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Big Five personality traits and relationship quality:
Self-reported, observational, and physiological evidence

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ABSTRACT
This report explored links between Big Five personality traits and the quality of romantic relationships. Interpersonal functioning was operationalized at three levels of analysis (self-reported quality, observed emotional tone, and physiological reactivity) in three samples (dating, engaged, and married couples). Couples completed questionnaires about their own and partners' personalities and then discussed a disagreement in their relationship while being physiologically monitored. Two conceptual frameworks were examined; the first predicted that personality would be consistently associated with all indicators of functioning. The second framework predicted that personality would be consistently linked to perceived quality and trivially associated with observed emotional tone and electrodermal/cardiac reactivity. Significant associations were identified between personality and self-reported quality, and only trivial associations with other indicators.

KEY WORDS: Big Five • dating couples • engaged couples • married couples • observed quality • personality traits • physiological reactivity • self-reported quality

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Social and personality psychologists have long been interested in understanding how personality traits influence the quality of adults’ romantic relationships (Caspi, Roberts, & Shiner, 2005). Indeed, even a cursory review of the literature reveals unambiguously that there is a reliable association between self-reported personality traits and relationship quality and satisfaction, as assessed through questionnaires (Karney & Bradbury, 1997; Robins, Caspi, & Moffitt, 2000, 2002; Watson, Hubbard, & Wiese, 2000). However, fewer studies have examined how personality traits may be reflected in other indicators of interpersonal functioning, such as observed quality (Donnellan, Conger, & Bryant, 2004; Donnellan, Larsen-Rife, & Conger, 2005). In addition, no studies to our knowledge have examined the association between personality traits and relationship quality as operationalized through patterns of physiological responding during dyadic interactions, despite research that confirms that patterns of autonomic response are intimately tied to interpersonal functioning (Gottman, Coan, Carrere, & Swanson, 1998; Gottman & Levenson, 1988, 1992). In order to address these gaps in the literature, this report explored links between the Big Five personality traits and the quality of adults’ romantic relationships utilizing a multi-method approach that operationalized interpersonal functioning at three levels of analysis (self-reported quality, observed emotional tone, and physiological reactivity during a dyadic interaction) in three samples (dating, engaged, and married couples).

Measuring personality

A complicating issue involved with evaluating the previous literature in this area is that researchers use different operationalizations and measures of personality. Nonetheless, although different personality characteristics are assessed across studies, there is some overlap. For example, Caspi et al. (2005) state that there is increasing agreement among researchers about the organization of higher-order traits (e.g., extraversion); however, there is less agreement about lower-order traits that are included within the higher-order dimensions.

The focus of the current analysis, therefore, was on higher-order trait dimensions; namely, extraversion, neuroticism, conscientiousness, agreeableness, and openness to experience. This Five Factor Model is a well-validated approach to the measurement of personality traits (McCrae & Costa, 1997). In this taxonomy, individuals high on extraversion or positive emotionality are generally described as outgoing, animated, and lively. Individuals low on extraversion or positive emotionality are quiet, submissive, and inhibited. Highly neurotic individuals (i.e., individuals high on negative emotionality) are anxious, moody, and insecure in relationships. Emotional stability and flexibility describe individuals who score low on this trait dimension. Individuals who are highly conscientious are responsible, focused, and organized; individuals who are low on this trait are irresponsible, forgetful, and unreliable. Agreeable individuals are thoughtful, kind, and supportive and
disagreeable people are impolite, stubborn, and aggressive. The last trait, openness to experience (sometimes called intellect), is the least-well understood trait of the Big Five dimensions (Caspi et al., 2005) and reflects individuals who are inventive and creative.

**Personality traits and relationship quality**

A number of studies have examined which personality traits are most highly correlated with relationship satisfaction. For instance, low levels of negative personality traits such as neuroticism and negative emotionality have been consistently associated with self-reports of relationship quality and satisfaction (Caughlin, Huston, & Houts, 2000; Robins et al., 2002; Watson et al., 2000). A meta-analysis (Heller, Watson, & Ilies, 2004) found that overall neuroticism is the strongest personality correlate of marital satisfaction. In addition, Karney and Bradbury (1997) have found that negative personality traits such as neuroticism are associated with decreased satisfaction from the onset of marriage. Kelly and Conley (1987) similarly found that neuroticism in both husbands and wives was negatively associated with marital satisfaction. Another study (Gattis, Berns, Simpson, & Christensen, 2004) found that neuroticism was significantly higher in a sample of distressed couples than in a sample of non-distressed couples. Finally, a study by Caughlin et al. (2000) found that trait anxiety is associated with marital satisfaction, and this association was largely explained by self-reports of communication patterns between partners. Consequently, it seems clear that the presence of highly neurotic individuals in relationships may have important implications for self-reported relationship quality and satisfaction (Robins et al., 2000).

