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**Interpersonal Conflict Behaviour as a Mediator  
between Couples' Personalities and their  
Relationship Satisfaction:  
Application of the Actor-Partner Interdependence  
and Gender-Specific Models**

Maxwell Blumberg

Department of Psychology

Goldsmiths College

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GOLDSMITHS



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**For My Parents**

**Maureen and Gordon**

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## **Abstract**

Intimate couple relationships are central to human wellbeing and studies have demonstrated strong links between relationship distress and physical, mental, and social problems. Psychologists have therefore researched the determinants of relationship outcomes with a view to developing interventions for the amelioration of relationship distress. This research has suffered from a number of limitations. First, the majority of studies have focused on bivariate associations between relationship outcomes and causal factors. Little is therefore known about the effects of interactions between the well researched factors of personality and conflict behaviour on relationship outcomes. In particular, the extent to which conflict behaviour mediates the association between partners' personalities and their relationship satisfaction is unknown. Second, investigations have seldom accounted for the interdependence of observations typical of intimate couples. Third, the majority of studies investigating relationship outcomes of heterosexual couples have assumed that effects on relationship outcomes vary by gender without specifically testing this assumption.

This dissertation examined the associations between Five Factor model personality traits, conflict behaviour, and the relationship satisfaction of 234 heterosexual couples drawn from an Internet-based sample of 1122 participants in intimate couple relationships. The following analyses were performed: conflict behaviour and relationship satisfaction; personality and relationship satisfaction; personality and conflict behaviour; and conflict behaviour as a mediator of the effects of personality on relationship

satisfaction. Analyses were based on the Actor-Partner Interdependence and gender-specific models.

The study found that the association between relationship satisfaction and conflict behaviour was larger than that between relationship satisfaction and personality. Furthermore, the effects of actor conflict behaviour were significantly stronger than those of partner conflict behaviour suggesting that an actor-oriented model of relationship outcomes better accounted for the results. The strongest personality correlate of relationship satisfaction was actor agreeableness while actor neuroticism was most strongly associated with conflict behaviour. The effects of personality on relationship satisfaction were almost completely mediated by conflict behaviour with the effects of neuroticism and agreeableness showing the greatest degree of mediation. Finally, minimal support for a gender-specific model was found.

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## **Thesis Structure**

The thesis consists of seven chapters. Chapter one introduces and motivates the current research investigation, and articulates the research objectives. Chapter two reviews the relevant literature in four sections: conflict behaviour and relationship satisfaction; personality and relationship satisfaction; personality and conflict behaviour; and conflict behaviour as a mediator of the effects of personality on relationship satisfaction.

Chapter three documents the research hypotheses, and chapter four describes the methodology used to recruit participants and collect data, and the assessment instruments used. Preliminary factor analyses to create the conflict behaviour and relationship satisfaction scales are performed here.

Chapter five documents the results of the data analyses and chapter six discusses and interprets the current findings in terms of the research hypotheses and similar investigations. Chapter seven concludes the dissertation and summarises the findings, strengths, limitations, and implications of the research, and offers directions for future research.

# CHAPTER 1

## Introduction

### 1.1 Contextual Background

*Relationships with others lie at the very core of human existence. Humans are conceived within relationships, born into relationships, and live within relationships with others. Each individual's dependence on other people – for the realization of life itself, for survival during one of the longest gestation periods in the animal kingdom, for food and shelter and aid and comfort through the life cycle – is a fundamental fact of human condition*

Berscheid & Peplau (1983, p.1)

Satisfactory intimate couple relationships are central to human existence and overall wellbeing (Baumeister & Leary, 1995; Glenn, 1990; Williams, 2003). In a five-year two-wave panel study of 691 single and cohabiting respondents, Kamp Dush and Amato (2005) found that individuals in steady satisfactory relationships reported significantly greater wellbeing than those who were single.

Despite the benefits of satisfactory couple relationships, there is evidence of widespread relationship dissatisfaction in Western society. In 2004, for example, the divorce rate per 1000 of the population in England

and Wales was 14.0 representing 153, 399 divorces compared to a lower marriage rate of 10.2 per 1000 (Office of National Statistics, 2006a).

Furthermore, the total number of divorces in the UK has increased for four successive years (Office of National Statistics, 2006a,b). There is also evidence of relationship distress in the United States where marital satisfaction, especially among younger couples, is thought to have declined consistently since 1980 (Amato, Johnson, Booth & Rogers, 2003; National Marriage Project, 1999; Rogers & Amato, 1997).

