Changes in attachment orientations across the transition to parenthood

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Received 10 September 2001; revised 20 August 2002

Abstract

According to attachment theory, individuals should experience changes in attachment orientations (styles) if they encounter experiences or events that strongly reinforce or directly contradict the major concerns of their existing orientations. Systematic changes should be most evident across stressful life transitions. Wives and husbands expecting their first child completed scales measuring their attachment orientations along with perceptions of themselves, their spouses, and their marriage both 6 weeks before and 6 months after childbirth. As predicted, women became more ambivalent across the transition if they entered parenthood perceiving less spousal support and more spousal anger, with perceptions of anger having stronger impact. Women who entered parenthood seeking less spousal support and those whose husbands were higher in avoidance became more avoidant across the transition. Men who perceived themselves as providing more prenatal support to their wives became less avoidant. These results extend attachment theory and research in novel directions.

Keywords: Attachment orientations; Change; Working models; Marriage; Parenthood

"There is certain information...that we find difficult to process. One example is information that is incompatible with our existing [working] models. In general, when new information clashes with established models...an old model may become replaced by a new one. Nevertheless, much evidence exists that we undertake such replacement only very reluctantly...to dismantle a model which has played and is still playing a major part in our daily life and to replace it by a new one is a slow and arduous task, even when the new situation is in principle welcome.”

Bowlby, 1980, pp. 230–231

According to attachment theory (Bowlby, 1969, 1973, 1980), attachment orientations can and do change in adulthood, especially during major life transitions when individuals encounter new information that is incongruent with, and must be assimilated into, their working models. The present study investigated the way in which model-incongruent and model-congruent perceptions of how individuals treat and are treated by their spouses predict changes in attachment orientations across the transition to parenthood, a period when meaningful changes are likely to occur.

Attachment orientations, affect regulation, and support

Attachment working models begin to develop early in childhood and become increasingly elaborated as cognitive abilities mature. These models are believed to contain information about the self (e.g., whether the self is or is not worthy of love and care from attachment figures) and significant others (e.g., whether attachment figures are or are not likely to be loving and supportive in stressful situations). They also house information processing rules that direct attention toward certain types of information and away from others (Bowlby, 1980), influence what is remembered and what is not (Bowlby, 1973), and affect the way in which
attachment-relevant experiences are interpreted (see Collins & Allard, 2001). Working models are thought to guide attachment behavior and cognition, especially in stressful situations that activate the attachment system (Kobak & Duemmler, 1994).

Two orthogonal dimensions underlie adult attachment (Brennan, Clark, & Shaver, 1998; Griffin & Bartholomew, 1994; Simpson, Rholes, & Phillips, 1996). The first dimension, commonly labeled avoidance, assesses the degree to which individuals desire limited intimacy with, and strive to remain psychologically and emotionally independent from, romantic partners. The second dimension, usually labeled anxiety or ambivalence, measures the degree to which individuals worry that their romantic partners do not really love them and might be unavailable or unsupportive in times of need. Individuals who score low on both dimensions are prototypically “secure” (i.e., they feel comfortable with dependence and intimacy, and do not worry about being abandoned).

People who have different attachment orientations regulate and cope with negative affect in different ways (Kobak & Sceriy, 1988; Simpson, 1990). Most of their differences center on the degree to which (a) attention is directed toward versus away from the source of emotional distress and (b) distress is mitigated by seeking versus not seeking emotional support from attachment figures. According to Kobak and Sceriy (1988), receiving adequate emotional support during development generates unconscious “security rules” that allow individuals to remain aware of their feelings when upset and to cope by actively seeking support from others. Sustained rejection and hostility, in contrast, generate “avoidance rules” that motivate persons to remain largely unaware of distress and to withdraw from potential support providers. Unpredictable support generates “ambivalence rules” that lead persons to magnify distress and ruminate obsessively about whether attachment figures will be available when needed.

In light of the social experiences that give rise to these different working models, attachment orientations should be and are systematically associated with the amount of support that individuals seek, give, and perceive in close relationships. More secure persons tend to harbor positive expectations about receiving support, more avoidant persons have negative and cynical expectations, and more ambivalent persons mistrust potential support providers (Wallace & Vaux, 1994). Consequently, highly avoidant persons both seek less support from and offer less support to their attachment figures than do secure persons, especially in stressful situations (Mikulincer & Florian, 1998; Mikulincer, Florian, & Weller, 1993; Simpson, Rholes, & Nelligan, 1992). Rather than utilizing active/problem-focused coping strategies as highly secure people do, highly avoidant people customarily rely on distancing/withdrawal strategies and denial to regulate and attenuate negative affect when they are upset (Mikulincer & Florian, 1998). Ambivalent individuals, on the other hand, ruminate obsessively about the source of distress and try to reduce negative affect through passive/emotion-focused coping strategies (Cassidy & Berlin, 1994). Ambivalent persons face a unique quandary. Even though they ideally want support from attachment figures, they often feel conflicted about seeking it due to lingering worries that attachment figures might not be sufficiently available or responsive.

Change in attachment orientations

Adult attachment orientations (styles) do change over time (see, for example, Collins & Read, 1990; Davila, Burge, & Hammen, 1997; Kirkpatrick & Hazan, 1994; Scharfe & Bartholomew, 1994). Baldwin and Fehr (1995), in fact, have estimated that 30% of people experience statistically significant shifts in their romantic attachment styles across relatively short time periods (i.e., several months), and that most of the variance associated with change is not due to the unreliability of attachment measures. Although some of this variance could be attributable to transient factors (e.g., idiosyncratic personal experiences, temporary priming effects), individuals have primary (default) attachment orientations that (a) predict attachment-relevant behavior independently of experimentally primed attachment styles and (b) are not changed by experimental primes (Baldwin, Keelan, Fehr, Enns, & Koh-Ranganarjoo, 1996).

When should individuals experience patterned, predictable changes in their primary, default models of attachment orientation? According to various attachment theorists (Bowlby, 1969, 1973; Collins & Read, 1994; Ricks, 1985), patterned changes should be most likely to occur when individuals must grapple with stressful, life-altering events that: (a) expose them to new information that either reinforces or contradicts the core assumptions of their working models and (b) encourage them to reflect upon and reevaluate their models. Only a handful of studies have tested for systematic changes in primary attachment orientations across moderately stressful/challenging life transitions. Kirkpatrick and Hazan (1994), for example, found that secure people tend to become less secure after romantic relationship breakups, whereas avoidant people become less avoidant after initiating new romantic relationships. Other studies, however, have failed to find theoretically predicted patterns of change in attachment during transition periods (e.g., Baldwin & Fehr, 1995; Davila et al., 1997; Scharfe & Bartholomew, 1994).