Positive emotionality and other positive personality traits are also frequently examined in conjunction with self-reported relationship quality. Robins et al. (2002) found that positive emotionality was related to higher-quality relationships and also low levels of negative relationship outcomes, such as self-reported conflict and abuse. Likewise, Watson et al. (2000) examined personality and relationship satisfaction in a sample that included both married couples and a sample of dating couples. Specifically, they found that extraversion was associated with satisfaction in married couples and that conscientiousness and agreeableness were associated with satisfaction in dating couples. In another study (Botwin, Buss, & Shackelford, 1997), conscientious wives had husbands who were more sexually satisfied and conscientious husbands had wives who were more generally satisfied with their relationships.

It is important to note that all of the results described above are based on self-reported and informant-reported personality and quality/satisfaction assessed using questionnaire methods. Recently, new research has emerged that has utilized other indicators of relationship quality in addition to self-reported quality, including observed quality (Donnellan et al., 2004, 2005). In these path-finding studies, participants talked about agreements and
disagreements in their relationships during a laboratory interaction procedure. Trained observers rated both males and females on several types of negative behaviors (e.g., hostility, angry coercion) in the context of their interactions. Donnellan et al. (2004) focused on a sample of long-term married couples. For the female participants, agreeableness, neuroticism, and openness were associated with observed negative interactions. For the male participants, only neuroticism was significantly associated with observed quality. Another report drawn from the same study (Donnellan et al., 2005) examined committed relationships, with a majority of married couples. In this study, positive emotionality was negatively correlated, and negative emotionality was positively associated, with negative interactions. Thus, some evidence for an association between personality and observed quality has emerged. However, surprisingly few researchers have incorporated comparable measures of observed relationship quality into their research designs. As such, these results await replication by other investigators.

In addition, while many current studies are now examining both partners involved in romantic relationships, few researchers utilize partner-reports of personality in their work (Botwin et al., 1997; Donnellan et al., 2004; Kosek, 1996), despite the fact that a secondary informant can provide valuable validation of findings based entirely on self-report. A notable exception is Watson et al. (2000), who examined both self- and partner-reports of personality. Their study assessed a sample of married and dating couples and each individual was asked to rate his or her own personality and then rate his or her partner’s personality. In addition, each individual rated their own relationship satisfaction. In the dating couples sample, conscientiousness and agreeableness, irrespective of who provided the data on personality (self or partner), were associated with both the males’ and females’ satisfaction. Significant associations were also found for neuroticism and extraversion. In the married couples sample, self-reports of extraversion, agreeableness, and neuroticism were all associated with self-reports of satisfaction, results that were corroborated by partners’ reports of personality.

The importance of other indicators of relationship quality

Although rarely examined in relation to personality traits, observed quality and physiological responding are fundamental indicators of the quality of adults’ romantic relationships. Observed quality is an important component of relationship quality because it provides a window on romantic partners’ actual interactions. For example, Gottman and Levenson (1988) have demonstrated that observed negative affect consistently differentiates satisfied from dissatisfied couples. Observational methods also provide a unique opportunity to examine negative affect, positive affect, and conflict during couples’ interactions. Observation may be especially important in terms of assessing negative affect because it is possible that individuals in romantic relationships may under-report negative behaviors in their relationship.

Researchers focused on romantic relationships have also utilized patterns of physiological response as an additional component of interpersonal func-
tioning and as a predictor of relationship stability (Gottman et al., 1998). Gottman et al. (1998) proposed that the ability to physiologically self-soothe and also soothe a partner during conflict interactions results in more successful relationships. Gottman et al. (1998) found that in happy couples (as opposed to unhappy or divorced couples) that the presence of humorous wives was associated with decreases in their husbands’ heart rates during interactions. In addition, it was also found that in happy couples, the husbands’ own characteristics, such as de-escalating arguments related to negative topics, validating their wives, and showing affection towards their partners, were also successful in decreasing their own cardiac reactivity. Furthermore, Fowles (1980, 1988) maintains that two antagonistic motivational systems whose activation can be inferred from unique physiological correlates. Specifically, Fowles (1980) argued that engagement of the Behavioral Inhibition System, which has often been characterized as being involved in the effort to inhibit behavior, is reflected in increases in electrodermal activity, whereas the Behavioral Activation System, which is involved in approach-related (hyper)activation, is signaled by heart rate reactivity. Using this theoretical framework we have recently shed light on the possible developmental foundations of the patterns of autonomic response so routinely observed among distressed couples in research on the psychophysiology of marriage and divorce (Gottman & Levenson, 1988) in that adults insecure with respect to their attachment experiences appear to show the largest increases in heart rate and skin conductance during their marital and premarital interactions relative to resting conditions (Roisman, 2007).