Relationship dissatisfaction has been linked to a wide range of health, economic, and social issues. Health issues include depression, alcoholism, and problems with the cardiovascular and immunological systems (Barnet, Steptoe & Gareis, 2005; Beach, Katz, Kim & Brody, 2003; Bradbury, Rogge & Lawrence, 2001; Kiecolt-Glaser, McGuire, Robles & Glaser, 2002; Spotts et al., 2005). In economic terms, data from 667 separated females drawn from the European Panel Study (12 countries) revealed that average income per capita declined 42% following separation (Uunk, 2003). Socially, children from parents in distressed relationships are more likely to experience mental problems, educational problems and unemployment in later life than children from well-adjusted families (Fincham, 1998; Grych & Fincham, 2001; Kiernan, 1996).

In order to ameliorate relationship distress and extend existing knowledge of relationship psychology, a number of theoretical models proposing various determinants of relationship satisfaction have been mooted. These models include interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959), the investment model (Rusbult, 1983), equity

theory (Walster & Walster, 1975), and social learning theory (Jacobson & Margolin, 1979).

An intrapersonal model that has received particular attention since the earliest days of couple research has been that of personality theory (e.g., Terman, Bottenweiser, Ferguson, Johnson & Wilson, 1938). In general, the most consistent finding of personality models has been the deleterious effect of neuroticism or trait anxiety on relationship satisfaction (e.g. Barelds, 2005; Donnellan, Conger & Bryant, 2004; Eysenck & Wakefield, 1981; Kelly & Conley, 1987; Robins, Caspi & Moffitt, 2000). There are, however, a number of issues associated with the use of personality as a determinant of relationship satisfaction. First, an important objective of contemporary psychology is to explain the mechanisms through which dispositional variables influence social outcomes (Baron & Kenny, 1986; Myers, 2005). The mechanisms through which personality exerts its influence on relationship satisfaction, however, are not well understood (Auhagen & Hinde, 1997; Donnellan et al., 2004). Second, personality traits are reasonably stable over the adult life course (Caspi & Herbener, 1990; Jocklin, McGue & Lykken, 1996). On their own they are therefore unlikely to account for the well-documented changes that arise in relationship satisfaction over the course of couple relationships (e.g. Burgess & Wallin, 1953; Erbert & Duck, 1997; Kurdek, 1999a). Finally, there is evidence that the *joint* effects of intrapersonal factors and interpersonal factors – such as couple communication and conflict behaviours – explain more variance in relationship satisfaction than either of these factors alone (Karney & Bradbury, 1997; Rogge, Bradbury, Hahlweg, Engl & Thurmaier, 2006).

In 1995, Karney and Bradbury (1995a) proposed a Vulnerability-Stress-Adaptation (VSA) model of marital outcomes that addresses a number of the above issues. In this model, the effects of partners' *enduring vulnerabilities* (for example, intrapersonal characteristics such as personality) on relationship outcomes are mediated by *adaptive processes* such as behavioural interactions. One adaptive process in particular – conflict behaviour – has been shown to exert significant influence on relationship satisfaction (e.g. Birchler, Weiss & Vincent, 1975; Cramer, 2003a; Gottman & Krokoff, 1989; Heavey, Layne & Christensen, 1993; Jacobson & Weiss, 1978; Kurdek, 1994a; Rands, Levinger & Mellinger, 1981).

## **1.2 Research Problem**

For a variety of reasons, the VSA model has not been adequately tested. First, researchers tend not to combine multiple theoretical paradigms in the same investigation. Therefore, intrapersonal enduring vulnerabilities and interpersonal adaptational processes are seldom investigated using a single sample (Davies, 2004; Gottman, 1994; Karney & Bradbury, 1997; Kurdek, 1991b). Second, in order to support a mediation hypothesis, a significant association between personality and conflict behaviour must be demonstrated (Baron & Kenny, 1986). Research on associations between personality and conflict behaviour is, however, limited (Asendorpf & Wilpers, 1998; Buss, 1992; Paunonen & Ashton, 2001). Third, many couple relationship outcome investigations have used data from only one partner thereby restricting possible analysis of interactional adaptive patterns between the partners. Fourth, many studies that *have* included both partners in couples used the dyad rather than the individual as the unit of analysis

