., secure) attachment relationship with a primary caregiver, although the norm in our society, is by no means guaranteed. Research by Ainsworth and others suggests that a mother's sensitivity and responsiveness to her infant's signals and needs during the first year of life are important prerequisites. Mothers who are slow or inconsistent in responding to their infant's cries or who regularly intrude on or interfere with their infant's desired activities (sometimes to force affection on the infant at a particular moment) produce infants who cry more than usual, explore less than usual (even in the mother's presence), mingle attachment behaviors with overt expressions of anger, and seem generally anxious. If, instead, the mother consistently rebuffs or rejects the infant's attempts to establish physical contact, the infant may learn to avoid her. On the basis of their observations, Ainsworth, Blehar, Waters, and Wall (1978) delineated three styles or types of attachment, often called *secure, anxious/ambivalent,* and *avoidant.* Infants in the anxious/ambivalent category frequently exhibit the behaviors Bowlby called *protest,* and the avoidant infants frequently exhibit the behaviors he called *detachment.* A major goal of this article is to apply this three-category system to the study of romantic love.

In their description of the three attachment styles, Ainsworth et al. (1978) referred to infants' expectations concerning their mothers' accessibility and responsiveness. This fits with Bowlby's claim that infants and children construct inner working models of themselves and their major social-interaction partners. Because the expectations incorporated in these models are some of the most important sources of continuity between early and later feelings and behaviors, they deserve special attention. According to Bowlby, working models (which we will also call *mental models*) and the behavior patterns influenced by them are central components of personality. The claim of cross-situational and cross-age continuity is still controversial but is supported by a growing list of longitudinal studies from infancy through the early elementary school years (Dontas, Maratos, Fafoutis, & Karangelis, 1985; Erickson, Sroufe, & Egeland, 1985; Main, Kaplan, & Cassidy, 1985; Sroufe, 1983; Waters, Wippman, & Sroufe, 1979). This evidence for continuity adds plausibility to the notion that a person's adult style of romantic attachment is also affected by attachment history.

Continuity, according to Bowlby (1973), is due primarily to the persistence of interrelated mental models of self and social life in the context of a fairly stable family setting:

> Confidence that an attachment figure is, apart from being accessible, likely to be responsive can be seen to turn on at least two variables: (a) whether or not the attachment figure is judged to be the sort of person who in general responds to calls for support and protection; [and] (b) whether or not the self is judged to be the sort of person towards whom anyone, and the attachment figure in particular, is likely to respond in a helpful way. Logically these variables are independent. In practice they are apt to be confounded. As a result, the model of the attachment figure and the model of the self are likely to develop so as to be complementary and mutually confirming. (Bowlby, 1973, p. 238)

Love as Attachment

So far, no one has attempted to conceptualize the entire range of romantic love experiences in a way that parallels the typology developed by Ainsworth and her colleagues. Nor has anyone with an interest in romantic relationships pursued Bowlby's idea that continuity in relationship style is a matter of mental models of self and social life. Finally, no one has explored the

possibility that the specific characteristics of parent–child relationships identified by Ainsworth et al. as the probable causes of differences in infant attachment styles are also among the determinants of adults' romantic attachment styles. These are the major aims of this article.

We derived the following hypotheses by applying Bowlby's and Ainsworth's ideas and findings as literally as possible to the domain of adult love.

Hypothesis 1

Given the descriptions of the secure, avoidant, and anxious/ambivalent styles, we expected roughly 60% of adults to classify themselves as secure and the remainder to split fairly evenly between the two insecure types, with perhaps a few more in the avoidant than in the anxious/ambivalent category. In a summary of American studies of the three types of infants, Campos, Barrett, Lamb, Goldsmith, and Stenberg (1983) concluded that 62% are secure, 23% are avoidant, and 15% are anxious/ambivalent. Given a diverse sample of American adults, we thought it reasonable to expect approximately the same proportions.

Hypothesis 2

Just as the feelings an infant presumably experiences in the relationship with his or her mother are thought to reflect the quality of attachment to her, we expected that different types of respondents—secure, avoidant, and anxious/ambivalent—would experience their most important love relationships differently. We predicted that the most important love experience of a secure adult would be characterized by trust, friendship, and positive emotions. For avoidant adults, love was expected to be marked by fear of closeness and lack of trust. Anxious/ambivalent adults were expected to experience love as a preoccupying, almost painfully exciting struggle to merge with another person. This last style is similar to what Hindy and Schwarz (1984) called anxious romantic attachment and Tennov (1979) called limerence.

Hypothesis 3

Respondents' working models of self and relationships were also expected to differ according to attachment style. Secure types should believe in enduring love, generally find others trustworthy, and have confidence that the self is likable. Avoidant types should be more doubtful of the existence or durability of romantic love and believe that they do not need a love partner in order to be happy. Anxious/ambivalent types should fall in love frequently and easily but have difficulty finding true love. They should also have more self-doubts than the other two types because, unlike avoidant respondents, they do not repress or attempt to hide feelings of insecurity.

Hypothesis 4

Because attachment style is thought to develop in infancy and childhood, we expected respondents of the three types to report different attachment histories. According to the theory, secure respondents should remember their mothers as dependably responsive and caring; avoidant respondents should report that their mothers were generally cold and rejecting; and anxious/ambivalent respondents should remember a mixture of positive and negative experiences with their mothers. As less research has been conducted with fathers, we tentatively expected the findings related to them to be roughly similar to the findings for mothers.

Hypothesis 5

Finally, because the attachment needs of insecure respondents are unlikely to be fully met, avoidant and anxious/ambivalent respondents should be especially vulnerable to loneliness. The avoidant types, however, may defend against or attempt to hide this vulnerable feeling and so report less loneliness than anxious/ambivalent respondents do.

Study 1

In an initial effort to test the attachment-theory approach to romantic love, we designed a "love quiz" to be printed in a local newspaper. As explained by Shaver and Rubenstein (1983), the newspaper questionnaire method has been used in a wide variety of studies, always with results that approximate those from more expensive, more strictly representative surveys. The main difference between newspaper survey respondents and participants in representative sample surveys is that the former have slightly higher education levels. Also, depending on the topic, newspaper surveys tend to draw more female than male respondents. Neither of these biases seemed to preclude a valuable initial test of our ideas, and the gains in sample size and heterogeneity appeared to outweigh the cost of mild unrepresentativeness.

A single-item measure of the three attachment styles was designed by translating Ainsworth et al.'s (1978) descriptions of infants into terms appropriate to adult love. The love-experience questionnaire, which we will describe in detail, was based on previous adult-love measures and extrapolations from the literature on infant–caregiver attachment. The measure of working models was based on the assumption that conscious beliefs about romantic love—concerning, for example, whether it lasts forever and whether it is easy or difficult to find—are colored by underlying, and perhaps not fully conscious, mental models. The measure of attachment history was a simple adjective checklist used to describe childhood relationships with parents and the parents' relationship with each other.