**Two conceptual frameworks**

It seems plausible that personality traits influence the nature and quality of adults’ romantic relationships. However, there are at least two different ways of conceptualizing the nature of this association. In this study, two different frameworks for understanding links between personality traits and relationship quality were contrasted. As described earlier, robust associations between personality and self-reported relationship quality have been found in previous studies and consequently, broad conclusions about the nature of the association between personality and relationship quality have been suggested. For example, Caspi et al (2005) state that there is “robust evidence that early-emerging individual differences in personality shape how individuals experience, interpret, and respond to the developmental tasks they face across the life course” (p. 471), and more specifically that “personality continues to be an important predictor of relationships in adulthood” (p. 471). Consistent with this predominant view, the first framework anticipates that personality will be broadly associated with interpersonal functioning. Thus, this framework would predict consistent effects of personality on self-reported quality, observed emotional tone, and physiological responding. A lack of previous literature limits the scope of prediction in reference to specific physiological patterns of responding, although it might be predicted that a negative trait, such as neuroticism, would create
stressors in the interaction which would be reflected in patterns of physiological responding. In addition, a positive trait, such as agreeableness, may calm or inhibit stressful encounters, which would result in less physiological change from baseline. In this study, we specifically examine electrodermal and heart rate reactivity, because both of these indicators have been consistently associated with marital dissatisfaction and even divorce (Gottman et al., 1998; Gottman & Levenson, 1992).

Although many studies investigating the association between personality traits and relationship satisfaction have been conducted, the vast majority examine only self-reports of satisfaction, only a few have focused on observed quality (Donnellan et al., 2004, 2005), and none to our knowledge have thus far examined autonomic reactivity during dyadic interactions. In addition, the findings that exist with respect to observed quality are based on results from a single sample (parents and their children involved in a longitudinal project) and have not yet been replicated by other researchers. Due to this limitation of the literature, it is worthwhile to explore a second framework that suggests a more limited role of personality with respect to relationship outcomes. This second framework predicts that personality would be most strongly associated with self-reported quality and perhaps only trivially associated with observed emotional tone and physiological responding. Therefore, this second framework would predict that an individual’s personality may primarily constrain his or her own evaluations of the quality of his or her relationships, but may be less reflected in observed interpersonal processes and physiological responding.

It seems reasonable that self-reported personality is commonly associated with self-perceptions of one’s own relationship. In fact, it seems inevitable that how an individual defines him or herself will affect how he evaluates his or her relationships. However, it is important to investigate this association across different levels of analysis (i.e., self-reported quality, observed emotional tone, and physiological responding), which this study did. No investigation has simultaneously examined all three of these indicators of interpersonal functioning in a single study to more completely understand the association between personality and relationship quality.

Toward that end, this study also utilized both self-reports of personality and reports of personality completed by one individual about the other partner (i.e., partner-reports). As described above, partner-reports have the potential to provide corroboration of findings related to self-reported personality. Independent of providing support for a single framework, neuroticism was expected to emerge as an important personality trait in predicting relationship quality in light of findings of previous literature. It is also important to note that this is a secondary analysis that utilized data from three different heterosexual couple types: exclusive dating, younger engaged, and older married couples (Roisman, 2007; Roisman, Clausell, Holland, Fortuna, & Elieff, 2008). Exploring associations across different couple types may be important because previous research has primarily focused on a single couple type. Although we believe it is possible that systematic differences may exist between couple types, because of a lack of
previous data we did not make specific predictions with respect to couple type a priori.

**Method**

**Participants**
Three different samples of heterosexual couples were utilized for this study. First, 109 dating couples (average length of relationship = 15.6 months, range = 1 to 69 months) were recruited from a small town in the Midwest. The men averaged 20.7 years of age ($SD = 1.8$, range = 18 to 25 years) and the women averaged 20.1 years of age ($SD = 1.5$, range = 18 to 25 years). Second, 50 engaged couples (between the ages of 18 and 30 years who were not previously married; average length of relationship = 41 months, range = 4 to 108 months) were also recruited from the same community. The men averaged 22.7 years of age ($SD = 2.7$, range = 19 to 29 years) and the women averaged 22.2 years of age ($SD = 3.0$, range = 18 to 30 years). Finally, 40 married couples (50 years of age and older and married at least 15 years; average length of relationship = 379 months, range = 201 to 621 months) were again recruited from the same small town. The men averaged 57.9 years of age ($SD = 7.6$, range = 50 to 77 years) and the women averaged 55.8 years of age ($SD = 6.2$, range = 50 to 73 years). The three samples were homogeneous in terms of ethnicity (dating = 75% Caucasian, engaged = 87% Caucasian, married = 97.5% Caucasian). The dating couples received US$20.00 as compensation for their participation and both the engaged and married couples received US$50.00 as compensation for their participation.

**Procedure**
Before arriving in the laboratory, all of the participants completed a packet of self-report questionnaires about themselves, their significant other, and their relationship in general, including a self- and partner-report on personality. After providing informed consent, the participants were separated and each was interviewed about their childhood experiences (see Roisman, 2007). Participants then completed several self-report measures, including a questionnaire that listed 11 common relationship problem areas (e.g., money, communication, sex, etc.). Participants were informed that this questionnaire would be the only questionnaire that their significant other would see. Participants rated whether the problem area was currently a problem in their relationship using a 10-point scale (where 1 = *not a problem*, 10 = *is a serious problem*).

