

CYCLICALITY AND THE RELATIONSHIP BETWEEN NEUROTICISM,
COMMUNICATION, AND RELATIONSHIP SATISFACTION IN COHABITING COUPLES

by

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Abstract

The present study sought to extend the research on cyclical, or on-again/off-again relationships, by examining whether a history of cyclicity moderated the association between neuroticism and relationship satisfaction. A second goal of this study was to examine the direct and indirect effects of neuroticism on relationship satisfaction through communication. The sample consisted of cohabiting cyclical ($n = 1,055$) and noncyclical ($n = 2,527$) couples from a larger dataset collected by the RELATE Institute. Results showed that cyclical partners reported higher levels of neuroticism, higher levels of conflict, lower levels of positive communication, and lower levels of relationship satisfaction than noncyclical couples. Direct actor paths from neuroticism to satisfaction were significant for cyclical and noncyclical females and males. Only the direct partner path from female neuroticism to male satisfaction was significant, and was only significant for cyclical couples. All indirect actor and partner paths were significant for cyclical and noncyclical females and males. Further, a history of cyclicity significantly moderated the direct paths from male communication to male and female relationship satisfaction, indicating this relationship is stronger for cyclical couples.

Table of Contents

List of Figures	vi
List of Tables	vii
Chapter 1 - Introduction.....	1
Chapter 2 - Literature Review.....	2
Overview of Neuroticism.....	3
Theoretical Framework.....	3
Intrapersonal Theory.....	3
Interpersonal Theory.....	4
The Direct Effects of Neuroticism on Relationship Satisfaction.....	5
Couple Interaction as a Mediator.....	5
Cyclicity and Neuroticism	6
Control Variables	8
The Present Study	9
Chapter 3 - Method.....	11
Sample and Procedures.....	11
Measures	12
Neuroticism.....	12
Conflict	12
Communication.....	13
Relationship Satisfaction	13
Cyclicity.....	13
Control Variables	13
Analyses.....	14
Chapter 4 - Results.....	15
Bivariate Analyses	15
Measurement Model	16
Structural Model	16
Direct Pathways	17

Actor Paths	17
Partner Paths	17
Indirect Pathways.....	18
Moderation.....	19
Chapter 5 - Discussion	20
Limitations	23
Strengths	23
Clinical Implications.....	23
Future Research	24
Conclusion	24
References.....	26
Appendix A - Tables.....	30
Appendix B - Figures.....	36

List of Figures

Figure 1 Proposed Actor-Partner Interdependence Model.....	36
Figure 2 Final Actor-Partner Interdependence Model with Standardized Coefficients for Cyclical Couples (N = 1,055).....	37
Figure 3 Final Actor-Partner Interdependence Model with Standardized Coefficients for Noncyclical Couples (N = 2,527).....	38

List of Tables

Table 1 Descriptive Statistics for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Females and Males.....	30
Table 2 Correlations among Variables of Interest for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Males.....	31
Table 3 Correlations among Variables of Interest for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Females.....	32
Table 4 Comparison of Means for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Females and Males.....	33
Table 5 Direct Path Coefficients for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Couples.....	34
Table 6 Indirect Path Coefficients and Confidence Intervals for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Couples.....	35

Chapter 1 - Introduction

Cyclical, or on-again/off-again relationships, is a developing area of relationship instability that relatively few researchers have studied. Prevalence rates and the effects of cyclical have been studied primarily in college students. A recent study about cyclical in married and cohabiting relationships found that couples who had experienced cyclical reported lower relationship satisfaction than those whose relationship was not cyclical (Vennum, Lindstrom, Monk, & Adams, 2013). The effect of personality traits on relationship satisfaction has yet to be studied in cyclical relationships.

One personality trait that has been found to be particularly important in the study of relationship satisfaction is neuroticism (Karney & Bradbury, 1995). As an aspect of an individual's personality, neuroticism manifests as a proclivity to become distressed and express negative emotions in situations where individuals not possessing this personality trait would remain calm (Lavee & Ben-Ari, 2004). Previous research has found that neuroticism in one or both partners is negatively associated with relationship quality, satisfaction, and stability (Bouchard, Lussier, & Sabourin, 1999; Kelly & Conley, 1987; Karney & Bradbury, 1997; Kurdek, 1993; Robins, Caspi, & Moffitt, 2000; Terman, 1948).

While evidence for the direct effect of neuroticism on relationship satisfaction exists, there is also evidence for a mediating effect through interactions in the relationship (Buss, 1991; Kurdek, 1997). Conflict resolution and communication have been found to play important roles in the association between neuroticism and relationship satisfaction. The Vulnerability-Stress-Adaptation model provides a theoretical basis for the mediating effect of couple interaction (Karney & Bradbury, 1995).

The present study seeks to extend the literature on neuroticism by examining the direct and indirect effects of neuroticism on relationship satisfaction through couple interactions and how the relationships between these variables are moderated by a history of breaking up and renewing a relationship.

Chapter 2 - Literature Review

Romantic relationship development has been studied for many years, but recent research has focused on a previously unstudied pattern in dating relationships. This pattern has been termed cyclicity (Dailey, Pfiester, Jin, Beck, & Clark, 2009) and has been defined as a romantic relationship in which the partners break-up and renew their relationship at least once.

Researchers who are studying this phenomenon have found that in a sample of college students about 40% reported their current relationship was cyclical (Vennum, 2012), and in a sample of adults ages 18-34, 60% reported experiencing a cyclical relationship at some point (Dailey et al., 2009).

To date, there are very few studies that examine cyclicity in cohabiting and married relationships. Previous research has focused on populations of college students and young adults. One recent study extended the research by examining cyclicity in a cohabiting and married sample. Cohabiting and married couples who had experienced cyclicity reported greater uncertainty that they would be together in the future, more disillusionment with their current relationship, and lower relationship satisfaction (Vennum, Lindstrom, Monk, & Adams, 2012).

Considering the relatively recent appearance of cyclicity in research about relationship instability, much remains to be explored concerning this phenomenon. Previous research has focused on exploring the prevalence of cyclicity, and recently, its association with relationship satisfaction. What has yet to be examined is how individual personality traits differ in couples who have experienced cyclicity compared to couples who have not experienced cyclicity.

Personality traits have been studied more than any other group of variables in relation to relationship satisfaction (e.g. Buss, 1991; Caughlin, Huston, & Houts, 2000; Karney & Bradbury, 1995). Personality has been widely studied in romantic relationships since the 1930's (Kelly & Conley, 1987), and has been found to be the most consistent predictor of marital satisfaction (Bouchard et al., 1999; Buss, 1991; Caughlin et al., 2000; Kurdek, 1993; Kurdek, 1997; Karney & Bradbury, 1995, Karney & Bradbury, 1997). Personality is important when studying relationships because it consists of stable traits that a person exhibits in most of their

behaviors and interactions, and, while behaviors and interactions can develop and change, personality is likely to remain the same (Buss, 1991).

Overview of Neuroticism

Neuroticism has been found to be the most consistent and powerful personality predictor of relationship outcomes (Buss 1991; Geist & Gilbert, 1996; Karney & Bradbury, 1995; Kelly & Conley, 1987; Kurdek, 1997). Sometimes referred to as negative affectivity or negative emotionality, neuroticism has been defined as a major domain of personality that is characterized by a susceptibility to psychological distress, the inability to control urges, proneness to unrealistic ideas, and the inability to cope with stress (Costa & McCrae, 1992). It has been found to be stable throughout a person's life, indicating that this personality trait does not change drastically over time (Costa, Herbst, McCrae, & Siegler, 2000; Hinnen Sanderman, & Hagedoorn, 2008).

Neuroticism increases the likelihood that a person will become distressed in general, and especially so in stressful situations (Ormel & Wohlfarth, 1991). People possessing this personality trait are more likely to express negative emotions than those who are lower in neuroticism (Lavee & Ben-Ari, 2004) and are more likely to overreact to criticism or negative interactions (Robins et al., 2000). Due to the impact neuroticism can have on a person's emotional expression and interactions with others, this is an important element to consider when studying relationship satisfaction.

Theoretical Framework

When considering the effects of neuroticism on relationship satisfaction and the influence cyclicity has on these effects, two theories are utilized to inform the current study: Intrapersonal Theory and Interpersonal Theory. Both of these theories have been used to explain how personality traits impact relationship satisfaction, and how relationship instability is part of the interaction between personality and relationship satisfaction.