resulting in an unnecessary loss of information (Donnellan et al. 2004; Kenny, 1988; Schneewind & Gerhard, 2002). Fifth, an overwhelming majority of studies investigating heterosexual couples have used gender as a key distinguishing variable based on the assumption that couple effects vary by gender without formally testing this assumption (Hyde, 2005). In contrast, Kashy and Kenny (1999) argue that actor-partner distinctions are more important than gender differences, and proposed the Actor-Partner Interdependence Model (APIM) for use in couple research. To date, however, few studies have applied this model and continue to distinguish effects by gender (Barelds, 2005; White, Hendrick & Hendrick, 2004). Finally, most research investigations that have included both partners in couples have used analytical approaches such as ordinary least squares regression and ANOVA that assume independence of observations. Independent observations are an unlikely prospect in intimate couple relationships (Kenny, 1996a,b) and if not specifically accounted for in statistical analyses, can result in inaccurate significance levels.

The current investigation addresses these issues and seeks to achieve the objectives described in the following section.

### **1.3 Research Objectives**

Working with a sample of intimate heterosexual couples, the objectives of the current research investigation are:

- 1) To investigate the associations between the following:
  - a) Conflict behaviour and relationship satisfaction
  - b) Personality and relationship satisfaction
  - c) Personality and conflict behaviour

- 2) To investigate the role of conflict behaviour as a mediator between couples' personalities and their relationship satisfaction.

## CHAPTER 2

### Literature Review

#### 2.1 Literature Review: Introduction

*Amid today's greatly increased alternatives, decreased social constraints, and heightened pair instability ... it matters far more how well two partners are pleased with the quality of their relationship*

Levinger (1997, p.3)

Bradbury et al. (2001) argue that “identifying ... the factors that cause variability in relationship quality” (p.62) is a core task of intimate couple research. There are good empirical reasons for assigning a central role to relationship outcomes. First, there is evidence that the amelioration of relationship distress reduces the risk of relationship separation (Kurdek, 1993; Lewis & Spanier, 1979). Second, relationship dissatisfaction has been closely linked to sequelae such as negative physical and emotional states. It is even argued that relationship satisfaction may predict overall wellbeing more strongly than demographic factors such as age, education, and social status (Gagnon, Hersen, Kabacoff & Van Hasselt, 1999; Kurdek, 1991c, 1993).

Two approaches have been particularly important in explaining variance in relationship satisfaction – the intrapersonal and interpersonal perspectives. In particular, partners’ personalities and conflict behaviours

have long been shown to play significant roles in determining their relationship satisfaction (e.g. Lewin, 1948; Terman and Buttenweiser, 1935) and various causal paths between personality, conflict behaviour, and relationship outcomes have been proposed. It is hypothesised (and often assumed) that conflict behaviour mediates the association between couples' personalities and their relationship satisfaction (e.g. Bradbury & Fincham, 1988; Huston & Houts, 1998; Karney & Bradbury, 1995a). Few studies, however, have specifically tested this hypothesis by assessing the combined effects of both intrapersonal and interpersonal factors on a single sample.

The current chapter opens with a review of the theory underpinning the construct *relationship satisfaction*. This is followed by sections reviewing its associations with interpersonal conflict behaviour and personality traits. The literature investigating the association between personality and interpersonal conflict behaviour is then considered as an important component of mediation testing. The review closes with an overview of mediational research in couple samples.

## **2.2 Relationship Satisfaction: An Overview**

### **2.2.1 Introduction**

This section defines the terms *couple relationship* and *relationship satisfaction* in the context of changing social structures and provides a broad overview of factors that have been linked to relationship satisfaction. The section closes with a review of the issues associated with couple research.

### 2.2.2 Definitions

Prager (2000) proposes four contexts in which couple relationships exist: the individual context including intrapersonal characteristics such as attachment styles and personality traits; the relational context featuring dyadic and interpersonal components such as power, support and conflict behaviour; the *social network context* which includes people that influence the relationship such as friends, family, and work colleagues; and the *sociocultural context* that includes factors such as race, social class, culture, and religion. With so many rapidly changing contexts, the difficulty in defining what is meant by labels like *lovers*, *couples*, *intimate relationships*, or *cohabiting pairs* is unsurprising. In fact Levinger (1997) argues that terms like these are merging into a “broadly inclusive label for all sorts of highly interdependent relationships” (p.2) and are no longer restricted to dating or married couples. In the light of such a broad description, even the view that close relationships must include elements like *love*, *self-disclosure*, and *affectionate nonverbal communication* (Hatfield & Rapson, 1996) may be considered overly restrictive. Similarly, Kelley et al.’s (1983) view that close relationships are those which exhibit “strong, frequent, and diverse interdependence that lasts over a considerable period of time” (p.38) may be considered too limiting for modern couple relationships.