After completing the problem area questionnaire, participants were reunited to engage in a standard marital interaction task. Couples used the problem area questionnaire to decide on a single problem area to discuss. Participants were given 10 minutes to discuss and arrive at a solution to this problem area in their relationship (i.e., the disagreement epoch). As a way of “cooling down” following the disagreement discussion, couples then spent five minutes discussing areas in their relationship they agreed about.
Physiological sensors measuring heart rate were attached to participants’ torsos and sensors measuring skin conductance levels were attached to participants’ fingertips prior to the interaction. Physiological readings were monitored second-by-second from an adjoining room during the interaction as well as during a three-minute rest period prior to the interaction, which provided a baseline measure of responding. Just prior to the resting baseline, a research assistant instructed participants to be silent and to empty their minds of all thoughts, feelings, and emotions before beginning the rest period. The interaction followed the rest period.

Apparatus

Physiological equipment. The acquisition system consisted of two Pentium computers, Snapmaster software, and James Long Inc. bioamplifiers. This system allowed continuous recording of physiological responses from both participants during the interaction.

Video equipment. High-resolution color video cameras recorded the couples’ interactions. The video cameras were embedded within a bookshelf located across the room from the participants who were seated on a couch. Microphones were clipped to the participants’ clothing and were used to record the conversation during the interactions.

Measures

Personality. Personality ratings were obtained using the NEO-Five Factor Inventory (NEO-FFI), which was part of the pre-lab packet of questionnaires. The NEO-FFI measures the “Big Five” personality traits: neuroticism, extraversion, openness, agreeableness, and conscientiousness. The NEO-FFI contains 60 items and each personality trait was derived by computing the mean of 12 different items. Participants completed one inventory about their own personality characteristics (neuroticism: dating M = 2.7, SD = .72; engaged M = 2.8, SD = .78; married M = 2.4, SD = .71; extraversion: dating M = 3.6, SD = .55; engaged M = 3.5, SD = .54; married M = 3.5, SD = .54; openness: dating M = 3.6, SD = .54; engaged M = 3.6, SD = .51; married M = 3.4, SD = .49; agreeableness: dating M = 3.7, SD = .49; engaged M = 3.6, SD = .53; married M = 4.0, SD = .43; conscientiousness: dating M = 3.7, SD = .58; engaged M = 3.6, SD = .61; married M = 3.9, SD = .59) and a second inventory about their partner and his or her personality. This second personality inventory was created by re-wording the original NEO-FFI items to probe about the partner’s personality (neuroticism: dating M = 2.6, SD = .77; engaged M = 2.7, SD = .75; married M = 2.5, SD = .78; extraversion: dating M = 3.6, SD = .62; engaged M = 3.5, SD = .52; married M = 3.4, SD = .55; openness: dating M = 3.4, SD = .59; engaged M = 3.4, SD = .48; married M = 3.2, SD = .54; agreeableness: dating M = 3.8, SD = .58; engaged M = 3.8, SD = .59; married M = 3.9, SD = .58; conscientiousness: dating M = 3.8, SD = .65; engaged M = 3.7, SD = .61; married M = 3.9, SD = .69).
NEO-FFI has well-documented reliability and validity. In this analysis, the alphas for self-reports of personality ranged from .74 to .87 for the dating couples, from .72 to .90 for the engaged couples, and from .69 to .90 for the married couples. The alphas for the partner-reports ranged from .78 to .89 for the dating couples, from .65 to .89 for the engaged couples, and from .75 to .91 for the married couples.

**Self-reported relationship quality.** Both the engaged and married participants filled out the Emotional Tone Index (ETI; Berscheid, Snyder, & Omoto, 1989) as a part of their pre-lab packet of self-report questionnaires. Participants were given a list of 25 emotion words (e.g., angry, calm, and joyful) and asked to rate on a scale of 1 (*never*) to 7 (*almost always*) how often they experience each feeling in their relationship. Scores corresponding to the positive and negative items were separately summed and then the total negative item score was subtracted from the total positive item score (engaged \( M = 4.0, SD = 1.2 \); married \( M = 3.6, SD = 1.3 \)). The reliability analysis produced an alpha of .89 for the positive emotions and .89 for the negative emotions. Alphas for the married couples were comparable; .93 for the positive emotions and .87 for the negative emotions. In contrast, the dating couples completed the Dyadic Adjustment Scale (DAS; Spanier, 1976). The DAS is a 32-item questionnaire that has been used with a wide variety of couples to assess adjustment/satisfaction. All of the items of the DAS were composited to create a total dyadic adjustment score (engaged \( M = 119.8, SD = 13.3 \)). The reliability analysis produced an alpha of .87.

