On being insecure about the assessment of attachment styles

Lawrence A. Kurdek

Wright State University

ABSTRACT

The psychometric properties of subscores from Collins and Read's (1990) Adult Attachment Scale (AAS, *N*s = 61 gay, 42 lesbian, and 155 heterosexual couples) and Griffin and Bartholomew's (1994b) Relationship Scales Questionnaire (RSQ, *N* = 33 gay, 52 lesbian, and 79 heterosexual couples) were examined. Type of couple did not moderate any findings. Dependency and Closeness emerged as reliable factors from the AAS, but, with controls for the Big Five personality factors, neither attachment style accounted for unique variability in relationship satisfaction, and only Closeness accounted for unique variability in relationship commitment. Closeness exerted an indirect effect on commitment through both expressiveness and dysfunctional beliefs regarding relationship standards. Avoidance and Anxiety emerged as reliable factors from the RSQ, but, with controls for the six facets of Neuroticism, only Anxiety accounted for variability in satisfaction and commitment. Anxiety exerted an indirect effect on satisfaction and commitment through positive models of the self and positive models of the other in the current relationship. It is concluded that, although closeness and anxiety may be distinct individual differences variables of relevance to close relationships that exert their indirect effects on relationship outcomes through relationship schemas, additional work is needed to develop a single measure that reliably assesses them.

KEY WORDS: attachment styles • gay couples • lesbian couples

Much current research in the area of adult close relationships is based on attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1973). One central tenet of this theory is that close relationships are regulated by internal working models that organize relationship-related

All correspondence concerning this article should be addressed to Lawrence A. Kurdek, Department of Psychology, Wright State University, Dayton, OH 45435–0001, USA [E-mail: larry.kurdek@wright.edu]. Barbara Sarason was the Action Editor on this article.

Journal of Social and Personal Relationships Copyright © 2002 SAGE Publications (London, Thousand Oaks, CA and New Delhi), Vol. 19(6): 811–834. [0265–4075 (200212) 19:6; 029064]

thoughts, affects, and behaviors relevant to one's partner (e.g., is the partner available, caring, and responsive?) and to one's self (e.g., am I worthy of care, love, and attention?). Based on work in the area of mother–infant relationships done by Ainsworth et al., Hazan and Shaver (1987) proposed that individual differences in the internal working models adults construct for their own close relationships are captured by three mutually exclusive attachment types. Individuals who are *securely attached* have relationships characterized by happiness, trust, and friendship. Those who are *anxiously attached* have relationships characterized by jealousy, obsessive preoccupation, and emotional lability. Finally, those who are *avoidantly attached* have relationships characterized by difficulties surrounding intimacy, trust, and dependence.

Although the use of this three-group typology has led to theoretically meaningful differences among secure, anxious, and avoidant adults' concurrent (e.g., Hazan & Shaver, 1987) and long-term (e.g., Kirkpatrick & Davis, 1994) relationship-related experiences, several researchers have pointed out the limitations of this particular methodology. These include difficulties in recruiting large numbers of avoidant individuals in research on couples, assessing the stability of attachment types, describing individuals in terms of blends of attachment types, and identifying the specific components of attachment types that affect relationship outcomes (Kirkpatrick & Davis, 1994; Scharfe & Bartholomew, 1994; Senchak & Leonard, 1992; Simpson, 1990).

As a result of these limitations, Fraley and Waller (1998) recommended that researchers shift their focus from categorical assessments of attachment types that yield one score (i.e., one's attachment type) to graduated assessments of attachment styles that yield multiple continuous scores (i.e., one for each attachment style). Perhaps the two most widely used self-report measures of attachment styles are Collins and Read's (1990) Adult Attachment Scale (AAS) and Griffin and Bartholomew's (1994a, 1994b) Relationship Scales Questionnaire (RSQ). Items from these measures are presented in Table 1.

Collins and Read (1990) developed the 18-item AAS by extracting multiple items from Hazan and Shaver's (1987) description of secure, anxious, and avoidant attachment types and by adding items that tapped confidence in the dependability of others. As can be seen from Table 1, items from the AAS refer to both one's current partner/relationship (items 5 and 11) and partners/relationships in general (all other items). Exploratory factor analyses of college students' responses indicated that the items of the AAS fell into three clusters: the extent to which others can be depended upon to be available when needed (dependency), the extent to which one feels anxious about being abandoned or unloved (anxiety), and the extent to which one is comfortable with closeness and intimacy (closeness).

Griffin and Bartholomew (1994a, 1994b) developed the 30-item RSQ to assess a variety of attachment styles that included Hazan and Shaver's (1987) secure, anxious, and avoidant styles; Collins and Read's (1990) dependency, anxiety, and closeness styles; Simpson, Rholes, and Nelligan's

TABLE 1
Items from Collins and Read's (1990) Adult Attachment Survey and Griffin and Bartholomew's (1994) Relationship Scales Questionnaire

Adult Attachment Survey

1. I find it difficult to allow myself to depend on others.
2. I do not often worry about being abandoned.
3. I find it relatively easy to get close to others.
4. People are never there when you need them.
5. I often worry that my partner does not really love me.
6. I do not often worry about someone getting too close to me.
7. I am comfortable depending on others.
8. I find others are reluctant to get as close as I would like.
9. I am somewhat uncomfortable being close to others.
10. I know that others will be there when I need them.
11. I often worry that my partner will not want to stay with me.
12. I am nervous when anyone gets too close.
13. I find it difficult to trust others completely.
14. I want to merge completely with another person.
15. I am comfortable having others depend on me.
16. I am not sure that I can always depend on others to be there when I need them.
17. My desire to merge sometimes scares people away.
18. Often, love partners have wanted to be more intimate than I felt comfortable being.

Relationship Scales Questionnaire

1. I find it difficult to depend on other people.
2. It is very important to me to feel independent.
3. I find it easy to get emotionally close to others.
4. I want to merge completely with another person.
5. I worry that I will be hurt if I allow myself to become too close to others.
6. I am comfortable without close emotional relationships.
7. I am not sure that I can always depend on others to be there when I need them.
8. I want to be completely emotionally intimate with others.
9. I worry about being alone.
10. I am comfortable depending on other people.
11. I often worry that romantic partners don't really love me.
12. I find it difficult to trust others completely.
13. I worry about others getting too close to me.
14. I want emotionally close relationships.
15. I am comfortable having other people depend on me.
16. I worry that others don't value me as much as I value them.
17. People are never there when you need them.
18. My desire to merge completely sometimes scares people away.
19. It is very important to me to feel self-sufficient.
20. I am nervous when anyone gets too close to me.
21. I often worry that romantic partners won't want to stay with me.
22. I prefer not to have other people depend on me.
23. I worry about being abandoned.
24. I am somewhat uncomfortable being close to others.
25. I find that others are reluctant to get as close as I would like.
26. I prefer not to depend on others.
27. I know that others will be there when I need them.
28. I worry about having others not accept me.
29. Romantic partners often want me to be closer than I feel comfortable being.
30. I find it relatively easy to get close to others.

(1992) avoidance and anxiety styles; and their own secure, fearful, preoccupied, and dismissing styles. As can be seen from Table 1, unlike items of the AAS, items of the RSQ refer to only partners/relationships in general. Using data from heterosexual couples, Griffin and Bartholomew (1994a) reported Cronbach alphas (averaged over partners) of .50, .73, and .73 for Hazan and Shaver's secure, anxious, and avoidant scales, respectively, and alphas ranging from .73 to .78 for Collins and Read's dependency, anxiety, and closeness scales. Griffin and Bartholomew (1994b) note that, although a principal components analysis of data from college students supported the existence of Simpson et al.'s avoidance and anxiety scales, alphas (with an unspecified sample) for their own four scales ranged from only .41 for the secure scale to .70 for the dismissing scale.