What might explain this inconsistency? One possibility is that previous studies have investigated different kinds of life transitions, some of which might not have been sufficiently stressful or challenging to launch the reappraisal of working models. Past research also has
not examined whether interpersonal perceptions that should be most pertinent to the major issues, concerns, and worries that underlie avoidance and ambivalence forecast changes on each attachment dimension during major life transitions or stressful experiences. The present research addresses these shortcomings.

The transition to parenthood and changes in attachment

Bowlby (1988) believed that the transition to parenthood should be an opportunity to witness systematic changes in attachment orientations for a variety of reasons. First, the chronically stressful and interpersonally taxing nature of having a child (see Belsky & Pensky, 1988; Cowan & Cowan, 2000; Levy-Shiff, 1994) ought to make individuals more receptive (or, in some cases, more “vulnerable”) to reevaluating, updating, and possibly revising their current views of themselves and significant others (see Caspi & Bem, 1990). Second, the birth of a child—particularly a first child—should rekindle significant attachment-related memories and issues from the expectant parents’ interpersonal pasts (Bowlby, 1988). Third, caring for a new baby usually exposes individuals to many new personal and interpersonal experiences (Cowan & Cowan, 2000). Some of these experiences may sharply contradict existing beliefs, expectations, and views of self or others, while other experiences may substantiate or buttress existing working models (Bowlby, 1988). Thus, systematic changes in attachment should occur for many people across this major life transition.

Expectant parents normally experience increased levels of stress several weeks prior to childbirth (Cowan & Cowan, 2000; Feeney, Hohaus, Noller, & Alexander, 2001). Consequently, as individuals await the arrival of their baby, their working models should start to orient them toward information that is relevant to the most salient concerns or worries of their attachment orientation. In the present study, we assessed women’s prenatal and postnatal perceptions of how supportive and rejecting (angry) their husbands behaved toward them, along with women’s self-perceptions of how much support they sought from their husbands. We also assessed men’s prenatal and postnatal self-perceptions of how supportive and rejecting (angry) they behaved toward their wives. We conjectured that if these prenatal perceptions reinforce or “confirm” the cardinal concerns and worries that underlie ambivalence or avoidance, an individual’s working models should become solidified (entrenched) or perhaps strengthened (grow even more extreme) across the transition period. Conversely, if unequivocal model-incongruent information is perceived, ambivalence or avoidance should decline across the transition.

We measured these specific perceptions for three reasons. First, support seeking, support giving, and rejection are central constructs in attachment theory (Bowlby, 1973, 1980). Rejection in this study was operationalized as the amount of hostile, angry behavior that wives perceived their husbands directed at them. Perceived anger was defined as rejection (from the perspective of wives) because it is an inappropriate emotional response, particularly when a romantic partner is distressed and needs comfort (Rholes, Simpson, & Oriña, 1999). Second, the early months of the transition are particularly difficult for women, who not only must cope with the demands of pregnancy and childbirth, but also tend to assume more postpartum childcare responsibilities than their husbands (Oakley, 1980). Third, men are often expected to be support-providers during the first few months postpartum (see Cowan & Cowan, 2000).

Since avoidant and ambivalent working models differ in several important ways, different types of information (assessed by perceptions of the self and partner) should instigate changes in ambivalence and avoidance. The fundamental concern that defines ambivalence is whether attachment figures will be sufficiently available and emotionally supportive in times of need (Cassidy & Berlin, 1994). In light of this overriding concern, perceptions of the partner’s supportiveness and anger—both of which should be clear indicators of availability—should predict changes in ambivalence. Specifically, among women, pre-to-postpartum declines in ambivalence should be predicted by perceptions of receiving higher levels of prenatal support and lower levels of prenatal rejection (anger) from their husbands because such perceptions are incompatible with the working models of ambivalent persons. Perceiving less prenatal support or more prenatal anger, on the other hand, is consistent with the beliefs and expectations of an ambivalent model and, therefore, such perceptions should sustain or possibly increase ambivalence across the transition.

We did not expect husbands to experience systematic changes in ambivalence as a function of the self-perceptions measured in this study (i.e., men’s self-perceived supportiveness and anger). Because ambivalence centers on the availability and supportiveness of attachment figures, it focuses more on receiving than providing support. Consequently, men’s self-perceived levels of prenatal supportiveness and anger should neither contradict nor confirm the main tenets of the ambivalent working model.

The fundamental concern of avoidant persons is to maintain psychological independence and to show personal, psychological strength (Crittenden & Ainsworth, 1989). Among the behaviors assessed in this study, the one that is most incongruent with avoidance is support seeking. Therefore, we hypothesized that higher levels of support seeking in the prenatal period would be associated with declines in avoidance over time. Because of
their focus on strength and independence from attachment figures, the way in which attachment figures treat avoidant persons may have less impact on their working models than it does on those of ambivalent persons. One certainly would expect that the amount of support avoidant persons perceive from their attachment figures would be less important and have less influence on change in their working models. Similarly, avoidance is partially a defense against rejection (anger), and rejection is consistent with avoidant working models. Thus, there are no strong grounds to expect high levels of anger to be associated with changes in levels of avoidance. Although high levels of perceived support and low levels of rejection are in principle incongruent with the expectations of avoidant persons, for the reasons discussed above these factors may have much less impact on changes in avoidance than self-perceptions of support seeking.

As for men, self-perceptions of behaving in a less rejecting manner should be incongruent with avoidance, but self-perceptions of acting in a more supportive manner might motivate greater change given the stronger emphasis most people place on the presence of positive traits/behaviors relative to the absence of negative traits/behaviors. This reasoning suggests that higher levels of self-perceived support giving by men during the prenatal period will predict declines in their avoidance across time.