**Observed relationship quality.** The Interactional Dimensions Coding System (Kline et al., 2005) was used to code the couples’ interactions. The Interactional Dimensions Coding System consists of nine individual scales (e.g., communication, problem-solving skills) and five dyadic scales (e.g., negative escalation, commitment) ranging in scores from 1 (*extremely uncharacteristic*) to 9 (*extremely characteristic*). The individual scales that were used in this analysis are positive affect and negative affect. These two scales were chosen because they most closely paralleled the positive and negative self-reported emotional tone rating described above. Positive affect was used to describe how positive the participant’s face, voice, and body were while interacting with their partner. For example, good eye contact is considered an important element of positive facial cues, laughing would be considered a component of positive voice, and orientation towards their partner would be included in the positive body category. Negative affect also consisted of negative face, voice, and body. Similarly, negative facial cues include lack of eye contact, a cold or angry voice would be considered negative voice, and negative body would include a tense or rigid posture. A composite score of observed emotional tone was created by subtracting negative affect from positive affect (dating \( M = -.35, SD = .31 \); engaged \( M = .92, SD = 2.2 \); married \( M = 43, SD = .20 \)). Two graduate students were trained to use the system. Intra-class correlations between raters were as follows:
• positive affect: dating couples = .84, engaged couples = .78, married couples = .72;
• negative affect: dating couples = .78, engaged couples = .69, married couples = .70.

Physiological responding. Physiological responses were recorded from participants’ cardiac system during a baseline period and the disagreement epoch of the interaction. The specific cardiac measure obtained was heart rate (HR). Electrode stickers were placed on opposite sides of each participant’s torso and a ground lead was placed on the sternum. Cardiac inter-beat intervals (IBI) were measured in milliseconds between successive R waves of the electrocardiogram (EKG). Heart rate was calculated using the standard formula: HR = (1/IBI) × 60,000 ms (i.e., beats per minute, dating M = 5.1, SD = 4.4; engaged M = 4.2, SD = 4.1; married M = 3.4, SD = 3.3). Electrodermal response was measured by skin conductance level (SCL). A constant-voltage device was used to pass a small voltage between electrodes attached to the fingertips of the second and fourth fingers of the non-dominant hand. SCL was measured in microsiemens (dating M = 4.1, SD = 2.2; engaged M = 4.2, SD = 2.3; married M = 2.8, SD = 1.7). Changes in physiological responses were calculated by subtracting mean levels of physiological responses during the baseline from mean levels during the disagreement epoch of the interaction. All physiological data were standardized for analyses.

Results

Analytic plan
HLM 6.0 (Bryk & Raudenbush, 1992) was used to examine the effects of personality on each measure of relationship quality. Two sets of analyses were conducted per relationship outcome in HLM. First, we examined the self-reported personality traits in relation to each relationship quality indicator. Next, partner-reports of personality were examined, in part to determine whether personality traits per se or a single informant (i.e., self-report) accounted for expected associations between personality and self-reported relationship quality. Thus, partner-report analyses were conducted as a means of corroborating analyses based on self-reported personality traits.

Note that analyses were conducted by relationship type (dating, engaged, and married) and only included actor effects (influence of an individual on his or her own outcome) and not partner effects (influence of individual on his or her partner’s outcome). We were not especially interested in partner effects in this study, but rather in using partner-reports as a secondary informant to corroborate self-reported findings. Finally, additional analyses were conducted in HLM to determine whether gender or duration of the relationship moderated any of the effects of personality traits on relationship quality. More specifically, gender was examined as a potential moderator of Level 1 personality effects (e.g., slopes) and duration was entered as a Level 2 (dyadic) predictor of each Level 1 personality slope.
In order to examine the associations between personality and indicators of relationship quality in the context of the HLM analyses, t-ratios were converted to correlations to estimate the standardized magnitude of effects \( r = \sqrt{t^2/(t^2 + df)} \), Rosenthal & Rosnow, 1984 as cited in Kurdek, 2004. Pseudo \( R^2 \)s were also calculated by comparing the error terms from the restricted model to an unrestricted model (only containing a dependent variable and intercept). The following formula was utilized for these calculations, \( 1 - ((\text{level 1 restricted error} + \text{level 2 restricted error})/(\text{level 1 unrestricted error} + \text{level 2 unrestricted error})) \) (R-squared in a hierarchical model, n.d.).

**Preliminary analyses**

Correlations examining the association between self-reported personality and partner-reported personality were conducted (see Table 1) to gain an understanding of how the self-reports and partner-reports converged as the partner-reports were important in establishing corroboration of the self-report findings. Overall, for the dating, engaged, and married couples there was significant convergence between informants within personality trait, thus providing evidence of the validity of using the partner-reports as a corroborating measure.