Despite the frequency with which attachment styles appear in the close relationships literature, there have been few critical examinations of the psychometric properties of the measures used to assess them. Further, these examinations typically have been limited to exploratory factor analyses (e.g., principal components analyses) of data from college students (e.g., Brennan, Clark, & Shaver, 1998; Simpson, Rholes, & Phillips, 1996) and reports of the internal consistency (i.e., Cronbach's alpha) of summed composite scores (which often have been relatively low, e.g., Brussoni, Jang, Livesley, & Macbeth, 2000; Carnelley & Janoff-Bulman, 1992; Simpson, 1990). Principal components analysis does not provide an index of how well a proposed measurement model fits a set of data, Cronbach's alpha is not an assessment of the dimensionality of a construct, and the responses of college students in transient dating relationships may not characterize the responses of older adults in fairly durable and diverse types of relationships. These limitations were addressed in the present study because confirmatory factor analyses were conducted using the responses of cohabiting partners from married, gay, and lesbian couples who completed the AAS and the RSQ at different times.

The first purpose of this study was to assess the goodness-of-fit of several measurement models derived from the AAS and the RSQ. Three measurement models from the AAS were of interest. Model 1 posits that attachment styles are best represented as the extent to which one feels secure, avoidant, and anxious/ambivalent in close relationships. These three styles are based on a graduated assessment of multiple aspects of the three attachment types initially proposed by Hazan and Shaver (1987). With regard to the AAS (see Table 1), a secure style is measured by items 2, 3, 6, 7, and 15; an avoidant style by items 1, 9, 12, 13, and 18; and an anxious/ambivalent style by items 5, 8, 11, 14, and 17 (relevant items would be reverse-scored).

Model 2 posits that attachment styles are best represented as the extent to which one feels one can depend on others to be available when needed (dependency), is worried about being rejected or unloved (anxiety), and is comfortable with closeness and intimacy (closeness). With regard to the AAS (Table 1), dependency is measured by items 1, 4, 7, 10, 13, and 16; anxiety by items 2, 5, 8, 11, 14, and 17; and closeness by items 3, 6, 9, 12, 15,

and 18. This model characterizes the original 3-factor model of attachment styles proposed by Collins and Read (1990) that continues to be used in current studies (e.g., Gallo & Smith, 2001; Shaver, Belsky, & Brennan, 2000).

Model 3 characterizes Brennan et al.'s (1998) view that attachment styles are best represented as the extent to which one avoids closeness to others (avoidance) and worries about being unloved or abandoned (anxiety). This model has been operationalized with the AAS in two ways. In Model 3a (e.g., Simpson, Ickes, & Grich, 1999), all 18 items of the AAS are used such that avoidance is assessed by items 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, and 18 and anxiety is assessed by items 2, 5, 8, 11, 14, and 17. In Model 3b (e.g., Davila, Bradbury, & Fincham, 1998; Feeney, 1999), only 13 items of the AAS are used such that avoidance is assessed by items 1, 3, 6, 7, 9, 12, 13, and 18 and anxiety is assessed by items 2, 5, 8, 11, and 17.

Four measurement models from the RSQ were of interest. Model 1 is a test of the validity of the Hazan and Shaver (1987) model in which a secure style is measured by items 10, 13, 15, 23, and 30; an avoidant style by items 1, 12, 24, and 29; and an anxious/ambivalent style by items 4, 11, 18, 21, and 25. Model 2 is a test of Collins's (1996) revision of the Collins and Read (1990) model in which all items refer to general relationships. Dependency is measured by items 1, 7, 10, 12, 17, and 27; anxiety by items 4, 11, 18, 21, 23, and 25; and closeness by items 13, 15, 20, 24, 29, and 30. Model 3 is a test of Brennan et al.'s (1998) model, which has been operationalized with RSQ items in two ways. In Model 3a (Simpson et al., 1992), avoidance is assessed by items 10, 12, 13, 15, 20, 24, 29, and 30 and anxiety is assessed by items 11, 18, 21, 23, and 25. In Model 3b (Feeney & Hohaus, 2001), avoidance is assessed by items 1, 2, 3, 4, 6, 8, 10, 14, 26, and 30 and anxiety is assessed by items 5, 7, 9, 11, 12, 13, 16, 17, 18, 21, 23, 25, and 28. Finally, Model 4 is a test of Griffin and Bartholomew's (1994a) model in which secure is assessed by items 3, 9, 10, 15, and 28; fearful by items 1, 5, 12, and 24; preoccupied by items 6, 8, 16, and 25; and dismissing by items 2, 6, 19, 22, and 26 (item 6 is expected to load on two factors).

Previous research has documented that attachment styles account for variability in diverse measures of marital adjustment (e.g., Davila et al., 1998; Davila, Karney, & Bradbury, 1999; Feeney, 1999; Fuller & Fincham, 1995; Gallo & Smith, 2001; Lussier, Sabourin, & Turgeon, 1997). Such evidence is consistent with the view that one's internal working models about both relationship partners and the self in relationships influence one's happiness with a primary close relationship (Fuller & Fincham, 1995). The second purpose of this study was to re-examine the link between attachment styles and relationship adjustment with one major modification from previous work: rather than assess relationship adjustment with a global scale that taps diverse aspects of the relationship, it was assessed in terms of two distinct and unidimensional components (Kurdek, 1996; Rusbult, Martz, & Agnew, 1998): satisfaction – the positive affect experienced in the relationship – and commitment – the intent to persist in a relationship. A differentiated assessment of relationship adjustment might shed some light

on the particular aspects of relationship adjustment of relevance to attachment styles. Because Rusbult et al. reported that aspects of trust were more strongly related to satisfaction than to commitment, it was plausible that attachment styles – which, in part, assume trust in the availability of relationship partners in times of need – might be more strongly related to satisfaction than to commitment.

The third purpose of this study was to assess the discriminant validity of the attachment styles that emerged from the confirmatory factor analyses. Although previous investigators (e.g., Davila et al., 1988; Griffin & Bartholomew, 1994b; Shaver & Brennan, 1992) have underscored the importance of showing that measurements of attachment styles are not redundant with existing measures of individual differences variables and that attachment styles account for variability in relationship quality beyond that accounted for by individual differences variables, relevant evidence about the distinctive significance of attachment styles for appraisals of relationship quality is limited. Using a sample of college students, Shaver and Brennan (1992) found that categorical measures of attachment styles accounted for variability in relationship satisfaction even with controls for the Big Five personality traits (neuroticism, extraversion, openness, agreeableness, and conscientiousness), but they did not do parallel analyses with continuous measures of attachment styles. Griffin and Bartholomew (1994b) reported overlap between college students' attachment styles derived from the RSQ and measures of the Big Five personality traits, but they did not assess whether the attachment styles accounted for variability in relationship quality with controls for the personality scores. Davila et al. (1998) found inconsistent evidence that attachment styles derived from the AAS explained variability in husbands' and wives' marital quality not already accounted for by negative affectivity.

In the current study, the unique importance of attachment styles for relationship adjustment was assessed by determining whether they accounted for variability in satisfaction and commitment with controls for dimensions of personality derived from Costa and McCrae's (1992) Big Five model. Respondents who completed the AAS also provided information regarding the Big Five personality traits, and respondents who completed the RSQ also provided information about the six facets of Neuroticism (one of the Big Five traits) – anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability (Costa & McCrae, 1992). Specific components of neuroticism were of interest in light of Karney and Bradbury's (1995) review that showed that global assessments of neuroticism were frequently and strongly related to relationship quality. For both samples, attachment styles would have unique relevance to the domain of close relationships if they accounted for variability in satisfaction and commitment over and above that accounted for by the fairly well established set of personality traits.

The final purpose of this study was to explore whether any links between attachment style and relationship outcomes were mediated by a set of relationship schemas that assessed representations of the self or

representations of the other (Baldwin, Fehr, Keedian, Seidel, & Thomson, 1993). For respondents who completed the AAS, three self-schemas were of interest. *Expressiveness* reflects a tendency to see oneself at the high end of the continuum of nurturance or 'femininity.' Such persons have been found to engage in high rates of positive communication behaviors and low rates of negative communication behaviors (Burger & Jacobson, 1979; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991) and to report high relationship quality (Bradbury & Fincham, 1988; Kurdek, 1991; Sanderson & Kurdek, 1993).