Intrapersonal Theory

Intrapersonal Theory suggests that a partner's personality traits directly affect their own relationship satisfaction, independently of couple interactions (Terman, 1948). Intrapersonal Theory describes how some individuals are predisposed to negative relationship outcomes

because of their personalities and little can be done to affect these outcomes (Terman, Bittenwieser, Ferguson, Johnson, & Wilson, 1938). This theory argues that patterns of communication and behavior exchanges are part of an individual's personality, and that these parts of someone's personality impact relationship outcomes. Terman et al. (1938) suggests some couples are just naturally incompatible due to personality traits. Terman (1948) went on to argue that for these couples it is very difficult to maintain a satisfying relationship, and there is a greater chance for instability in these relationships.

Interpersonal Theory

Interpersonal Theory suggests the broad patterns that occur in a romantic relationship are due in part to specific interactions between the partners (Gottman, 1972). Spouses discern from communicating with each other if they are in a satisfying relationship or not, and, if normal marital disagreements are not adequately resolved, negative feelings begin to build up, eventually leading to negative patterns of interaction (Markman, 1991). Interpersonal Theory acknowledges that personality traits impact relationship outcomes, but posits that this occurs indirectly through exchanges, such as communication and conflict resolution (Fitzpatrick & Badzinski, 1994).

Perhaps the most well-known model that has been propagated by Interpersonal Theory is the Vulnerability-Stress-Adaptation Model (VSA; Karney & Bradbury, 1995). The VSA model describes how interpersonal processes, such as couple interaction, mediate the connection between individual factors, or enduring vulnerabilities, and relationship quality. According to Karney & Bradbury (1995), individuals have stable, enduring vulnerabilities that they bring with them to their relationships. These enduring vulnerabilities can include personality traits, such as neuroticism. The relationship between individual factors and relationship quality is impacted by adaptive processes, or behavioral exchanges, that can be positive or negative, such as how couples communicate and handle conflict (Langer, Lawrence, & Barry, 2008). In conceptualizing the association between neuroticism and relationship satisfaction, neuroticism is an enduring vulnerability that impacts relationship quality through the adaptive processes, or interactions (i.e. communication), that occur between partners. The connections between personality traits and couple interactions affect relationship satisfaction, and, ultimately, relationship stability (Karney & Bradbury, 1995).

Based on the theories discussed, there appear to be two paths of association between neuroticism and relationship satisfaction. Intrapersonal Theory proposes a direct path between neuroticism and relationship satisfaction, whereas Interpersonal Theory, or VSA model, proposes an indirect path through couple interactions. Both Intrapersonal Theory and the VSA model describe how a negative relationship between neuroticism and relationship satisfaction is likely to be associated with cyclicity. The current study will examine both the direct effects of neuroticism on relationship satisfaction, and the indirect effects through couple interactions, as well as the role a history of cyclicity plays.

The Direct Effects of Neuroticism on Relationship Satisfaction

Researchers examining the associations between neuroticism and relationship satisfaction have consistently found that neuroticism is negatively associated with partners' marital satisfaction (Belsky & Hsieh, 1998; Botwin, Buss, & Shackelford, 1997; Bouchard et al., 1999; Buss, 1991; Caughlin et al., 2000; Fisher & McNulty, 2008; Hinnen, et al., 1998; Lavee & Ben-Ari, 2004; Karney & Bradbury, 1995; Karney & Bradbury, 1997; Kelly & Conley, 1987; Kurdek, 1993; Kurdek, 1997; Larsen, Blick, Jackson, & Holman, 2010; Robins, Caspi, & Moffitt, 2000; Russell & Wells, 1994). Robins et al. (2000) found that both husbands' and wives' dissatisfaction with the relationship was significantly predicted by their partner's higher neuroticism, even after controlling for their own neuroticism. Similarly, Bouchard et al. (1999) found that for both spouses neuroticism was a significant predictor of self-reported and partner-reported marital quality. Finally, Karney & Bradbury (1997) found that neuroticism was strongly associated with spouses' initial levels of marital satisfaction, such that spouses scoring higher on neuroticism reported lower marital satisfaction from the start of the marriage.

Couple Interaction as a Mediator

In line with Intrapersonal Theory, the majority of studies on the association of neuroticism with relationship satisfaction have focused on the direct relationship between the two. A few researchers have examined the role couple interactions play in the connection between neuroticism and relationship satisfaction, as suggested by the VSA model. In line with the VSA model, Buss (1991) discussed how neuroticism could lead to conflict in relationships, which in turn leads to lower relationship satisfaction. Buss suggested that neuroticism can cause conflict between partners directly by affecting how the neurotic partner acts in stressful

situations. Buss also described how neurotic partners could provoke behaviors in the non-neurotic partner that are upsetting to the non-neurotic partner, leading to his or her dissatisfaction with the relationship.

Likewise, Robins et al. (2000) discussed how a partner high in neuroticism might react to and interpret the behaviors of their partner in a more negative way than someone low in neuroticism. In this way he or she is more likely to overreact to criticism, exaggerate the meaning of flirtation with someone outside the relationship, or believe their partner no longer loves them when he or she does not call (Robins et al., 2000). These authors also proposed that neuroticism in one partner could evoke behaviors in the other partner that contribute to the neurotic partner's dissatisfaction in the relationship.

Kurdek (1997) tested both the direct and indirect effects of neuroticism on relationship satisfaction through conflict. Consistent with the VSA model, Kurdek found that partners high in neuroticism tend to use more problematic styles of problem solving compared to partners low in neuroticism, which leads to lower relationship satisfaction. Further, Caughlin and colleagues (2000) found that most of the association between neuroticism and relationship satisfaction was explained by couple communication processes (Caughlin et al., 2000). Using dyadic analysis, Larsen et al. (2010) found that a neurotic partner's negative perception of the non-neurotic partner's communication skills significantly predicted the neurotic partner's lower relationship satisfaction for both men and women.

Karney and Bradbury (1997) tested models of both the Intrapersonal theory, as well as the Interpersonal theory in a longitudinal study. Results showed that neuroticism was related to lower initial marital satisfaction, but over time did not appear to be independently associated with changes in satisfaction in different couples. Results were opposite for interpersonal processes: the effects of marital interactions were more likely to develop over time as marital satisfaction developed, versus strong effects initially.

Cyclicity and Neuroticism

Given the negative impact neuroticism has on couple interactions and relationship satisfaction, neuroticism is an important factor to consider when studying cyclicity. Both Intrapersonal Theory and the VSA model predict that personality traits, such as neuroticism, are related to relationship instability, either directly or indirectly. In support of these predictions, a

longitudinal study conducted by Kelly & Conley (1987) found that men and women who divorced during the span of the study were higher on neuroticism than men and women who were stably married. The divorced men were substantially higher in neuroticism than were the stably married men (Kelly & Conley, 1987). Divorced women were also higher in neuroticism than both the satisfied and dissatisfied married women (Kelly & Conley, 1987). Similarly, Kurdek (1993) found that husbands and wives from unstable marriages were more neurotic, and that neuroticism predicted marital dissolution for both husbands and wives.

Both Intrapersonal Theory and the VSA model suggest that the negative association between neuroticism and relationship satisfaction is linked with instability. Intrapersonal Theory, and the evidence reviewed in the literature in support of this theory, suggests that individuals with the personality trait of neuroticism are more likely to be members of unstable unions because their personalities make it difficult to maintain relationship satisfaction (Kelly & Conley, 1987; Kurdek, 1993; Terman, 1948). The VSA model, as well as literature examining the mediating effects of couple interactions, suggest that the volatile nature of the interactions in relationships with one or both partners high in neuroticism is likely associated with instability in the relationship (Buss, 1991; Karney & Bradbury, 1995; Robins et al., 2000).

In reviewing the research, it is expected that cyclical and noncyclical couples will differ when it comes to levels of neuroticism, conflict behaviors, positive communication, and relationship satisfaction. Past research shows that in couples experiencing instability, partners report greater neuroticism, lower relationship satisfaction, and worse communication (Kelly & Conley, 1987; Kurdek, 1993; Vennum et al., 2013). Therefore, it would be expected that couples with a history of cyclicity will report higher levels of neuroticism than their noncyclical counterparts, as well as higher levels of conflict, lower levels of positive communication, and lower levels of relationship satisfaction.