Method

Subjects. Analyses reported here are based on the first 620 of over 1,200 replies received within a week following publication of the questionnaire. (The major findings were stable after the first few hundred, so additional replies were not keypunched.) Of these 620 replies, 205 were from men and 415 were from women. The subjects ranged in age from 14 to 82, with a median age of 34 and a mean of 36. Average household income was $20,000 to $30,000; average education level was "some college." Just over half (51%) were Protestant, 22% were Catholic, 3% were Jewish, 10% were atheist or agnostic, and 13% were "other." Ninety-one percent were "primarily heterosexual," 4% were "primarily homosexual," and 2% were "primarily bisexual" (3% chose not to answer). Forty-two percent were married at the time of the survey; 28%

were divorced or widowed, 9% were "living with a lover," and 31% were dating. (Some checked more than one category.)

Measures and procedure. The questionnaire appeared in the July 26, 1985, issue of the *Rocky Mountain News* on the first and second pages of the Lifestyles section. Besides being highly visible there, it was referred to in a banner headline at the top of the paper's front page: "Tell us about the love of your life; experts ask 95 questions about your most important romance." The instructions included the following sentences: "The questionnaire is designed to look at the most important love relationship you have ever had, why you got involved in it, and why it turned out the way it did. . . . It may be a past or a current relationship, but choose only the most important one." Given that there was only enough room to ask about one relationship, we decided to have subjects focus on the one they considered most important.

The questionnaire was divided into three parts. The first contained 56 statements concerning the subject's most important relationship, for example, "I (considered/consider) _____ one of my best friends" and "I (loved/love) _____ so much that I often (felt/feel) jealous." (The blank referred to the most important lover's name.) Responses were recorded by circling *SD, D, A,* or *SA* to indicate points along a *strongly disagree* to *strongly agree* continuum. The 56 statements, 4 each for 14 a priori subscales, were adapted from previous love questionnaires (Dion & Dion, 1985; Hatfield & Sprecher, 1985; Hindy & Schwarz, 1984; Lasswell & Lobsenz, 1980; Rubin, 1973; Steffen, McLaney, & Hustedt, 1984) or suggested by the literature on infant–caretaker attachment (e.g., Ainsworth et al., 1978).

A principal-components analysis followed by equimax rotation was performed on the 56-item measure. Thirteen factors had eigenvalues greater than 1.0, and 12 corresponded to a priori scales. Items loading above .40 on 1 of the 12 predicted factors were analyzed for reliability, and items that reduced coefficient alpha were deleted. Table 1 provides the names of the 12 scales and a sample item, the number of items retained, and coefficient alpha for each. Alpha ranged from .64 to .84 with a mean of .76, which seemed adequate for preliminary tests of the hypotheses.

Part 2 of the questionnaire asked whether the described relationship was current or past (61% were current, 39% were past), what the subject's relationship to that person was at the time of the survey, how long the relationship had lasted, how many times the subject had been in love, and whether he or she had experienced crushes before age 10. This part of the questionnaire also contained demographic questions.

Part 3 dealt with attachment style and attachment history. It included sections dealing with the subject's childhood relationships with his or her mother and father and the parents' relationship with each other (the specific items will be discussed more fully in the *Results and Discussion* section). Also included were questions concerning how the subject typically felt in relationships (the exact wording appears in Table 2) and what he or she believed concerning the typical course of romantic love. The questionnaire concluded with the open-ended question "Can you add anything that might help us understand romantic love?" and a request for the subject's name and phone number if he or she was willing to be interviewed. (Over 60% of the subjects provided this information.)

Subjects were asked to mail their reply forms to the *Rocky Mountain News* within a week.

Table 1
Information on Love-Experience Scales

Scale name	Sample item	No. of items	α
Happiness	My relationship with _____ (made/makes) me very happy.	4	.84
Friendship	I (considered/consider) _____ one of my best friends.	4	.78
Trust	I (felt/feel) complete trust in _____.	4	.83
Fear of closeness	I sometimes (felt/feel) that getting too close to _____ could mean trouble.	3	.64
Acceptance	I (was/am) well aware of _____'s imperfections but it (did/does) not lessen my love.	2	.67
Emotional extremes	I (felt/feel) almost as much pain as joy in my relationship with _____.	3	.81
Jealousy	I (loved/love) _____ so much that I often (felt/feel) jealous.	4	.82
Obsessive preoccupation	Sometimes my thoughts (were/are) uncontrollably on _____.	3	.70
Sexual attraction	I (was/am) very physically attracted to _____.	4	.80
Desire for union	Sometimes I (wished/wish) that _____ and I were a single unit, a "we" without clear boundaries.	3	.79
Desire for reciprocation	More than anything, I (wanted/want) _____ to return my feelings.	3	.70
Love at first sight	Once I noticed _____, I was hooked.	4	.70

Results and Discussion

Frequencies of the three attachment styles. Hypothesis 1 concerned whether newspaper readers could meaningfully classify themselves as avoidant, anxious/ambivalent, or secure in their most important romantic relationship, given fairly simple descriptions of the three attachment styles, and in particular whether the frequencies of the types would be similar to those found in studies of infants and young children. Table 2 shows how the alternatives were worded and provides the percentage of subjects endorsing each description.

Just over half (56%) classified themselves as secure, whereas the other half split fairly evenly between the avoidant and anxious/ambivalent categories (25% and 19%, respectively). These figures are similar to proportions reported in American studies of infant–mother attachment (Campos et al., 1983, summarized the proportions obtained in these studies as 62% secure, 23% avoidant, and 15% anxious/ambivalent). Our results suggest, but of course do not prove, that subjects' choices among the alternatives were nonrandom and may have been determined by some of the same kinds of forces that affect the attachment styles of infants and children. The remainder of the results argue for the validity of subjects' self-classifications.

Differences in love experiences. The second hypothesis predicted that subjects with different self-designated attachment styles would differ in the way they characterized their most important love relationship. Table 3 presents the mean subscale scores (each with a possible range of 1 to 4) for each attachment type, along with the F ratio from a one-way analysis of variance (ANOVA) on scores for each subscale.

In line with the hypothesis, secure lovers described their most

Table 2
Adult Attachment Types and Their Frequencies (Newspaper Sample)

Question: Which of the following best describes your feelings?
Answers and percentages:

Secure (N = 319, 56%): I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't often worry about being abandoned or about someone getting too close to me.

Avoidant (N = 145, 25%): I am somewhat uncomfortable being close to others; I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I feel comfortable being.

Anxious/Ambivalent (N = 110, 19%): I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't want to stay with me. I want to merge completely with another person, and this desire sometimes scares people away.

Note. Twenty-one subjects failed to answer this question, and 25 checked more than one answer alternative.

important love experience as especially happy, friendly, and trusting. They emphasized being able to accept and support their partner despite the partner's faults. Moreover, their relationships tended to endure longer: 10.02 years, on the average, compared with 4.86 years for the anxious/ambivalent subjects and 5.97 years for the avoidant subjects, $F(2, 568) = 15.89$, $p < .001$. This was the case even though members of all three groups were 36 years old on the average. Only 6% of the secure group had been divorced, compared with 10% of the anxious/ambivalent group and 12% of the avoidant group, $F(2, 573) = 3.36$, $p < .05$.