Dysfunctional standards regarding relationships reflect problematic beliefs regarding the way people in general and relationships in general *should* be. Such standards include beliefs that disagreements should be avoided because they are destructive to a relationship, that partners in a relationship should be able to read each other's minds, that partners in a relationship should not change, and that sexual interactions should be perfect (Eidelson & Epstein, 1982). Dysfunctional beliefs regarding relationships have been positively related to the frequency of spouses' negative problem-solving behavior (Bradbury & Fincham, 1993), negatively related to the frequency of positive problem-solving (Christian, O'Leary, & Vivian, 1994), and negatively related to relationship quality (Kurdek, 1992).

Satisfaction with social support reflects happiness with the ways in which people in one's entire support network provide help and support. Persons high in perceived social support have been found to be relatively proficient in both knowledge of social scripts needed to resolve interpersonal problems and in the confidence they have in using these scripts effectively (Sarason, Sarason, & Pierce, 1994; Sarason, Sarason, & Shearin, 1986). They have also been found to report high relationship quality (Kurdek, 1991; Sanderson & Kurdek, 1993).

For respondents who completed the RSQ, one self-related and one other-related schema were of interest. *Positivity of the self* indicates the degree to which individuals in the context of their current close relationship have internalized a sense of their own self-worth and expect their relationship partners to respond to them positively. *Positivity of the other* indicates the degree to which individuals expect their current relationship partners to be available and supportive. Unlike the relationship schemas assessed in the AAS sample, positivity of self and other were anchored to the same relationship whose quality was assessed.

If individuals who are securely attached have relationships characterized by happiness, trust, friendship, and positive representations of both the self and the relationship partner, then one might expect that that attachment styles would overlap with the relationship schemas of interest. For example, using the Collins and Read (1990) framework for illustrative purposes, individuals who score high in closeness, high in dependency, and low in anxiety might also be expected to score high in expressiveness, endorse few dysfunctional beliefs about relationships, be satisfied with perceived levels of social support, and have positive views of themselves and their partners

in the current relationship. If attachment styles exert direct effects on relationship quality, then they should account for variability in satisfaction and commitment over and above that accounted for by any of the relationship schemas. However, if attachment styles exert indirect effects on relationship quality through relationship schemas, then any significant relations they have with satisfaction or commitment would be reduced to nonsignificance once information about the relationship schemas was added.

Method

Participants

AAS sample. Participants involved in analyses relevant to the AAS included 61 gay, 42 lesbian, and 155 heterosexual married couples. The gay and lesbian couples were drawn from the second annual wave of an on-going longitudinal study of relationship quality when all measures of interest here were first administered except the measure of the Big Five traits that was administered one year later. (Given evidence of the strong stability of these personality traits, McCrae & Costa, 1994, the time lag was not considered to be problematic.)

Most gay partners were white (94%) and employed (82%). Thirty-two percent of them had earned a baccalaureate degree, and their modal annual personal income was between $30,000 and $34,999. Their mean age was 43.49 years, and they had cohabited a mean of 12.33 years. Most lesbian partners were white (92%) and employed (87%). Thirty-six percent of them had earned a baccalaureate degree, and their modal annual personal income was between $30,000 and $34,999. Their mean age was 42.05 years, and they had cohabited a mean of 9.28 years.

The heterosexual couples were drawn from the sixth annual wave of data collection in an on-going longitudinal study of newlywed couples when all measures of interest here were first administered (see Kurdek, 1993, for further details on initial subject recruitment). As with the gay and lesbian couples, measures of the Big Five factors were obtained one year later. Most respondents were white (97% of husbands and 99% of wives) and employed (92% of husbands and 82% wives). The modal level of education for each spouse (38% of husbands and 42% of wives) was college graduation. The modal annual personal income was between $25,000 and $29,999 for husbands (14%) and less than $5000 for wives (20%). The mean age of husbands and wives was 35.77 and 33.72 years, respectively, and couples had lived together a mean of 5.71 years. Fifty-five percent of the couples had (step)children living with them.

RSQ sample. Participants involved in analyses relevant to the RSQ included 33 gay, 52 lesbian, and 79 heterosexual married couples. The gay and lesbian couples were drawn from the eighth annual wave of an on-going longitudinal study of relationship quality when all measures of interest here were first administered except for the measure of the facets of Neuroticism, which was administered one year earlier. (Again, given evidence of the strong stability of these personality traits, McCrae & Costa, 1994, the time lag was not considered to be problematic.) Additional gay and lesbian couples were recruited to supplement the sample of couples used in the AAS analyses.

Most gay partners were white (94%) and employed (76%). Twenty-seven percent of them had earned a baccalaureate degree, and their modal annual personal income was between $35,000 and $39,999. Their mean age was 49.76 years, and they had cohabited a mean of 12.19 years. Most lesbian partners were white (92%) and employed (90%). Thirty-one percent of them had earned a baccalaureate degree, and their modal annual personal income was between $35,000 and $39,999. Their mean age was 46.19 years, and they had cohabited a mean of 13.61 years.

The heterosexual couples were drawn from the eleventh annual wave of data collection in an on-going longitudinal study of newlywed couples when all measures of interest here were first administered. As with the gay and lesbian couples, the measure of the facets of Neuroticism was given one year earlier. Most respondents were white (98% of husbands and 100% of wives) and employed (90% of husbands and 68% of wives). The modal level of education for each spouse (33% of husbands and 41% of wives) was college graduation. The modal annual personal income was between $45,000 and $49,999 for husbands (14%) and less than $5000 for wives (24%). The mean age of husbands and wives was 42.76 and 40.89 years, respectively, and couples had lived together a mean of 12.24 years. Sixty-three percent of the couples had (step)children living with them.

For descriptive purposes, the equivalence of the three types of couples on background scores was assessed by averaging partners' scores within each couple for age, education, personal income, and months living together. A one-way (type of couple) multivariate analysis of variance yielded a significant effect for both the AAS sample, $F(8,506) = 15.85$, $p < .001$ and the RSQ sample, $F(8,318) = 5.42$, $p < .001$. Univariate analyses indicated that the three types of couples in the AAS sample differed on age, education, personal income, and months living together, respective Fs(2,255) = 23.72, 19.47, 4.13, and 39.26, ps < .01. Gay and lesbian couples were older, had higher levels of education, and lived together longer than heterosexual couples, and gay couples had higher levels of personal income than heterosexual couples. Univariate analyses indicated that the three types of couples in the RSQ sample differed on age, education, personal income, and months living together, respective Fs(2,161) = 8.97, 10.45, and 3.61, ps < .05. Gay and lesbian couples were older and had higher levels of education than heterosexual couples, and gay couples had higher levels of income than heterosexual couples. However, because preliminary analyses revealed that type of couple did not affect any of the findings reported here, this variable is not considered further.

Procedure

Each couple was sent two identical surveys that included (among other measures) a statement of informed consent and measures of demographic variables, attachment styles, relationship outcomes, personality variables, and relationship schema variables. Partners were directed to complete their surveys privately and not to discuss their answers with each other until the forms had been completed and returned in separate postage-paid envelopes.

Measures of demographic variables

Participants provided information regarding age; race; education (represented by eight intervals ranging from completion of less than seventh grade to the award of a doctorate); employment status; and annual personal income

(represented by 18 intervals ranging from $5000 or less to $80,000 or more). They also reported the number of months they had lived with their partner as well as whether (step)children lived with them.

Measures of attachment styles

As already noted, Collins and Read's (1990) Adult Attachment Scale involves having respondents indicate how characteristic (1 = *not at all characteristic, 5 = very characteristic*) each of 18 statements is of them, whereas Griffin and Bartholomew's (1994b) Relationship Scales Questionnaire involves having respondents indicate the extent to which (1 = *not at all like me, 5 = very much like me*) they believe each of 30 statements best describes their feelings about close relationships.

