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Working Models of Attachment and Daily Social Interactions

Paula R. Pietromonaco
University of Massachusetts at Amherst

Lisa Feldman Barrett
Boston College

This study tested whether working models of attachment guide how people construe and respond to social interactions by examining immediate responses to a range of everyday interactions and to specific attachment-relevant interactions. Patterns for immediate reports were compared with those for more memory-based, global reports. Secure, preoccupied, fearful, and dismissing participants provided immediate reports after their social interactions for 1 week and completed retrospective questionnaires. Attachment differences were accentuated in attachment-relevant, high-conflict interactions. Preoccupied participants responded more favorably after conflict than did secure or dismissing–avoidant participants. Immediate and retrospective patterns diverged in important ways. How working models contribute to perceptions may depend on the fit between attachment goals and the situation and on the extent of memory-based processing.

Some people typically experience warm, smooth interactions with others and readily establish close, fulfilling relationships, whereas other people experience difficulties with these interpersonal tasks. Attachment theory (e.g., Bowlby, 1969), as applied to adult relationships (Hazan & Shaver, 1987; Shaver, Hazan, & Bradshaw, 1988), provides a framework for understanding such individual differences in interpersonal experiences. According to adult attachment theorists (e.g., Collins & Read, 1994; Hazan & Shaver, 1987), people develop cognitive representations, or internal working models, that consist of generalized expectations, beliefs, and goals about the self, others, and the relation between the two. These working models are thought to guide how people perceive, interpret, and respond to their social interactions.

Adults who hold qualitatively different working models differ in their global, retrospective perceptions of interpersonal experiences (e.g., Carnelley, Pietromonaco, & Jaffe, 1994; Collins & Read, 1990; Hazan & Shaver, 1987; Kirkpatrick & Davis, 1994), emotional experiences (e.g., Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987), and themselves and others (e.g., Bartholomew & Horowitz, 1991; Collins & Read, 1990). These retrospective studies suggest that people who hold different working models differ in their general theories about themselves, others, and relationships, but little is known about how working models contribute to perceptions and behavior on an interaction-by-interaction basis. In the present research, we investigated the link between working models and immediate perceptions of everyday social interactions and examined some conditions (i.e., type of situation or relationship) that might affect the nature of this link.

Attachment Theory and Research

Adult attachment theory (Hazan & Shaver, 1987; Shaver et al., 1988) is an extension of Bowlby's (1969) theory of the bonds between infants and their caregivers. Bowlby (1969) proposed an innate, attachment–behavioral system that leads individuals to monitor whether an attachment figure is available and responsive. The fundamental goal of the attachment system is to achieve felt security (Sroufe & Waters, 1977). In the interest of achieving this goal, children are thought to use their day-to-day experiences to develop internal working models about the availability and responsivity of their attachment figures and about their own worth in the eyes of their attachment figures (Bowlby, 1973). These working models are hypothesized to include expectations, beliefs, and goals that (a) allow individuals to predict and plan for a range of future outcomes and (b) direct their thoughts, feelings, and behavior in interpersonal interactions.

Similarly, adults are assumed to hold working models that may be based, in part, on those developed earlier in life but that also incorporate experiences in later significant relationships (e.g., Carnelley et al., 1994; Hazan & Shaver, 1987). As they do in childhood, these working models are thought to shape how adults interpret and respond to their social interactions. Consistent with this idea, the literature on adult attachment indicates that people who differ in how they describe their attachment style (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987), and who presumably differ in the quality of their working models, also differ in their global perceptions of their interpersonal experiences, themselves, and others. People who evidence

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Correspondence concerning this article should be addressed to Paula R. Pietromonaco, Department of Psychology, Tobin Hall, Box 37710, University of Massachusetts, Amherst, Massachusetts 01003-7710, or to Lisa Feldman Barrett, Department of Psychology, 427 McGuinn Building, Boston College, Chestnut Hill, Massachusetts 02167. Electronic mail may be sent via the Internet to monaco@psych.umass.edu or laf7@psuvm.psu.edu.

a secure attachment style generally hold optimistic views of their relationships, reporting greater satisfaction and adjustment in their romantic relationships (Carnelley et al., 1994; Collins & Read, 1990; Kirkpatrick & Davis, 1994; Simpson, 1990), and evidence positive views of themselves and others (Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987). Overall, secure individuals appear to be comfortable with both intimacy and independence and seek a balance between the two (Bartholomew & Horowitz, 1991).

People who evidence a preoccupied (anxious–ambivalent) attachment style express a strong desire for intimacy (Collins & Read, 1990; Feeney & Noller, 1990; Hazan & Shaver, 1987) and are not as satisfied with their relationships as are secure individuals (Carnelley et al., 1994; Collins & Read, 1990; Kirkpatrick & Davis, 1994; Simpson, 1990). Preoccupied people also report more intense feelings and emotional highs and lows in their romantic relationships (Collins & Read, 1990; Hazan & Shaver, 1987; Pietromonaco & Carnelley, 1994) and evidence greater emotional expressiveness (Bartholomew & Horowitz, 1991), anxiety, and impulsiveness (Shaver & Brennan, 1992). In addition, preoccupied people evidence negative views of themselves (Bartholomew & Horowitz, 1991; Collins & Read, 1990) and inconsistent views of others; although they appear positive toward others because they show a high level of sociability and warmth (Bartholomew & Horowitz, 1991), they also are less likely than secure individuals to believe that people have good intentions (Hazan & Shaver, 1987) and less positive in their views of human nature (Collins & Read, 1990). Overall, preoccupied people seek a high level of intimacy and responsiveness from others and appear to value intimacy over their own independence.

People who evidence an avoidant attachment style are less likely to seek intimacy and to disclose personal information (Bartholomew & Horowitz, 1991; Feeney & Noller, 1990; Mikulincer & Nachshon, 1991), are less satisfied in their romantic relationships (Carnelley et al., 1994; Collins & Read, 1990; Kirkpatrick & Davis, 1994; Simpson, 1990), and appear to use defensive strategies to suppress their affective reactions (Mikulincer & Orbach, 1995). Some work (Bartholomew & Horowitz, 1991) has distinguished between dismissing-avoidants and fearful-avoidants. Dismissing-avoidants report that they do not need close emotional relationships, desire a high level of independence, and evidence positive views of themselves and negative views of others (Bartholomew & Horowitz, 1991). Although dismissing-avoidant and secure individuals show similarly high self-esteem, theorists (Bartholomew & Horowitz, 1991; Bowlby, 1980; Cassidy & Kobak, 1987; Main, 1991) have suggested that the high self-esteem of dismissing-avoidants arises more from their ability to inhibit, deny, or ignore their negative feelings about themselves than from true feelings of self-worth. In contrast, fearful-avoidants report feeling uncomfortable with closeness but, at the same time, desire emotionally close relationships; furthermore, they evidence negative views of themselves and others (Bartholomew & Horowitz, 1991).

Although distinct patterns are associated with each attachment style, the studies showing these patterns are limited in several respects. One limitation is that the majority of studies have relied on individuals' global, retrospective reports of their experiences. Thus, it is unclear whether differences primarily reflect memory-based, summary judgments of experiences or whether similar differences also would be evident in more immediate, less memory-based judgments of specific interactions.

A second limitation is that most studies have not examined perceptions in specific interaction contexts (for an exception, see Simpson, Rholes, & Nelligan, 1992), leaving open the question of whether working models contribute to interpersonal perceptions in general (i.e., across different relationships and contexts) or whether their effects are best observed under specific, attachment-relevant conditions. Although adult attachment theory (Hazan & Shaver, 1987) originally focused on attachment processes in romantic relationships, subsequent work has applied the theory to a variety of other relationships, including those with peers (e.g., Bartholomew & Horowitz, 1991), coworkers (Hazan & Shaver, 1990), strangers (Mikulincer & Nachshon, 1991), and God (Kirkpatrick & Shaver, 1992). Evidence suggesting that working models of attachment are closely associated with general interpersonal characteristics such as warmth and sociability (e.g., Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994) suggests that they might influence responses across a broad range of contexts and relationships. Yet, several theorists have suggested that working models may be particularly likely to be activated under specific conditions, such as those that threaten an attachment bond (Bowlby, 1980; Simpson et al., 1992) or in interactions with close others who are more likely to serve as attachment figures (Ainsworth, 1990; Hazan & Shaver, 1994). A third limitation of previous work is that most studies have focused on only one avoidant category. Thus, it is unclear whether patterns for avoidants reflect tendencies toward dismissing-avoidance, fearful-avoidance, or both.