It is also expected that the strength of the associations between neuroticism, communication, conflict, and relationship satisfaction, will differ for cyclical and noncyclical couples. In the VSA model, stressors, such as a history of breaking up and renewing, play a role in the associations between enduring vulnerabilities, adaptive processes, and relationship satisfaction. According to this model cyclicity would determine the behavioral exchanges that occur between partners (Karney & Bradbury, 1995). Previous research has shown that partners possessing neurotic personality traits cannot cope as well in stressful situations as partners not

possessing these traits (Costa & McCrae, 1992), so for cyclical partners, neuroticism may have a greater impact on partner's communication and conflict with their partner.

Cyclicity would also impact the strength of the associations between communication, conflict, and satisfaction, perhaps due in part to the higher levels of relationship uncertainty cyclical couples experience (e.g. Halpern-Meekin, Manning, Giordano, & Longmire, 2012). Uncertainty, a specific stressor experienced by cyclical couples, makes communicating more difficult and more important (e.g. Knobloch & Carpenter-Theune, 2004; Knobloch & Solomon, 2005). Cyclical couples report higher levels of intimate self-disclosure (Halpern-Meekin et al., 2012), but in the presence of greater uncertainty, each exchange between partners has the potential to solidify or dissolve the relationship. In line with the VSA model, a stronger negative relationship is hypothesized between conflict and relationship satisfaction for cyclical couples than noncyclical couples, and a stronger positive relationship is hypothesized between positive communication and relationship satisfaction for cyclical couples than noncyclical couples.

Control Variables

Several variables have been found to be important to consider when examining cyclicity. Demographic variables, such as age, education, and income, are necessary to include when looking at group differences. Another important variable is relationship length. Vennum et al. (2013) found significant differences in relationship length between cyclical and noncyclical cohabiting and married couples, with cyclical couples reporting having been in the relationship longer. Dailey, Rossetto, Pfiester, and Surra (2009) discuss that this may be because when cyclical couples breakup, they keep in contact with each other and understand that the relationship is not permanently dissolved, but redefined, such that the relationship continues through the breakup. The presence of children has also been found to be important when comparing cyclical and noncyclical couples (Vennum et al., 2013). These researchers found that constraints, or factors that keep a relationship from permanently ending (Stanley et al, 2006), have been found to be present in cyclical relationships, and one of those constraints is the presence of children. In the previously mentioned, study cohabiting cyclical partners were more likely to report children younger than 18 living in the house than noncyclical cohabiting partners (42% and 28%, respectively). These variables will be included in the present study as control variables.

The Present Study

The present study seeks to examine the moderating role cyclicity plays in the relationship between neuroticism, couple interactions, and relationship satisfaction in cohabiting couples. The present study will also test both direct effects of neuroticism on relationship satisfaction, and indirect effects through couple interactions. It is hypothesized that:

H1: Couples who report experiencing cyclicity will report higher levels of neuroticism, lower levels of positive communication, higher levels of conflict behaviors, and lower levels of relationship satisfaction than noncyclical couples.

H2: Neuroticism will have a direct, negative effect on relationship satisfaction for both actor and partner effects in cyclical and noncyclical couples.

H3: Neuroticism will have a direct, negative effect on positive communication for both actor and partner effects in cyclical and noncyclical couples.

H4: Neuroticism will have a direct, negative effect on conflict behaviors for both actor and partner effects in cyclical and noncyclical couples.

H5: Neuroticism will have an indirect, negative effect on relationship satisfaction through couple interaction for both actor and partner effects in cyclical and noncyclical couples.

H6: Cyclicity will have a moderating effect on the relationship between neuroticism, couple interaction, and relationship satisfaction resulting in:

H6a: A stronger negative association between neuroticism and positive communication.

H6b: A stronger positive association between neuroticism and conflict behaviors.

H6c: A stronger negative association between conflict and relationship satisfaction.

H6d: A stronger positive association between communication and relationship satisfaction.

The present study adds to the existing body of literature on neuroticism by simultaneously testing both direct and indirect effects of neuroticism on relationship satisfaction, which relatively few studies have done, and also by applying neuroticism to a new area of relationship instability: cyclicity. Further, the current study will extend the research on cyclical relationships by examining cyclicity in cohabiting couples where little previous research has

been done. Cohabiting unions are more committed than dating relationships, but are not as committed as marital relationships. Thus it is likely that a number of cohabiting relationships will have experienced cyclicity, but will not have permanently dissolved, as might be the case when studying cyclicity in married relationships. In addition to expanding the research on cyclicity in a sample of cohabiting couples, this study will also examine personality, which has yet to be examined in relation to cyclicity.

Chapter 3 - Method

Sample and Procedures

The sample for this study was a random sample drawn from the entire population of participants who completed the Relationship Evaluation Questionnaire between 2006 and 2012 (Busby, Holman, & Taniguchi, 2001). All participants completed the RELATE instrument online after being referred from other sources. Of the full sample, 27% were referred to the online site by their instructor in a class, 12% were directed by a relationship educator or therapist, 7% were sent to the site by clergy, 13% were referred by a friend or family member, 9% were referred by an ad they saw online or in print, and 18% found the instrument by searching for it online. Given this recruitment strategy, the data collectors caution that RELATE likely oversamples couples moving toward marriage and those with higher socioeconomic status than more nationally representative samples.

The initial sample of 5,400 couples for this study was reduced to only respondents who reported they were currently cohabiting with their partner, based on the female partner's report. This resulted in a sample of 3,582 couples, and the sample had less than 1% missing data. The mean age of males was 31 ($SD = 7.66$) and the mean age of females was 29 ($SD = 6.75$) (see Table 1 for descriptive statistics for cyclical and noncyclical males and females). The majority of males and females had a Bachelor's degree or higher (60% and 67%, respectively). The majority of males and females were white (72% and 71%, respectively), 4% of males and 6% of females were Asian, 4% of males and 3% of females were Hispanic or Latino, 3% of males and 3% of females were African American/Black, 2% of males and 3% of females indicated more than one race, and 15% of males and 14% of females were "other". Twenty-nine percent of males and 43% of females indicated their yearly gross income was under \$40,000, 34% of males and 36% of females indicated their yearly gross income was between \$40,000 and \$80,000, and 37% of males and 21% of females indicated that their yearly gross income was above \$80,000. This sample appears to be higher educated than what is nationally representative for cohabiting couples. According to the U.S. Census Bureau, 49.4% of unmarried partners have a high-school diploma or less, and only 19.7% have a bachelor's degree or higher. This sample, however, is consistent with national demographics of cohabiting couples in terms of race. The U.S. Census

Bureau reported that 67% of cohabiting couples are White (Kreider, 2010), which is similar to the current sample.

Measures

The Relationship Evaluation Questionnaire (RELATE; Holman, Busby, Doxey, Klein, & Loyer-Carlson, 1997) is a 271-item comprehensive online questionnaire that assesses individual, familial, cultural, and couple contexts of relationships that are predictors of relationship satisfaction and stability (Busby et al., 2001). The subscales used in RELATE typically consist of 3-5 items and demonstrate high internal consistency (alphas between .70 and .90), as well as high construct validity and concurrent validity (Busby et al., 2001). Most of the items in RELATE ask individuals to rate themselves and their partner on various traits and skills using a 5-point Likert-type scale ranging from 1 (*never/strongly disagree*) to 5 (*very often/strongly agree*). Parceling was utilized to create latent constructs with parceled items for neuroticism, conflict, communication, and relationship satisfaction (Little, Cunningham, Shahar, & Widaman, 2002). Parcels have greater reliability than the items that are used to create them and are likely to be more normally distributed than the items (Little, 2013).

Neuroticism

Neuroticism was measured by seven items. Respondents were instructed to rate how much the words or phrases, such as “Worrier” and “Sad and blue”, described themselves on a scale from *never* (1) to *very often* (5). The scale was computed by taking the mean of the seven items, and higher scores indicate higher levels of neuroticism. Cronbach’s alpha was .84 for male and females.

Conflict

Conflict was assessed with seven items about behaviors typical in conflict. Respondents were instructed to rate how they acted when they and their partner have a conflict on a scale from *never* (1) to *very often* (5) on items such as “There’s no stopping me once I get started complaining” and “When I get upset I can see glaring faults in my partner’s personality.” The scale was computed by taking the mean of the seven items, and higher scores indicate higher

levels of conflict behavior. The scale produced a Cronbach's alpha of .78 for males and .80 for females.

Communication

Communication was measured by seven items about positive communication traits. Respondents were instructed to rate how they act in the relationship on a scale from *never* (1) to *very often* (5) on items such as "I understand my partner's feelings" and "I sit down with my partner and just talk things over." The scale was computed by taking the mean of the seven items, and higher scores indicate higher levels of positive communication behaviors. The Cronbach's alpha for both males and females was .84.