Measures of relationship outcomes

Satisfaction. Relationship satisfaction was assessed by the 3-item Kansas Marital Satisfaction Scale (Schumm et al., 1986). This scale requires ratings of how true (1 = *not at all true,* 9 = *extremely true*) each of three statements is (e.g., 'I am satisfied with my relationship'). Cronbach's alpha for the summed composite score based on the total sample was .97.

Commitment. Eight items from Sternberg's (1988) measure of commitment were answered with a 9-point response format (1 = *not at all true*, 9 = *extremely true*) to assess level of commitment to the relationship (e.g., 'I view my relationship with my partner as permanent.'). Cronbach's alpha for the summed composite score was .95.

Measures of personality variables

Big Five personality traits. For the AAS sample, the 'Big Five' personality traits were assessed by the NEO Five-Factor Inventory (Costa & McCrae, 1992), which includes 12 items apiece for Neuroticism (e.g., 'I often feel inferior to others.'), Extraversion (e.g., 'I like to have a lot of people around me.'), Openness (e.g., 'I often try new and foreign foods.'), Agreeableness (e.g., 'I try to be courteous to everyone I meet.'), and Conscientiousness (e.g., 'I keep my belongings neat and clean.'). Respondents used a 5-point scale (1 = *strongly disagree*, *5 = strongly agree*) to indicate how much they agreed with each statement. Cronbach's alphas for the summed composite scores were .87, .81, .79, .77, and .82, respectively.

Facets of Neuroticism. For the RSQ sample, the six facets of Neuroticism were assessed by 48 items taken from the revised NEO Personality Inventory (Costa & McCrae, 1992). There were eight items apiece for anxiety (e.g., 'I often worry about things that may go wrong.'), hostility (e.g., 'I often get angry at the way people treat me.'), depression (e.g., 'Sometimes I feel completely worthless.'), self-consciousness (e.g., 'In dealing with other people, I always dread making a social blunder.'), impulsiveness (e.g., 'I have trouble resisting my cravings.'), and vulnerability (e.g., 'I often feel helpless and want someone else to solve my problems.'). Respondents used a 5-point scale (1 = *strongly disagree*, *5 = strongly agree*) to indicate how much they agreed with each statement. Cronbach's alphas for the summed composite scores were .83, .80, .86, .77, .77, and .81, respectively.

Measures of relationship schemas

Participants from the AAS sample completed measures of expressiveness, dysfunctional relationship standards, and satisfaction with social support, whereas those from the RSQ sample completed measures of the positivity of the self and the positivity of the other in the current relationship.

Expressiveness. Self-ratings (1 = *never or almost never true*, 7 = *always or almost always true*) of expressiveness were obtained for 12 items (e.g., 'tender,' 'compassionate,' 'warm,' and 'sympathetic') from the Bem Sex Role Inventory (Bem, 1974). These items defined an orthogonal Expressiveness factor in a previous factor analysis of the Inventory based on responses from coupled gay, lesbian, and heterosexual respondents (Kurdek, 1987). Cronbach's alpha for the summed composite score was .85 and the 1-year stability correlation from this sample was .76.

Dysfunctional relationship standards. The Generalized Relationship Beliefs Inventory (Kurdek, 1992) is a revision of Eidelson and Epstein's (1982) Relationship Beliefs Inventory. It requires ratings of how strongly (0 = *strongly disagree*, 5 = *strongly agree*) respondents feel about 32 items that cover dysfunctional standards regarding intimate relationships in general for the areas of destructiveness of disagreements (e.g., 'Partners should have difficulty accepting each other when they disagree.'), mind-reading (e.g., 'Partners should sense each other's moods.'), partner change (e.g., 'Partners should learn to be more responsive to each other's needs.'), and sexual perfection (e.g., 'Partners should get upset if they do not satisfy each other sexually.'). Cronbach's alpha for the summed composite score was .87 and the 1-year stability correlation from this sample was .72.

Satisfaction with social support. Satisfaction with social support was assessed by the short form of the Social Support Scale (Sarason, Sarason, Shearin, & Pierce, 1987). This measure requires ratings of how satisfied (1 = *very dissatisfied*, 6 = *very satisfied*) respondents are with the support they receive in six areas (e.g., 'Think of the people you can count on to be dependable when you need help. How satisfied are you with the support you receive in this area?'). Cronbach's alpha for the summed composite score was .92 and the 1-year stability correlation from this sample was .61.

Positivity of self and other. Based on previous descriptions and measures of internalized working models of the self and the other (e.g., Collins & Read, 1990; Griffin & Bartholomew, 1994a, 1994b), a 10-item adult attachment style measure was designed for this study. Five items tapped the model of the self ('I often worry that my partner will not want to stay with me.'; 'I am comfortable having my partner depend on me.'; 'I worry that I will ruin my relationship.'; 'I'm generally pretty anxious about my relationship.'; and 'I feel secure about myself in my relationship.'), and five items tapped the model of the other ('My partner is responsive to my needs.'; 'My partner is available when I need him/her.'; 'I can count on my partner for comfort.'; 'I can rely on my partner for emotional support.'; and 'My partner does his/her share to make our relationship work.'). Respondents used a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) to indicate how much they agreed with each statement.

The 10 items were submitted to a confirmatory factor analysis using LISREL Version 8.50 (Joreskog & Sorbom, 2001) to provide evidence that the 10 items tapped two underlying factors. As suggested by Hu and Bentler (1998), the data in a confirmatory factor analyses represent a good fit to the model if the standardized root-mean-square residual (SRMR) is less than .05 and the comparative fit index (CFI) is close to .95. The present analysis yielded an acceptable standardized root mean square residual of .06 and a CFI of .95. So that all scores tapped a positive evaluation, all self-model items were reverse-scored. The one-year stability correlation for this sample was .61 for the self score and .67 for the other score.

Results

Analyses for the AAS

Measurement models. Three measurement models were of initial interest. Model 1 posited the existence of secure, avoidant, and anxious–ambivalent styles. Model 2 posited the existence of dependency, anxiety, and closeness styles. And two versions of Model 3 posited the existence of avoidance and anxiety styles. Because confirmatory factor analyses required that all observations were independent, preliminary analyses assessed the level of interdependence between partner's AAS items. The mean intraclass correlation between partners' ratings for the 18 items of the AAS averaged only .07. Consequently, analyses were conducted on the total sample with the individual partner as the unit of analysis.

The standardized loadings of each item (as originally worded in Table 1) on its proposed single factor are presented in Table 2 for each model. The chi-squared value for the overall model as well as the SRMR and CFI values are shown in the last rows of the table. As can be seen from these values, none of the three models yielded acceptable goodness-of-fit values. Based on the factor loadings in Table 2, items 2, 6, 8, 14, 15, and 17 in particular did not load highly on their relevant factor. Because four of these items (2, 8, 14, and 17) were supposed to tap an anxiety factor, it appears that the AAS does an especially poor job of assessing anxiety.

Nonetheless, given the considerable work done to date with the AAS and the reasonable performance of some of the dependency and closeness items, it seemed prudent to see if a subset of items from the AAS could be used to derive reliable indicators of dependency and closeness. Based on the item loadings from Table 2, items 1, 7, 13, and 16 were good indicators of dependency and items 3, 9, 12, and 18 were good indicators of closeness. With this subset of items, two models were tested, one (Model 4a in Table 2) in which the items tapping dependency or closeness defined their own factors (Collins & Read, 1990), and one (Model 4b in Table 2) in which the items tapping dependency and closeness were forced to load on a single factor (cf. Brennan et al., 1998). As seen from Table 2, the 2-factor model resulted in adequate fit, whereas the single-factor model did not.