Analyses were conducted in HLM (see Table 2) to investigate the overlap between the different measures of relationship quality. These analyses were important to investigate how the different measures of relationship quality converge to ensure that we are capturing different constructs. Significant associations were found between self-reported quality and observed emotional tone for the dating couples and for the married couples. Significant correlations between self-reported quality and observed emotional tone were not found for the engaged couples. For both the dating couples and the married couples, skin conductance and heart rate were significantly correlated. While some overlap exists between the dependent measures, the fact that such overlap was modest in magnitude suggested that it was best to examine these constructs separately in analyses.

**HLM analyses**

**Dating couples.** Self-reported conscientiousness was associated with greater self-reported quality (see Table 3). In addition, self-reported agreeableness was associated with greater quality as rated by observers. Partner-reported neuroticism was negatively associated with self-reported quality and positively associated with conscientiousness. Thus, the self-reported conscientiousness finding was corroborated by partner-report. Finally, partner-reported extraversion was associated with an increase in heart rate. Pseudo \( R^2 \)s were highest for self-report quality (range = .07 to .09) in comparison to observed emotional tone and physiological responding (range = −.02 to .03). Only one effect was moderated by gender; more specifically, female partner-reported extraversion was more strongly associated with increases in heart rate than was male partner-reported extraversion. No effects were moderated by duration of relationship.
TABLE 1
Correlations between male and female self-reported personality and male and female partner-reported personality

<table>
<thead>
<tr>
<th>Partner-reported personality</th>
<th>1</th>
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<th>5</th>
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<tr>
<td><strong>Dating couples</strong></td>
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<td><strong>Male self-reported personality</strong></td>
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<td></td>
</tr>
<tr>
<td>1. Neuroticism</td>
<td>.37**</td>
<td>-.24*</td>
<td>-.00</td>
<td>-.21*</td>
<td>-.08</td>
</tr>
<tr>
<td>2. Extraversion</td>
<td>-.39**</td>
<td>.62**</td>
<td>.00</td>
<td>.23*</td>
<td>.14</td>
</tr>
<tr>
<td>3. Openness</td>
<td>.11</td>
<td>-.09</td>
<td>.44**</td>
<td>.15</td>
<td>.06</td>
</tr>
<tr>
<td>4. Agreeableness</td>
<td>-.12</td>
<td>.14</td>
<td>.21*</td>
<td>.44**</td>
<td>.02</td>
</tr>
<tr>
<td>5. Conscientiousness</td>
<td>-.08</td>
<td>.13</td>
<td>-.15</td>
<td>.14</td>
<td>.40**</td>
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<td><strong>Female self-reported personality</strong></td>
<td></td>
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<tr>
<td>1. Neuroticism</td>
<td>.13</td>
<td>-.16</td>
<td>.03</td>
<td>.12</td>
<td>-.22*</td>
</tr>
<tr>
<td>2. Extraversion</td>
<td>-.23*</td>
<td>.42**</td>
<td>-.07</td>
<td>.17</td>
<td>.25**</td>
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<tr>
<td>3. Openness</td>
<td>.23*</td>
<td>.00</td>
<td>.41**</td>
<td>-.08</td>
<td>-.15</td>
</tr>
<tr>
<td>4. Agreeableness</td>
<td>.01</td>
<td>.20*</td>
<td>.04</td>
<td>.31*</td>
<td>.10</td>
</tr>
<tr>
<td>5. Conscientiousness</td>
<td>-.02</td>
<td>.21</td>
<td>-.15</td>
<td>.02</td>
<td>.36**</td>
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<tr>
<td><strong>Engaged couples</strong></td>
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<td><strong>Male self-reported personality</strong></td>
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<tr>
<td>1. Neuroticism</td>
<td>.59**</td>
<td>-.35*</td>
<td>-.01</td>
<td>-.24</td>
<td>-.15</td>
</tr>
<tr>
<td>2. Extraversion</td>
<td>-.22</td>
<td>.65**</td>
<td>-.25</td>
<td>.24</td>
<td>.11</td>
</tr>
<tr>
<td>3. Openness</td>
<td>.11</td>
<td>-.21</td>
<td>.65**</td>
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<td>-.12</td>
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* p < .05; ** p < .01.
TABLE 2
Standardized effects identified in HLM between self-reported quality, observed emotional tone, and physiological responding for dating couples, engaged couples, and married couples

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<th>SCL</th>
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<td>Heart rate</td>
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<td>.01</td>
<td></td>
<td></td>
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<td>SCL</td>
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<td></td>
</tr>
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</tr>
<tr>
<td>Heart rate</td>
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<td>.01</td>
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<td></td>
</tr>
<tr>
<td>SCL</td>
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<td>−.04</td>
<td>−.13</td>
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</tr>
<tr>
<td>Heart rate</td>
<td>−.16</td>
<td>.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCL</td>
<td>.01</td>
<td>−.14</td>
<td>.38**</td>
<td></td>
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</table>

* p < .05; ** p < .01.