The present study

Six weeks before the birth of their first child, wives and husbands independently completed a battery of self-report scales. Wives completed scales that assessed their romantic attachment orientations (toward partners in general), their perceptions of the amount of support their husbands gave them, the amount of anger their husbands directed at them, their tendency to seek support from their husbands, and their marital satisfaction. Husbands completed scales assessing their romantic attachment orientations, their views of how supportively they behaved toward their wives, the amount of anger they directed at their wives, and their marital satisfaction. Both spouses completed these scales again 6 months postpartum. Thus, the prenatal measures assessed attachment orientations and how spouses perceived and related to one another as they prepared to enter parenthood, whereas the postnatal measures assessed attachment orientations and how spouses perceived and related to one another during the period following childbirth.

Research has shown that neuroticism correlates moderately with attachment ambivalence (Shaver & Brennan, 1992) and partners’ attachment orientations sometimes covary, particularly in long-term couples (e.g., Fuller & Fincham, 1995). Therefore, we also measured and statistically controlled each spouse’s level of prenatal neuroticism as well as their partners’ prenatal scores on both attachment dimensions. By controlling for these variables, cleaner and more direct tests could be performed to determine whether and how each spouse’s own prenatal attachment scores were related to changes in their own postnatal attachment scores, independent of variance associated with their own neuroticism or their partner’s attachment orientation.

Our primary hypotheses involved how wives’ and husbands’ prenatal perceptions should be related to pre- to-postpartum changes in their avoidance or ambivalence.

**Hypothesis Set 1.** We predicted that wives who enter parenthood perceiving that their husbands are behaving less supportively or more angrily toward them should become more ambivalent over the transition period, whereas wives who perceive more support and less anger should become less ambivalent.

Lower prenatal marital satisfaction in women may also predict increases in ambivalence, but the effects of satisfaction should be negligible after the more proximal predictors of change—women’s perceptions of prenatal spousal support and anger—are statistically controlled.

**Hypothesis Set 2.** Accordingly to Bowlby (1988), most women should want spousal support, particularly during the early months of the transition period. When distressed, highly avoidant women are especially calmed if their romantic partners spontaneously offer comfort and support (Simpson et al., 1992). This suggests that most women—even some avoidant ones—might seek support from their husbands if the stress of becoming a parent is too severe. Accordingly, we predicted that wives who perceive themselves as seeking greater support during the prenatal period from their husbands should show declines in avoidance across the transition. Similarly, wives who perceive their husbands as more supportive and less rejecting prenatally might also become less avoidant. Nevertheless, for the reasons discussed above, we anticipated that perceptions of

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1 The degree of marital satisfaction also might forecast changes in ambivalence over time (Davila, Karney, & Bradbury, 1999). Marital satisfaction, however, is a multidimensional construct that reflects many different facets of relationship functioning, some of which have little to do with attachment processes (e.g., a partner’s physical appearance, financial resources, sense of humor). Therefore, we also assessed marital satisfaction in both spouses to test whether satisfaction predicted changes in attachment ambivalence or avoidance over and above perceptions of support and anger, both of which should be stronger and more proximal predictors of changes in attachment according to attachment theory.

2 No predictions were made about whether relations between the predictor variables and changes in ambivalence or avoidance would vary depending on participants’ initial (prenatal) attachment scores.
support seeking would have stronger effects on changes in avoidance than perceptions of spousal support or anger.

**Hypothesis Set 3.** Having a first child is stressful and often forces new parents into novel and unique situations. For many men, assuming the role of sustained support provider may be a novel experience. Even highly avoidant men may feel obliged to provide some additional support to their wives during the transition to parenthood. Thus, we predicted that husbands who perceive themselves as more supportive prenatally should become less avoidant over the transition. Conversely, if husbands enter parenthood perceiving that they are displaying greater anger toward their wives, they may become more avoidant. For reasons mentioned earlier, we did not expect husbands to experience changes in ambivalence as a function of the variables assessed in this study.

**Hypothesis Set 4.** Since working models should be partially self-sustaining (Bowlby, 1973), we derived a fourth set of more tentative, exploratory hypotheses structured around the mediation model shown in Fig. 1. According to this model, the stability of attachment orientation scores from the prenatal to the postnatal period should be at least partially mediated by how individuals perceive themselves and their spouses prior to childbirth. For example, women who enter parenthood scoring higher on ambivalence should typically view their husbands as less supportive and angrier during the prenatal period, and these perceptions should in turn partially mediate the relation between pre- and postnatal levels of ambivalence. That is, more ambivalent women should remain highly ambivalent if they perceive their spouses to be less supportive and/or angrier, and less ambivalent women should remain low in ambivalence if they perceive their spouses to be more supportive and/or less angry. Similarly, women who enter parenthood scoring higher on avoidance should perceive themselves as seeking less prenatal spousal support and may perceive their husbands as angrier and/or less supportive, and these perceptions could partially mediate their level of postnatal avoidance. And men who enter parenthood scoring higher on avoidance should view themselves as less supportive prenatally, which might partially mediate their level of postnatal avoidance.

**Method**

**Participants**

One hundred and six married couples living in a southwestern region of the US, all of whom were expecting their first child, completed both the pre-birth (Time 1) and the post-birth (Time 2) testing sessions. Seven additional couples completed only the pre-birth session. Six of these couples had moved to a distant location by Time 2, and one couple had separated. Couples were recruited from childbirth classes offered by a local hospital and were paid $50 for their participation. The mean age of women and men was 28.0 ($SD = 4.3$) and 29.0 ($SD = 5.5$) years, respectively. The mean length of marriage was 3.8 years ($SD = 2.5$).

**Procedures**

Couples were initially contacted during an early meeting of a childbirth class. An experimenter described the study, and couples were enlisted. Approximately 6 weeks before their due date (at Time 1), both spouses in each couple completed a battery of self-report scales after class, privately and without consulting each other. Approximately 6 months after childbirth (at Time 2), both partners completed a second set of self-report measures mailed to their homes. Spouses were instructed to complete the measures privately and not to consult with one another when answering any of the questions. Each spouse’s questionnaire packet was sealed in a separate envelope and was mailed back to the study coordinator directly.

Each packet contained scales that assessed participants’ adult attachment orientations (toward romantic partners *in general*), their marital satisfaction, and the quality of their marriage. In addition, wives completed scales that assessed how supportive they perceived their husbands were, how often their husbands behaved angrily toward them, and the degree to which they sought support from their husbands when they had a problem or were upset. Husbands completed scales that assessed how available they were as sources of support for their wives, and how often they behaved angrily toward their wives.