The Present Study

The present study focused on the link between working models of attachment and immediate perceptions of everyday social interactions. To capture how people think and feel during the course of their everyday lives, we used an event-contingent daily diary method that followed the format of the Rochester Interaction Record (RIR; Reis & Wheeler, 1991). In this procedure, participants provide detailed descriptions of their thoughts and feelings on a brief standardized form immediately after each social interaction occurring within a designated period (e.g., 1 week). The RIR procedure has several methodological advantages (for a complete discussion, see Reis & Wheeler, 1991) over the global, retrospective questionnaires that have been used in most attachment studies. This procedure allows researchers to sample a broad range of interactions as they occur naturally and thus to examine individuals' immediate responses across different situations and relationships. The RIR procedure also minimizes the recall biases that can arise when people complete self-report questionnaires at one point in time; event-contingent diary reports rely less on memory because individuals report their perceptions immediately after an interaction occurs and need not remember their experiences over time or average their perceptions across different interactions and partners. Furthermore, immediate diary reports provide different, more detailed

information than do retrospective reports. Nevertheless, it is important to examine retrospective reports because they provide useful, complementary information (see Reis & Wheeler, 1991) about individuals' more memory-based, global theories of themselves and others.

The present study extended previous work in several ways. First, we examined the nature of attachment differences in both retrospective, memory-based reports and in more immediate reports of specific everyday interactions. This procedure allowed us to compare, within the same sample, whether the patterns obtained for retrospective reports converged with those obtained for immediate reports of specific, everyday interactions. Second, the present work examined the nature of attachment differences across interactions in general (i.e., across partners and situations) and within some specific attachment-relevant contexts (i.e., high-conflict interactions and interactions with close partners). Third, we also sought to clarify when differences are linked to fearful-avoidance, dismissing-avoidance, or both, and thus included participants from each of Bartholomew and Horowitz's (1991) four attachment groups (i.e., secure, preoccupied, fearful-avoidant, dismissing-avoidant).

Retrospective Perceptions

We included retrospective measures of emotional experience, views of self, and views of others. Some of these measures were identical to those used in previous attachment studies, but we also included many conceptually similar measures not used in previous attachment research. This set of measures allowed us to assess whether previous findings replicated across a wide range of measures and provided a finer grained examination of the link between attachment and global, memory-based reports. However, the primary purpose of this component was to allow us to compare, within the same sample, the patterns of findings for global, retrospective perceptions with those for immediate perceptions.

Immediate Perceptions of Everyday Interactions

We examined immediate perceptions of everyday interactions in four domains highlighted in the literature: quality of interpersonal experiences, emotional reactions, views of self, and views of others. We expected that attachment differences in immediate perceptions would appear, to some extent, across all kinds of everyday interactions, but that stronger differences would emerge under attachment-relevant (i.e., high-conflict interactions and interactions with close others) conditions. We made separate predictions for patterns across all interactions and those within attachment-relevant (i.e., high-conflict interactions and interactions with close others) contexts.

All interactions. Our predictions for patterns across all interactions were based on previous findings, primarily from studies of global, retrospective perceptions. Research on the link between attachment and intimacy and satisfaction in relationships led us to predict that (a) preoccupied and secure individuals would perceive more intimacy in their interactions and self-disclose more than would dismissing-avoidant individuals, and that fearful-avoidant individuals would fall in between these groups, and (b) secure individuals would report greater satisfaction following their interactions than would insecure individuals.

Following from the literature on attachment and emotion, we predicted that preoccupied people would experience more positive and more negative emotions in their interactions, whereas dismissing-avoidant individuals would show less positive and negative emotions; secure and fearful-avoidant individuals should fall in between these two extremes.

Bartholomew and Horowitz's (1991) conceptualization suggests that working models differ in whether views of self are positive (i.e., secure and dismissing-avoidant styles) or negative (i.e., preoccupied and fearful-avoidant styles) and whether views of others are positive (i.e., secure and preoccupied styles) or negative (i.e., dismissing-avoidant and fearful-avoidant styles). Accordingly, we expected secure and dismissing-avoidant participants to evidence more positive views of themselves after everyday interactions and preoccupied and fearful-avoidant individuals to evidence more negative views of themselves. We also expected secure and preoccupied individuals to evidence more positive views of others, and fearful-avoidant and dismissing-avoidant individuals to evidence more negative views of others.

High-conflict interactions. For most people, conflictual interactions are likely to pose a threat to attachment security; such interactions disrupt smooth, warm relations and raise the possibility that the relationship may not last. Nevertheless, conflictual interactions also offer an opportunity for greater intimacy and closeness in a relationship because partners may be forced to pay attention to each other and to be responsive (e.g., by disclosing feelings). People may differ in their perceptions of conflictual interactions, depending on the nature of their working models and accompanying interpersonal goals. Preoccupied individuals desire a high level of intimacy and responsiveness from others and are oriented toward understanding themselves in relation to others. Despite the discomfort of conflict, preoccupied people may respond less negatively to interpersonal conflict because such interactions offer them the chance to establish greater intimacy and obtain some degree of responsiveness from their partner.

In contrast, secure and dismissing-avoidant individuals should show similarly negative responses to conflictual interactions, but for different reasons. Like preoccupied individuals, secure individuals desire intimacy, but they are not excessively concerned about achieving it. Thus, secure individuals may respond negatively to conflictual interactions, which present a threat to security and disrupt their normally smooth interactions. In contrast to preoccupied individuals, dismissing-avoidant individuals seek to avoid intimacy and are oriented toward understanding themselves as independent and self-reliant. Interactions that raise issues of intimacy or force them to be responsive may be particularly aversive for dismissing-avoidant individuals. Accordingly, we predicted that, after high-conflict interactions, preoccupied people would show more positive (or less negative) responses (e.g., perceive greater intimacy in the interaction, more positive emotion, more esteem for themselves and their partners) than secure or dismissing-avoidant people; furthermore, we expected dismissing-avoidant individuals to show the most negative responses. Fearful-avoidant individuals, who

show a mixture of preoccupation and dismissing-avoidance, are likely to show moderate responses that fall in between those of preoccupied and dismissing-avoidant individuals.

Interactions with close partners. We expected the patterns predicted across all interactions to be accentuated with closer partners. Furthermore, closeness might be a less relevant dimension for dismissing-avoidants, and thus their responses might differ less across interactions with close and nonclose partners than for individuals in other attachment groups.

Method

Participants

Undergraduates from the University of Massachusetts at Amherst (n = 1,047) and Pennsylvania State University (n = 615) participated in prescreening sessions in which they completed several questionnaires including Bartholomew and Horowitz's (1991) measure that describes four attachment prototypes. Participants who qualified for the study (82% of the sample) had selected, on the forced-choice portion, the secure, preoccupied, fearful-avoidant, or dismissing-avoidant prototype and had rated, on a continuous scale, the chosen prototype as more self-descriptive than any of the other three prototypes. (In all, 18% of the participants did not qualify because they had selected an attachment category that differed from the one they had rated as most self-descriptive.) The proportions in each category were 48% secure, 16% preoccupied, 28% fearful-avoidant, and 8% dismissing-avoidant. To obtain roughly equal numbers from each group, we oversampled students from each insecure category. A research assistant, who was unaware of participants' attachment prototype choices, telephoned qualified individuals and invited them to participate in the study. Of the students who could be contacted (i.e., who answered the phone or responded to a message), approximately 66% agreed to participate.[1]

The selected sample included 104 participants, 56 from the University of Massachusetts, and 48 from Pennsylvania State University. The two subsamples were comparable on the central variables and therefore were combined. These 104 individuals completed the questionnaires administered during the first laboratory session and were included in the analyses of the questionnaire data. Of this sample, 30 were secure (14 men, 16 women), 26 were preoccupied (8 men, 18 women), 25 were fearful-avoidant (10 men, 15 women), and 23 were dismissing-avoidant (10 men, 13 women).

Only a subset (n = 70) of this larger sample were available for the analyses of the immediate daily diary data because (a) 15 individuals did not complete all phases of the study (i.e., 3 laboratory sessions plus 7 days of recording their daily interactions), and (b) 19 participants reported completing more than 25% of their interaction records from memory, thus presenting an unacceptable risk of recall bias. Participants who dropped out or relied heavily on memory did not differ from those remaining on the primary measures (e.g., attachment classification, self-esteem, and emotion). The 70 individuals in the final sample for the diary analyses included 21 secure (9 men, 12 women), 17 preoccupied (6 men, 11 women), 14 fearful-avoidant (6 men, 8 women), and 18 dismissing-avoidant (7 men, 11 women) individuals. Although fewer men than women participated, both genders were distributed nearly evenly across the attachment groups.