Because the majority of the items for each attachment style factor were worded in a 'clinical' direction, unit-weighted summary scores were computed so that high values reflected either high discomfort with dependency on others or high discomfort with closeness to others. Only these two scores were used in

TABLE 2
Loadings of each item on its hypothesized factor for each of the four models derived from confirmatory factor analyses of Adult Attachment Scale items

Item/fit	Model 1	Model 2	Model 3a	Model 3b	Model 4a	Model 4b
1 (D)	.56	.57	.58	.58	.64	.60
2 (A)	.18	.26	.27	.27	–	–
3 (C)	.76	.71	–.68	–.69	.69	–.68
4 (D)	–	.70	.66	–	–	–
5 (A)	.81	–.81	.80	–.79	–	–
6 (C)	.26	.19	–.19	–.19	–	–
7 (D)	.63	–.57	–.58	–.57	–.61	–.58
8 (A)	.35	–.37	–.36	–.34	–	–
9 (C)	.76	–.77	.69	.75	–.78	.75
10 (D)	–	–.67	–.63	–	–	–
11 (A)	.78	–.77	–.78	–.81	–	–
12 (C)	.79	–.78	.71	.77	–.79	.76
13 (D)	.67	.71	.70	.67	.73	.69
14 (A)	.21	–.23	–.22	–	–	–
15 (C)	.37	.29	–.28	–	–	–
16 (D)	–	.71	.65	–	.62	.58
17 (A)	.38	–.40	–.39	–.35	–	–
18 (C)	.43	–.42	.41	.42	–.42	.42
X^2	561.37**	808.94**	921.94**	399.08**	96.12**	150.80**
SRMR	.09	.08	.08	.07	.04	.06
CFI	.81	.81	.77	.85	.95	.92

Note. – indicates no coefficient was calculated. D = dependency, A = anxiety, and C = closeness. Model 1 tests the Hazan and Shaver (1987) model; Model 2, the Collins and Read (1990) model; Model 3a, the Simpson et al. (1999) model; Model 3b, the Davila et al. (1998) and Feeney (1999) model; Model 4a a model in which D and C items load on separate factors; and Model 4b a model in which D and C items load on one factor. SRMR = standardized root-mean-square residual. CFI = Comparative Fit Index.
**$p < .01$.

subsequent analyses. Across all partners, the mean for the dependency score was 11.44 (SD = 3.16), the mean for the closeness score was 9.39 (SD = 3.23), Cronbach's alpha for the dependency score was .76, Cronbach's alpha for the closeness score was .75, and the correlation between the two scores was .63.

Discriminant validity. Of interest here was whether the two attachment style scores accounted for unique variability in satisfaction and commitment above and beyond that accounted for by personality variables. Because partners' scores for the relationship outcomes were not independent of each other (intraclass correlation .54 for satisfaction and .48 for commitment), two-level random-intercept models were estimated using Raudenbush, Bryk, Cheong, and Congdon's (2000) hierarchical linear modeling (HLM) program, Version 5.04. HLM analyses were appropriate for this study because they enabled estimates of the intercepts for each couple to be calculated with controls for the extent to which the relationship outcome scores were correlated between both partners from the same couple.

Three random-intercept models were of interest in which partner (level 1) was nested in couple (level 2). In Model 1, either only the dependency score or only the closeness score was used as a predictor to see if each attachment style score, on its own, explained unique variability in each outcome. In Model 2, both the dependency and the closeness scores were entered simultaneously as predictors to see if each attachment style score accounted for unique variability. In Model 3, the two attachment style scores as well as the five personality scores of interest were used as predictors to see if each attachment style score still accounted for unique variability.

As seen from the unstandardized coefficients presented under the Model 1 heading in Table 3 for each relationship outcome, all bivariate links were significant. That is, partners who were uncomfortable with dependency and partners who were uncomfortable with closeness tended to have low levels of satisfaction and commitment. As seen from the unstandardized coefficients for Model 2, when the two attachment scores were considered together, only dependency provided unique information regarding satisfaction, whereas only

TABLE 3
Unstandardized coefficients for AAS and individual differences variables derived from 2-level random-intercepts hierarchical linear models for satisfaction and commitment

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Satisfaction						
Dependency	–0.21**	–0.19**	–0.11	–0.16*	–0.17*	0.02
Closeness	–0.14*	–0.05	0.00	0.00	0.00	–0.05
Neuroticism	–	–	–0.03	–	–	–
Extraversion	–	–	0.03	–	–	–
Openness	–	–	–0.02	–	–	–
Agreeableness	–	–	0.04	–	–	–
Conscientiousness	–	–	0.05*	–	–	–
Expressiveness	–	–	–	0.06**	–	–
Standards	–	–	–	–	–0.04**	–
Social support	–	–	–	–	–	0.29**
Commitment						
Dependency	–0.29**	–0.11	0.00	–0.01	–0.08	0.22
Closeness	–0.39**	–0.34*	–0.28*	–0.17	–0.26	–0.34*
Neuroticism	–	–	0.00	–	–	–
Extraversion	–	–	0.03	–	–	–
Openness	–	–	–0.03	–	–	–
Agreeableness	–	–	0.10	–	–	–
Conscientiousness	–	–	0.14**	–	–	–
Expressiveness	–	–	–	0.23**	–	–
Standards	–	–	–	–	–0.09**	–
Social support	–	–	–	–	–	0.45**

Note. – indicates no coefficient was calculated. Model 1 includes only the effects for each attachment style score alone; Model 2 includes both attachment style scores considered simultaneously; and Model 3 includes both attachment style scores as well as the five personality scores considered simultaneously. Both attachment scores are considered simultaneously along with expressiveness, standards, and social support in Models 4, 5, and 6, respectively.
*$p < .05$; **$p < .01$.

closeness provided unique information regarding commitment. Finally, as seen from the unstandardized coefficients presented for Model 3, with controls for the Big Five personality traits, neither attachment score provided unique information about satisfaction, but closeness continued to account for unique variability in commitment.

Mediational analyses. Because only closeness was found to account for unique variability in commitment with controls for dependency as well as the Big Five factors, the mediational analyses were restricted to assessing whether the significant link between closeness and commitment was reduced to nonsignificance when information about either expressiveness, standards, or social support was considered (with dependency as a control variable). Following Baron and Kenny (1986), preliminary analyses were conducted to see if expressiveness, standards, and social support were each reliably linked to closeness as well as to commitment.

Random-intercept analyses indicated that, with controls for dependency, expressiveness and standards (but not social support) were each linked to closeness, unstandardized coefficients = –.06 and .02, respectively, $p < .01$, and that expressiveness, standards, and social support were each reliably linked to commitment, unstandardized coefficients = .25, –.10, and .44, respectively, $p < .01$. Because only expressiveness and standards were linked to both closeness and commitment, the mediational analyses involved whether the significant link between closeness and commitment was eliminated when either expressiveness or standards was considered.

As can be seen from the unstandardized coefficients in Table 3, adding expressiveness (Model 4) as well as standards (Model 5) reduced the information provided by closeness about commitment to nonsignificance. (For descriptive purposes, results are also presented in Table 3 when the purported mediator was social support [Model 6].) Further, in a model not presented in Table 3, when closeness, dependency, expressiveness, and standards were included as predictors of commitment, only expressiveness and standards contributed unique information, unstandardized coefficients = .22 and –.08, respectively, $p < .01$.

Analyses for the RSQ

Measurement models. Four measurement models were of interest. Model 1 posited the existence of Hazan and Shaver's (1987) secure, avoidant, and anxious–ambivalent styles. Model 2 posited the existence of Collins's (1996) dependency, anxiety, and closeness styles. Two versions of Model 3 (Feeney & Hohaus, 2001; Simpson et al., 1992) posited the existence of avoidance and anxiety styles. Finally, Model 4 posited the existence of Griffin and Bartholomew's (1994a, 1994b) secure, fearful, preoccupied, and dismissing styles. As with the AAS items, the intraclass correlations between partners' RSQ items were low, with a mean of only .11. Consequently, analyses were conducted on the pooled sample.