TABLE 3
HLM analyses predicting dating couples’ self-reported quality, observed emotional tone, and physiological responding from self-reported personality and partner-reported personality

<table>
<thead>
<tr>
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<th>SCL</th>
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</thead>
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<td>Neuroticism</td>
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<td>.06</td>
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</tr>
<tr>
<td>Extraversion</td>
<td>.08</td>
<td>.06</td>
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<td>Openness</td>
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<td>.11**</td>
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<td>Conscientiousness</td>
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<td>.07</td>
</tr>
<tr>
<td><strong>Pseudo-R²</strong></td>
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<td>.03</td>
<td>−.02</td>
<td>−.02</td>
</tr>
<tr>
<td><strong>Partner-reported</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>−.12**</td>
<td>.06</td>
<td>.06</td>
<td>.07</td>
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<tr>
<td>Extraversion</td>
<td>.02</td>
<td>.03</td>
<td>.10*</td>
<td>.05</td>
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<tr>
<td>Openness</td>
<td>.07</td>
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<td>.02</td>
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<tr>
<td><strong>Pseudo-R²</strong></td>
<td>.09</td>
<td>.01</td>
<td>.01</td>
<td>−.01</td>
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</table>

† p < .10; * p < .05; ** p < .01. Unless otherwise noted, coefficients above are standardized betas.
Engaged couples. Individuals who reported being high on extraversion (see Table 4) and conscientiousness also reported having greater relationship quality. Self-reported extraversion was associated with greater relationship quality as rated by observers. Finally, conscientiousness was associated with increases in skin conductance levels from baseline. With respect to partner-reported personality, neuroticism was associated with reporting lower relationship quality. Partner-reported openness, agreeableness, and conscientiousness were all associated with greater self-reported quality. Once again, partner-reported conscientiousness corroborated the association identified between self-reported conscientiousness and self-reported quality. Partner-reported neuroticism, extraversion, and agreeableness were all associated with increases in heart rate during the disagreement epoch. Consistent with the findings from the dating sample, pseudo $R^2$s were highest for self-report quality (range = .22 to .30) in comparison to observed emotional tone and physiological responding (range = −.06 to .03). No effects were moderated by either gender or duration of relationship.

Married couples. Individuals high on self-reported neuroticism also reported higher levels of relationship quality (see Table 5). Self-reported extraversion and agreeableness were associated with greater self-reported quality. With respect to physiological outcomes, self-reported conscientiousness was associated with increases in skin conductance levels. Only one unique effect was found for partner reported personality: agreeableness was associated with greater relationship quality as rated by observers. Once again, pseudo

### Table 4

<table>
<thead>
<tr>
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<th>SCL</th>
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† $p < .10$; * $p < .05$; ** $p < .01$. Unless otherwise noted, coefficients above are standardized betas.
R2s were highest for self-report quality (range = .22 to .26) in comparison with observed emotional tone and physiological responding (range = –.04 to .04). No effects were moderated by gender; however, one effect was moderated by duration of relationship. More specifically, duration of relationship moderated the effect of self-reported extraversion and self-reported relationship quality, such that the effect was larger for longer-term relationships.

**Discussion**

This study contrasted two frameworks designed to better understand the nature of links between the Big Five personality traits and the quality of adults’ romantic relationships. As described in the introduction, the first framework predicted that personality traits would be coherently and reliably associated with all of the relationship outcomes (i.e., self-reported quality, observed emotional tone, and physiological responding) explored in this study. In contrast, the second framework predicted that personality would be most strongly associated with self-reported quality, and only weakly associated with observations of relationship quality and physiological response during a dyadic interaction. Significant associations were identified between personality (in aggregate) and self-reported quality. In contrast, few significant associations were identified for both observed emotional tone and physiological responding. Moreover, the overall magnitude of the effect of personality traits in aggregate on non-self-report indicators of
relationship quality was trivial across dating, engaged, and married couples. Thus, more support was found for the second framework.

An association between personality traits and self-reported relationship quality has been consistently identified in the literature (Karney & Bradbury, 1997; Robins et al., 2000, 2002; Watson et al., 2000). As such, neuroticism was expected to emerge as an important personality trait in predicting relationship quality. However, while a few significant effects were found for each of the personality traits, a consistent pattern across informants and indicators of quality did not clearly emerge for any specific personality trait. In addition, there was some heterogeneity in unique effects across couple type. The most consistent unique effects were found in the domain of self-reported quality – and conscientiousness was the most consistent predictor of this dependent measure. For example, among dating and engaged couples, individuals who were more conscientious reported higher quality relationships. In addition, married couples reported greater conscientiousness and also exhibited higher levels of skin conductance. That said, we consider this latter finding counterintuitive in that increases in skin conductance are often associated with efforts to inhibit behavior – which would not be indicative of a high quality interaction with a significant other.