Measures

Romantic attachment. We assessed romantic attachment using Bartholomew and Horowitz's (1991) attachment prototype measure; instructions were modified to focus only on romantic relationships. Participants first selected the prototype (i.e., secure, preoccupied, fearful-avoidant, or dismissing-avoidant) that best described how they viewed romantic relationships and then rated on 9-point scales how much each of the four prototypes described their views.

Retrospective perceptions. During the first laboratory session, we administered a set of questionnaires to assess global, retrospective perceptions.

1. Emotional reactions. Participants completed the Affect Intensity Measure (AIM; Larsen & Diener, 1987), the Emotionality subscale from the Emotionality–Activity–Sociability measure (EAS; Buss & Plomin, 1975), and measures of general distress, denial of distress, and defensiveness from the Weinberger Adjustment Inventory (WAI; Weinberger & Schwartz, 1990). Examples of items from the AIM (α = .91; 40 items) are as follows: "When something good happens, I am usually much more jubilant than others" and "When I solve a small personal problem, I feel euphoric." Examples of emotionality items (α = .87; 12 items) from the EAS are "I frequently get distressed" and "I get emotionally upset easily."

The WAI Distress subscale (α = .95; 29 items) assessed anxiety, depression, self-esteem, and emotional well-being. In addition, two WAI subscales tapped defensiveness, which presumably should be higher in individuals who report less emotion. The WAI Denial of Distress subscale indicates whether people do not admit to normative experiences of distress (e.g., "Some things have happened this year that I felt unhappy about at the time"; reverse scored; α = .77 for 11 items); the Repressive Defensiveness subscale indicates the extent to which individuals describe themselves as always being considerate of others, responsible, and in control of their undesirable impulses (e.g., "There have been times when I didn't let people know about something I did wrong"; reverse scored; α = .71 for 11 items). These measures were conceptually similar to those used in previous research but tapped a wider range of emotion-related qualities (e.g., affect intensity, distress, and defensiveness).

2. Views of self. Participants completed a standard measure of self-esteem (Rosenberg, 1965; α = .91 for 10 items) and measures of self-concept confusion (Campbell, 1993; α = .90 for 12 items) and self-knowledge (Kato & Markus, 1993; α = .84 for 7 items). The latter two measures have not been used in previous attachment research and were included to provide a more detailed profile of the self-views of individuals in the different attachment groups. Examples of self-concept confusion items are "My beliefs about my self often conflict with one another" and "I spend a lot of time wondering what kind of person I really am." Examples of self-knowledge items are "I always know what I want" and "I know my weaknesses and strengths."

3. Views of others. Participants completed several subscales (Kato & Markus, 1993) tapping their views of others in relation to self, including degree of self–other differentiation (e.g., "I am unique—different from others in many respects"; α = .74 for 8 items), concern with others (e.g., "It is important to me that I am liked by others"; α = .81 for 9 items), and importance of maintaining self–other bonds (e.g., "When making a decision, I first consider how it will affect others before considering how it will affect me"; α = .66 for 7 items). These measures differed from those used in previous retrospective studies but focused on theoretically central aspects of views of others.

Immediate perceptions. Over a 7-day period, participants completed a variant of the RIR (Reis & Wheeler, 1991; Wheeler & Nezlek, 1977) immediately after every interaction that lasted for 10 min or longer. Participants rated all items on 5-point scales; endpoints generally were

[1] This proportion was similar across attachment categories, with one exception: Only 25% of preoccupied men in the Pennsylvania sample agreed to participate, in contrast to 88% from the Massachusetts sample. This difference, which probably occurred randomly, accounts for the smaller number of men in the preoccupied category.

labeled *very little* and *a great deal,* but the few exceptions are indicated below. The interaction record included items that assessed the following:

1. Interaction quality. Four single items tapped different aspects of interaction quality: intimacy (endpoints: *surface* to *deep*), self-disclosure, satisfaction (endpoints: *dissatisfied* and *satisfied*), and disagreement–conflict. (Disagreement–conflict ratings were used to identify high-conflict interactions.)

2. Emotional reactions. We averaged the ratings on four positive emotion adjectives (i.e., happy, satisfied, enthusiastic, and excited; $\alpha = .90$) and four negative emotion adjectives (i.e., sad, disappointed, angry, and nervous; $\alpha = .92$) to form two composite emotion scores. We focused on these positive and negative emotion adjectives because previous work (e.g., Feldman, 1995) has shown that they represent central dimensions of affective experience.

3. Views of self. Participants indicated how much they felt worthwhile (endpoints: *not worthwhile* and *worthwhile*), competent (endpoints: *incompetent* and *competent*), and accepted by the partner (endpoints: *not accepted by your partner* and *accepted by your partner*); we averaged these three ratings to form a composite score ($\alpha = .94$).

4. Views of others. Participants rated their partner on scales parallel to those used for views of self; they indicated how much they perceived their interaction partner(s) to be worthwhile, competent, and accepted by them ($\alpha = .95$). We also included single items to assess perceptions of how much the partner (a) disclosed personal information, (b) expressed positive emotion, and (c) expressed negative emotion.

Participants also provided additional information about the interaction (e.g., no. of partners, and gender of partners) and recorded a unique set of initials for each interaction partner.

Final interview. To verify that participants followed all instructions, we asked them about the percentage of interactions that they did not record, the percentage of interactions records that they had completed from memory, how difficult it was to record their experiences, and the accuracy of their reports. The experimenter stressed that participants would not be penalized in any way (i.e., they would still receive credit and have a chance to win a prize for participating) if they had not followed the instructions and that we were simply interested in obtaining an accurate picture of our data.

During the final session, participants also reviewed a list of the initials for all interaction partners and indicated their relationship to them (e.g., romantic partner, partner, friend, and acquaintance) and rated the overall closeness of their relationship with the partner on a 7-point scale (endpoints: *not at all close* and *very close*).

Procedure

Participants, previously selected from each attachment group, attended three laboratory sessions. During the first session, the experimenter explained that the study concerned how people think and feel in their interactions with others in their daily lives and that participants would be keeping records of their interactions for 7 days as well as completing several sets of questionnaires. To encourage participation, the experimenter explained that participants would receive extra credit for their class plus tickets for a $50 lottery to be held at the end of the semester. To preserve confidentiality, participants selected a code name to use throughout the study. During the first session, participants completed the set of retrospective questionnaires and learned how to complete the daily interaction records. The experimenter first defined interactions as any encounter with one or more people in which the participants attended to one another and possibly adjusted their behavior in response to one another (Reis & Wheeler, 1991) and then carefully explained and defined all items on the interaction record form. All participants also received written instructions to keep with them as they completed their interaction records. The experimenter emphasized the importance of completing a record as soon as possible (within 15 min) after each interaction, and of answering honestly. Before beginning the 7-day recording period, participants took home three practice recording forms and completed them after three interactions.

During the second session, participants reviewed their practice interaction records and received final instructions for completing 7 days of interaction records. Participants returned their interaction records three times during their recording week and received extra lottery tickets for returning their forms on time. The purpose of this procedure was to reduce the likelihood that participants would complete many forms from memory and also to motivate them to remain in the study. The experimenter called within 24 hr any participants who did not return their forms on time and requested that they return them. During a third session, the experimenter interviewed participants about their experience in the study and the accuracy with which they recorded their interactions.

Results

Global, Retrospective Perceptions

To determine whether the retrospective patterns in our sample were similar to those found in previous work, we performed analyses of variance on each retrospective measure, with attachment prototype choice as the grouping factor. Table 1 shows the means for each measure by attachment group. As expected, preoccupied and dismissing-avoidant individuals showed opposite emotional patterns. Preoccupied individuals reported more affect intensity and emotionality than those in each of the other three groups, whereas dismissing-avoidant individuals reported less affect intensity and emotionality than those in the other three groups. Preoccupied individuals also reported significantly higher levels of distress than did individuals in any of the other groups; fearful-avoidant individuals reported significantly more distress than did secure or dismissing-avoidant individuals.

We would expect less emotionality to be accompanied by greater defensiveness. Accordingly, dismissing-avoidant individuals evidenced greater denial of distress than did preoccupied individuals or fearful-avoidant individuals; however, they did not differ from secure individuals. Furthermore, the attachment groups did not differ reliably on the Repressive Defensiveness subscale of the WAI.

Consistent with previous work (e.g., Bartholomew & Horowitz, 1991; Collins & Read, 1990), preoccupied and fearful-avoidant individuals evidenced significantly lower self-esteem than did secure and dismissing-avoidant individuals, and greater self-concept confusion than did secure individuals. Furthermore, preoccupied individuals displayed significantly less self-knowledge than did individuals in any of the other attachment groups.