The loadings of each item (as originally worded in Table 1) on its proposed single factor are presented in Table 4 for each model. The chi-squared value for the overall model as well as the SRMR and CFI values are shown in the last rows of the Table. As can be seen from these rows, only Model 3a – Simpson et al.'s (1992) operationalization of avoidance and anxiety – yielded marginally

TABLE 4
Loadings of each item on its hypothesized factor for each of the four models derived from confirmatory factor analyses of Relationship Scales Questionnaire items

Item/fit	Model 1	Model 2	Model 3a	Model 3b	Model 4
1	.63	.70	–	.64	.67
2	–	–	–	.27	.38
3	–	–	–	–.64	.44
4	.14	.13	–	–.29	–
5	–	–	–	.64	.60
6	–	–	–	.57	–.03/.40[a]
7	–	.76	–	.57	–
8	–	–	–	–.53	.17
9	–	–	–	.49	–.33
10	.54	–.60	.48	–.70	.51
11	–	.67	.67	.70	–
12	.71	.76	–.65	.66	.74
13	–.70	.75	–.75	.54	–
14	–	–	–	–.57	–
15	.34	–.33	.34	–	.20
16	–	–	–	.72	–.80
17	–	.78	–	.68	–
18	.52	.54	.52	.53	–
19	–	–	–	–	.52
20	–	.77	–.76	–	–
21	.80	.81	.82	.75	–
22	–	–	–	–	.44
23	–.48	.66	.67	.70	–
24	.73	.79	–.79	–	.69
25	.63	.63	.61	.61	–.65
26	–	–	–	.59	.77
27	–	–.68	–	–	–
28	–	–	–	.55	–.56
29	.57	.56	–.56	–	–
30	.63	–.63	.62	–.50	–
X^2	321.99**	359.19**	164.52**	1770.76**	616.96**
SRMR	.07	.05	.05	.13	.11
CFI	.83	.90	.93	.68	.70

Note. – indicates no coefficient was calculated. Model 1 tests the Hazan and Shaver model; Model 2, the Collins and Read model; Model 3a, the Simpson et al. model; Model 3b, the Feeney and Hohaus model; and Model 5, the Griffin and Bartholomew model. SRMR = standardized root-mean-square residual. CFI = Comparative Fit Index.
[a]Item 6 loads on both Preoccupied and Dismissing.
**$p < .01$.

acceptable goodness-of-fit values. Consequently, the remaining analyses were done with the two unit-weighted summed composite scores derived from this model in which items were scored so that high values represented high avoidance and high anxiety, respectively. Across all partners, the mean for the avoidance score was 18.77 (SD = 5.50), the mean for the anxiety score was 9.08

(*SD* = 3.47), Cronbach's alpha for the avoidance score was .77, Cronbach's alpha for the anxiety score was .83, and the correlation between the two scores was .50.

Discriminant validity. Of interest here was whether the two attachment style scores accounted for unique variability in satisfaction and commitment and beyond that accounted for by personality variables. Three two-level random-intercept models were of interest in which partner (level 1) was nested in couple (level 2). In Model 1, either only the avoidance score or only the anxiety score was used as a predictor to see if each attachment style score, on its own, explained unique variability in each outcome. In Model 2, both the avoidance and anxiety scores were entered simultaneously as predictors to see if each attachment style score accounted for unique variability. In Model 3, the two attachment style scores as well as the six facets of neuroticism were used as predictors to see if each attachment style score accounted for unique variability.

As seen from the unstandardized coefficients presented under the Model 1 heading in Table 5 for each relationship outcome, all bivariate links were significant. That is, partners who were avoidant and partners who were anxious tended to have low levels of satisfaction and commitment. As seen from the unstandardized coefficients for Model 2, when the two attachment scores were considered together, each provided unique information regarding both satisfaction and commitment. Finally, as seen from the unstandardized coefficients presented for Model 3, with controls for the six facets of neuroticism, only anxiety provided unique information about both satisfaction and commitment.

Mediational analyses. Because only anxiety was found to account for unique variability in satisfaction and commitment with controls for avoidance as well as the six facets of neuroticism, the mediational analyses were restricted to assessing whether the significant link between anxiety and satisfaction as well as commitment was reduced to nonsignificance when information about either positivity of self or positivity of other was considered (with avoidance as a control variable). Preliminary random-intercepts analyses indicated that, with controls for avoidance, anxiety was linked to both positivity of self and positivity of other, unstandardized coefficients –0.36 and –0.16, respectively, $p < .01$, and that positivity of self and positivity of other were each linked to satisfaction, respective unstandardized coefficients = 0.59 and 0.91, $p < .01$ and to commitment, respective unstandardized coefficients = 1.08 and 1.66, $p < .01$.

As can be seen from the unstandardized coefficients in Table 5, adding positivity of self (Model 4) as well as positivity of other (Model 5) reduced the information provided by anxiety about both satisfaction and commitment to nonsignificance. Further, in a model not presented in Table 5, when avoidance, anxiety, positivity of the self, and positivity of the other were included as predictors of commitment, only positivity of the self and positivity of the other contributed unique information, unstandardized coefficients = 0.35 and 1.53, respectively, $p < .01$.

Discussion

Although attachment style variables assessed by multiple items have appeared with increasing frequency in the close relationships literature,

TABLE 5
Unstandardized coefficients for RSQ and individual differences variables derived from 2-level random-intercept hierarchical linear models for satisfaction and commitment

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Satisfaction					
RSQ Avoidance	–0.14**	–0.09*	–0.09	0.00	0.01
RSQ Anxiety	–0.22**	–0.16*	–0.22*	0.06	–0.02
NEO Anxiety	–	–	0.12	–	–
NEO Hostility	–	–	–0.02	–	–
NEO Depression	–	–	–0.13	–	–
NEO Self-consciousness	–	–	0.14	–	–
NEO Impulsiveness	–	–	0.04	–	–
NEO Vulnerability	–	–	–0.07	–	–
Positive self	–	–	–	0.64**	–
Positive other	–	–	–	–	1.07**
Commitment					
RSQ Avoidance	–0.28**	–0.19*	–0.19	–0.02	0.01
RSQ Anxiety	–0.51**	–0.38**	–0.61**	0.01	–0.10
NEO Anxiety	–	–	0.28	–	–
NEO Hostility	–	–	0.01	–	–
NEO Depression	–	–	–0.40**	–	–
NEO Self-consciousness	–	–	0.36*	–	–
NEO Impulsiveness	–	–	0.05	–	–
NEO Vulnerability	–	–	–0.11	–	–
Positive self	–	–	–	1.07**	–
Positive other	–	–	–	–	1.63**

Note. – indicates no coefficient was calculated. Model 1 includes only the effects for each attachment style score alone; Model 2 includes both attachment style scores considered simultaneously; and Model 3 includes both attachment style scores as well as the six facets of neuroticism. Both attachment scores are considered simultaneously along with positive model of self and positive model of other in Models 4 and 5, respectively. $N = 328$ for Models 1, 2, and 4 and 244 for Model 3.
*$p < .05$; **$p < .01$.

their psychometric properties have not been extensively critically evaluated. In contrast to previous studies that have performed exploratory factor analyses on items from attachment measures completed by college students (e.g., Brennan et al., 1998; Collins & Read, 1990), the present study used confirmatory factor analysis to validate several measurement models of purported latent attachment style factors derived from the responses of partners from gay, lesbian, and heterosexual (married) couples to items from Collins and Read's (1990) Adult Attachment Scale (AAS) and Griffin and Bartholomew's (1994b) Relationship Scales Questionnaire (RSQ). Additional information regarding the validity of attachment style variables was obtained by seeing whether they accounted for variability in satisfaction and commitment beyond that already explained by personality variables and whether their effect on relationship outcomes was direct or

indirect (through relationship schemas). The fact that type of couple did not moderate any of the findings provides additional evidence that the processes that regulate gay and lesbian relationships are similar to those that regulate heterosexual relationships (Kurdek, 1998).