The avoidant lovers were characterized by fear of intimacy, emotional highs and lows, and jealousy. They never produced the highest mean on a positive love-experience dimension. The anxious/ambivalent subjects experienced love as involving obsession, desire for reciprocation and union, emotional highs and lows, and extreme sexual attraction and jealousy. They provided a close fit to Tennov's (1979) description of limerence and Hindy and Schwarz's (1984) conception of anxious romantic attachment, suggesting that the difference between what Tennov called love and limerence is the difference between secure and anxious/ambivalent attachment.

Although the average love experiences of people in the three different attachment categories differed significantly, for most of the subscales all three types scored on the same side of the midpoint (2.50), emotional extremes and jealousy being the only exceptions. Thus, there appears to be a core experience of romantic love shared by all three types, with differences in emphasis and patterning between the types. The results also support the ideas that love is a multidimensional phenomenon and that individuals differ in more ways than the intensity of their love experiences. Especially noteworthy was the fact that the ordering of means for the different attachment styles differed for different dimensions. For the dimensions of happiness, friendship, trust, and fear of closeness, secure subjects differed significantly from avoidant and anxious/ambivalent subjects but these two insecure groups did not differ from each other. On the dimensions of obsessive preoccupation, sexual attraction, desire for union, desire for reciprocation, and love at first sight, anxious/ambivalent subjects differed significantly from avoidant and secure subjects, who did not differ from each other. On the acceptance dimension, avoidant subjects (the least accepting) differed from anxious/ambivalent and secure subjects, and on emotional extremes and jealousy, all three groups were statistically distinct. This variety of patterns supports the claim that there are three different love styles, not simply three points along a love continuum.

Differences in mental models. We attempted to assess what Bowlby (1969) called working models of relationships by using the items shown in Table 4. Each was either checked or not checked as describing how the subject generally "view[s] the course of romantic love over time." These dichotomous answers were analyzed by attachment style, using a one-way ANOVA. (Because the answers were scored as either 0 or 1, the means can be read as proportions.)

In line with the third hypothesis, secure lovers said that romantic feelings wax and wane but at times reach the intensity experienced at the start of the relationship and that in some relationships romantic love never fades. The avoidant lovers said the kind of head-over-heels romantic love depicted in novels and movies does not exist in real life, romantic love seldom lasts, and it is rare to find a person one can really fall in love with. The anxious/ambivalent subjects claimed that it is easy to fall in love and that they frequently feel themselves beginning to fall, although (like the avoidant subjects) they rarely find what they would call real love. Like the secure subjects, the anxious/ambivalent subjects said they believe that romantic feelings wax and wane over the course of a relationship.

Differences in attachment history. Attachment history with parents was assessed in two ways. Subjects were asked whether

Table 3
Love-Subscale Means for the Three Attachment Types (Newspaper Sample)

Scale name	Avoidant	Anxious/ ambivalent	Secure	$F(2, 571)$
Happiness	3.19_a	3.31_a	3.51_b	14.21***
Friendship	3.18_a	3.19_a	3.50_b	22.96***
Trust	3.11_a	3.13_a	3.43_b	16.21***
Fear of closeness	2.30_a	2.15_a	1.88_b	22.65***
Acceptance	2.86_a	3.03_b	3.01_b	4.66**
Emotional extremes	2.75_a	3.05_b	2.36_c	27.54***
Jealousy	2.57_a	2.88_b	2.17_c	43.91***
Obsessive preoccupation	3.01_a	3.29_b	3.01_a	9.47***
Sexual attraction	3.27_a	3.43_b	3.27_a	4.08*
Desire for union	2.81_a	3.25_b	2.69_a	22.67***
Desire for reciprocation	3.24_a	3.55_b	3.22_a	14.90***
Love at first sight	2.91_a	3.17_b	2.97_a	6.00**

Note. Within each row, means with different subscripts differ at the .05 level of significance according to a Scheffé test.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 4
Proportion of Respondents Who Endorsed Each Mental-Model Statement About Love (Newspaper Sample)

Statement	Avoidant	Anxious/ ambivalent	Secure	$F(2, 571)$
1. The kind of head-over-heels romantic love depicted in novels and movies doesn't exist in real life.	$.25_a$	$.28_a$	$.13_b$	8.81***
2. Intense romantic love is common at the beginning of a relationship, but it rarely lasts forever.	$.41_a$	$.34_b$	$.28_b$	3.83*
3. Romantic feelings wax and wane over the course of a relationship, but at times they can be as intense as they were at the start.	$.60_a$	$.75_b$	$.79_b$	9.86***
4. In some relationships, romantic love really lasts; it doesn't fade with time.	$.41_a$	$.46_a$	$.59_b$	7.48***
5. Most of us could love many different people equally well; there is no "one true love" which is "meant to be."	.39	.36	.40	*ns*
6. It's easy to fall in love. I feel myself beginning to fall in love often.	$.04_a$	$.20_b$	$.09_a$	9.33***
7. It's rare to find someone you can really fall in love with.	$.66_a$	$.56_a$	$.43_b$	11.61***

Note. Within each row, means with different subscripts differ at the .05 level of significance according to a Scheffé test.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

they had ever been separated from either parent for "what seemed like a long time" and whether the parents ever separated or divorced. They were also asked to describe how each parent had generally behaved toward them during childhood (using 37 adjectives, such as *responsive, caring, critical,* and *intrusive,* derived from a pilot study in which subjects answered open-ended questions about their childhood relationships with parents) and the parents' relationship with each other (using 12 similarly derived adjectives such as *affectionate, unhappy,* and *argumentative*).

There were no significant differences among the three attachment types in likelihood or duration of separation from parents during childhood, even when analyzed by reason for separation. In addition, parental divorce seemed unrelated to attachment type, even though quality of relationships with parents was associated with type. The best predictors of adult attachment type were respondents' perceptions of the quality of their relationship with each parent and the parents' relationship with each other.

A one-way ANOVA, with attachment style as the independent variable, on each of the 86 child–parent and parent–parent relationship variables yielded 51 *F*s that were significant at the .05 level, clearly more than expected by chance. (Thirty-seven of these were significant at the .01 level; 15 were significant at the .001 level.) Because many of the variables were correlated, which meant that many of the ANOVA results were redundant, a hierarchical discriminant-function analysis was performed to assess predictability of membership in the three attachment categories from a combination of attachment-history variables. Subjects with no missing data on the variables involved (N = 506) were included in the analysis. The 22 attachment-history variables shown in Table 5 (plus one with a correlation below .20) were retained as significant predictors of attachment type. Both discriminant functions (two being the maximum possible number given three target groups) were statistically significant, with a combined $\chi^2(46, N = 506) = 131.16$, $p < .001$. After removal of the first function, $\chi^2(22, N = 506)$ was 40.94 ($p < .01$). The two functions accounted for 69.87% and 30.13%, respectively, of the between-groups variability.

As shown in Figure 1, the first discriminant function separated secure subjects from the two kinds of insecure subjects. The second function separated avoidant from anxious/ambivalent subjects. Together, the two functions correctly classified 56% of the avoidant subjects, 51% of the anxious/ambivalent subjects, and 58% of the secure subjects. (The incorrectly classified subjects were distributed fairly evenly across the remaining categories.)