Relationship Satisfaction

Relationship satisfaction was determined by asking respondents how satisfied they were with the relationship on four items, such as "The love experienced" and "The amount of relationship quality experienced." Items were rated on a scale of *very dissatisfied* (1) to *very satisfied* (5). The scale was computed by taking the mean of the four items, and higher scores indicate higher levels of relationship satisfaction. The scale produced a Cronbach's alpha of .80 for males and .79 for females.

Cyclical

Cyclical was determined by the question "How often have you broken up or separated and then gotten back together?" Respondents were asked to rate this on a scale of *never* (1) to *very often* (5). Respondents who answered higher than *never* (1), indicating they had broken up and then gotten back together at least once in the past were considered cyclical. This was determined for the couple by the female partner's rating of the item.

Control Variables

Several variables were controlled for in the current study: age, income, education, age, relationship length, and the presence of children. Age was reported as a continuous variable. Income was reported as the respondent's personal yearly gross income before taxes and deductions and was measured as an ordered categorical variable ranging from *None* (0) to *\$300,000 and above* (11). Education was reported as how much education the respondent had

completed and was measured as an ordered categorical variable ranging from *Less than high school* (1) to *Graduate or professional degree* (9). Relationship length was reported as how long the respondent and his or her partner had been dating and was measured as an ordered categorical variable ranging from *0 to 3 months* (1) to *More than 40 years* (11). The presence of children was recoded to a dichotomous dummy-coded variable. The female partner's response was used to determine relationship length and presence of children for the couples, since female partners tend to respond more accurately to items of this nature. See Tables 2 and 3 for correlations of variables used in the current study.

Analyses

Normality of the data were assessed using IBM SPSS Statistics Version 21 (IBM Corporation, 2012). The scales of neuroticism, communication, conflict, and satisfaction all had acceptable values for skewness and kurtosis, that is the values were inside the accepted ranges of absolute value of 2 and 7, respectively, and should therefore be considered normally distributed (Chou & Bentler, 1995). Due to the normal distribution of the data, Maximum Likelihood (ML) was chosen as the appropriate estimator, and missing data were handled with MPlus 7 (Muthen & Muthen, 1998-2011) using full-information maximum likelihood. An Actor-Partner Interdependence Model (APIM) was run to test the associations between neuroticism, conflict, communication, relationship satisfaction, and the moderating effect of cyclicity on this association (See Figure 1). The model included cyclical and noncyclical couples and tested the direct effects and indirect effects of neuroticism on relationship satisfaction..

To test model fit, χ^2 difference tests were used. Because this test is influenced by sample size and may result in significance even when the model is minimally mis-specified (Marsh, Hau, & Wen, 2004), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), and the standardized root mean square residual (SRMR) were also used to examine overall model-data fit. Values greater than .95 for CFI and smaller than .06 and .08 for RMSEA and SRMR suggest good model fit (Hu & Bentler, 1999). Finally, to test mediating pathways bootstrapping procedures were used as outlined in Preacher and Hayes (2008).

Chapter 4 - Results

Couples that reported experiencing cyclicity made up 29% of the sample ($n = 1055$), and the remaining 71% ($n=2527$) were considered noncyclical. On average, cyclical couples reported having been in their relationship longer than noncyclical couples ($t[1671] = -7.99, p < .001$). About 11% of noncyclical couples had been together less than one year, about 39% had been together one to two years, 40% had been together three to five years, and about 10% had been together more than five years. Only 8% of cyclical couples reported having been together less than one year, and only about 22% had been together one to two years, however, 45% reported having been together three to five years, and almost 25% reported having been together more than five years. Cyclical couples were also more likely to have children with about 22% indicating the presence of at least one child, whereas only about 18% of noncyclical couples indicated the presence of a child ($\chi^2[1] = 10.03, p < .01$).

Cyclical males and females were on average younger than their noncyclical counterparts (males: $t[3471] = 2.85, p < .01$; females: $t[3470] = 4.05, p < .001$) (see Table 1 for descriptive statistics). Males and females with a history of cyclicity had also on average completed significantly less education (males: $t[1906] = 5.06, p < .001$; females: $t[1912] = 3.93, p < .001$) and had significantly lower incomes (males: $t[1679] = 2.70, p < .01$; females: $t[1673] = 2.17, p < .05$) than those without a history of cyclicity. Cyclical and noncyclical males and females did not appear to differ much in terms of race.

Bivariate Analyses

Group mean differences between cyclical and noncyclical males and females were tested to see if they differed on neuroticism, communication, conflict, and satisfaction (see Table 4). A t-test showed that means were significantly different between cyclical and noncyclical males and females at the $p < .001$ or $p < .01$ level. Cyclical males and females reported higher mean scores for neuroticism and conflict, indicating those that have a history of cyclicity also have higher levels of neuroticism and higher levels of conflict behaviors. Noncyclical males and females reported higher mean scores for communication and satisfaction, indicating that those without a history of cyclicity also have higher levels of positive communication behaviors and relationship satisfaction.

Measurement Model

According to Kline (2005), before testing to see if structural paths differ across groups, partial measurement invariance must be determined. A multiple group Confirmatory Factor Analysis was run to determine the level of measurement invariance across cyclical and noncyclical groups. The first step of this process was to establish well-fitting measurement models separately for cyclical and noncyclical couples (Byrne, 2012). Although model fit indices indicated good fit for cyclical couples ($\chi^2[181] = 604.83, p < .001$; RMSEA = .05 [90% CI: .04-.05]; CFI = .96; and SRMR = .05) and noncyclical couples ($\chi^2[181] = 848.56, p < .001$; RMSEA = .04 [90% CI: .03-.04]; CFI = .97; and SRMR = .03), modification indices indicated that parcels from the conflict scale were cross loading onto the communication and satisfaction latent constructs, so conflict was removed from the model. The modification indices also indicated that parcels for male and female satisfaction needed to be correlated, which was included in the final model (see Figures 2 and 3). This resulted in good model fit for the full sample: $\chi^2[194] = 388.22, p < .001$; RMSEA = .02 [90% CI: .02-.03]; CFI = .99; and SRMR = .02.

The next step was to run the unconstrained multiple group measurement model (Byrne, 2012). This was done by specifying the factor loadings to be freely estimated for cyclical and noncyclical couples. The model with unconstrained factor loadings had good model fit ($\chi^2[184] = 370.39, p < .001$; CFI = .99, RMSEA = .02 [90% CI: .02-.03]; and SRMR = .02). Next, all factor loadings were constrained to be equal across groups. The fully constrained model also resulted in good model fit, as was found in the first step ($\chi^2[194] = 388.22, p < .001$; CFI = .99, RMSEA = .02 [90% CI: .02-.03]; and SRMR = .02). A chi-square difference test determined that the fully constrained model did not fit significantly worse than the unconstrained model ($\Delta \chi^2 [10] = 17.83, p > .05$), which means it can be concluded that the requirement for at least partial measurement invariance has been met (Byrne, 2012).

Structural Model

Next the structural model was tested to see if better fit was attained as a one-group model or a two-group model. This was done by constraining all paths to be equal across the cyclical and noncyclical groups and running a chi-square difference test. The two-group model was found to fit significantly better ($\Delta \chi^2 [20] = 31.47, p < .05$). Control variables of age, education,

income, relationship length, and the presence of children were added to the model in an attempt to make sure the model was accurately specified. The controls were used to predict females' and males' satisfaction. Income and relationship length were removed from the model because of the high percentage of missing data (53% each). Controlling for the presence of children was not significant, but both males' and females' age and education were kept as control variables in the model because they were significant. Model fit indices indicated that the final unconstrained structural model with controls has good fit: $\chi^2[306] = 717.13, p < .001$; RMSEA = .03 [90% CI: .02-.03]; CFI = .98; and SRMR = .03.

Direct Pathways

Table 5 provides the unstandardized and standardized path coefficients for the cyclical and noncyclical groups for the final unconstrained model with controls.

Actor Paths

A significant negative relationship was found in actor paths from female neuroticism to female communication for cyclical ($\beta = -.27, p < .001$) and noncyclical females ($\beta = -.26, p < .001$), and in the male actor paths from male neuroticism to male communication for both cyclical ($\beta = -.19, p < .001$) and noncyclical males ($\beta = -.22, p < .001$). A significant positive relationship was found in the actor path from female communication to female satisfaction for cyclical ($\beta = .51, p < .001$) and noncyclical females ($\beta = .59, p < .001$), and from male communication to male satisfaction for cyclical ($\beta = .58, p < .001$) and noncyclical males ($\beta = .55, p < .001$). Significance was found in the negative actor path from female neuroticism to female satisfaction for cyclical ($\beta = -.11, p < .01$) and noncyclical females ($\beta = -.10, p < .001$). The actor path from male neuroticism to male satisfaction was also significant and negative for cyclical ($\beta = -.12, p < .001$) and noncyclical males ($\beta = -.10, p < .001$).