**Measures.** Ambivalence and avoidance were measured by the Adult Attachment Questionnaire (AAQ; Simpson et al., 1996). Participants responded to this measure according to how they thought and felt about romantic partners *in general*, including (but not necessarily limited to) their spouse. Sample items from the avoidance scale are: “I don’t like people getting too close to me” and “I’m nervous whenever anyone gets too close to me.” Sample items from the ambivalence scale include: “Others often are reluctant to get as close as I would like” and “I am confident that my partner(s) love

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**Fig. 1.** The general mediation model.
me just as much as I love them" (reverse-scored). These items were answered on 7-point scales (anchored $1 = $strongly disagree$, $7 = $strongly agree$). There are eight avoidance and nine ambivalence items on the AAQ. Thus, scores can range from 8–56 for avoidance, and from 9–63 for ambivalence. Cronbach alphas for the avoidance scale were .79 and .82 for men and women respectively at Time 1, and .78 and .82 for each sex at Time 2. Alphas for the ambivalence scale were .74 and .81 for men and women at Time 1, and .80 and .86 for each sex at Time 2.

Marital satisfaction was assessed by the satisfaction subscale of Spanier’s Dyadic Adjustment Scale (DAS; Spanier, 1976). Example items from this 10-item subscale are: “Do you regret that you ever married?”; “How often do you discuss or have you considered divorce, separation, or terminating your relationship?”; and ”Do you confide in your spouse?” These items were answered on 6-point scales (anchored $1 = all the time$, $6 = never$). Scores could range from 6 to 60. Cronbach alphas were .78 and .87 at Times 1 and 2 for men, and .84 and .90 at Times 1 and 2 for women.

The Social Provisions Scale (SPS; Cutrona, 1984) assessed wives’ perceptions of the degree to which their husbands supported them in general. Sample items are: “Can you depend on your husband to help you if you really need it?”; “Does your relationship with your husband provide you with a sense of emotional security and well-being?”; and “If something went wrong, do you feel that your husband would not come to your assistance?” (reverse-scored). These items were answered on 3-point scales ($1 = no$, $2 = sometimes$, $3 = yes$). Scores could range from 12 to 36. Cronbach alphas were .83 and .88 at Times 1 and 2. The SPS also was adapted to measure husbands’ perceptions of their availability as sources of support to their wives. Husbands answered the same 12 questions with the wording changed to assess their self-perceptions (e.g., “Can your wife depend on you to help her if she really needs it?”). Cronbach alphas for this measure at Times 1 and 2 were .68 and .81, respectively.

Support seeking (reported only by wives) was measured by Moos, Cronkite, Billings, and Finney’s (1983) Coping Scale, which asks respondents to report how they typically cope with general stress. Sample items (answered on 7-point scales, where $1 = $strongly unlike what I do$ and $7 = $very much like what I do$) are: “I keep (the problem) to myself” (reverse-scored); “I talk it out with my partner”; “I become distant” (reverse-scored); and “I go immediately to my partner.” Scores could range from 18 to 126. Cronbach alphas at Times 1 and 2 were .74 and .67, respectively.

The amount of anger (rejection) that husbands directed at their wives in the past month was assessed by Finch, Okum, Poole, and Ruehman’s (1999) Negative Social Exchange Scale. Sample items (answered on 9-point scales, where $1 = $not at all$ and $9 = $frequently$) include: Got angry, lost my temper, was rude, was insensitive, was cold, was inconsiderate, yelled, was too demanding, argued, and was impatient. Scores could range from 24 to 216. Cronbach alphas for men were .95 at Time 1 and .96 at Time 2. This scale was also adapted for wives so they could indicate how frequently in the past month their husbands had displayed each of the 24 behaviors contained in the scale. Items were answered on 9-point scales (where $1 = not at all$ and $9 = frequently$). Scores could range from 24 to 216. Cronbach alphas for women were .96 at both Time 1 and Time 2.

Both spouses also completed Goldberg’s (1990) Big Five measure of neuroticism at Time 1. This 20-item measure was answered on 5-point Likert-type scales, anchored $1 = $strongly agree$ and $5 = $strongly disagree$. The scale could range from 20 to 100. Cronbach alphas were .87 for women and .89 for men.

## Results

### Preliminary analyses

Table 1 presents zero-order correlations between the prenatal (Time 1) variables for both sexes along with correlations between each measure assessed at Time 1 and Time 2 (i.e., 7.5 month test–retest correlations for each scale). In general, women who perceived greater prenatal spousal support also perceived less prenatal spousal anger, sought more support, were more satisfied, had husbands who perceived that they provided more prenatal support and displayed less prenatal anger, and had more satisfied husbands. The same basic pattern emerged for women who perceived less prenatal anger from their husbands. Women who perceived seeking more prenatal support also perceived receiving more prenatal spousal support, less prenatal spousal anger, and reported being more satisfied. They also had husbands who perceived providing more support and reported being more satisfied. Correlations between the prenatal and postnatal assessments of each scale were all positive and significant (see the diagonal of Table 1). In addition, ambivalence and avoidance were moderately correlated in both men and women, with higher ambivalence being associated with greater avoidance in each sex. Correlations between attachment dimensions within couples indicated that husbands’ and wives’ avoidance scores were positively correlated.

Table 2 contains zero-order correlations between the prenatal (Time 1) predictor variables and the Time 2 attachment scores for women and men. For wives, most of the prenatal predictors correlated significantly and in the expected direction with avoidance and ambivalence. Although all correlations were in the expected direction for husbands, fewer (approximately half) were statistically significant.
Using hierarchical regression methods, we first tested whether each attachment dimension was predictive of the other, across each sex, in a set of preliminary analyses. We used the hypothesized Time 1 (prenatal) variables predicted Time 2 (postnatal) variables. Betas were calculated. For all of the change analyses, the predictor variables (attachment dimensions), Time 1 attachment scores, and avoidance, were then correlated. A significant correlation would indicate that changes in the two attachment dimensions cov ariated with changes on the other attachment dimension. The correlations for both husbands and wives were not significantly associated.

Before testing our hypotheses, we wanted to determine whether changes in attachment and avoidance were more likely to experience significant changes in attachment scores. The tests of the 4 major sets of hypotheses are presented below in separate sections. Hierarchical regression was conducted to test whether the hypothesized Time 1 (prenatal) variables predicted Time 2 (postnatal) variables. All attachment scores were centered prior to conducting the analyses (Aiken & West, 1991). The dependent variable in this study was the primary analysis of variance (ANOVA) comparing the sample means for ambivalence attachment compared to spouses with lower prenatal ambivalence attachment scores.