Correlations of the 22 predictor variables with the two dis-

Table 5
Significant Correlations Between Attachment-History Variables and Discriminant Functions (Newspaper Sample)

Variable	Function 1	Function 2
Affectionate parental relationship	.44*	
Respectful mother	.43*	.22
Intrusive mother	−.42*	
Caring father	.41*	
Demanding mother	−.40*	
Loving father	.40*	.25
Humorous father	.40*	
Confident mother	.35*	
Unhappy parental relationship	−.34*	.24
Accepting mother	.33*	
Caring parental relationship	.32*	
Responsible mother	.31*	
Affectionate father	.30*	.26
Sympathetic father	.28*	
Strong mother	.28*	
Disinterested mother	−.28*	
Unresponsive father	−.24*	
Unfair father	−.20	.47*
Humorous mother		.43*
Likable mother		.38*
Respected mother	.30	.37*
Rejecting mother	−.27	−.30*

Note. Correlations marked with an asterisk in the first column correlated more highly with Function 1 than with Function 2; the reverse is true in the second column.

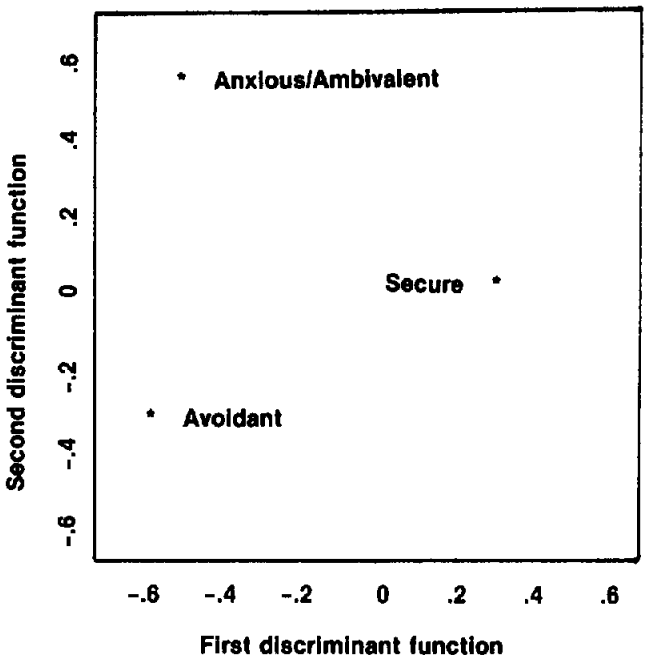


Figure 1. Plot of three group centroids on two discriminant functions derived from attachment-history variables (newspaper sample).

criminant functions are shown in Table 5. The best discriminators between secure and insecure subjects included (a) a relationship between parents that was affectionate (r = .44), caring (.32), and not unhappy (−.34); (b) a mother who was respectful of the subject (.43), confident (.35), accepting (.33), responsible (.31), not intrusive (−.42), and not demanding (−.40), among other qualities; and (c) a father who was, among other things, caring (.41), loving (.40), humorous (.40), and affectionate (.30). The top discriminators between avoidant and anxious/ambivalent groups, with positively correlated variables being those named more frequently by anxious/ambivalent subjects, included (a) no parental relationship variables; (b) a mother who was relatively humorous (.43), likable (.38), respected (.37), and not rejecting (−.30); and (c) a father who was relatively unfair (.47).

These results can be summarized by saying that secure subjects, in comparison with insecure subjects, reported warmer relationships with both parents and between their two parents. Avoidant subjects, in comparison with anxious/ambivalent subjects, described their mothers as cold and rejecting. Anxious/ambivalent subjects saw their fathers as unfair. Both sets of correlations are compatible with expectations based on Ainsworth et al.'s (1978) studies of infant–caregiver attachment.

Sex differences and similarities. There were a few significant sex differences on individual items. Most notably, respondents tended to describe their opposite-sex parent more favorably than their same-sex parent. For example, 62% of the women (vs. 44% of the men) described their fathers as loving, $t(563) = 4.16$, $p < .001$, and 78% of the men (vs. 69% of the women) described their mothers as loving, $t(614) = 2.36$, $p < .05$. This same pattern was found for the adjectives *affectionate* and *understanding*. Moreover, on negative trait dimensions, respondents tended to judge their same-sex parent more harshly. For instance, 39% of the women, but only 27% of the men, described their mothers as critical, $t(614) = 2.91$, $p < .01$. When reporting about their fathers, on the other hand, 53% of the men chose *critical*, compared with 39% of the women, $t(563) = 3.06$, $p < .01$. The same was true for *demanding*. There were no significant sex differences in prevalence of the three attachment styles and only small differences on two of the love dimensions: Men agreed slightly more than women did with the sexual-attraction items (3.35 vs. 3.26), $t(618) = 1.99$, $p < .05$, and also reported greater desire for union (2.94 vs. 2.78), $t(616) = 2.45$, $p < .05$. Overall, what stood out was the marked similarity of the results for men and women.

Study 2

Method

Study 1 suffered from several limitations that made it desirable to conduct a conceptual replication. First, the newspaper sample might have been biased because of self-selection. This could have affected our estimate of the prevalence of each of the three attachment types and distorted other results in unanticipated and undetectable ways. It seemed wise, therefore, to test a non-self-selected college-student group in our second study, students being the usual subjects in social psychological research. Second, Study 1 examined only limited aspects of subjects' mental models. An interesting part of Bowlby's (1969) analysis was the claim that these models involve complementary portrayals of self and relationships. In Study 1, because of space limitations imposed by newspaper editors, we neglected the self side of subjects' mental models; in Study 2 we focused on them. Third, because previous research on loneliness (e.g., Rubenstein & Shaver, 1982) has linked loneliness to attachment history without using the attachment-classification item designed for our research on romantic love, we decided to include in Study 2 brief measures of state and trait loneliness (Shaver, Furman, & Buhrmester, 1985). The hypotheses were the same as in Study 1, but Hypotheses 4 and 5 were especially important in Study 2 because new self-model items and measures of loneliness were included.

Subjects. One hundred eight undergraduates (38 men and 70 women) who were enrolled in a course entitled Understanding Human Conflict completed the questionnaire as a class exercise. Approximately three fourths of the students were first-quarter freshmen; the mean age was 18 years.

Measures and procedure. As in Study 1, subjects were asked to describe their most important love relationship in terms of 56 agree–disagree items. They also classified themselves by using the same attachment-style item. To measure additional aspects of subjects' mental models, we included several self-descriptive items and some new items concerning relationships with other people (see Table 8). State and trait loneliness were measured (in a separate questionnaire to be described) with two parallel 11-item scales similar to those described by Shaver et al. (1985). These were based in part on the revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980). Each item was answered on a 5-point response scale; trait items referred to feelings experienced "during the past few years" and state items referred to "the past few weeks." Sample trait items included "During the past few years, I have lacked companionship" and "During the past few years, about how often have you felt lonely?"

Subjects received their questionnaires as part of a series of class exercises due at different points during the quarter. Each exercise was due a week before related issues were discussed in class. Confidentiality was assured by checking off the names of students who handed in the exercise on time and then analyzing all data by number rather than by name.