Analyses of the retrospective measures of views of others indicated that preoccupied individuals showed less differentiation between themselves and others than did secure, dismissing-avoidant, or fearful-avoidant individuals. This finding fits with preoccupied individuals' desire to merge with others (cf. Hazan & Shaver, 1987). The attachment groups did not differ significantly in concern for others or maintaining self–other bonds, although the preoccupied group scored nonsignificantly higher on both subscales. Thus, these measures of views of others did not reveal the patterns that would be expected from Bartholomew and Horowitz's (1991) model.

These patterns reveal distinct profiles for each attachment

Table 1
Mean Scores on Retrospective Questionnaires by Attachment Category

Measure	Attachment category: Secure	Fearful-avoidant	Preoccupied	Dismissing-avoidant	*F*	*df*s
Emotional reactions and defensiveness						
Affect intensity	3.72_a	3.65_a	4.00_b	3.38_c	6.95**	3, 97
Emotionality	18.34_a	22.16_a	27.80_b	17.04_c	7.96***	3, 98
Distress	62.86_a	79.92_b	90.92_c	68.96_a	10.72***	3, 99
Denial of distress	24.93_a	22.56_b	20.15_b	25.30_a	4.26*	3, 99
Repressive-defensiveness	25.93_a	22.96_a	26.04_a	26.35_a	1.36	3, 99
Views of self						
Self-esteem	24.63_a	20.64_b	18.12_b	23.43_a	8.15***	3, 100
Self-concept confusion	28.47_a	36.92_b	38.23_c	32.91_{ab}	6.86**	3, 100
Self-knowledge	7.12_a	6.89_a	6.12_b	7.20_a	3.64*	3, 97
Views of others						
Self–other differentiation	6.35_a	6.07_a	5.31_b	6.46_a	4.29*	3, 97
Concern with others	5.65_a	5.81_a	6.39_a	5.71_a	1.57	3, 96
Maintaining self–other bonds	6.07_a	6.08_a	6.51_a	6.03_a	0.87	3, 95

Note. Participants were included in the analysis only if they had complete data for the scale; sample sizes varied from 99 to 104. Within rows, Newman–Keuls contrasts between means with different subscripts differed significantly, $p < .05$.
* $p < .01$. ** $p < .001$. *** $p < .0001$.

group and are generally consistent with findings from previous research. Preoccupied individuals evidenced more negative, uncertain self-views and difficulty differentiating between themselves and others, greater emotionality and distress, and low defensiveness. Dismissing-avoidant individuals evidenced patterns similar to those of secure individuals (e.g., high self-esteem, low distress, and high defensiveness), except that they showed distinctly less intense emotions. Fearful-avoidant individuals sometimes showed patterns similar to those of preoccupied individuals (e.g., low self-esteem, low defensiveness, and high distress), but sometimes showed more moderate patterns (e.g., for self-knowledge, self–other differentiation, and affect intensity) that fell in between those of preoccupied and dismissing-avoidant individuals. We next examined whether similar patterns emerged when individuals reported on their immediate perceptions of everyday interactions.

Immediate Perceptions

Overall, the attachment groups did not differ reliably in the quantity or type of interactions. Individuals who held different working models of attachment did not differ significantly in the number of (a) interactions across all partners, $F(3, 66) = 0.33$, *ns;* (b) unique interaction partners, $F(3, 66) = 0.30$, *ns;* (c) interactions with best friends, roommates, friends, and parents, all Fs < 1, *ns;* and (d) interactions with romantic partners, $F(3, 66) = 1.87$, $p < .15$. The groups also did not differ significantly in the number of interactions with acquaintances, $F(3, 66) = 2.61$, $p < .10$, although dismissing-avoidant individuals ($M = 4.28$) reported nonsignificantly more interactions with acquaintances than did preoccupied ($M = 1.35$), fearful-avoidant ($M = 2.14$), or secure ($M = 2.24$) individuals.

Analysis strategy. Analysis of daily diary records presents some statistical challenges. Some researchers (e.g., Nezlek, 1993; Nezlek, Imbrie, & Shean, 1994) have analyzed diary data using individuals as the unit of analysis; they have averaged data across all interactions for one individual and then analyzed the aggregated scores across individuals. This strategy is limited, however, because individuals often vary considerably in their level of social activity, and thus some individuals will complete many more interaction records than others. As a result, individuals may differ in the stability of their ratings, in the variance of their ratings, or both. In both cases, variation across individuals may obscure or exaggerate differences between groups and thus produce findings that reflect statistical artifacts rather than the true nature of the data.

We therefore chose a weighted least squares estimation approach (Kenny & Bolger, 1996; Kenny, Kashy, & Bolger, 1997; Schwartz, Warren, & Pickering, 1994) to evaluate the link between attachment style and immediate perceptions in each of the four domains (e.g., views of self and emotions). The analyses included lower level data (i.e., interaction record ratings on variables such as intimacy and self-disclosure) nested within a between-subjects, upper level unit (i.e., attachment styles), but also specified subjects as a factor (Kenny & Bolger, 1996; Kenny et al., 1997). Our analyses focused on upper level, between-subjects relationships (e.g., Do preoccupied versus dismissing–avoidant individuals differ in how much they self-disclose, on average, during their interactions?). Thus, our analyses compared, for example, preoccupied individuals with those in each of the other attachment groups on the mean levels of their interaction record variables, while taking into account variation both across subjects and between groups (Kenny & Bolger, 1996; Kenny et al., 1997).

To examine whether individuals who held different attachment styles differed in the mean levels across interactions, we performed multilevel regression analyses (Kenny & Bolger, 1996; Kenny et al., 1997) separately for each interaction record variable. These regressions included three dummy codes for attachment group and a subject variable that identified each individual in the sample. To test for differences between secure individuals versus individuals in the other three groups, we performed the regressions with three dummy variables for attachment, which allowed us to compare the regression estimates of the secure group with those for each of the other groups. To test for differences among the insecure groups, we repeated the regression analyses but included different dummy variables for attachment, which allowed us to compare the regression estimates (a) of the preoccupied group with those of each of the other groups or (b) of the fearful-avoidant group with those of each of the other groups. Thus, the mean levels of the interaction variables remained the same in all of the above regressions, but the alternate dummy codes allowed us to compare different pairs of attachment groups.

The effect of subjects was significant in nearly all analyses, which indicated that the regression estimate for each interaction record index varied significantly across individuals independently of their attachment classification. We then performed a second set of regression analyses that included only the attachment dummy variables as predictors. The mean square terms from these analyses reflected all of the variation in the regression estimates that arose from both individuals and attachment style. To separate variability resulting from subjects independent of attachment style and variability resulting from attachment style alone, we calculated the F tests using the mean square term from the second regression as the numerator and the mean square term for the subject variable from the first regression as the denominator (Kenny & Bolger, 1996; Kenny et al., 1997). Thus, these F values tested the mean level differences between attachment groups for each interaction record variable, while taking into account individual variation. (In the isolated instances in which the subject variable was not significant, the F tests were calculated using the mean square term from the second set of analyses that included only the dummy variables for attachment.) In the sections below, we present the results of analyses (a) across all interactions, (b) for high-conflict interactions, and (c) for interactions with close others.[2] All comparisons between regression estimates were assessed at the .05 level of significance.

All interactions. Table 2 shows that individuals who held different working models of attachment differed somewhat in their responses across all kinds of interactions. Some of these differences were consistent with our predictions, but others were not. Analyses of the interaction quality variables were consistent with our predictions. Preoccupied individuals reported significantly more intimacy than did dismissing-avoidant individuals, $F(1, 66) = 4.38$, $p < .05$, and nonsignificantly more than did secure individuals, $F(1, 66) = 3.69$, $p < .10$. Fearful-avoidant individuals fell in between the secure and preoccupied groups and reported nonsignificantly more intimacy than did dismissing-avoidant individuals, $F(1, 66) = 3.05$, $p < .10$. In addition, preoccupied individuals reported more self-disclosure than did dismissing-avoidant individuals, $F(1, 66) = 4.35$, $p < .05$; neither the secure nor the fearful-avoidant group differed from the other groups.