For the purposes of the current research, a variation of Levinger’s (1997) liberal definition will be adopted and couple relationships defined as any form of interdependent relationship between two people where the degree of emotional closeness is sufficient for the partners to consider themselves *a couple*.

The definition of couple relationship outcomes is equally problematic. The terms *relationship satisfaction*, *relationship adjustment*, and *relationship quality*, for example, are often used interchangeably although some scholars have attributed specific meanings to them. *Relationship adjustment* refers to an external objective view of relationship success (Erbert & Duck, 1997). *Relationship quality* is a complex construct incorporating multiple dimensions for evaluating relationships such as relationship satisfaction, integration, disagreements, partner roles, communication and interaction, happiness, adjustment, the degree of relationship stability, commitment, intimacy, and love (Diener, Emmons, Larsen & Griffin, 1985; Fletcher, Simpson & Thomas, 2000; Lewis & Spanier, 1979; Sabatelli, 1988). Issues with multidimensional conceptions of relationship outcomes are discussed in the following section. *Relationship satisfaction*, the focus of the current investigation, can be defined as the individual's subjective evaluation of relationship success and represents the discrepancy between the perceived and the idealised state of an individual's relationship (Fincham & Linfield, 1997; Hendrick & Hendrick, 1997; Hinde, 1997). More generally, Fincham and Beach (1999) argue that relationship satisfaction is an attitude representing the association between the cognitive representation of the relationship and its summary evaluation. Crosby (1991) argues that subjective definitions of relationship satisfaction are useful in clinical contexts because they facilitate rapid assessment of relationship attitudes.

### **2.2.3 Relationship Satisfaction: Causes and Correlates**

Research into the causes and correlates of relationship satisfaction can be categorised into five broad areas: intrapersonal characteristics,

interpersonal factors, socioeconomic and demographic factors, and dyadic factors (Ayles, 2003; Karney & Bradbury, 1995a).

### **2.2.3.1 Intrapersonal Factors**

Intrapersonal factors are inherent to the individual and include, for example, attachment styles, affect, gender, beliefs, mental health, and personality traits. Table A.1 (Appendix A) provides examples of intrapersonal factors and studies that have investigated them. The intrapersonal factor *personality* is a focus of the current research and will be discussed in section 2.4. Some studies have reported that gender is a determinant of relationship satisfaction and that males are generally more satisfied with their relationships than females (e.g. Schumm, Webb & Bollman, 1998). Kurdek (2005), however, could find few significant differences. Partner attitudes are another example of an intrapersonal characteristic (Fincham, Garnier, Gano-Phillips & Osborne, 1995; Karney, Bradbury, Fincham & Sullivan, 1994). Fincham et al. (1995) showed that viewed as an attitude, relationship satisfaction accessibility was positively associated with increased relationship stability. Similarly, Bradbury and Fincham (1990) concluded that distressed couples are more likely to make attributions that serve to over-emphasise negative partner events and negate positive partner events leading to decreases in satisfaction. Physiology as an intrapersonal factor has also been researched. In a three year study, Levenson and Gottman (1985), for example, found that increased autonomic activity was associated with declines in relationship satisfaction. These findings should be considered merely as indicative, however, as the final sample consisted of 19 couples only.

### **2.2.3.2 Demographic and Socioeconomic Factors**

The influence of demographic and socioeconomic factors has also been investigated (see Table A.2. for examples). In general, studies have found associations between relationship dissatisfaction and factors such as occupational status, low education, and low socioeconomic status (Kurdek, 1991a, 1993, 1995b; Newcomb & Bentler, 1981).

### **2.2.3.3 Dyadic Factors**

A number of studies have considered dyad-specific factors (see Table A.3). Studies have shown, for example, that marriage at a young age is generally associated with long-term dissatisfaction (e.g., Eysenck, 1980; Heaton, Albrecht & Martin, 1985).