Table 6
Love-Subscale Means for the Three Attachment Types (Undergraduate Sample)

Scale name	Avoidant	Anxious/ ambivalent	Secure	$F(2, 104)$
Happiness	3.06	3.26	3.30	*ns*
Friendship	3.34_a	3.39_a	3.61_b	3.30*
Trust	3.25_a	3.35_b	3.57_b	3.03*
Fear of closeness	2.63_a	2.45_a	2.13_b	4.48**
Acceptance	2.96	3.11	2.91	*ns*
Emotional extremes	2.79_a	2.86_a	2.33_b	4.67**
Jealousy	2.52_a	3.26_b	2.40_a	13.24***
Obsessive preoccupation	3.03	3.09	3.09	*ns*
Sexual attraction	3.05	3.31	3.23	*ns*
Desire for union	2.83_a	3.29_b	2.92_a	3.41*
Desire for reciprocation	3.21_a	3.64_b	3.18_a	7.50***
Love at first sight	2.67_a	3.10_b	2.83_a	3.76*

Note. Within each row, means with different subscripts differ at the .05 level of significance according to a Scheffé test.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

To decrease possible halo effects, the loneliness questionnaire was administered 4 weeks after the love-quiz exercise was completed.

Results and Discussion

Frequencies of the three attachment styles. The proportions of each of the three attachment styles were highly similar in Study 2 to what they were in Study 1: secure, 56% (vs. 56% of newspaper respondents); avoidant, 23% (vs. 25%); and anxious/ambivalent, 20% (vs. 19%). It seems unlikely, therefore, that the newspaper sample was biased in this respect.

Differences in love experiences. The effects of attachment style on love experiences were also similar across the two studies, as seen by comparing Tables 3 and 6. Even though only 8 of the 12 subscales yielded significant mean differences with the smaller sample, nearly all exhibited the same pattern of means found in Study 1. Secure respondents characterized their love experiences as friendly, happy, and trusting, whereas avoidant subjects reported fear of closeness, and anxious/ambivalent subjects described relationships marked by jealousy, emotional highs and lows, and desire for reciprocation.

Differences in mental models (old items). As seen by comparing Tables 4 and 7, the results for six of the seven mental-model items used in Study 1 were replicated in Study 2, the exception being Item 3. (In Study 1, avoidant subjects were distinguishable by their denial that love can be rekindled after it wanes, but in Study 2 they were not.) However, only two of the items produced significant differences: Item 6 ("It's easy to fall in love. . ."; endorsed by 32% of the anxious/ambivalent, 15% of the secure, and none of the avoidant subjects) and Item 7 ("It's rare to find someone. . ."; endorsed by 80% of the avoidant, 55% of the secure, and 41% of the anxious/ambivalent subjects). One possible reason for differences between the two sets of results is that the college student subjects had less relationship experience; their average relationship had lasted about 1 year, compared with 8 years for the newspaper sample. Fewer of them were willing to say that Hollywood romance doesn't exist in real life (Item 1), more said that love doesn't fade over time (Item 4), and so on.

Differences in mental models (new items). Table 8 shows the proportion of each attachment group endorsing the new mental-model statements designed for Study 2. Attachment style had a significant effect on six of the eight, including all but one of the items concerning self. The secure subjects described themselves as easy to get to know and as liked by most people and endorsed the claim that other people are generally well-intentioned and good-hearted. The anxious/ambivalent subjects reported having more self-doubts, being misunderstood and underappreciated, and finding others less willing and able than they are to commit themselves to a relationship. The avoidant subjects generally fell between the extremes set by the secure and anxious/ambivalent subjects, and in most cases were closer

Table 7
Proportion of Respondents Who Endorsed Each Statement About Love (Undergraduate Sample)

Statement	Avoidant	Anxious/ ambivalent	Secure	*F* Ratio (2, 104)
1. The kind of head-over-heels romantic love depicted in novels and movies doesn't exist in real life.	.16	.18	.12	*ns*
2. Intense romantic love is common at the beginning of a relationship, but it rarely lasts forever.	.40	.27	.17	*ns*
3. Romantic feelings wax and wane over the course of a relationship, but at times they can be as intense as they were at the start.	.64	.68	.50	*ns*
4. In some relationships, romantic love really lasts; it doesn't fade with time.	.56	.59	.77	*ns*
5. Most of us could love many different people equally well; there is no "one true love" which is "meant to be."	.28	.36	.28	*ns*
6. It's easy to fall in love. I feel myself beginning to fall in love often.	$.00_a$	$.32_b$	$.15_{ab}$	4.96**
7. It's rare to find someone you can really fall in love with.	$.80_a$	$.41_b$	$.55_b$	4.10*

Note. Within each row, means with different subscripts differ at the .05 level of significance according to a Scheffé test.
* $p < .05$.
** $p < .01$.

Table 8
Proportion of Respondents Who Endorsed Each New Mental-Model Item (Undergraduate Sample)

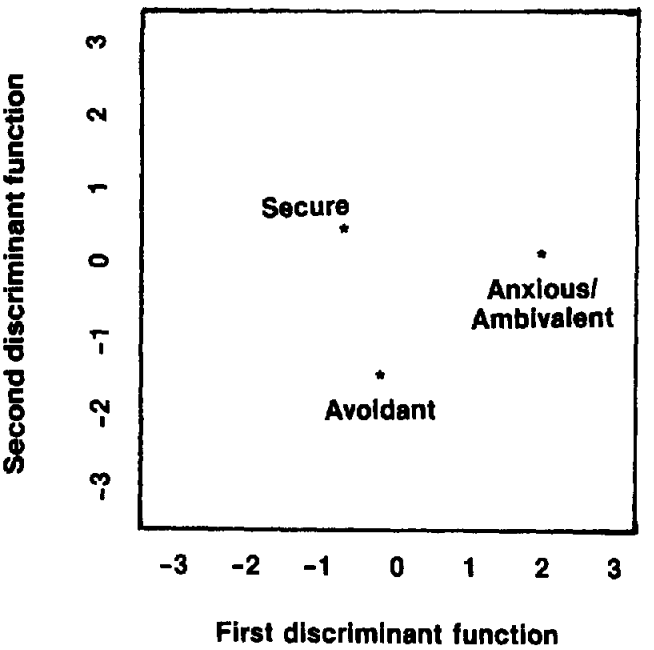
Item	Avoidant	Anxious/ ambivalent	Secure	$F(2, 104)$
1. I am easier to get to know than most people.	$.32_a$	$.32_a$	$.60_b$	4.39*
2. I have more self-doubts than most people.	$.48_a$	$.64_a$	$.18_b$	9.96***
3. People almost always like me.	$.36_a$	$.41_a$	$.68_b$	5.19**
4. People often misunderstand me or fail to appreciate me.	$.36_a$	$.50_a$	$.18_b$	4.56*
5. Few people are as willing and able as I am to commit themselves to a long-term relationship.	$.24_a$	$.59_b$	$.23_a$	5.57**
6. People are generally well-intentioned and good-hearted.	$.44_a$	$.32_a$	$.72_b$	6.99***
7. You have to watch out in dealing with most people; they will hurt, ignore, or reject you if it suits their purposes.	.32	.32	.15	*ns*
8. I am more independent and self-sufficient than most people; I can get along quite well by myself.	.80	.59	.68	*ns*

Note. Within each row, means with different subscripts differ at the .05 level of significance according to a Scheffé test.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

to the anxious/ambivalent than to the secure. Although the differences on the last two items did not reach significance, the means were ordered in theoretically meaningful ways. The two insecure groups more often said that one has to "watch out in dealing with most people," and more of the avoidant subjects (80%) than of the secure (68%) or anxious/ambivalent (59%) subjects agreed that "I can get along quite well by myself."