Table 2
Mean Levels for Interaction Record Variables Across All Interactions by Attachment Category

Measure	Attachment category: Secure	Fearful-avoidant	Preoccupied	Dismissing-avoidant
Interaction quality				
Intimacy	2.68_{ab}	3.06_{ab}	3.13_{a}	2.62_{b}
Self-disclosure	3.04_{ab}	3.02_{ab}	3.27_{a}	2.87_{b}
Satisfaction	3.61_{ab}	3.86_{a}	3.60_{ab}	3.40_{b}
Emotional reactions				
Positive emotion	2.97_{ab}	3.19_{a}	2.84_{ab}	2.82_{b}
Negative emotion	1.39_{a}	1.62_{ab}	1.57_{ab}	1.66_{b}
Views of self				
Self-esteem	4.60_{a}	4.40_{ab}	4.22_{b}	4.40_{ab}
Views of others				
Esteem for partners	4.52_{a}	4.44_{a}	4.29_{a}	4.40_{a}
Partners' disclosure	3.14_{a}	3.23_{a}	3.45_{a}	3.12_{a}
Partners' positive emotion	3.47_{ab}	3.67_{a}	3.56_{ab}	3.32_{b}
Partners' negative emotion	1.90_{a}	1.83_{a}	2.00_{a}	2.09_{a}

Note. Analyses were based on 2,272 observations from 70 participants, dfs = 1, 66. Means with different subscripts differed significantly, $p < .05$.

In contrast to our expectations, secure individuals did not report the highest satisfaction. Surprisingly, fearful-avoidant individuals showed the highest level of satisfaction in contrast to dismissing-avoidant individuals, who showed the lowest satisfaction, $F(1, 66) = 9.56$, $p < .01$; secure and preoccupied individuals fell in between these two extremes.

Analyses of emotional reactions indicated that, as expected, dismissing-avoidant individuals reported the least positive emotion but differed significantly from only fearful-avoidant individuals, who reported the most positive emotion, $F(1, 66) = 4.13$, $p < .05$. Dismissing-avoidant individuals, however, reported more negative emotion than did secure individuals, $F(1, 66) = 4.51$, $p < .05$. This latter finding contrasts notably with previous findings (e.g., Bartholomew & Horowitz, 1991) showing that dismissing-avoidant individuals report less distress. Contrary to predictions, preoccupied individuals did not evidence more positive and negative emotion across all interactions.

For views of self, the patterns were partly consistent with Bartholomew and Horowitz's (1991) model; preoccupied individuals reported lower self-esteem after their interactions than

[2] When we repeated all analyses including gender as a factor, the results were virtually identical; gender did not interact significantly with attachment style for any variable.

did secure individuals. The means for fearful-avoidant and dismissing-avoidant individuals, however, fell in between those for the preoccupied and secure groups and did not differ significantly from them. Thus, the patterns for fearful-avoidant (who are assumed to have low self-esteem) and dismissing-avoidant individuals (who are assumed to have high self-esteem) were not consistent with Bartholomew and Horowitz's model.

Participants' views of others did not follow the pattern expected from Bartholomew and Horowitz's (1991) model. Preoccupied and secure individuals did not evidence the expected positive views of their interaction partners; in fact, preoccupied individuals showed a nonsignificant tendency to report less esteem for their partners than did secure individuals, $F(1, 66) = 2.79, p < .10$; the means for the fearful-avoidant and dismissing-avoidant groups fell in between those for the preoccupied and secure groups and did not differ significantly from them. Attachment was not associated with responses on any other variables assessing views of partners (i.e., the partner's disclosures, and expression of positive and negative emotion), with one exception. Unexpectedly, fearful-avoidant individuals reported that their partners expressed more positive emotion than did dismissing-avoidant individuals, $F(1, 66) = 4.32, p < .05$.

High-conflict interactions. To test the hypotheses for high-conflict interactions, we performed a series of regressions on the subset of interactions that individuals rated as high in conflict (i.e., ratings of 4–5 on the 5-point scale). Analyses followed the same format as those across all interactions and were based on 168 interactions from 54 participants. (A total of 16 participants could not be included because they did not rate any interactions as greater than 3 in conflict.) Note that the number of interactions rated as high in conflict did not differ by attachment style, $F(3, 66) = 0.41$, *ns;* in addition, the overall ratings of conflict across all interactions were similar (*M*s = 1.64, 1.68, 1.66, and 1.65, for secure, fearful-avoidant, preoccupied, and dismissing-avoidant individuals, respectively).

Figure 1 shows that preoccupied individuals differed markedly from dismissing-avoidant and secure individuals in their ratings of the quality of their high-conflict interactions. As predicted, preoccupied individuals reported greater intimacy than did dismissing-avoidant, $F(1, 50) = 15.80, p < .001$, and secure, $F(1, 50) = 8.32, p < .01$, individuals. Preoccupied individuals also reported greater self-disclosure than did dismissing-avoidant, $F(1, 50) = 6.22, p < .03$, secure, $F(1, 50) = 5.46, p < .03$, and fearful-avoidant, $F(1, 50) = 5.35, p < .03$, individuals. These patterns are similar to those across all interactions, but appear to be more pronounced. In addition, preoccupied individuals also reported greater satisfaction after high conflict than did dismissing-avoidant, $F(1, 50) = 11.38, p < .001$, secure, $F(1, 50) = 5.28, p < .03$, and fearful-avoidant, $F(1, 50) = 3.71, p < .10$, individuals. In some respects, fearful-avoidant individuals showed patterns that were similar to those of preoccupied individuals; they reported significantly greater intimacy than did dismissing-avoidant individuals, $F(1, 50) = 9.43, p < .01$, and nonsignificantly greater intimacy than did secure individuals, $F(1, 50) = 3.81, p < .10$. In other respects, fearful-avoidant individuals differed from preoccupied individuals; they reported less self-disclosure and less satisfaction in these high-conflict interactions. Dismissing-avoidant individuals did not differ from secure individuals in their ratings of the quality of their high-conflict interactions.

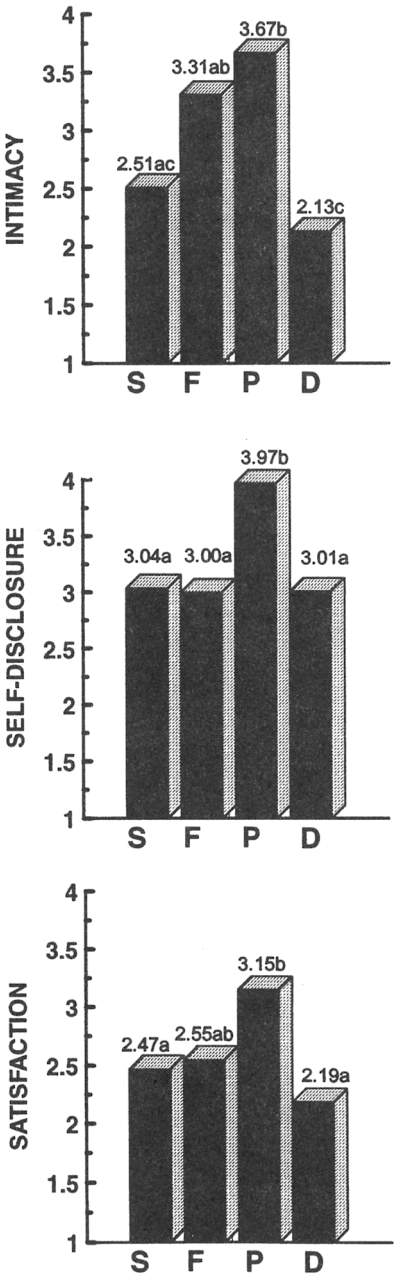

Figure 1. Mean levels for ratings of the interaction quality variables for high-conflict interactions. Means with different subscripts differed significantly, $p < .05$. S = secure; F = fearful-avoidant; P = preoccupied; D = dismissing-avoidant.

Figure 2 shows that emotional responses after high-conflict interactions varied as a function of attachment. As expected, preoccupied individuals reported significantly more positive emotion than did dismissing-avoidant individuals, $F(1, 50) = 7.16, p < .03$, and marginally more than did secure individuals, $F(1, 50) = 3.25, p < .10$. In addition, dismissing-avoidant

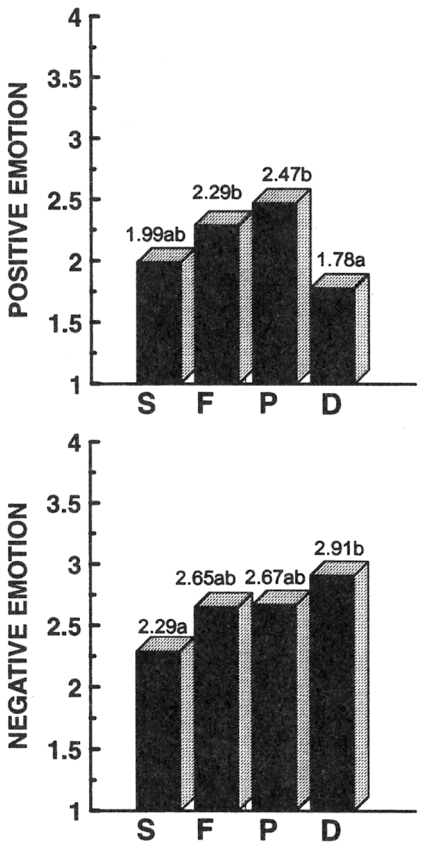

Figure 2. Mean levels for ratings of positive and negative emotion for high-conflict interactions. Means with different subscripts differed significantly, $p < .05$. S = secure; F = fearful-avoidant; P = preoccupied; D = dismissing-avoidant.

individuals evidenced less positive emotion than did fearful-avoidant individuals, $F(1, 50) = 4.10$, $p < .05$, and more negative emotion than did secure individuals, $F(1, 50) = 5.37$, $p < .03$. Thus, consistent with the predictions for high-conflict interactions, preoccupied individuals expressed the most positive emotion, whereas dismissing-avoidant individuals expressed the least positive and most negative emotion.