### Table 1
Correlations between husbands’ and wives’ prenatal (Time 1) and postnatal (Time 2) predictor variables

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<td>6. Wives’ Time 1 marital satisfaction</td>
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<td>7. Husbands’ Time 1 avoidance</td>
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<td>10. Husbands’ Time 1 perceptions of anger</td>
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<td>11. Husbands’ Time 1 marital satisfaction</td>
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**Note.** Correlations between attachment dimensions at Time 1 appear below the diagonal. Correlations between each measure as assessed at Time 1 and Time 2 appear on the diagonal.

*p < .05.

**p < .01.
first analysis was wives’ Time 2 ambivalence scores. The first predictor variable entered into the regression equation was wives’ Time 1 ambivalence. Husbands’ Time 1 avoidance and ambivalence scores were entered as a block in step 2 to examine any effects they might have (see Rholes et al., 1999) and to control for their effects when testing hypotheses involving wives’ avoidance and ambivalence. The variables central to Hypothesis Set 1—wives’ perceptions of their husbands’ prenatal supportiveness and anger—were entered in steps 3 and 4. Supportiveness and anger should have opposing effects in predicting changes in attachment orientations. Although attachment theory addresses how each variable should shape the development of attachment orientations, support has been discussed much more extensively than anger (see Bowlby, 1973, 1980, 1988). Consequently, support was entered before anger in all of the analyses reported below. Finally, for reasons discussed in footnote 1, wives’ marital satisfaction was entered in step 5 (after anger) to determine whether facets of marital satisfaction that are unrelated to the theoretically critical variables (perceptions of support and anger) accounted for additional variance in change.

As reported in Table 4, this analysis revealed that husbands’ levels of ambivalence and avoidance were unrelated to changes in their wives’ ambivalence. Consistent with Hypothesis Set 1, however, wives’ perceptions of their husbands’ prenatal supportiveness and anger each accounted for significant variance in change. Specifically, women who perceived that their husbands were less supportive, \( F_{\text{change}}(1, 101) = 4.60, \ p < .05, \ \beta = -.18 \) or angrier, \( F_{\text{change}}(1, 100) = 4.11, \ p < .05, \ \beta = .22 \), before the birth of their child became more ambivalent across the transition (from Time 1 to Time 2). Perceptions of anger accounted for significant variance independent of perceptions of support, but perceptions of support did not account for significant variance independent of perceived anger. When marital satisfaction was entered in the final step, it did not predict additional variance in change. When husbands’ ambivalence and avoidance scores were dropped as covariates, the same significant effects emerged.

To gain a clearer understanding of the psychological processes that might explain these changes in ambivalence, we next calculated residualized scores reflecting pre-to-postpartum changes in women’s perceptions of their husbands’ supportiveness and anger. These change scores were then entered as predictor variables into regression analyses similar to the one reported above. These scores correlated significantly with changes in women’s pre-to-postpartum ambivalence once women’s Time 1 perceptions of spousal supportiveness and anger were controlled, each \( F_{\text{change}}(1, 102) > 25.00, \ p < .001 \). That is, women who perceived the largest

### Table 2

Correlations between the Time 1 predictor variables and husbands’ and wives’ Time 2 attachment orientations

<table>
<thead>
<tr>
<th></th>
<th>Wives’ T2 avoidance</th>
<th>Wives’ T2 ambivalence</th>
<th>Husbands’ T2 avoidance</th>
<th>Husbands’ T2 ambivalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wives’ T1 perceptions of spousal support</td>
<td>-0.25*</td>
<td>-0.41**</td>
<td>-0.06</td>
<td>-0.11</td>
</tr>
<tr>
<td>2. Wives’ T1 perceptions of spousal anger</td>
<td>0.29**</td>
<td>0.46**</td>
<td>0.07</td>
<td>0.14</td>
</tr>
<tr>
<td>3. Wives’ T1 perceptions of own support seeking</td>
<td>-0.52**</td>
<td>-0.38**</td>
<td>-0.08</td>
<td>-0.16</td>
</tr>
<tr>
<td>4. Wives’ T1 marital satisfaction</td>
<td>-0.27**</td>
<td>-0.40**</td>
<td>-0.17</td>
<td>-0.31**</td>
</tr>
<tr>
<td>5. Husbands’ T1 perceptions of support giving</td>
<td>-0.18</td>
<td>-0.16</td>
<td>-0.36*</td>
<td>-0.34*</td>
</tr>
<tr>
<td>6. Husbands’ T1 perceptions of anger (directed at wives)</td>
<td>0.21*</td>
<td>0.16</td>
<td>0.21*</td>
<td>-0.06</td>
</tr>
<tr>
<td>7. Husbands’ T1 marital satisfaction</td>
<td>-0.25**</td>
<td>-0.38**</td>
<td>-0.28**</td>
<td>-0.32**</td>
</tr>
</tbody>
</table>

*Note. T1 = Time 1; T2 = Time 2.

* \( p < .05 \)

** \( p < .01 \)

---

### Table 3

Changes in mean levels of attachment from Time 1 to Time 2

<table>
<thead>
<tr>
<th></th>
<th>Time 1 (mean, standard deviations)</th>
<th>Time 2 (mean, standard deviations)</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husbands’ avoidance</td>
<td>27.88 (8.17)</td>
<td>26.85 (7.97)</td>
<td>1.59</td>
</tr>
<tr>
<td>Husbands’ ambivalence</td>
<td>23.46 (7.52)</td>
<td>23.52 (8.66)</td>
<td>-0.09</td>
</tr>
<tr>
<td>Wives’ avoidance</td>
<td>25.54 (8.07)</td>
<td>24.27 (8.36)</td>
<td>1.96*</td>
</tr>
<tr>
<td>Wives’ ambivalence</td>
<td>23.77 (8.62)</td>
<td>23.10 (10.39)</td>
<td>0.82</td>
</tr>
</tbody>
</table>

*Note. The degrees of freedom for each test are 104.

* \( p < .05 \)
changes in perceived spousal anger and support over the transition also experienced the largest changes in ambivalence.