Differences in attachment history. In an attempt to replicate the attachment-history findings of Study 1 using data from Study 2, we again performed a hierarchical discriminant-function analysis. Subjects with no missing data on the variables involved ($N = 101$) were included in the analysis. Once again, both functions proved to be statistically significant, with a combined $\chi^2(50, N = 101) = 128.30$, $p < .001$. After removal of the first function, $\chi^2(24, N = 101)$ was 39.84 ($p < .05$). The two functions accounted for 75.31% and 24.69%, respectively, of the between-groups variability. As shown in the upper panel of Figure 2, the first discriminant function separated anxious/ambivalent subjects from the other two attachment groups, a pattern different from that obtained in Study 1. The second function separated avoidant from secure subjects. Together, the two functions correctly classified 75.0% of the avoidant subjects, 90.5% of the anxious/ambivalent subjects, and 85.7% of the secure subjects.

The new pattern was due primarily to the fact that avoidant subjects in Study 2 described their attachment histories as more similar to those of secure subjects on positive trait dimensions



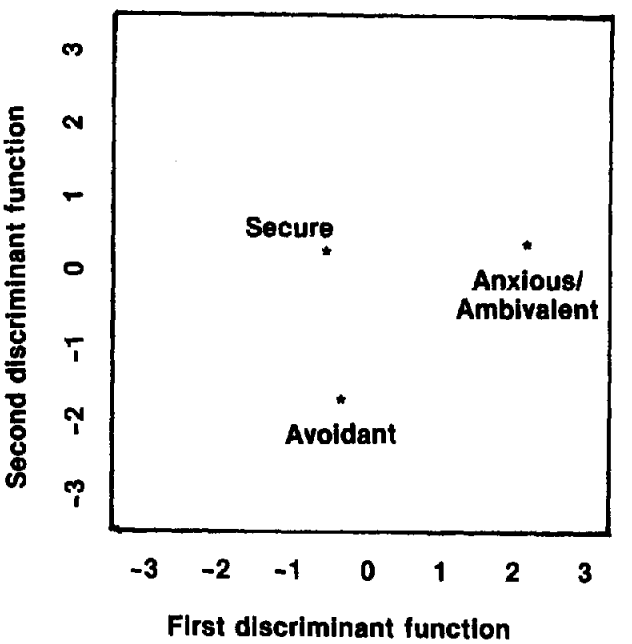


Figure 2. Plots of three group centroids on two discriminant functions derived from attachment-history variables. (The upper portion of the figure displays results for Study 2; the lower portion, results from newspaper respondents below 26 years of age.)

Table 9
Significant Correlations Between Attachment-History Variables and Discriminant Functions (Undergraduate Sample)

Variable	Function 1	Function 2
Cold father	.25*	
Caring father	−.24*	
Confident father	−.23*	
Understanding mother	−.22*	
Humorous father	−.21*	
Warm father	−.18*	
Respectful father	−.17*	
Good-humored parental relationship	−.16*	
Rejecting mother		−.42*
Confident mother		.31*
Respectful mother		.21*
Fair father		.19*
Critical mother		−.19*
Disinterested mother		−.18*
Accepting mother		.17*
Insecure mother		−.17*
Cold mother		−.16*

Note. Correlations marked with asterisks in the first column correlated more highly with Function 1 than with Function 2; the reverse is true in the second column.

than did avoidant subjects in Study 1. In Study 1, for example, only 12% of avoidant subjects said their mother had been accepting; in Study 2 this figure jumped to 50%. For *sympathetic,* the figure jumped from 32% to 79%. The same kinds of differences were evident in descriptions of the relationship with father and the parental relationship. For example, 29% of avoidant subjects in Study 1 described their parents' relationship as happy; the corresponding figure in Study 2 was 63%. For *good-humored,* the percentage increased from 19 to 54. This tendency toward more favorable descriptions on the part of Study 2's avoidant subjects resulted in greater apparent similarity to the secure subjects; on several items, in fact, slightly more avoidant than secure subjects gave their parents favorable reports. This did not keep them, however, from also mentioning more negative descriptors, such as *critical, rejecting,* and *disinterested.* These negative descriptors allowed the second discriminant function to distinguish between secure and avoidant groups.

Correlations between the 17 significant predictor variables with coefficients above .15 and the two discriminant functions are shown in Table 9. The best discriminators between anxious/ambivalent subjects and secure subjects were (a) a relationship between parents that was perceived not to be good-humored (−.16), (b) a mother who was not understanding (−.22), and (c) a father who was cold (.25), not caring (−.24), and not confident (−.23). In contrast to avoidant subjects, secure subjects described their mothers as respectful (.21), accepting (.17), not rejecting (−.42), and not critical (−.19), and their fathers as fair (.19).

Why should avoidant subjects' attachment histories appear more similar to secure subjects' attachment histories in the younger (college student) sample? Central to avoidant attachment is defensiveness. Main et al. (1985) and Kobak and Sceery (in press) have shown that avoidant adults and college students tend to idealize their relationships with parents to avoid the negative feelings associated with those relationships. Evidently, it is only with maturity and distance from parents that an avoidant person can begin to acknowledge severely negative aspects of his or her early relationships. To test the hypothesis that youth is an important factor, we performed a third discriminant-function analysis, using data from the 100 youngest newspaper respondents (all under 26 years of age). The pattern of results proved to be highly similar to the results from Study 2, as seen by comparing the upper and lower panels of Figure 2. There were two statistically significant discriminant functions, and, as in Study 2, the first distinguished primarily between anxious/ambivalent subjects and the other two groups. The second function distinguished primarily between avoidant and secure subjects.

As a further test of whether differences were due to younger avoidant subjects describing their attachment histories more favorably than did older avoidant subjects, we compared the means on attachment variables for young (again, under 26 years of age) with those of older newspaper subjects who had classified themselves as avoidant. We found that more younger than older avoidant subjects described relationships with and between their parents in favorable terms. For example, more described their mothers as loving (.77 vs. .57), $t(51) = 2.15$, $p < .05$. They were also significantly ($p < .05$) more likely to say their mothers were responsive, not intrusive, and not rejecting. The same pattern was found in their descriptions of their fathers. For example, 65% of the young avoidants but only 54% of the older group called their fathers loving, $t(157) = 2.13$, $p < .05$, and they described their fathers as significantly more good-humored. Thus, differences between discriminant-function analyses from the two studies seem to be due to age differences between the two samples and the tendency for young avoidant subjects to idealize their attachment histories.

Differences in state and trait loneliness. Finally, Table 10 reports mean trait- and state-loneliness scores (on 5-point scales) for each of the three attachment groups in Study 2. In line with Hypothesis 5, the highest scores were obtained by the anxious/ambivalent subjects and the lowest scores by the secure subjects. These findings fit with other indications throughout the two studies that anxious/ambivalent adults yearn for a love relationship involving merger, reciprocation, and intense passion—a relationship for which they find too few willing partners.