After high-conflict interactions, views of self did not differ significantly by attachment: *M*s = 3.94 (secure), 3.58 (fearful), 3.73 (preoccupied), and 3.44 (dismissing). Nevertheless, dismissing-avoidant individuals showed marginally lower self-esteem than did secure individuals, $F(1, 50) = 3.12$, $p < .10$, which is consistent with the prediction that they would respond most negatively to interpersonal conflict. Interestingly, preoccupied individuals did not show lower self-esteem after high conflict, although they did show the lowest self-esteem across all interactions.

Figure 3 shows the means for the variables reflecting views of others after high-conflict interactions. As predicted, preoccupied individuals expressed higher esteem for their partners following high-conflict interactions than did either secure individuals, $F(1, 50) = 3.40$, $p < .05$, or fearful-avoidant individuals, $F(1, 50) = 8.94$, $p < .01$. Similarly, preoccupied participants reported more disclosure from their partners and more expression of positive emotion by their partners than did dismissing-avoidant, $F(1, 50) = 6.22$, $p < .03$ (partners' disclosure), and $F(1, 50) = 7.18$, $p < .007$ (partners' positive emotion), or secure individuals, $F(1, 50) = 8.24$, $p < .01$ (partners' disclosure), and $F(1, 50) = 10.53$, $p < .001$ (partners' positive emotion). Fearful-avoidant individuals fell in between these two extremes. The four groups did not differ significantly in their perceptions of how much partners expressed negative emotion: *M*s = 3.33 (secure), 3.25 (fearful), 3.06 (preoccupied), and 3.54 (dismissing). Thus, following high-conflict interactions, preoccupied individuals showed more positive views of their partners, but they did not show this pattern across all interactions.

Overall, the findings for high-conflict interactions supported the predictions. Preoccupied individuals responded more favorably to high-conflict interactions than did either secure or dismissing-avoidant individuals, and fearful-avoidant individuals usually fell in between preoccupied and dismissing-avoidant groups. Although the responses of dismissing-avoidant individuals generally paralleled those of secure participants, they did report more negative emotion and marginally lower self-esteem.

A comparison of the findings across all interactions, which primarily reflect lower conflict interactions (over 90% of all interactions were rated as 3 or less in conflict), and those for the smaller subset of high-conflict interactions suggests that attachment patterns varied as a function of level of conflict. We directly tested this proposition by extending the analysis procedure described above to include the full range of conflict ratings (i.e., from 1 to 5) as a lower level predictor, attachment

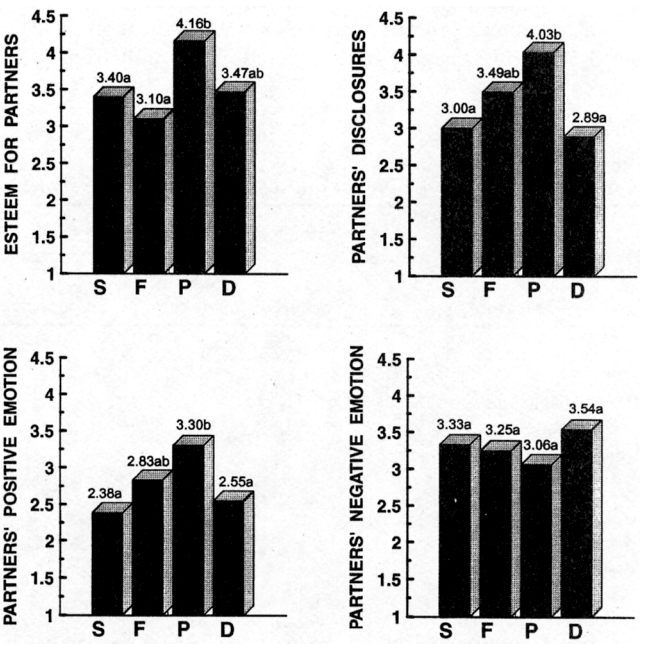

Figure 3. Mean levels for variables indicating views of others for high-conflict interactions. Means with different subscripts differed significantly, $p < .05$. S = secure; F = fearful-avoidant; P = preoccupied; D = dismissing-avoidant.

styles as an upper level predictor, and the interaction between the two as a predictor. Note that the lower level predictor, conflict ratings, varied within subjects. The effect for conflict ratings indicated the degree of association between level of conflict and each interaction record variable (e.g., between conflict and intimacy). The interaction term estimated the degree to which attachment style (i.e., the upper level predictor) influenced the size of the association between conflict ratings (i.e., the lower level predictor) and a particular interaction record variable (i.e., the lower level criterion). Thus, the interaction indicated whether the association between conflict ratings and an interaction record variable (e.g., intimacy) was stronger for some attachment styles than for others; a significant interaction means that attachment style explains some of the variation in the magnitude of the association across subjects. We first centered the conflict ratings around the grand mean before entering them into the regression equations, as recommended by Aiken and West (1991). We estimated the degree of random variation (a) across participants in the mean of the criterion variable (e.g., intimacy) and (b) in the effect of the lower level predictor on the lower level criterion (e.g., the effect of conflict on intimacy as indicated by the regression slope). These terms provided error estimates for tests of the effect of attachment styles on the slopes (i.e., regression coefficients for the association between conflict and each interaction variable) and intercepts (i.e., mean levels holding constant the level of conflict; Kenny & Bolger, 1996; Kenny et al., 1997). As in the previous analyses, we again performed a series of regressions including alternate dummy variables for attachment to allow for comparisons between the secure and insecure groups and among the insecure groups.

Table 3 shows the regression coefficients (slopes), which estimate the association between level of conflict and each of the interaction record measures for each attachment group. The slopes of the preoccupied group differed significantly from those of the dismissing-avoidant, fearful-avoidant, or secure group on the majority of variables, supporting the prediction that the patterns would vary as a function of conflict. Preoccupied individuals also reported more intimacy, self-disclosure, satisfaction, and partner disclosure at higher levels of conflict, in contrast to those in other groups who showed either no association or a negative association between level of conflict and their reports on these variables. In addition, preoccupied individuals showed less of a decline in positive emotion, esteem for self, esteem for partners, and perceptions of the partners' expressions of positive emotion at higher levels of conflict than did individuals in the other attachment groups.

Table 3 also shows the intercepts, or mean levels, which are similar to the mean levels across all interactions. The mean levels differ slightly from those across all interactions (see Table 2) because level of conflict was held constant (i.e., at its mean, which was set to zero) in these analyses, but the patterns parallel those across all interactions.

Interactions with close partners. The prediction that stronger attachment differences would emerge in closer relationships was not confirmed. We examined the patterns for relationships that were rated as close (i.e., rated 6 or 7 on the 7-point scale administered during the final interview). For the most part, the findings (based on 1,133 interactions from 70 participants) paralleled those found across all interactions: (a) Fearful-avoidant individuals reported higher satisfaction than did dismissing-avoidant, $F(1, 66) = 11.04$, $p < .01$, preoccupied, $F(1, 66) = 6.44$, $p < .03$, or secure individuals, $F(1, 66) = 4.24$, $p < .05$. Individuals who held different attachment styles did not differ in their ratings of intimacy or self-disclosure in their interactions with close others—unlike the analyses across all interactions—probably because most individuals feel more intimate and disclose more in their interactions with close others; (b) fearful-avoidant individuals evidenced the most positive emotion and

Table 3
Associations Between Conflict and Other Interaction Record Variables by Attachment Category: Slope and Intercept Differences