A major strength of this study is the incorporation of partner-reports of personality in an effort to corroborate self-reports of personality. It is important to note that few studies have incorporated partner-reports of personality in their work (Botwin et al., 1997; Donnellan et al., 2004; Kosek, 1996; Watson et al., 2000). In this study, the partner-reports of personality only provided modest corroboration for self-reported personality. For the dating and engaged couples, both self-reported and partner-reported conscientiousness was associated with higher self-reported relationship quality. However, no other partner-reports corroborated self-reported personality findings. Perhaps the lack of significant partner-reported findings is related to the partner’s own current satisfaction with the relationship. Watson and Humrichouse (2006) hypothesized that when raters are unsure about how to answer a question about their partner’s personality that they compensate by referring to their current level of satisfaction with the relationship. Their data showed that when participants were very satisfied with their relationship, that they rated their partners as more positive than even their partners self-reported. However, they judged their partners more negatively when they were less satisfied with the relationship.

A major goal of this study was to more fully explore how personality and relationship quality are associated by including a range of measures of romantic relationship quality. This goal was complicated by the fact that much of the existing literature does not explicitly acknowledge that the association between personality and relationship quality is based on an approach that primarily utilizes self-reports of personality and self-reports of relationship quality. Thus, an additional strength of this study is the use of a multi-method, multi-informant approach. This design allowed us to examine questions previously not extensively explored in the existing literature related to the range of relationship-relevant outcomes associated with personality traits.
Limitations
This analysis focused on a specific operationalization of personality (i.e., self-reported and partner-reported personality). This operationalization was used because it is the most common method utilized when measuring personality. Nonetheless, as a reviewer of this paper noted, both observed emotional tone and physiological responding are behavioral assessments of relationship quality. As such, if a more behaviorally-based measure of personality was utilized, more evidence that personality has broad predictive significance might have emerged in this analysis.

In addition, the sub-samples of this study were relatively small in size and we chose not to aggregate them because different measures of self-reported quality were used for the dating couples (the DAS) and the engaged and married couples (the ETI). Re-scaling one of the measures seemed inappropriate conceptually, as the two measures differ in their focus and scope, even though they both assess self-reported quality. In addition, it is important to acknowledge that our methodologically intensive design limited our ability to collect data from larger samples. Finally, a significant limitation is that this study only examined personality and relationship quality at a single time point. However, before conducting longitudinal studies, it seems appropriate first to examine cross-sectional associations, which were not identified in this study for observations and physiological indicators of relationship quality.

Nonetheless, future work still needs to incorporate multiple levels of analysis longitudinally in order to fully examine how personality traits and relationship quality are interrelated over time (Donnellan et al., 2005; Robins et al., 2002; Watson et al., 2000). Researchers have in fact acknowledged that individuals are likely to influence their partner over the duration of the relationship; thus individuals may become increasingly dissimilar from or similar to their partner as the relationship progresses (Gattis et al., 2004).

This study utilized samples of exclusive dating, engaged, and married couples and, interestingly, the smallest effects of personality were found for dating couples. One possible explanation for this finding is that different measures were used for the dating couples versus the engaged and married couples. That said, previous studies have not specifically investigated how the association between personality and relationship quality differs as a function of relationship type; based on these results perhaps associations in this domain are stronger in more serious relationships, thus reflecting a developmental shift in terms of the salience of personality traits in adults’ romantic relationships. In other words, it may be that dating relationships are not yet fully developed enough to see the same kind of effects that were found in more seriously committed couples. However, a related explanation is that tasks of social living, such as having children and beginning a career path may influence personality change (Roberts, Wood, & Smith, 2005). Thus, younger couples, such as the dating and engaged couples who are more likely beginning to approach these challenges, may be exhibiting more personality change than the older, married couples. In fact, Roberts et al. (2005) discuss how investing heavily in social relationships may help explain increases in agreeableness and conscientiousness in young and middle adulthood. Consequently, it is possible that increases in agreeableness and
conscientiousness would have the potential to positively affect romantic relationships over time.

Finally, it is important to acknowledge that the lack of an association between personality and observed emotional tone stands in contrast to previous findings investigating the association between these two constructs (Donnellan et al., 2004, 2005). However, the Donnellan et al. (2004, 2005) results were based on a single sample of parents and children followed longitudinally and have not been replicated by other researchers.

**Conclusion**
This study explored how the Big Five personality traits are associated with relationship quality in the context of two different conceptual frameworks. Among samples of dating, engaged, and married couples, the data were more consistent with a framework that predicted that personality traits would be most strongly associated with self-reported quality and only weakly associated with other indicators of relationship quality, such as observed quality and physiological response during a dyadic interaction. The common approach to addressing questions about the predictive significance of personality traits typically uses self-reports of personality and self-reports of relationship quality. However, this study clearly indicates that such a mono-method approach is not sufficient. Instead, it is necessary to utilize multi-method, multi-informant designs in order to fully clarify how personality is associated with the full range of relationship quality indicators routinely used by interpersonal relationships scholars. Understanding the nature and differential magnitude of these associations across relationship quality outcomes is a critical step in accurately portraying the predictive significance of personality traits for the quality of adults’ interpersonal relationships.

**REFERENCES**