Partner Paths

A significant negative relationship was found in partner paths from female neuroticism to male communication for both cyclical ($\beta = -.20, p < .001$) and noncyclical couples ($\beta = -.19, p < .001$), as well as from male neuroticism to female communication for both cyclical ($\beta = -.12, p < .01$) and noncyclical couples ($\beta = -.11, p < .001$). Male partner paths from male communication to female satisfaction were significant and positive for cyclical ($\beta = .26, p < .001$) and

noncyclical couples ($\beta = .20, p < .001$), and the partner path from female communication to male satisfaction was also significant and positive for cyclical ($\beta = .15, p < .001$) and noncyclical couples ($\beta = .18, p < .001$). Significance was found in the negative partner path from female neuroticism to male satisfaction for cyclical couples ($\beta = -.06, p < .05$), but was not for noncyclical couples ($\beta = -.02, p > .05$). The partner path from male neuroticism to female satisfaction was also negative and not significant for cyclical ($\beta = -.02, p > .05$) and noncyclical couples ($\beta = -.01, p > .05$).

For the cyclical sample, this model accounted for 8% of the variance in male communication, 9% of the variance in female communication, 53% of the variance in male satisfaction, and 51% of the variance in female satisfaction. For the noncyclical sample, this model accounted for 9% of the variance in male communication, 9% of the variance in female communication, 48% of the variance in male satisfaction, and 55% of the variance in female satisfaction.

Indirect Pathways

Bootstrapping procedures were used to test for mediating effects in the model (Preacher & Hayes, 2008). All indirect pathways were significant, both actor effects and partner effects, for cyclical and noncyclical couples (see Table 6). The actor indirect path from female neuroticism to female satisfaction through female communication was negative and significant for both cyclical females ($\beta = -.14, p < .001, CI = -.20, -.14$) and noncyclical females ($\beta = -.15, p < .001, CI = -.20, -.14$), as was the actor indirect path from male neuroticism to male satisfaction through male communication for both cyclical males ($\beta = -.14, p < .001, CI = -.20, -.13$) and noncyclical males ($\beta = -.11, p < .001, CI = -.15, -.10$).

Similarly, evidence for mediating effects through partner pathways were also found. The path from female neuroticism to female satisfaction through male communication was negative and significant for both cyclical couples ($\beta = -.05, p < .001, CI = -.09, -.04$) and noncyclical couples ($\beta = -.04, p < .001, CI = -.05, -.03$), as was the path from male neuroticism to male satisfaction through female communication for cyclical ($\beta = -.02, p < .01, CI = -.03, -.01$) and noncyclical couples ($\beta = -.02, p < .001, CI = -.03, -.01$). Significance was also found for the negative paths from female neuroticism to male satisfaction through male communication for cyclical ($\beta = -.13, p < .001, CI = -.18, -.11$) and noncyclical couples ($\beta = -.10, p < .001, CI = -$

.13, -.08), and through female communication for cyclical couples ($\beta = -.04, p < .01, CI = -.07, -.04$) and noncyclical couples ($\beta = -.05, p < .001, CI = -.07, -.04$). Paths from male neuroticism to female satisfaction through male communication for cyclical couples ($\beta = -.06, p < .001, CI = -.10, -.05$) and noncyclical couples ($\beta = -.04, p < .001, CI = -.06, -.03$) were also negative and significant. Finally, paths from male neuroticism to female satisfaction through female communication were negative and significant for cyclical ($\beta = -.06, p < .001, CI = -.10, -.05$) and noncyclical couples ($\beta = -.07, p < .001, CI = -.10, -.05$) (see Table 6).

Moderation

Moderating effects of cyclicity were tested by constraining direct effects to be equal for both cyclical and noncyclical couples. Paths were constrained to be equal across groups one at a time and chi-square difference tests were performed to see if constraining paths resulted in significantly worse model fit. Chi-square difference tests were significant only for pathways from male communication to male satisfaction ($\Delta \chi^2 [1] = 11.13, p < .001$) and male communication to female satisfaction ($\Delta \chi^2 [1] = 6.33, p < .05$). All other pathways were not significantly moderated by cyclicity. These results show that most of the pathways are not different between cyclical and noncyclical couples, indicating that these paths are not moderated by cyclicity, except for the paths from male communication to male and female satisfaction. The final model included constraints on all pathways except the two pathways from male communication to male and female satisfaction ($\chi^2 [324] = 728.11, p < .001$; RMSEA = .03 [90% CI: .02-.03]; CFI = .99; and SRMR = .03) (see Figures 2 and 3).

Chapter 5 - Discussion

The primary goal of this study was to continue expanding the research on cyclicity by examining a well-studied personality trait, neuroticism, and what effects cyclicity has on the relationship between neuroticism and relationship satisfaction. A second goal of this study was to examine the direct and indirect effects of neuroticism on relationship satisfaction through communication.

Group Differences (H1). Results supported the first hypothesis, showing that there were significant differences between cyclical and noncyclical couples in the current sample. Cyclical couples had significantly higher scores on neuroticism than noncyclical couples for both males and females, and significantly lower scores on communication than noncyclical couples. This is consistent with previous findings by Vennum et al. (2013), who also found that couples who have experienced a breakup and renewal had poorer communication skills than those who had not. Because no research has previously been done on personality traits in cyclical couples, the current findings also add to the literature showing that cyclical partners are higher in neuroticism than their noncyclical counterparts. Although it cannot be said from these findings if higher levels of neuroticism predict cyclicity, or if cyclicity predicts higher levels of neuroticism, previous literature has shown that neuroticism is considered a stable trait in adulthood, which could indicate that neuroticism is already present in individuals before they enter into an unstable romantic relationship (Costa et al., 2000; Hinnen et al., 2008). This increases what we know about cyclical couples and the factors that may explain the differences between them and noncyclical couples. Noncyclical couples, both males and females, had significantly higher scores on relationship satisfaction than cyclical couples. This is consistent with the literature as Vennum et al. (2013) found that cohabiting adult couples who had experienced a breakup and renewal reported lower levels of satisfaction compared to noncyclical couples. The findings of this study in combination with findings from the current study again add to our understanding of cyclical couples in more committed relationships, and the differences between them and their noncyclical counterparts, by focusing on a population other than college students' dating relationships.

Direct effects of neuroticism (H2, H3, H4).

Actor Paths. The second, third, and fourth hypotheses had mixed results. Both female

and male direct actor paths from neuroticism to satisfaction were negative and significant for both cyclical and noncyclical couples, as hypothesized. This is consistent with previous findings, which have found that one's own neuroticism is negatively associated with one's own relationship satisfaction (Belsky & Hsieh, 1998; Botwin, Buss, & Shackelford, 1997; Bouchard et al., 1999; Buss, 1991; Caughlin et al., 2000; Fisher & McNulty, 2008; Hinnen, et al., 1998; Lavee & Ben-Ari, 2004; Karney & Bradbury, 1995; Karney & Bradbury, 1997; Kelly & Conley, 1987; Kurdek, 1993; Kurdek, 1997; Larsen et al., 2010; Robins et al., 2000; Russell & Wells, 1994).

Partner Paths. The only partner path, however, that was significant was the negative path from female neuroticism to male satisfaction for cyclical couples. This negative path was not significant for noncyclical couples indicating that in couples that have experienced cyclicity, there is a stronger relationship between the female partner's level of neuroticism and the male partner's level of satisfaction. Although this path was significant at the $p < .05$ level, this finding was likely due to the large sample size used in this study. Moderating effects of cyclicity were not found on this path, so essentially this path is the same for cyclical and noncyclical couples. The partner path from male neuroticism to female satisfaction was negative and not significant for cyclical or noncyclical couples, indicating that the negative association between the male partner's level of neuroticism and the female partner's level of satisfaction is not strong. This is inconsistent with the literature, as Robins et al. (2000) found that the partner's level of neuroticism significantly predicted the male or female's level of relationship satisfaction, more so than his or her own level of neuroticism.