Measure	Attachment category: Regression coefficients (slopes)				Attachment category: Intercepts			
	Secure	Fearful-avoidant	Preoccupied	Dismissing-avoidant	Secure	Fearful-avoidant	Preoccupied	Dismissing-avoidant
Interaction quality								
Intimacy	$.01_{ab}$	$.06_{ab}$	$.14_{a}$	$-.10_{b}$	2.71_{ab}	3.09_{a}	3.04_{a}	2.58_{b}
Self-disclosure	$.02_{a}$	$.04_{a\dagger}$	$.21_{b}$	$.02_{a}$	3.01_{a}	3.07_{a}	3.20_{a}	2.88_{a}
Satisfaction	$-.37_{a}$	$-.44_{a}$	$-.14_{b}$	$-.44_{a}$	3.55_{a}	3.89	3.53_{a}	3.36_{a}
Emotional reactions								
Positive emotion	$-.32_{a}$	$-.29_{a}$	$-.13_{b}$	$-.33_{a}$	2.93_{ab}	3.21_{b}	2.77_{a}	2.80_{a}
Negative emotion	$.25_{a}$	$.32_{a}$	$.28_{a}$	$.35_{a}$	1.39_{a}	$1.60_{b\dagger}$	1.55_{ab}	1.66_{b}
Views of self								
Self-esteem	$-.19_{ab}$	$-.24_{a}$	$-.09_{b}$	$-.29_{a}$	4.58_{a}	$4.42_{ac\dagger}$	4.15_{b}	$4.38_{ac\dagger}$
Views of others								
Esteem for partners	$-.29_{a}$	$-.37_{a}$	$-.00_{b}$	$-.29_{a}$	4.51_{a}	$4.47_{a\dagger}$	4.21_{b}	4.37_{ab}
Partners' disclosure	$.03_{ab}$	$.13_{a}$	$.15_{a}$	$-.05_{b}$	3.11_{a}	3.29_{a}	3.39_{a}	3.14_{a}
Partners' positive emotion	$-.36_{a}$	$-.22_{ab}$	$-.10_{b}$	$-.30_{a}$	3.45_{ab}	3.73_{a}	3.50_{b}	3.30_{b}
Partners' negative emotion	$.44_{a}$	$.44_{ab}$	$.28_{b\dagger}$	$.42_{ab}$	1.94_{ab}	1.79_{a}	2.06_{ab}	2.11_{b}

Note. Analyses were based on 2,268 observations from 70 participants, *df*s = 1, 66. Within rows, slopes (or intercepts) with different subscripts differed significantly, $p < .05$, except as noted below.
† Comparisons with this slope or intercept differed marginally from those with different subscripts, $p < .10$.

differed significantly from preoccupied individuals, $F(1, 66) = 4.41$, $p < .05$; (c) dismissing-avoidant individuals evidenced more negative emotion than did secure individuals, $F(1, 66) = 3.99$, $p < .05$; and (d) preoccupied individuals, compared with secure individuals, showed lower esteem for themselves, $F(1, 66) = 19.07$, $p < .001$, and marginally lower esteem for their partners, $F(1, 66) = 3.49$, $p < .10$.

We examined the possibility that the strongest attachment differences would emerge for interactions with romantic partners, who are most likely to serve as attachment figures (Hazan & Shaver, 1994). Analyses examining only interactions with dating partners did not reveal any effects that were stronger or different than those for all close partners. Unfortunately, the power of these analyses to detect differences was limited by the smaller sample size ($n = 41$ participants); although the patterns paralleled those across all close relationships, most of the differences were not statistically significant.

We also performed multilevel analyses including the full range of closeness ratings (i.e., 1–7) as a predictor. These analyses (based on 2,272 interactions for 70 participants) followed the same procedure described above for those using conflict as a predictor. The associations between closeness and the interaction record variables varied significantly by attachment style for only two variables: self-disclosure and partner disclosure. Overall, individuals reported more self-disclosure with closer partners (regression coefficients = .21, .24, .19, .12, for secure, fearful-avoidant, preoccupied, and dismissing-avoidant groups, respectively), but the association between closeness and self-disclosure for dismissing-avoidant individuals was significantly ($p < .05$) weaker than for fearful-avoidant individuals and marginally ($p < .10$) weaker than for secure participants. Furthermore, all individuals tended to report that their partners disclosed more when they had interacted with closer partners (regression coefficients = .18, .21, .18, .09, for secure, fearful-avoidant, preoccupied, and dismissing-avoidant groups, respectively), but this association was significantly ($p < .01$, for all comparisons) weaker for dismissing-avoidant than for preoccupied, fearful-avoidant, or secure individuals. When closeness was at baseline (i.e., at its mean), the pattern of mean differences by attachment paralleled those across all interactions. Overall, attachment differences did not emerge more strongly in closer relationships, but dismissing-avoidant individuals showed a tendency to distinguish less between nonclose and close others than did individuals in the other groups.

Discussion

These findings provide evidence that working models of attachment are linked to people's immediate perceptions of their everyday social interactions and thus extend previous work that has focused on retrospective, global perceptions. Working models of attachment were associated, to some extent, with perceptions across many kinds of everyday interactions and thus appear to contribute to interpersonal perceptions in general. Furthermore, working models of attachment were more strongly linked to perceptions in specific, attachment relevant contexts. These attachment-related differences in perceptions cannot be explained by differences in the sheer number of interactions; participants from the different attachment groups, on average, reported similar numbers of interactions and similar numbers of different types of interactions (e.g., interactions high in conflict). In addition, the patterns found for immediate perceptions did not always correspond to the patterns found for retrospective perceptions. Given that retrospective perceptions are likely to be affected by memory biases, these divergent patterns provide some clues about the contribution of memory to attachment-related perceptions.

Correspondence in Patterns for Retrospective and Immediate Perceptions

The patterns of findings for retrospective reports and immediate reports showed some notable differences. In retrospective, global reports, preoccupied individuals showed more emotionality and affect intensity than did individuals in the other attachment groups. In contrast, preoccupied individuals did not show more extreme emotional responses in their immediate reports in general; however, following high-conflict interactions, they did evidence more positive emotion and satisfaction. Furthermore, dismissing-avoidant individuals evidenced less intense emotionality, less distress, and more denial of distress in their retrospective reports, but their immediate perceptions suggested that they experienced negative emotions that were at least as intense as those of other insecure individuals. Across all interactions and in high-conflict interactions, dismissing-avoidant individuals reported more negative emotion than did secure individuals.

These divergent patterns suggest that the differences between the retrospective reports of preoccupied and dismissing-avoidant individuals are linked to memory biases. When preoccupied individuals retrospectively report on the intensity of their emotions, they may be recalling particularly salient emotional events (e.g., high-conflict situations) rather than a representative sample of all of their experiences. Similarly, dismissing-avoidant individuals, who repress or deny their negative feelings, may have greater difficulty recalling their negative emotions when they must remember over a longer period of time and summarize across different experiences. This idea is consistent with work that has demonstrated that repressors (e.g., Davis & Schwartz, 1987) and dismissing-avoidant individuals (Mikulincer & Orbach, 1995) are less able to recall negative personal experiences. Dismissing-avoidant individuals may be less able to suppress their negative feelings when they are asked to report on their emotions immediately after the event occurs, as in this study, but may be more able to do so when they can selectively recall and summarize their experiences over time.

Retrospective and immediate reports of self-esteem showed some similarities. Preoccupied individuals, who evidenced the most pervasive self-concept deficits on the retrospective measures, also evidenced the lowest self-esteem in their immediate perceptions across all interactions. However, fearful-avoidant individuals evidenced more negative self-views in their retrospective reports, but did not evidence lower self-esteem in their immediate perceptions. One explanation for this inconsistency is that preoccupied people rely heavily on others to confirm their self-worth (Brennan & Bosson, in press; Brennan & Morris, 1997); our findings suggest that they may do so to a greater

extent than do fearful-avoidant individuals, when evaluating their self-esteem immediately after social interactions. Thus, for preoccupied people, the context of everyday social interactions may highlight their negative self-views.

In contrast to previous research (e.g., Bartholomew & Horowitz, 1991; Collins & Read, 1990), our retrospective findings did not indicate that secure and preoccupied people held more positive views of others than did fearful-avoidant or dismissing-avoidant individuals. Our measures assessing positive views of others (i.e., concern for others and maintaining self–other bonds), however, differed considerably from those used in previous studies. An additional retrospective measure (i.e., self–other differentiation) indicated that preoccupied individuals depended more heavily on others as a source of information about themselves. This finding suggests that preoccupied people are more sensitive to others' responses but does not indicate whether their views of others are more positive or negative. The findings based on immediate perceptions revealed a somewhat different pattern. Across all interactions, preoccupied individuals showed a tendency to view others more negatively than did secure individuals; in contrast, they showed more positive views of others only after high-conflict interactions.