In an attempt to understand why avoidant subjects did not receive trait-loneliness scores equal to those of anxious/ambiva-

Table 10
Trait and State Loneliness as a Function of Adult Attachment Style (Undergraduate Sample)

Loneliness type	Avoidant	Anxious/ambivalent	Secure	$F(2, 104)$	p
Trait	2.30_{ab}	2.59_{a}	2.01_{b}	7.12	.001
State	2.57_{ab}	3.02_{a}	2.21_{b}	6.43	.003

Note. Within each row, means with different subscripts differ at the .05 level of significance according to a Scheffé test.

lent subjects, we looked at individual items, including some extreme ones not included in the two scales. (The extra items were taken from the NYU Loneliness Scale; Rubenstein & Shaver, 1982.) Two kinds of items were of special interest: one that blatantly emphasized being a lonely person (e.g., "I am a lonely person," "I always was a lonely person") and another that referred to distance from others but without indicating that a lonely self was to blame (e.g., "During the past few years, no one has really known me well," "During the past few years, I have felt left out").

In an exploratory analysis, two items of each type were averaged and contrasted by means of planned comparisons. The comparison of anxious/ambivalent subjects and the other two groups on items that implicated a trait-lonely self produced $F(1, 80) = 17.88, p < .001$; the comparison of secure and insecure groups on the more ambiguous items produced $F(1, 80) = 7.05, p < .01$. No other comparisons were significant.

These exploratory analyses are compatible with findings reported by Kobak (1985). In his study, both avoidant and anxious/ambivalent subjects were rated by peers as less socially competent than secure subjects, but when asked to describe themselves, only the anxious/ambivalent subjects reported less social competence.

Sex differences and similarities. In Study 2 there were no significant sex differences in any of the variables or patterns for which we had sufficient numbers of men to make comparisons.

General Discussion

Five hypotheses concerning adult love and loneliness were derived from attachment theory and research. The first was the simplest prediction we could make regarding the relative frequencies of the three attachment styles: that they would be about as common in adulthood as they are in infancy. The results supported this hypothesis. Across both studies, approximately 56% of the subjects classified themselves as secure, approximately 24% as avoidant, and approximately 20% as anxious/ambivalent. Campos et al. (1983) estimated the figures for infancy as 62% secure, 23% avoidant, and 15% anxious/ambivalent. Of course, it is unlikely that our single-item measure of attachment style measures exactly the same thing that Ainsworth et al. (1978) coded from behavioral observations of infant–mother dyads, and it would be naive to think that a style adopted in infancy remains unchanged or unelaborated all through life. Still, the search for connections between attachment in childhood and attachment in adulthood must begin somewhere, and our simple measure and straightforward hypothesis fared surprisingly well in their initial tests.

The second hypothesis predicted different kinds of love experiences for people in the three attachment-style categories. The data supported this hypothesis, indicating a unique constellation of emotions for each of the three attachment categories despite the existence of a general core experience of romantic love. The results were weaker in Study 2 than in Study 1, partly because of sample size but also, perhaps, because of younger subjects' lack of relationship experience.

The third hypothesis predicted that subjects' working models of self and relationships would be related to attachment style. The results supported this prediction, indicating that people with different attachment orientations entertain different beliefs about the course of romantic love, the availability and trustworthiness of love partners, and their own love-worthiness. These beliefs may be part of a cycle (a vicious cycle in the case of insecure people) in which experience affects beliefs about self and others and these beliefs in turn affect behavior and relationship outcomes (Wachtel, 1977).

The fourth hypothesis, like the first, predicted straightforward parallels between infant–mother interactions and adults' reports about their childhood relationships with parents. Simple adjective checklists were used to assess remembered relationships with parents and the parents' relationship with each other. Study 1 indicated that two discriminant functions based on attachment-history items could distinguish significantly between members of the three attachment categories. The most powerful function discriminated between secure and insecure subjects; the second function discriminated mainly between the two insecure groups. These results fit well with Ainsworth et al.'s (1978) findings.

The results were not so straightforward for Study 2, which involved a younger group of subjects. For them, the easiest attachment styles to distinguish, based on reports about childhood experiences with parents, were anxious/ambivalent on the one hand and avoidant and secure on the other. A second function discriminated mainly between the latter two groups. The differences between Study 1 and Study 2 were interpreted in terms of the defensiveness of young avoidant subjects. An analysis distinguishing younger from older subjects in Study 1 supported this interpretation.

The fifth hypothesis predicted greater reported trait loneliness among insecure than secure subjects, especially among the anxious/ambivalents. This prediction was tested in Study 2 and was supported by measures of both trait and state loneliness. Additional analyses revealed that avoidant subjects admitted being distant from other people but did not report feeling lonely. It was impossible to evaluate their claims more deeply to see whether they are accurate or should be interpreted as additional examples of defensive avoidance.

Overall, the results provide encouraging support for an attachment-theoretical perspective on romantic love, although a number of caveats are in order.

Because the Study 1 and Study 2 questionnaires had to be brief (one due to the constraints of newspaper space, the other to limitations of a class-exercise format), we were able to inquire about only a single romantic relationship—the one that each subject considered most important. To increase the chances of detecting features of relationship experience due to subjects' attachment styles, it would be better to ask about more than one relationship. Hindy and Schwarz (1984) questioned their subjects (all recent college graduates) about four relationships and treated these as items on an anxious-attachment measure. They found correlations in the neighborhood of .40 between each pair of relationships in terms of anxious attachment, suggesting both considerable continuity (due, we suspect, to subjects' attachment style) and considerable variation across relationships. Degree of security or anxiety in a relationship is, as one would expect, a joint function of attachment style and factors unique to particular partners and circumstances. This matter obviously deserves further study.

It may be useful to assess both partners in a relationship; so far, we and Hindy and Schwarz have relied on reports from only one. It should be possible, using methods like those of Gottman (1979) and Gottman, Markman, and Notarius (1977), to examine not only reports about relationship qualities but also observable features of couple interaction in the laboratory. This is one way to extend measurement beyond the realm of self-report.

In general, we have probably overemphasized the degree to which attachment style and attachment-related feelings are traits rather than products of unique person–situation interactions. Attachment researchers often vacillate between using the terms *secure, avoidant,* and *anxious/ambivalent* to describe relationships and using them to categorize people. We have focused here on personal continuity, but we do not wish to deny that relationships are complex, powerful phenomena with causal effects beyond those predictable from personality variables alone. A secure person trying to build a relationship with an anxious/ambivalent person might be pushed to feel and act avoidant. An avoidant person might cause a secure partner to feel and act anxious, and so on. These kinds of interactions deserve study in their own right.

Our measures were limited in terms of number of items and simplicity of answer alternatives, and this should be corrected in future work. However, there are reasons to suspect that no amount of psychometric improvement will solve all the problems associated with self-report assessment of attachment-related variables. First of all, subjects may be unable to articulate exactly how they feel in love relationships. Second, subjects are unlikely to have anything like perfect memory for their love experiences or for the nature of their relationships with parents, especially those during the preschool years. Third, subjects are likely to be defensive and self-serving in their recall and description of some of the events we wish to inquire about.