One reason for this inconsistency could be that the association between neuroticism and relationship satisfaction is not so direct in this sample. Although Intrapersonal theory has been supported numerous times in the past, it could be that for the couples sampled here the partner's level of neuroticism does not directly affect their own relationship satisfaction. Other mediating variables may be at play in the association between neuroticism and relationship satisfaction, which leads to the fifth hypothesis:

Indirect effects (H5). Results strongly supported the fifth hypothesis, showing that the mediating pathways through communication were significant. The effects of neuroticism on relationship satisfaction through communication were significant for both male and female actor and partner effects at the $p < .01$ level.

These findings are consistent with the VSA model. Neuroticism was inversely related to relationship satisfaction through communication. A higher level of neuroticism, the enduring vulnerability, was negatively related to communication, the adaptive process, which in turn was negatively associated with relationship satisfaction, as evidenced by lower levels of satisfaction for both males and females in cyclical and noncyclical relationships.

Karney & Bradbury (1997) found effects of couple interactions on marital satisfaction over time in longitudinal data, and this cross-sectional data also supports this research. These findings show that at this particular point in these couples' relationships, the mediating effects of couple interactions are stronger and, in some cases, significant when compared to the direct effects of neuroticism on relationship satisfaction. In this sample, direct partner effects of neuroticism on relationship satisfaction were not significant, but indirect partner effects through communication were significant. This shows that for the couples in this sample, the association of their partner's neuroticism with their own relationship satisfaction was significantly mediated by their own and their partner's communication.

One explanation for the significance of the mediating partner effects over the direct partner effects could be that even though a romantic partner may exhibit a high level of neurotic personality traits, what is more important to the other partner's satisfaction with the relationship is how the neurotic personality traits in the partner impact both partners' communication with each other. A female cohabiting partner's relationship satisfaction may be less negatively impacted by the male cohabiting partner's neurotic traits, but when those neurotic traits affect her communication and his communication, her satisfaction is significantly affected.

Moderating effects (H6). Although a history of cyclicity did not moderate the relationships between partners' neuroticism and communication, it did moderate the relationship of male communication with both male and female satisfaction. Specifically, for couples with a history of cyclicity, male's communication has a stronger positive relationship to their own and their female partner's satisfaction.

These findings are consistent with what was expected. Using the VSA model, it was predicted that adaptive processes would have a stronger relationship with relationship satisfaction in cyclical couples. This could mean that adaptive processes, such as communication, and the way the male partner in particular handles these processes is more important when looking at relationship satisfaction for cyclical couples than noncyclical couples.

Communication could play a stronger role in cyclical couples due to the greater amount of uncertainty in these relationships (Vennum et al. 2013). Cyclical couples are more uncertain about their relationship, so perhaps communication is more closely associated with satisfaction because each exchange of communication has the potential to end in another breakup or a more solidified relationship status.

Limitations

One limitation of the current study is that it relied on cross-sectional data. When looking at variables in relationships, it is important to gather data from multiple time points, as relationships can have varying degrees of conflict, communication, and satisfaction over time. Longitudinal data is also required to test true mediation, as time separation is needed. Cross-sectional data is also limiting in that it cannot be used to examine the timing of cyclicity in relationships. This limits the accuracy of the reports on relationship history.

Another limitation to the current study is the characteristics of the sample. The original data collectors of the RELATE dataset caution that due to the sampling procedures, couples responding to the questionnaire are more likely to be higher educated, and moving toward marriage than a representative sample of cohabiting couples in the U.S. (Kreider, 2010). This sample was higher educated than what is nationally representative so these findings are likely to generalize to cohabiting couples that are higher educated.

Strengths

Despite these limitations, this study also has some strengths. The current study used dyadic data. This allowed the researcher to take into account the interdependent nature of the females and males responses and look at processes occurring between them within the dyad. Another strength of the current study was the fairly large sample size that was used. This made it possible to run a full structural model and gave power to test things that a smaller sample size might not have allowed for.

Clinical Implications

The results of this study indicate possible areas of intervention for clinicians. Tests of group mean differences showed that couples who have experienced cyclicity reported significantly higher levels of neuroticism, higher levels of conflict, lower levels of positive

communication, and lower levels of relationship satisfaction. Although neuroticism is a stable trait that will not likely change, psychoeducation around neurotic personality traits, as well as conflict, communication, and satisfaction may be potential areas for clinicians to focus on with cyclical couples. Mediating partner effects of neuroticism on relationship satisfaction through communication were also significant, which indicated the possibility that how neurotic traits impact communication is more important when looking at satisfaction than just the direct effect of neurotic personality traits on satisfaction. This also points to a possible point of intervention, where clinicians could focus on the communication processes in the couple's relationship.

Future Research

Future research should continue to examine personality traits and cyclicity in longitudinal data, as longitudinal data is better able to detect the unique factors associated with cyclicity, such as the timing of each breakup and renewal. The current study also sought to test the mediating effects of couple interactions on the association between neuroticism and relationship satisfaction. Further research should seek to replicate and expand the evidence for this mediating effect found in the current study in a larger, more representative sample, looking at couples in dating, cohabiting, and married relationships. Future studies should also examine other possible mediators, such as commitment or attachment style, as these could also mediate the association between neuroticism and relationship satisfaction.

Conclusion

This study sought to expand the literature on cyclical couples, test models of direct and indirect effects of neuroticism on relationship satisfaction, and examine the effects of cyclicity on these relationships. Results showed that there were some significant differences between cyclical and noncyclical couples. Of importance is the finding that cyclical couples are higher in neuroticism than noncyclical couples, as personality has yet to be studied in relation to relationship instability. Moderating effects of cyclicity were also found on paths from male communication to male and female satisfaction. Finally, mediating pathways from neuroticism to relationship satisfaction through couple interactions were found to be significant, providing support for the VSA model. The results of this study show that it is important to continue studying patterns of relationship instability as understanding the processes occurring in these relationships

will provide useful information for those seeking to help tumultuous couples, as well as providing information on where best to intervene.

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Appendix A - Tables

Table 1 Descriptive Statistics for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Females and Males

Variables	Female		Male	
	Cyclical	Noncyclical	Cyclical	Noncyclical
	<i>M (SD) or %</i>	<i>M (SD) or %</i>	<i>M (SD) or %</i>	<i>M (SD) or %</i>
Age (years)	28.04 (6.53)	29.07 (6.90)	30.26 (7.98)	31.08 (7.56)
Race				
White	69.00	72.60	70.00	73.60
Black	4.10	2.10	4.90	2.60
Hispanic or Latino	4.20	2.50	4.70	3.00
Asian	5.30	5.90	4.00	3.80
Other	14.00	14.00	14.40	14.70
Multi-racial	3.30	2.90	2.00	2.30
Education				
Some college or less	39.10	31.40	45.80	36.50
Bachelor's degree or higher	60.90	68.60	54.20	63.50
Income				
Under \$40,000	50.20	41.60	33.10	27.80
\$40,000-\$79,999	31.90	36.70	35.50	33.70
\$80,000 and higher	17.90	21.70	31.40	38.50

Table 2 Correlations among Variables of Interest for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Males

Variables	1	2	3	4	5	6	7	8	9
1. Age	–	.46***	.25***	-.03	.24***	.09**	-.04	.07*	-.09***
2. Income	.34***	–	.34***	.04	.02	-.11*	-.002	-.05	-.01
3. Education	.18***	.37***	–	.10*	-.22***	-.05	.11***	-.02	.03
4. Relationship Length	.07	.10**	.10***	–	-.15**	-.02	.01	-.02	-.04
5. Presence of Children	.34***	-.07*	-.24**	.10**	–	.01	-.16***	.12***	-.13***
6. Neuroticism	.02	-.07*	-.02	-.03	.04*	–	-.17***	.28***	-.22***
7. Communication	-.03	.01	.05*	-.10***	-.03	-.19***	–	-.41***	.57***
8. Conflict	-.05**	.02	.01	.09**	-.03	.26***	-.46***	–	-.39***
9. Satisfaction	-.05*	-.01	-.03	-.15***	-.03	-.19***	.55***	-.43***	–

Note: Correlations for cyclical males are reported above the diagonal and correlations for noncyclical males are reported below the diagonal. * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed)

Table 3 Correlations among Variables of Interest for Cyclical (N = 2,527) and Noncyclical (N = 1,055) Females