These findings help to clarify the mixed results of previous studies (e.g., Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987), most of which were based on retrospective questionnaires. Preoccupied individuals appear to hold more positive views of others in some contexts but may hold more negative views in other contexts. Thus, it may be more appropriate to describe preoccupied individuals as having multiple, inconsistent views of others rather than positive views of others. These inconsistent views may arise, in part, because preoccupied people idealize their relationship partners (Feeney & Noller, 1990) and may be disappointed when partners do not meet their high expectations. In a related vein, neither fearful-avoidant nor dismissing-avoidant individuals reported significantly less esteem for others than did secure individuals; these findings further suggest that the conditions under which avoidant individuals display positive or negative views of others need to be specified. Avoidant individuals may appear more negative about others when measures focus on their sociability and interpersonal warmth (e.g., Bartholomew & Horowitz, 1991), which may reflect their general discomfort in social interactions or distrust of others, but not when measures focus on negative views of another's competence or worth as a person (as in our study).

Overall, the patterns of findings for retrospective and immediate reports provided different but complementary information about the link between attachment and interpersonal perceptions. The differences underscore the importance of examining not only global, retrospective perceptions but also immediate perceptions in specific contexts. Furthermore, they invite a more direct examination of attachment processes under conditions that vary how much individuals can engage in complex, memory-based processing.

Working Models of Attachment: General and Specific Effects

Several attachment differences appeared across all kinds of everyday interactions. Consistent with other researchers' findings (e.g., Bartholomew & Horowitz, 1991; Feeney & Noller, 1990; Mikulincer & Nachshon, 1991), we found that preoccupied individuals perceived greater intimacy and disclosed more in their everyday interactions than did dismissing-avoidant individuals and evidenced lower self-esteem than did secure individuals. Unexpectedly, we found that fearful-avoidant individuals expressed the most positive emotion and satisfaction after their interactions. One possibility is that fearful-avoidant individuals, who anticipate rejection, are relieved when they experience interactions that do not confirm their negative expectations and thus express greater satisfaction and positive emotion. In addition, dismissing-avoidant participants reported more negative emotion in their interactions than did secure individuals. Although this finding contrasts with theory and research suggesting that dismissing-avoidant individuals report less extreme emotions, it is consistent with recent findings (Tidwell, Reis, & Shaver, 1996) indicating that avoidants report the most negative emotion in their perceptions of some interactions.

Several attachment differences emerged more strongly for high-conflict, attachment-relevant situations. In these interactions, preoccupied individuals responded more favorably (or less unfavorably) than did either secure or dismissing-avoidant individuals. Thus, in situations that most people are likely to find unpleasant, or even aversive, preoccupied people seem to show some psychological benefits. What might account for this paradoxical pattern? One possibility is that high-conflict situations offer preoccupied individuals an opportunity to accomplish central interpersonal goals (cf. Cantor, 1994). Preoccupied people expect and desire a high degree of intimacy and personal disclosures. In high-conflict situations, partners are apt to pay attention and respond to the interaction (e.g., by making disclosures), even if their responses convey anger or disappointment. Preoccupied people may interpret these responses as evidence that their partner is engaged and responsive and thus believe that they have moved toward their goal of achieving intimacy. In contrast, dismissing-avoidant individuals seek independence and distance from others. Thus, high-conflict situations, which demand a response and even personal disclosures, clash with their goals. The tendency for dismissing-avoidant individuals to respond more unfavorably to high-conflict interactions is consistent with this reasoning. Like dismissing-avoidant individuals, secure individuals also responded more negatively to high-conflict interactions, but not necessarily for the same underlying reasons. Secure individuals are comfortable with intimacy and know how to establish it without conflict; conflictual interactions pose a threat to their usual feelings of security and sense of themselves as socially competent.

Although preoccupied people may feel greater intimacy after having a conflict, their partners may not share those feelings, and thus conflictual interactions may create further difficulties in the relationship. Indeed, the more favorable reactions of preoccupied people may make them particularly susceptible to remaining in conflict-ridden or even abusive relationships. This idea fits with work showing that preoccupied individuals often break up but subsequently reunite with the same romantic partner (Kirkpatrick & Hazan, 1994), show more positive emotion and passion in high-conflict romantic relationships (Morgan &

Pietromonaco, 1994), and have more difficulty separating from abusive partners (Henderson, Bartholomew, & Dutton, 1997).

Although interactions with close others are likely to carry high relevance for attachment, differences between people of different attachment styles were not as clear-cut as those for high-conflict interactions. Nevertheless, our findings comparing the associations between closeness and self- and partner disclosures hint that dismissing-avoidant individuals may be less likely to differentiate between nonclose and close others; their greater uniformity in responses across relationships, regardless of closeness, may reflect their desire to maintain distance from others. In addition, we did not find stronger patterns for interactions with romantic partners, but our analyses were limited by the small number of participants in romantic relationships. This idea deserves further investigation, especially in view of recent work (Tidwell et al., 1996) suggesting that attachment differences arise primarily in interactions with opposite-sex partners.

Overall, our findings suggest that working models of attachment show some characteristics of a general interpersonal style and thus exert broad, pervasive effects across all kinds of social interactions. It is noteworthy that generalized expectations about a specific class of relationships (i.e., romantic relationships) were linked to interaction patterns that cut across different kinds of relationships (with strangers, same-sex best friends, professors, etc.). Our findings also support theorists' (Bowlby, 1980; Mikulincer, Florian, & Weller, 1993; Simpson et al., 1992) claims that the differential effects of working models should be most evident in attachment-relevant situations. Although theorists generally have assumed that such situations are likely to increase distress among insecure individuals, our work suggests that when such situations (e.g., high conflict) mesh with particular interpersonal goals (e.g., achieving intimacy for preoccupied people), they may not intensify distress, at least not in the short term. The long-term consequences of such situations remain to be explored in future work.

Limitations

The results of our study are limited in several respects. First, we did not have a large enough sample size to examine adequately the patterns within different kinds of close relationships (e.g., with romantic partners or parents) or for men versus women. Both of these factors will be important to examine in further investigations.

Second, we focused on individuals' perceptions of their experiences; the extent to which such perceptions reflect objective characteristics of the situation or match the other partner's perceptions remains to be determined. In particular, participants defined whether their interactions were high in conflict or whether they had a close relationship with a partner. It is possible that people who hold different attachment styles differ in what they are willing to call a high-conflict situation or a close partner. Thus, the objective characteristics of a preoccupied person's high-conflict situation may not match those of a dismissing-avoidant person. The fact that individuals who held different attachment styles did not differ in the total number of interactions that they labeled as high in conflict suggests that participants may not have varied greatly in defining these situations. Nevertheless, this limitation will need to be addressed in investigations that observe the responses of different individuals to similar, objectively defined (e.g., experimentally created) high-conflict situations.

Third, the high-conflict interactions (defined as 4 or 5 on the 5-point scale) were not associated, on average, with extremely high ratings of negative emotion or extremely low ratings of positive emotion. Thus, the high-conflict interactions in our sample may not have been as aversive as those that occur in some natural interactions (e.g., interactions between partners in distressed marriages).

Fourth, our correlational data cannot determine the causal direction of the link between working models of attachment and the observed differences in individuals' retrospective and immediate reports or whether a third variable might account for this link. For example, it is possible that individuals who are predisposed to experience more intense affect also are more likely to develop a preoccupied attachment style and to experience lower self-esteem. Yet it is unclear how greater affect intensity could account for the more favorable responses of preoccupied individuals to high-conflict situations, which presumably should evoke more negative affect.

Fifth, our categorical analysis did not allow us to identify precisely which dimensions of working models (e.g., models of self vs. models of others; anxiety vs. defensiveness) might underlie the observed differences. An alternative way of analyzing the data would have been to examine the contribution of particular dimensions, such as models of self, others, and the interaction between the two (see Griffin & Bartholomew, 1994). We chose to rely on the more traditional categorical measure, however, because it is not yet clear whether working models of attachment are best conceptualized as categories or dimensions (Brennan & Shaver, 1995) or, if they are dimensional, which dimensions best capture their underlying structure (e.g., Brennan & Shaver, 1995; Collins & Read, 1990; Griffin & Bartholomew, 1994; Kobak, Cole, Ferenz-Gillies, & Fleming, 1993).

Conclusions

People who differ in the quality of their working models also differ in how they construe and respond to their everyday social interactions. Although these differences appear in general, across different situations and social partners, they are particularly evident under some conditions that activate attachment-relevant goals. Furthermore, the nature of the association between working models and perceptions depends on the fit between specific attachment goals and the features of the situation and whether perceptions are immediate and specific to an event or are more memory-based, global summaries of past experiences. Many questions remain about how working models contribute to adult attachment processes. Some challenging next steps include specifying the effects of generalized versus more specific working models of relationships, examining the causal relationship between working models and interpersonal perceptions and behavior, and understanding the dynamic interplay between each partner's working models and behavior.

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