The AAS

Measurement models. Goodness-of-fit indices failed to validate the existence of secure, avoidant, and anxious–ambivalent styles (cf. Hazan & Shaver, 1987); dependency, anxiety, and closeness styles (cf. Collins & Read, 1990); and avoidance and anxiety styles (cf. Brennan et al., 1998). An examination of item loadings revealed that the anxiety items in particular did not define their own factor. An anxiety factor may not have emerged because the anxiety items from the AAS include two types of targets: relationship partners in general and one's current relationship partner in particular (other attachment measures such as those of Brennan et al., 1998 also have this problem). Baucom, Epstein, Rankin, and Burnett (1996) note that cognitions about one's specific partner tap relationship assumptions that are distinct from cognitions about partners in general that tap relationship standards (see also Kurdek, 1992).

Although findings from the confirmatory analysis did not support the existence of an anxiety factor, they did provide evidence that a subset of items from the AAS defined distinct dependency and closeness factors. Because these items targeted relationships in general rather than a specific relationship, the resulting scores might characterize a generalized trait. The validation of this 2-factor model (and not the relevant 1-factor model) is at odds with Brennan et al.'s (1998) conclusion that dependency and closeness can be fused into a common avoidance factor, but supports Collins and Read's (1990) initial conceptualization that dependency and closeness are distinct attachment styles. Although the majority of studies that obtain separate assessments of dependency and closeness adopt the convention of combining dependency and closeness scores into a single score (e.g., Collins, 1996; Davila et al., 1998), studies that retain separate scores have obtained distinct patterns for these scores. For example, Shaver et al. (2000) reported that dependency was more frequently related than closeness to scores from an interview assessment of attachment.

Discriminant validity. Additional support for retaining separate closeness and dependency scores was obtained from analyses in which these scores were linked to satisfaction and commitment. Consistent with previous evidence (e.g., Collins & Read, 1990; Gallo & Smith, 2001), each attachment score on its own was linked to each relationship outcome. However, when considered together, only dependency accounted for unique variability in satisfaction, whereas only closeness accounted for unique variability in commitment. One's general comfort with dependency may have been especially strongly linked to relationship satisfaction because dependency reflects one's ability to trust others. In this vein, it is of note that Rusbult et

al. (1998) reported that trust was more strongly correlated with satisfaction than it was with commitment. One's general comfort with closeness may have been especially strongly linked to commitment because closeness reflects one's ability to engage in the kinds of relationship maintenance behaviors linked to one's desire to persist in the relationship. In this vein, it is of note that Collins and Read (1990) reported that closeness was more strongly correlated than dependency with positive relationship experiences that included communication, responsiveness, and self-disclosure.

Although closeness and dependency were uniquely linked to relationship outcomes, their importance as *special* predictors of relationship outcomes would be underscored if they contributed information about these outcomes not provided by other individual differences variables. The evidence on this issue was mixed. Although, with controls for the Big 5 personality factors, dependency no longer accounted for unique variability in satisfaction, closeness still accounted for unique variability in commitment. Thus, as assessed by the AAS, closeness was the only attachment style that contributed information about commitment not provided by the Big Five factors of personality.

Direct or indirect effects? The mechanisms by which closeness as an attachment style exerted its influence on commitment was explored by analyses in which two relationship schemas – expressiveness and dysfunctional beliefs regarding relationship standards – were viewed as mediators of this relation. Rather than directly affect commitment, closeness was found to indirectly affect commitment through either expressiveness or standards. That is, closeness influenced both expressiveness and standards, which, in turn, affected commitment. As additional evidence of the robustness of the link between expressiveness and relationship outcomes and between standards and relationship outcomes (Bradbury & Fincham, 1988; Kurdek, 1991, 1992; Sanderson & Kurdek, 1993), it is of note that *both* expressiveness and standards persisted in explaining unique portions of the variance in commitment even with controls for closeness and dependency.

The RSQ

Measurement models. The factor structure of the RSQ was of particular interest because its items targeted only relationships in general. Nonetheless, goodness-of-fit indices failed to validate the existence of secure, avoidant, and anxious–ambivalent styles (cf. Hazan & Shaver, 1987); dependency, anxiety, and closeness styles (cf. Collins, 1996); and secure, fearful, preoccupied, and dismissing styles (cf. Griffin & Bartholomew, 1994a, 1994b). However, reasonable support was obtained for Simpson et al.'s (1992) operationalization of avoidance and anxiety.

Discriminant validity. Consistent with previous findings (e.g., Feeney, 1999), avoidance and anxiety on their own were linked to satisfaction and commitment. More importantly, when considered together, avoidance and anxiety

accounted for unique portions of the variability in both satisfaction and commitment. Thus, the key issue was whether these two attachment styles continued to account for variability in relationship outcomes with controls for personality factors. With controls for the six facets of neuroticism, only anxiety continued to account for variability in both satisfaction and commitment. Because generalized anxiety is one of the facets of neuroticism, it appears that relationship-specific anxiety as assessed by the RSQ cannot be reduced to anxiety in its more general form. And because depression is another facet of neuroticism (as well as one of the most frequently documented correlates of relationship quality, Barnett & Gotlib, 1988; Karney & Bradbury, 1995), it is of note that relationship-specific anxiety also cannot be reduced to depression.

Direct or indirect effects? The mechanisms by which anxiety as an attachment style exerted its influence on both satisfaction and commitment was explored by analyses in which two relationship schemas – positivity of self and positivity of other – were viewed as mediators of this relation. Rather than directly affecting either outcome variable, anxiety was found to indirectly affect them through either positivity of the self or positivity of the other. That is, anxiety influenced both positivity of self and positivity of other which, in turn, affected satisfaction and commitment. As with the parallel set of analyses for the ASA, the mediational analyses for the RSQ also indicated the robustness of the link between positivity of self and relationship outcomes and between positivity of other and relationship outcomes (Griffin & Bartholomew, 1994a), because even with controls for avoidance and anxiety *both* positivity of self and positivity of other persisted in explaining unique portions of the variance in satisfaction and commitment.

Limitations and conclusions

The findings from this study are limited in that only two self-report measures were examined; the samples of gay, lesbian, and heterosexual couples cannot be regarded as representative; other individual differences variables might have been selected; the strength of the links assessed were not made with corrections for measurement error; and relationship outcomes were restricted to satisfaction and commitment. Despite these limitations, the findings support the conclusions that the RSQ – and not the original version of the AAS – yields psychometrically sound scores of attachment styles; that anxiety in particular accounts for unique variability in relationship outcomes; that satisfaction and commitment are distinct relationship outcomes; and that the processes that regulate the relationships of gay, lesbian, and heterosexual partners are similar. Because work within the attachment theory tradition is likely to continue, future work needs to compare findings from college students who are dating with those from older individuals in more established relationships, to develop multi-faceted measures of anxiety in relationships, and to routinely demonstrate that attachment styles convey unique information about the relationship outcomes of interest beyond that provided by other individual differences variables.

It might be argued that a major appeal for the continued use of attachment styles in the close relationships literature is the relevance of attachment theory for how relationships are begun, maintained, and ended. However, because expressiveness alone and standards alone accounted for the link between closeness and commitment, it might be counter-argued that attachment styles are best viewed as distal individual differences variables that have an effect on relationship outcomes by influencing the manner in which schemas relevant to the relationship are constructed.

REFERENCES

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. Hillsdale, NJ: Erlbaum.

Baldwin, M., Fehr, B., Keedian, E., Seidel, M., & Thomson, D. W. (1993). An exploration of the relational schemata underlying attachment styles: Self-report and lexical decision making approaches. *Personality and Social Psychology Bulletin, 19*, 746–754.

Barnett, P. A., & Gotlib, I. H. (1988). Psychosocial functioning and depression: Distinguishing among antecedents, concomitants, and consequences. *Psychological Bulletin, 104*, 97–126.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Baucom, D. H., Epstein, N., Rankin, L. A., & Burnett, C. K. (1996). Assessing relationship standards: The Inventory of Specific Relationship Standards. *Journal of Family Psychology, 10*, 72–88.

Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 47*, 155–162.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York: Basic Books.

Bradbury, T. N., & Fincham, F. D. (1988). Individual difference variables in close relationships: A contextual model of marriage as an integrative framework. *Journal of Personality and Social Psychology, 54*, 713–721.

Bradbury, T. N., & Fincham, F. D. (1993). Assessing dysfunction cognition in marriage: A reconsideration of the Relationship Belief Inventory. *Psychological Assessment, 5*, 92–101.

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

Brussoni, M. J., Jang, K. L., Livesley, W. J., & Macbeth, T. M. (2000). Genetic and environmental influences on adult attachment styles. *Personal Relationships, 7*, 283–289.

Burger, A. L., & Jacobson, N. S. (1979). The relationship between sex role characteristics, couple satisfaction, and couple problem solving skills. *American Journal of Family Therapy, 7*, 52–60.

Carnelley, K. B., & Janoff-Bulman, R. (1992). Optimism about love relationships: General vs. specific lessons from one's personal experiences. *Journal of Social and Personal Relationships, 9*, 5–20.

Christian, J. L., O'Leary, K. D., & Vivian, D. (1994). Depressive symptomatology in maritally discordant women and men: The role of individual and relationship variables. *Journal of Family Psychology, 8*, 32–42.

Collins, N. L. (1996). Working model of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology, 71*, 810–832.

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology, 58*, 644–663.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.

Davila, J., Bradbury, T. N., & Fincham, F. (1998). Negative affectivity as a mediator of the association between adult attachment and marital satisfaction. *Personal Relationships, 5*, 467–484.

Davila, J., Karney, B. R., & Bradbury, T. N. (1999). Attachment change processes in the early years of marriage. *Journal of Personality and Social Psychology, 76*, 783–802.

Eidelson, R. J., & Epstein, N. (1982). Cognition and relationship maladjustment: Development of a measure of dysfunctional relationship beliefs. *Journal of Consulting and Clinical Psychology, 50*, 715–720.

Feeney, J. A. (1999). Adult attachment, emotional control, and marital satisfaction. *Personal Relationships, 6*, 169–185.

Feeney, J. A., & Hohaus, L. (2001). Attachment and spousal caregiving. *Personal Relationships, 8*, 21–39.

Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 77–114). New York: Guilford Press.

Fuller, T. L., & Fincham, F. D. (1995). Attachment style in married couples: Relation to current marital functioning, stability over time, and method of assessment. *Personal Relationships, 2*, 17–34.

Gallo, L. C., & Smith, T. W. (2001). Attachment style in marriage: Adjustment and responses to interaction. *Journal of Social and Personal Relationships, 18*, 263–289.

Griffin, D., & Bartholomew, K. (1994a). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology, 67*, 430–445.

Griffin, D. W., & Bartholomew, K. (1994b). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships, Vol. 5: Attachment processes in adulthood* (pp. 17–52). London: Jessica Kingsley.

Hazan, C., & Shaver, P. R. (1987). Conceptualizing romantic love as an attachment process. *Journal of Personality and Social Psychology, 52*, 511–524.

Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3*, 424–453.

Joreskog, K. G., & Sorbom, D. (2001). *LISREL 8.50*. Chicago, IL: Scientific Software International.

Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin, 118*, 3–34.

Kirkpatrick, L. A., & Davis, K. E. (1994). Attachment style, gender, and relationship stability: A longitudinal analysis. *Journal of Personality and Social Psychology, 66*, 502–512.

Kurdek, L. A. (1987). Sex role self schema and psychological adjustment in coupled homosexual and heterosexual men and women. *Sex Roles, 17*, 549–562.

Kurdek, L. A. (1991). Correlates of relationship satisfaction in cohabiting gay and lesbian couples: Integration of contextual, investment, and problem-solving models. *Journal of Personality and Social Psychology, 61*, 910–922.

Kurdek, L. A. (1992). Assumptions vs. standards: The validity of two relationship cognitions in heterosexual and homosexual couples. *Journal of Family Psychology, 6*, 164–170.

Kurdek, L. A. (1993). Predicting marital dissolution from demographic, individual-differences, interdependence, and spouse discrepancy variables: A 5-year prospective longitudinal study of newlywed couples. *Journal of Personality and Social Psychology, 64*, 221–242.

Kurdek, L. A. (1996). The deterioration of relationship quality for gay and lesbian cohabiting couples: A five-year prospective longitudinal study. *Personal Relationships, 3*, 417–442.

Kurdek, L. A. (1998). Relationship outcomes and their predictors: Longitudinal evidence from heterosexual married, gay cohabiting, and lesbian cohabiting couples. *Journal of Marriage and the Family, 60*, 553–568.

Lussier, Y., Sabourin, S., & Turgeon, C. (1997). Coping strategies as moderators of the relationship between attachment and marital adjustment. *Journal of Social and Personal Relationships, 14*, 777–791.

McCrae, R. R., & Costa, P. T. (1994). The stability of personality: Observations and evaluations. *Current Directions in Psychological Science, 3*, 173–175.

Raudenbush, S., Bryk, A., Cheong, Y. F, & Congdon, R. (2000). *HLM5: Hierarchical linear and nonlinear modeling*. Lincolnwood, IL: Scientific Software International.

Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The Investment Model Scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships, 5*, 357–392.

Rusbult, C. E., Verette, J., Whitney, G. A., Slovik, L. F., & Lipkus, I. (1991). Accommodation processes in close relationships: Theory and preliminary evidence. *Journal of Personality and Social Psychology, 60*, 53–78.

Sanderson, B., & Kurdek, L. A. (1993). Predicting relationship satisfaction and relationship commitment from interdependence, individual differences, and problem-solving variables: Race and gender as possible moderator variables in a sample of dating heterosexual couples. *Family Relations, 42*, 263–267.

Sarason, I. G., Sarason, B. R., & Pierce, G. R. (1994). Social support: Global and relationship-based levels of analysis. *Journal of Social and Personal Relationships, 11*, 295–312.

Sarason, I. G., Sarason, B. R., & Shearin, E. N. (1986). Social support as an individual difference variable: Its stability, origins, and relational aspects. *Journal of Personality and Social Psychology, 50*, 845–855.

Sarason, I. G., Sarason, B. R., Shearin, E. N., & Pierce, G. R. (1987). A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relationships, 4*, 497–510.

Scharfe, E., & Bartholomew, K. (1994). Reliability and stability of adult attachment patterns. *Personal Relationships, 1*, 23–43.

Schumm, W. R., Paff-Bergen, L. A., Hatch, R. C., Obiorah, F. C., Copeland, J. E., Meens, L. D., & Bugaighis, M. A. (1986). Concurrent and discriminant validity of the Kansas Marital Satisfaction Scale. *Journal of Marriage and the Family, 48*, 381–388.

Senchak, M., & Leonard, K. E. (1992). Attachment styles and marital adjustment among newlywed couples. *Journal of Social and Personal Relationships, 9*, 51–64.

Shaver, P. R., Belsky, J., & Brennan, K. A. (2000). The adult attachment interview and self-reports of romantic attachment: Associations across domains and methods. *Personal Relationships, 7*, 25–43.

Shaver, P. R., & Brennan, K. A. (1992). Attachment styles and the 'Big Five' personality traits: Their connections with each other and with romantic relationship outcomes. *Personality and Social Psychology Bulletin, 18*, 536–545.

Simpson, J. A. (1990). The influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology, 59*, 971–980.

Simpson, J. A., Ickes, W., & Grich, J. (1999). When accuracy hurts: Reactions of anxious–ambivalent dating partners to a relationship-threatening situation. *Journal of Personality and Social Psychology, 76*, 754–769.

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

Simpson, J. A., Rholes, W. S., & Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality and Social Psychology, 71*, 799–814.