**Changes in avoidance in women**

To test Hypothesis Set 2, regression analyses were conducted in which the dependent measure was women’s avoidance at Time 2. The first variable entered into the regression equation was women’s Time 1 avoidance score. For reasons discussed above, husbands’ Time 1 avoidance and ambivalence scores were entered as a block in the second step. The variable of primary interest in Hypothesis Set 2, wives’ tendency to seek prenatal spousal support, was entered in step 3, followed by wives’ perceptions of their husbands’ levels of support and anger in steps 4 and 5. Women’s marital satisfaction was entered in the final step to determine whether it accounted for significant variance above and beyond the theoretically central variables. As predicted and shown in Table 5, women’s prenatal self-perceived support seeking predicted pre-to-postpartum changes in their avoidance, $F_{change}(1,101) = 13.88, p < .001, \beta = -.29$. Specifically, women who sought more prenatal support became less avoidant across the transition, while those who sought less support became more avoidant. Neither women’s prenatal perceptions of spousal support and anger nor their prenatal marital satisfaction explained significant additional variance in change. Finally, women married to more avoidant men (assessed at Time 1) became more avoidant over the transition, $F_{change}(1,102) = 4.73, p < .05, \beta = .16$. Both husbands’ avoidance and wives’ support seeking explained significant variance in pre-to-postpartum changes in women’s avoidance.

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>$\beta$</th>
<th>$F$</th>
<th>$\Delta R^2$</th>
<th>Total $\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ ambivalence (Time 1)</td>
<td>.62**</td>
<td>65.98</td>
<td>.39</td>
<td>.39</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband’s ambivalence (Time 1)</td>
<td>.08</td>
<td>1.00</td>
<td>.01</td>
<td>.40</td>
</tr>
<tr>
<td>Husband’s avoidance (Time 1)</td>
<td>-.03</td>
<td>.14</td>
<td>.01</td>
<td>.40</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ perceptions of spousal support</td>
<td>-.18*</td>
<td>4.60</td>
<td>.03</td>
<td>.43</td>
</tr>
<tr>
<td>(Time 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ perceptions of spousal anger</td>
<td>.22*</td>
<td>4.11</td>
<td>.02</td>
<td>.45</td>
</tr>
<tr>
<td>(Time 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ marital satisfaction</td>
<td>-.07</td>
<td>.35</td>
<td>.00</td>
<td>.45</td>
</tr>
</tbody>
</table>

*Note. Wives’ perceptions of support was not a significant predictor over and above their perceptions of spousal anger, $F < 1.0, \beta = -.04, ns. $  
**$p < .05.$
***$p < .01.$

Table 5
Predicting change in wives’ avoidance: regression summary table

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>$\beta$</th>
<th>$F$</th>
<th>$\Delta R^2$</th>
<th>Total $\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ avoidance (Time 1)</td>
<td>.67**</td>
<td>82.88</td>
<td>.44</td>
<td>.44</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husbands’ ambivalence (Time 1)</td>
<td>-.04</td>
<td>.86</td>
<td>.03</td>
<td>.47</td>
</tr>
<tr>
<td>Husbands’ avoidance (Time 1)</td>
<td>.16*</td>
<td>4.73</td>
<td>.03</td>
<td>.47</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ perceptions of support seeking</td>
<td>-.29**</td>
<td>13.88</td>
<td>.06</td>
<td>.53</td>
</tr>
<tr>
<td>(Time 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ perceptions of spousal support</td>
<td>.06</td>
<td>.03</td>
<td>.00</td>
<td>.53</td>
</tr>
<tr>
<td>(Time 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ perceptions of spousal anger</td>
<td>-.12*</td>
<td>2.90</td>
<td>.01</td>
<td>.54</td>
</tr>
<tr>
<td>(Time 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ marital satisfaction</td>
<td>.06</td>
<td>1.13</td>
<td>.00</td>
<td>.54</td>
</tr>
</tbody>
</table>

*Note. Husbands’ avoidance remained a significant predictor when all variables were entered into the equation, $F = 4.65, \beta = .16, p < .05.$

**$p < .10.$
***$p < .05.$
****$p < .01.$
variance in change in women’s avoidance with the other variable statistically controlled. When husbands’ ambivalence and avoidance scores were removed as covariates, the effects for women’s support seeking were unchanged.

**Changes in avoidance in men**

In testing Hypothesis Set 3, the dependent measure was men’s Time 2 avoidance scores. The first variable entered into the analysis was men’s Time 1 avoidance. Women’s ambivalence and avoidance were entered next as a block in step 2 to (a) examine any effects they might have and (b) partial out the effects of women’s attachment orientations when testing the Hypothesis Set 3 predictions. The main variables of interest—men’s self-perceptions of their supportiveness and anger—were entered next in steps 3 and 4. As before, support was entered first, followed by anger. Men’s marital satisfaction was entered in the final step. As displayed in Table 6, husbands who perceived that they were more supportive prenatally became less avoidant over time, $F_{change}(1,101) = 4.07, p < .05, \beta = -.16$. Perceived supportiveness was marginally significant when men’s perceptions of their anger were controlled, $F_{change}(1,100) = 3.04, p < .10$. When wives’ ambivalence and avoidance scores were dropped as covariates, the same significant effects were found.

**Changes in ambivalence in men**

Although we formulated no hypotheses about changes in husbands’ ambivalence, regression analyses similar to those described above were run to ascertain whether changes in husbands’ ambivalence were related to their own perceptions of supportiveness and anger, their wives’ perceptions of these variables, or either their own or their wives’ marital satisfaction. These analyses yielded no significant results.

**Discriminant validity analyses**

Shaver and Brennan (1992) have documented that neuroticism correlates moderately with ambivalence (such that more neurotic people tend to score higher in ambivalence). Hence, we conducted additional analyses to determine whether neuroticism (assessed at Time 1) predicted pre-to-postpartum changes in ambivalence or avoidance for either sex. It never did. Furthermore, all of the significant predictors of change in avoidance and ambivalence described above remained significant when neuroticism was statistically controlled.