Variables	1	2	3	4	5	6	7	8	9
1. Age	–	.41***	.25***	.07	.19***	.02	-.12***	.02	-.09**
2. Income	.41***	–	.34***	.07	-.10*	-.09*	-.03	-.03	-.04
3. Education	.23***	.36***	–	.14**	-.23***	-.07*	.09**	-.05	.04
4. Relationship Length	.06*	.10**	.11***	–	-.15**	-.07	-.01	-.04	-.03
5. Presence of Children	.30***	-.09**	-.23***	-.10**	–	.07*	-.15***	.12***	-.12***
6. Neuroticism	-.06**	-.06*	-.01	.03	-.03	–	-.24***	.40***	-.25***
7. Communication	-.02	.003	.05*	-.05	-.03	-.23***	–	-.41***	.54***
8. Conflict	-.06**	.07*	.03	.10**	-.01	.35***	-.34***	–	-.40***
9. Satisfaction	-.05*	-.01	-.02	-.17***	-.01	-.24***	.57***	-.42***	–

Note: Correlations for cyclical females are reported above the diagonal and correlations for noncyclical females are reported below the diagonal. * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed)

Table 4 Comparison of Means for Cyclical (N = 1,055) and Noncyclical (N = 2,527) Females and Males

Variable	Females						Males					
	Cyclical		Non-cyclical		<i>t</i>	<i>df</i>	Cyclical		Non-cyclical		<i>t</i>	<i>df</i>
<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>			<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>		
Neuroticism	2.78	.63	2.68	.56	4.41***	1783	2.47	.60	2.41	.55	2.56*	1828
Communication	3.97	.58	4.19	.53	-10.82***	3580 ^a	3.81	.55	3.99	.56	-9.23***	3578 ^a
Conflict	2.61	.67	2.30	.64	13.11***	1894	2.51	.63	2.23	.60	12.47***	3578 ^a
Satisfaction	4.00	.77	4.31	.65	-11.53***	1729	3.98	.75	4.27	.63	-11.06***	1709

Note: ^aEqual variances assumed. **p* < .05, ***p* < .01, ****p* < .001 (two-tailed).

Table 5 Direct Path Coefficients for Cyclical (n= 1,055) and Noncyclical Couples (n= 2,527)

Path	Cyclical			Non-cyclical		
	<i>b</i>	<i>S.E.</i>	β	<i>b</i>	<i>SE</i>	β
F Communication → F Satisfaction	.57***	.05	.51	.62***	.03	.59
F Communication → M Satisfaction	.17***	.04	.15	.19***	.03	.18
M Communication → M Satisfaction	.76***	.05	.58	.58***	.03	.55
M Communication → F Satisfaction	.34***	.05	.26	.20***	.03	.20
F Neuroticism → F Communication	-.27***	.04	-.27	-.27***	.02	-.26
F Neuroticism → M Communication	-.17***	.03	-.20	-.19***	.02	-.19
F Neuroticism → F Satisfaction	-.12**	.04	-.11	-.11***	.02	-.10
F Neuroticism → M Satisfaction	-.07	.04	-.06	-.02	.02	-.02
M Neuroticism → M Communication	-.18***	.03	-.19	-.23***	.03	-.22
M Neuroticism → F Communication	-.13**	.04	-.12	-.12***	.03	-.11
M Neuroticism → M Satisfaction	-.15***	.04	-.12	-.01***	.02	-.10
M Neuroticism → F Satisfaction	-.02	.04	-.02	-.01	.02	-.01

Note: F = Female, M = Male. * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed). Paths in bold were significantly moderated by cyclicity.

Table 6 Indirect Path Coefficients and Confidence Intervals for Cyclical (N=1,055) and Noncyclical (N=2,527) Couples

Indirect Path	Cyclical		Non-cyclical	
	β	CI	β	CI
F Neuroticism → F Communication → F Satisfaction	-.14***	-.20, -.14	-.15***	-.20, -.14
F Neuroticism → M Communication → F Satisfaction	-.05***	-.09, -.04	-.04***	-.05, -.03
F Neuroticism → F Communication → M Satisfaction	-.04***	-.07, -.04	-.05***	-.07, -.04
F Neuroticism → M Communication → M Satisfaction	-.13***	-.18, -.11	-.10***	-.13, -.08
M Neuroticism → F Communication → F Satisfaction	-.06***	-.10, -.05	-.07***	-.10, -.05
M Neuroticism → M Communication → F Satisfaction	-.06***	-.10, -.05	-.04***	-.06, -.03
M Neuroticism → F Communication → M Satisfaction	-.02***	-.03, -.01	-.02***	-.03, -.01
M Neuroticism → M Communication → M Satisfaction	-.14***	-.20, -.13	-.11***	-.15, -.10

Note: F = Female, M = Male. *** $p < .001$ (two-tailed). Indirect paths tested with 2,000 bootstraps. CI = 90% confidence interval.