One way around some of the problems with self-report measures is to ask outsiders to describe subjects' relationship-relevant characteristics. Kobak and Sceery (in press) did so in a recent study of attachment styles of college freshmen. They had two acquaintances of each subject describe him or her by using a Q-sort procedure, and the two sets of results were averaged. Subjects' attachment styles were assessed by a long clinical interview designed by George, Kaplan, and Main (1984). The results indicated that secure subjects were described by acquaintances as more socially competent, charming, cheerful, and likable than their avoidant and anxious/ambivalent classmates. The two insecure groups differed in theoretically expected ways, the avoidant group being described as more hostile and defensive, for example, and the anxious/ambivalent group as more self-conscious and preoccupied with relationship issues.

The attachment interview designed by George et al. (1984) is itself an important alternative to the kinds of self-report measures we used because it includes assessments of defensiveness, apparently blocked memories of important relational episodes with parents, and preoccupation with attachment issues (on the part of anxious/ambivalent subjects). In fact, focusing on defensiveness and information-processing style led Main et al. (1985) to conceptualize mental models somewhat differently than we did. Whereas we attempted to assess consciously held beliefs about self and relationships, Main et al. attempted to assess how information is processed and distorted.

Even within the self-report domain, it should be possible to improve on our single-item measure of attachment style. Each of our answer alternatives included more than one issue or dimension, for example, ease of getting close to others, feeling comfortable with caregiving and care receiving, fear of abandonment. In principle, each such issue could be assessed separately, with a multi-item scale, and then attachment types could be derived by profile analysis. Besides being potentially more reliable, such a method would allow subjects to endorse parts of what is currently forced on them as a single alternative.

Aside from measurement problems, the attachment approach to romantic love must overcome important conceptual dilemmas. In our preliminary studies, we have chosen to overlook the fact that child–parent relationships differ in important ways from adult romantic relationships. One of the most important differences is that romantic love is usually a two-way street; both partners are sometimes anxious and security-seeking and at other times able providers of security and care. A second important difference is that romantic love almost always involves sexual attraction (Tennov, 1979), whereas only the most speculative psychoanalysts have claimed that infants' attachments to the mother are sexual in nature. Bowlby (1979) and Ainsworth et al. (1978), taking their cue from ethology, have dealt with problems such as these by postulating distinct behavioral systems. These include, among others, the attachment system, the caregiving system, and the mating or reproductive system. Adult romantic love seems to involve the integration of these three systems, with the form of the integration being influenced by attachment history (Shaver et al., in press).

Another important issue has to do with continuity and change in attachment style. For theoretical reasons, we were interested in examining evidence for continuity of attachment style between childhood and adulthood, and we consider it important that there is good evidence for continuity between ages 1 and 6 and preliminary retrospective evidence for continuity in our own adult data. Nevertheless, it would be overly pessimistic—from the perspective of insecurely attached people—to conclude that continuity is the rule rather than the exception between early childhood and adulthood. The correlations we obtained between parent variables and current attachment type were statistically significant but not strong. They were higher in Study 2, where the average subject was 15 to 20 years younger than in Study 1. (Also, when we divided the newspaper sample into younger and older age groups in an analysis not reported here, correlations with parent variables were higher for the younger group.) It seems likely that continuity between childhood and adult experiences decreases as one gets further into adulthood. (See Skolnick, in press, for relevant longitudinal evidence.) The average person participates in several important friendships and love relationships, each of which provides an opportunity to revise mental models of self and others.

Main et al. (1985) reported that, despite an impressive association between adults' attachment history and the attachment styles of their own young children, some parents had freed themselves from the chain of cross-generational continuity. That is, some adults who reported being insecure in their relationships with parents managed to produce children who were

securely attached at ages 1 and 6. Careful study of these cases suggested to Main et al. that the adults had mentally worked through their unpleasant experiences with parents and now had mental models of relationships more typical of secure subjects. The process by which an insecure person becomes increasingly secure, probably by participating in relationships that disconfirm negative features of experience-based mental models, offers an important avenue for future research. Our results suggest that younger avoidant adults are especially prone to defensive distortion of memories of relationships with and between parents. Older avoidant subjects presented a much less favorable portrait of their parents.

Because many social psychologists are likely to misread our approach as Freudian, it may be worthwhile to contrast Freudian conceptions of infant-to-adult continuity on the one hand with attachment theory's conception on the other. Unlike the Freudian conception, according to which the supposed irrationalities of adult love indicate regression to infancy or fixation at some earlier stage of psychosexual development, attachment theory includes the idea that social development involves the continual construction, revision, integration, and abstraction of mental models. This idea, which is similar to the notion of scripts and schemas in cognitive social psychology (e.g., Fiske & Taylor, 1984), is compatible with the possibility of change based on new information and experiences, although change may become more difficult with repeated, uncorrected use of habitual models or schemas.

Freud argued his case beautifully, if not persuasively, by likening the unconscious to the city of Rome, which has been ravaged, revised, and rebuilt many times over the centuries. In the case of the unconscious, according to Freud, it is as if all the previous cities still exist, in their original form and on the same site. Bowlby's conception is more in line with actual archeology. The foundations and present shapes of mental models of self and social life still bear similarities and connections to their predecessors—some of the important historical landmarks, bridges, and crooked streets are still there. But few of the ancient structures exist unaltered or in mental isolation, so simple regression and fixation are unlikely.

The attachment-theory approach to romantic love suggests that love is a biological as well as a social process, based in the nervous system and serving one or more important functions. This view runs counter to the increasingly popular idea that romantic love is a historical–cultural invention, perhaps a creation of courtly lovers in 13th-century Europe (e.g., Averill, 1985; de Rougement, 1940). This is obviously a matter for serious cross-cultural and historical research, but in the absence of strong evidence to the contrary, we hypothesize that romantic love has always and everywhere existed as a biological potential, although it has often been precluded as a basis for marriage. There are explicit records of romantic love in all of the great literate civilizations of early historic times, from Egypt and China to Greece and Rome (Mellen, 1981).

Finally, we should make clear that by calling romantic love an attachment process we do not mean to imply that the early phase of romance is equivalent to being attached. Our idea, which requires further development, is that romantic love is a biological process designed by evolution to facilitate attachment between adult sexual partners who, at the time love evolved, were likely to become parents of an infant who would need their reliable care.

The noticeable decrease in fascination and preoccupation as lovers move from the romantic (attaching) phase to what can become a decades-long period of secure attachment is evident not only in the case of romantic love but also in early childhood, when most secure children begin to take parental support for granted (barring unexpected separations). As Berscheid (1983) has shown in her analysis of the apparent unemotionality of many marriages, disruptions such as divorce and widowhood often "activate the attachment system," to use Bowlby's phrase, and reveal the strength of attachment bonds that were previously invisible. Loneliness and grieving are often signs of the depth of broken attachments.

In sum, love and loneliness are emotional processes that serve biological functions. Attachment theory portrays them in that light and urges us to go beyond simpler and less theoretically integrative models involving concepts such as attitude (e.g., Rubin, 1973) and physiological arousal (Berscheid & Walster, 1974). For that reason, the attachment approach seems worth pursuing even if future study reveals (as it almost certainly will) that adult romantic love requires additions to or alterations in attachment theory. It would not be surprising to find that adult love is more complex than infant–caretaker attachment, despite fundamental similarities.

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