**Mediation model analyses**

The variables that predict the stability of attachment orientations could be influenced by a myriad of contextual and personal factors, one of which might be the perceiver’s own initial (prenatal) attachment orientation. As outlined in exploratory Hypothesis Set 4, prenatal attachment orientations could impact the way that individuals perceive themselves or their spouses as they enter parenthood. Over time, these model-congruent perceptions might actually sustain their attachment orientations. Greater prenatal ambivalence, for instance, might predispose women to see their husbands as less supportive prior to childbirth, which in turn might maintain their heightened ambivalence at 6 months postpartum. Therefore, we tested a small set of mediation models to determine whether any of the significant prenatal predictor variables identified in the analyses
reported above partially mediated links between either wives’ or husbands’ prenatal (Time 1) attachment orientations and their (Time 2) orientations (see Baron & Kenny, 1986). The general form of these analyses is shown in Fig. 1. The results for all significant mediation models are reported below. Unlike earlier analyses, which tested whether potential mediator variables significantly predicted pre-to-postpartum changes in attachment orientations, these mediation analyses test whether the stability between Time 1 and Time 2 attachment orientations is attributable to each mediator. Because we had only 2 waves of measurement (rather than 3), the mediation results reported below must be regarded as exploratory and suggestive rather than conclusive.

Two sets of variables met the mediation criteria proposed by Baron and Kenny (1986) and yielded significant Sobel (1982) z tests. As shown in Fig. 2, women who were more avoidant at Time 1 engaged in significantly less prenatal support seeking than did less avoidant women, and lower levels of support seeking in turn predicted greater postnatal avoidance. When prenatal support seeking (the mediator) was partialed, the relation between Time 1 and Time 2 avoidance diminished, Sobel’s z = 1.98, p < .05. In other words, higher levels of prenatal avoidance in women were associated with higher postnatal avoidance in part through the impact of prenatal avoidance on prenatal support seeking. Thus, one possible factor that may sustain higher levels of avoidance in women could be limited prenatal support seeking.

The second mediation model is shown in Fig. 3. It reveals that women who were more ambivalent at Time 1 perceived greater prenatal spousal anger than did less ambivalent women, and these perceptions in turn predicted greater postnatal ambivalence. When prenatal perceptions of spousal anger were partialed, the relation between Time 1 and Time 2 ambivalence diminished, z = 2.57, p < .05. This suggests that perceptions of heightened prenatal spousal anger may play a role in sustaining high levels of ambivalence in women across the transition to parenthood.

**Discussion**

As the opening quotation attests, Bowlby (1980) believed that attachment orientations should change in predictable ways when the fundamental assumptions and concerns that underlie working models are challenged. He also believed that change is most likely to occur when individuals confront stressful life transitions that increase their receptivity to change. The present study confirms that attachment orientations do change in theoretically meaningful ways during the transition to parenthood, and that change is systematically related to how individuals perceive themselves and/or their romantic partners. Consistent with attachment theory, the perceptual sources of change were different for avoidance and ambivalence. In line with the two-dimensional measurement model of adult attachment, changes on the two dimensions were not correlated.

In general, if individuals perceived that either their own behavior or their partners’ behavior was incongruent with their attachment orientation, their orientation was undermined. On the other hand, as shown in the mediation analyses, their attachment orientation was stabilized if their perceptions were congruent with the basic tenets of their working models. Model-congruent perceptions appear to have been generated, at least in part, by individuals’ working models. Model-incongruent perceptions, in contrast, must have been produced by factors external to their working models (such as their partners’ behavior, contextual factors, etc.). Perhaps the most important implication of the present study is that the maintenance versus change of attachment orientations over time is an active process in which working models generate model-congruent information through both social perceptions and behavior. These self-maintaining processes, however, appear to be in dynamic tension with model-incongruent information, which can change working models. Change and stability, therefore, are dynamic processes that unfold over time. Adults with insecure attachment orientations do not remain insecure simply because of negative childhood experiences. Rather, they continue to experience...
themselves and their social worlds in ways that actively sustain and “justify” their insecurity. Conversely, individuals are not doomed to remain insecure if their social environments provide sufficient model-incongruent information.

Primary results

For wives, changes in ambivalence were predicted by their prenatal perceptions of their husbands’ anger and support. Women who perceived being the targets of greater prenatal anger and less support became significantly more ambivalent across the transition, whereas those who perceived the opposite became less ambivalent. In addition, women who reported the largest pre-to-postnatal changes in perceived spousal anger and support experienced the largest changes in ambivalence. Perceived spousal anger was a particularly powerful, independent predictor of change.

As expected, changes in men’s ambivalence were unrelated to the variables assessed in this study (men’s self-perceived supportiveness and anger). Coupled with the findings that women’s perceptions of spousal anger and support predicted changes in ambivalence, these null results substantiate the notion that the focal concern of ambivalence revolves around procuring adequate emotional support rather than providing it. As noted earlier, we assessed men’s perceptions of the support they gave to their wives rather than the support they received from their wives because most men should have been primary “support providers” in the opening months of the transition. It is conceivable that men’s perceptions of support received from their wives could have predicted changes in men’s ambivalence, but this might have been limited to men for whom receiving support was a significant issue at this early point of the transition. We suspect that receiving support would become more important to many husbands at later stages of the transition (e.g., by 1-year postpartum), particularly if husbands perceive that their wives are neglecting their personal needs (Kunce & Shaver, 1994).

Changes in avoidance arose from a different set of perceptions. Men who perceived themselves as behaving more supportively toward their wives during the prenatal period and women who perceived seeking more prenatal spousal support both became less avoidant. The effect for women remained significant even after women’s perceptions of prenatal spousal support, anger, and marital satisfaction were controlled. These findings are noteworthy because they imply that perceptions of one’s own behavior might instigate changes in attachment.

Changes in women’s avoidance were also associated with their husbands’ prenatal attachment orientations. The fact that husbands’ prenatal avoidance predicted changes in their wives’ avoidance is understandable in light of previous social interaction research. Highly avoidant men tend to behave less supportively toward their romantic partners in stressful lab interactions, particularly if their partners are highly distressed and request support (Simpson et al., 1992). In other words, highly avoidant men turn away from their romantic partners precisely when their partners need them the most, a process that should make women more avoidant.

Why are changes in ambivalence associated with prenatal perceptions of how one is treated by attachment figures, while changes in avoidance are more closely tied to prenatal perceptions of one’s own behavior and actions? Fraley and Shaver (2000) have proposed that ambivalence and avoidance reflect two components or “subsystems” of the attachment system. One component (assessed by ambivalence) monitors and evaluates the proximity of attachment figures, especially their degree of psychological and emotional proximity, availability, and responsiveness. When partners appear to be too insensitive or proximity falls below some threshold of acceptability, individuals become anxious. The second component (tapped by avoidance) regulates attachment behavior with respect to attachment goals. This component controls the inclination to seek contact and support from attachment figures or to manage stress in an independent, self-reliant manner. The fact that changes in ambivalence in women are associated with prenatal perceptions of spousal support and anger is understandable given that the “goal” of the first component is to detect cues that partners’ proximity and availability is less than needed. Similarly, the fact that changes in avoidance are associated with prenatal perceptions of one’s own behavior is also understandable considering the “goal” of the second component is to regulate one’s action tendencies.