Appendix B - Figures

Figure 1 Proposed Actor-Partner Interdependence Model

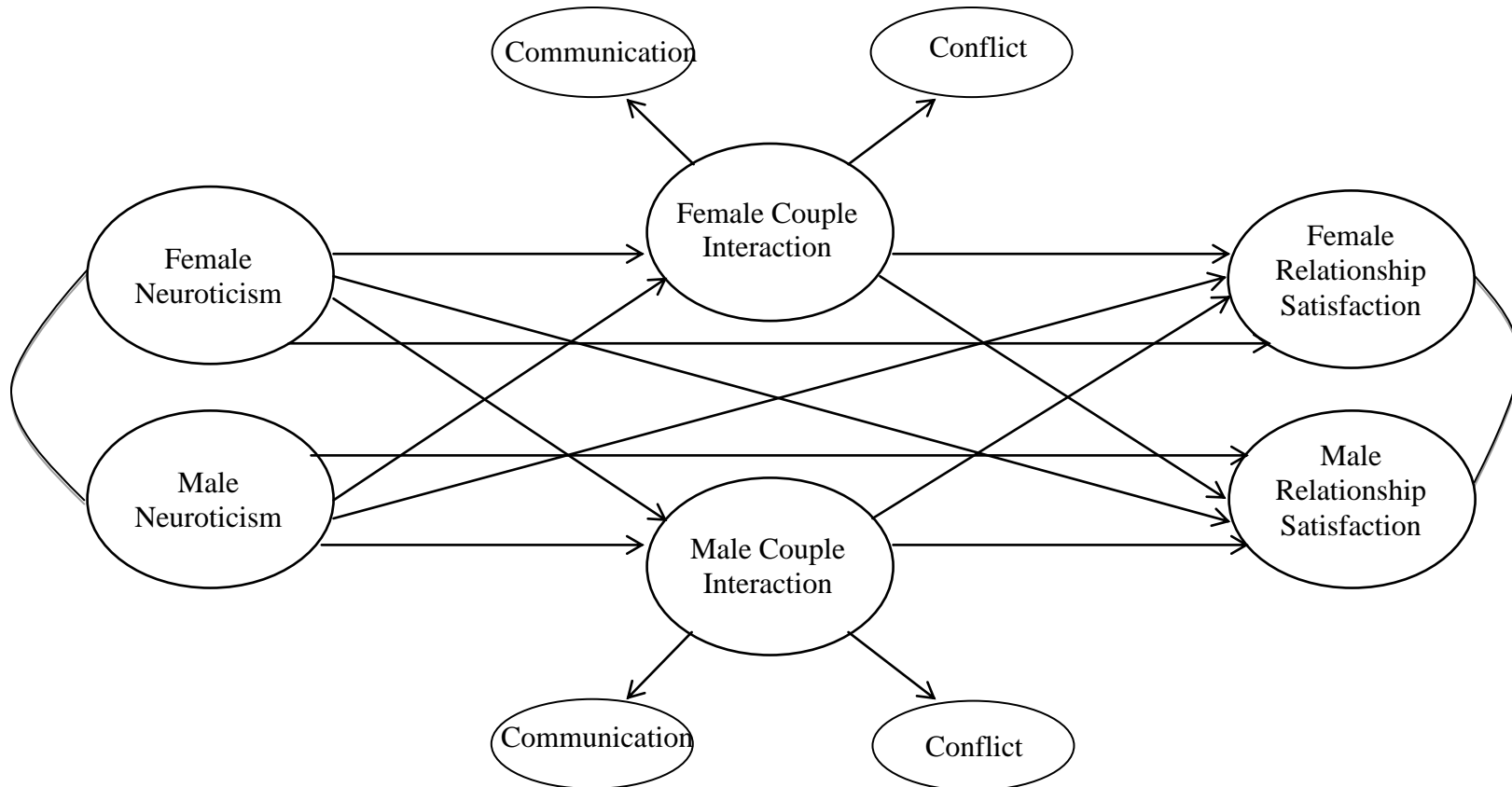
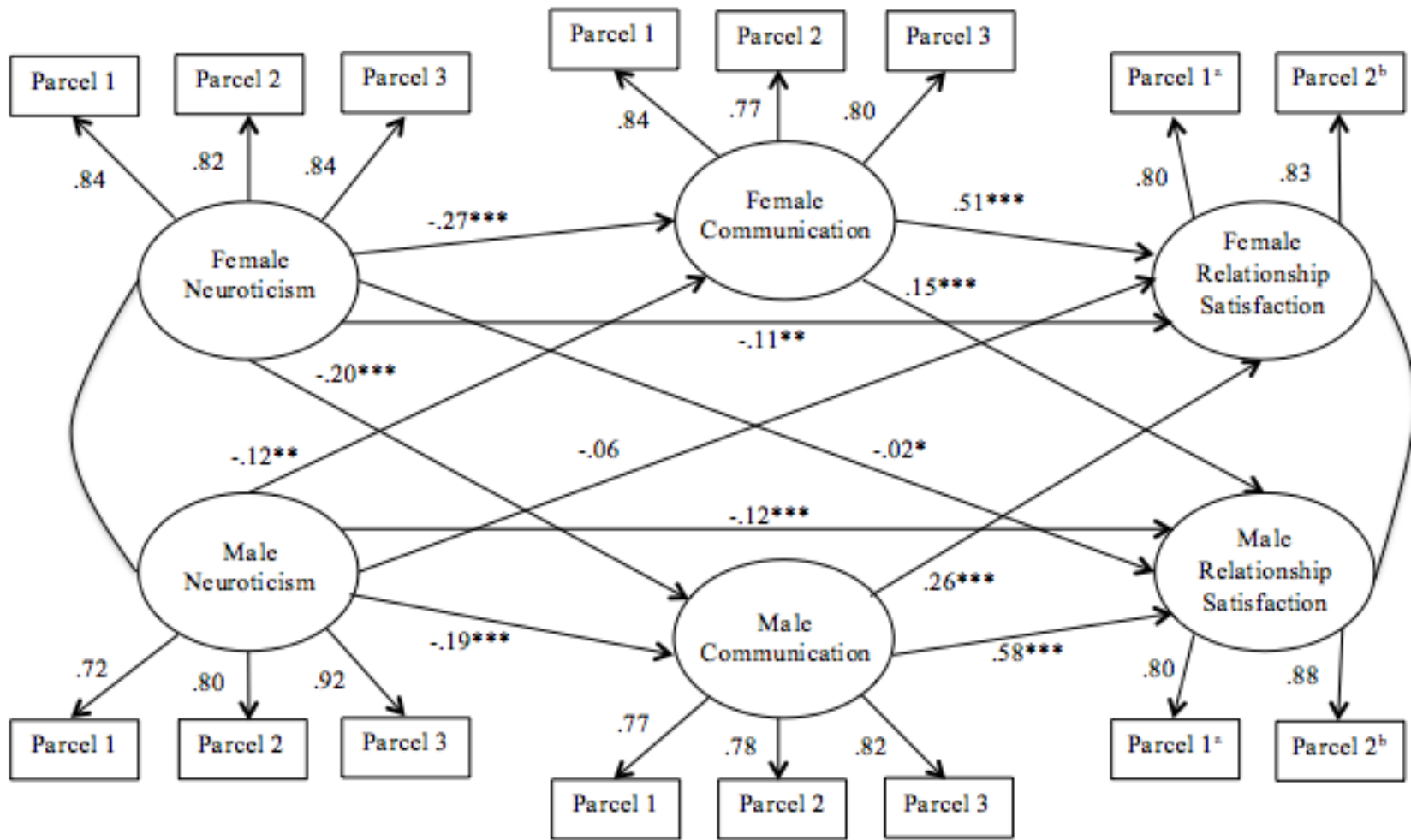
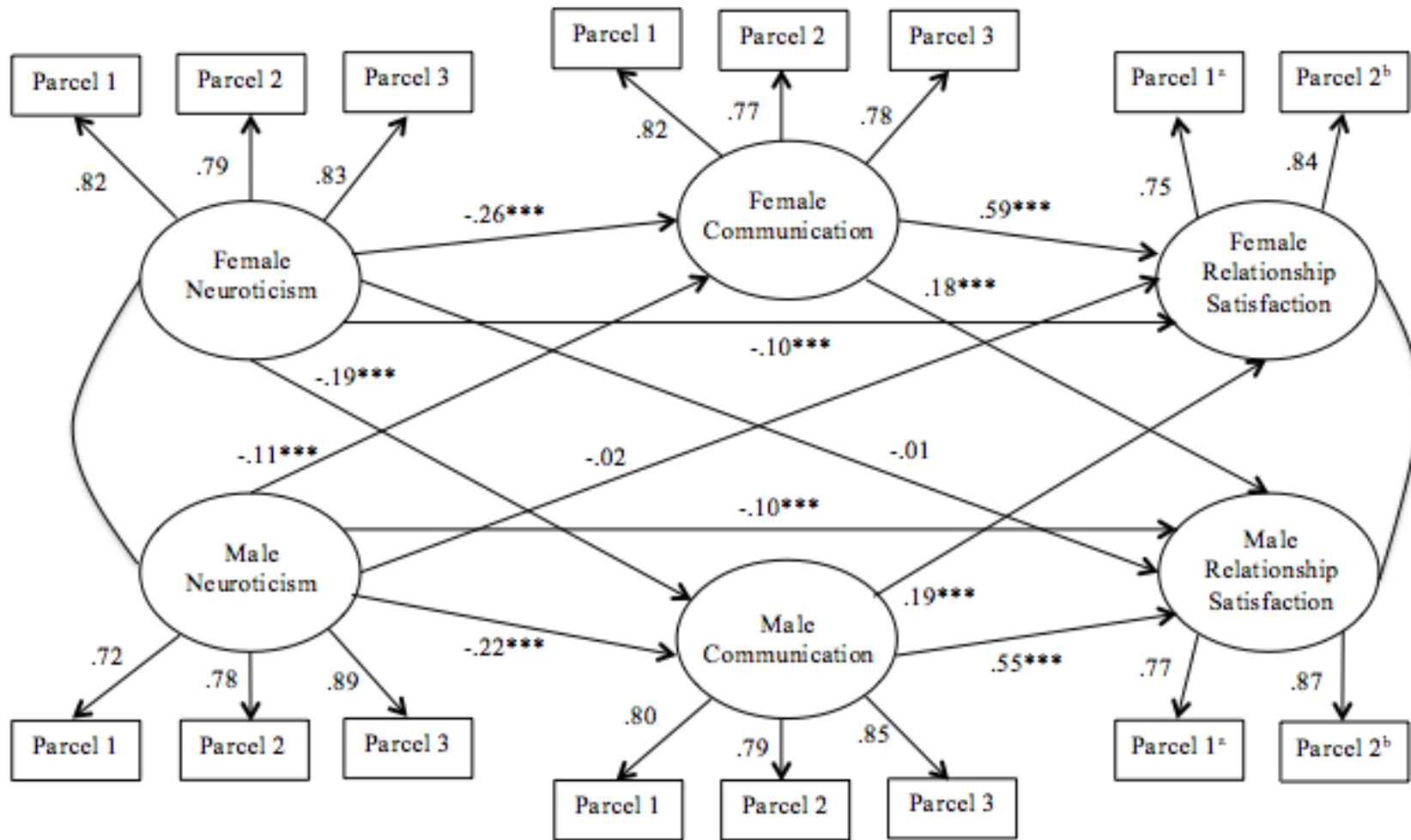


Figure 2 Final Actor-Partner Interdependence Model for Cyclical Couples (N = 1,055)



Note: ^a Denotes correlation between two parcels. ^b Denotes correlation between two parcels. * $p < .05$, ** $p < .01$, *** $p < .001$, (two-tailed). $\chi^2[324] = 728.11, p < .001$; RMSEA = .03 [90% CI: .02-.03]; CFI = .99; and SRMR = .03

Figure 3 Final Actor-Partner Interdependence Model for Noncyclical Couples (N = 2,527)



Note: ^a Denotes correlation between two parcels. ^b Denotes correlation between two parcels. * $p < .05$, ** $p < .01$, *** $p < .001$, (two-tailed). $\chi^2[324] = 728.11, p < .001$; RMSEA = .03 [90% CI: .02-.03]; CFI = .99; and SRMR = .03