Though exploratory, the mediation analyses illustrate the self-perpetuating properties of attachment orientations. Women who entered the transition scoring higher in ambivalence perceived greater prenatal spousal anger than did less ambivalent women, and these perceptions partially mediated the connection between prenatal and postnatal ambivalence. Similarly, more avoidant wives perceived seeking less prenatal support, which mediated the link between prenatal and postnatal avoidance. These mediation results imply that insecure working models may be sustained in part by model-congruent prenatal perceptions.

Neither prenatal perceptions of spousal support nor spousal anger predicted declines in women’s avoidance over the transition. Social support is, of course, not expected, valued, or sought by avoidant persons (Crittenden & Ainsworth, 1989). For this reason, merely perceiving greater support—particularly when husbands are “role-bound” to provide it—could have been insufficient to promote change in avoidance. Not being the
target of spousal anger might have had little impact on changes in avoidance because, in general, the absence of a negative effect carries little weight in social perception. Similarly, for men, displaying less prenatal anger may not have reduced avoidance over time for the same reason.

**Processes underlying change**

What are the psychological processes through which greater security vs. insecurity is produced in romantic relationships? Self-perceptions can clearly be influenced by the way in which significant others perceive and act (Mead, 1934). Behavioral confirmation research involving strangers, for instance, has shown that the expectations and beliefs of one interaction partner can profoundly alter the behavior, thoughts, and feelings of the other partner (Snyder, 1984). Analogous processes have also been documented in close relationships. Murray, Holmes, and Griffin (1996), for example, have shown that romantic partners often shift their self-views in a positive or negative direction depending upon how their romantic partners view them. Similarly, Drigotas, Rusbult, Wieselquist, and Whitten (1999) have found that people see themselves as closer to their ideal self if their partners’ views of them are closer to their ideal self.

Changes in avoidance were predicted by men’s and women’s prenatal perceptions of their own support giving and support seeking behavior, respectively. These findings could reflect the fact that model-discrepant actions produce psychological inconsistency, which is resolved by shifting one’s values, beliefs, and behavior away from prototypically avoidant models (cf. Bem, 1972; Festinger, 1957). Other explanations, however, are also plausible. For example, giving or seeking support may affect one’s spouse’s behavior in ways that gradually alter one’s own level of avoidance. Husbands of women who seek more support, for example, may come to understand their wives better or feel more needed, motivating these men to behave in ways that gradually diminish their wives’ avoidance. Similarly, wives of men who offer more support may become increasingly receptive to seeking, receiving, or giving support, and these actions might gradually decrease their husbands’ avoidance.

Interactions with adult attachment figures (e.g., romantic partners) may also activate positive or negative affect and cognitions tied to experiences with attachment figures from childhood. Early caregivers presumably lay the foundation for the development of secure versus insecure attachment patterns (DeWolff & van Ijzendoorn, 1997; Levy, Blatt, & Shaver, 1998). Secure orientations are partially a product of sensitive, responsive parental care, while insecure orientations partially stem from caregiving that was rejecting, angry, emotionally rigid and distant, unloving, or unpredictable (Ainsworth, Blehar, Waters, & Wall, 1978; Weinfield, Sroufe, Egeland, & Carlson, 1999). When adult attachment figures are perceived as behaving in ways that resemble negative behavior experienced in childhood (i.e., when husbands are angry/rejecting, reminding some wives of their hostile/cold parents), childhood-based models of insecurity may be activated. Conversely, when adult attachment figures behave similar to secure parents, heightened security should be fostered (see Shaver & Mikulincer, 2002).

**Caveats and conclusions**

This study identifies some of the factors that promote stability and change in adult romantic attachment orientations across a major life transition. Though causal conclusions cannot be drawn from the present data, the prospective results offer evidence of possible cause–effect relationships because the purported causal variables were assessed prenatally (before changes in attachment occurred). Failure to detect significant prospective effects does not mean that a given predictor is not a causal agent. The power of longitudinal studies to predict change is often compromised by range restrictions in measures of change. In addition, many longitudinal studies are too short in duration to detect changes between assessment periods. If only small changes normally occur across relatively short timeframes (e.g., a few months), range restrictions can prevent true causal agents from being detected. Furthermore, the timing of assessment periods is critical for interpreting effects. Informed by previous theory and research on the transition to parenthood (e.g., Levy-Shiff, 1994), we conducted our first assessment 6 weeks before delivery and our second at 6 months postpartum. Had we chosen another follow-up time period (e.g., 2 weeks after birth), our results might have been different. For certain variables, therefore, null findings or small effects may indicate that the timing of prenatal or postnatal assessments were not optimal. This might explain why significant prospective findings failed to emerge for a few of our hypothesized predictors.

One might wonder whether the attachment changes documented in this study represent relatively permanent and stable shifts in attachment orientations (and underlying working models) versus more transient, stress-induced shifts. This is difficult to know without having data from latter stages of the transition period (e.g., 1–2 years postpartum). We suspect that the changes observed across the 7.5 month time-span of this study are likely to remain reasonably stable if the prenatal conditions that instigated them persist long enough for...
consolidation to occur. In future research, multiple assessments should be made across longer periods of the transition so the permanence/stability of change and certain mediation effects (e.g., does Time 1 ambivalence predict Time 2 perceptions of self or spouse behavior, which then predicts Time 3 changes in ambivalence) can be tested more directly.

Finally, even though perceptions of anger, support, and support seeking are three of the most logical variables to examine when studying changes in attachment (see Bowlby, 1973, 1980), other variables not measured in this study may also play important roles in generating changes in ambivalence and avoidance.

In conclusion, the present study confirms that prenatal perceptions of husbands' emotional support and anger forecast theoretically meaningful changes in both wives' and husbands' attachment orientations across the transition to parenthood. These results confirm a major tenet of attachment theory—that attachment orientations change in predictable, patterned ways when individuals navigate major and stressful life transitions.

References