Another frequently studied dyadic dynamic is the association between relationship duration and changes in relationship satisfaction (e.g. Glenn, 1998; Karney & Bradbury, 1997). Generally, over short durations, satisfaction remains reasonably constant. Smith, Vivian and O'Leary (1990), for example, found that early satisfaction was significantly related to satisfaction 30 months later. The trajectory of relationship change has also been investigated, Kurdek (1999), for example, reported that relationship satisfaction declines linearly over five years. Over longer periods, however, the trajectory of satisfaction has been shown to vary considerably and findings have been mixed. Burgess and Wallin (1953), in an early study, concluded that satisfaction declines over the marital course and that the steepest declines occur in the early years. Other studies, however, have reported that relationship satisfaction follows a U-shaped curve, starting high

at the outset of the relationship, declining at the birth of children, continuing to decline while the children lived at home, and then increasing once they leave (Anderson, Russell & Schumm, 1983; Blood & Wolfe, 1960; Burr, 1970). Rollins and Cannon (1974) made an effort to quantify the effects of lifecycle on relationship outcome and found that family lifecycle stage accounted for only 8% of the variance in relationship satisfaction. Recent studies (e.g., Glenn, 1998; Vaillant & Vaillant, 1993; Vanlangingham, Johnson & Amato, 2000), however, support the early work of Burgess and Wallin (1953) in that they have been unable to find curvilinear relationships and have concluded that satisfaction declines monotonically over the course of a relationship. In addition, Vanlangingham et al. (2000) acknowledge a cohort effect leading to greater relationship declines in the 1980s relative to the 1990s.

#### **2.2.3.4 External Stressors**

Table A.4 provides examples of research into the effects of external stressors including the effects of significant others (e.g. White, 1990) and stressful life events (Cohan & Bradbury, 1997; Williams 1995). Cohan and Bradbury (1997) in a six month study found that the experience of negative events increased the likelihood of negative conflict behaviour in couple relationships. Similarly, dissatisfied couples reported a greater number of stressful events than satisfied couples (Whiffen & Gotlib, 1989).

### **2.2.3.5 Interpersonal Factors**

Finally, the overwhelming majority of couple relationship research has investigated behavioural interactions between the partners (Table A.5). Factors considered include communicative competence, conflict severity, consensus, negativity, and power. Interpersonal conflict is a focus of the current research and will be discussed in section 2.3.

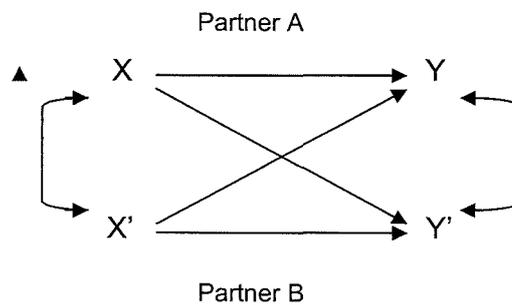
## **2.2.4 Theoretical Approaches to Dyadic Research**

Two conceptual models are relevant in dyadic research, one of which has been used for some time, often inappropriately, and the other more recent.

### **2.2.4.1 The Actor-Partner Interdependence Model**

Until recently, the majority of dyadic research investigations have assumed that outcomes in dyadic research are a function of the individuals' own characteristics. Partner effects have not been considered (e.g., Botwin, Buss & Shackelford, 1997; Kelly & Conley, 1987; Watson, Hubbard and Wiese, 2000a; White et al., 2004).

The *Actor-Partner Interdependence model* (APIM; Kashy & Kenny, 1999; Kenny, 1988, 1996) acknowledges that individuals' relationship outcomes are a function not only of their own characteristics (*actor effects*), but of their partners' characteristics (*partner effects*) as well. In Figure 2.1, X and X' are the independent variables (for example, neuroticism) of the partners, and Y and Y' are the dependent variables (relationship outcomes). Y is a function of both X and X', and similarly for Y'. The APIM also accounts for interdependence between the independent and dependent variables.



**Figure 2.1 The Actor-Partner Interdependence**

**Model.** Horizontal lines are actor effects and diagonal lines are partner effects (Kenny, 1996a,b, p.434)

Kenny and Cook (1999) define four processes associated with the APIM. Actor-oriented processes occur when the actor effects are significant and the partner effects are not significant; partner-oriented processes occur when the partner effects are significant and the actor effects are not significant; couple-oriented processes occur when the actor and partner effects are not significantly different; and social comparison processes occur when the actor and partner effects are complementary (that is, the sum of the actor and partner effects is zero).

#### 2.2.4.2 Gender-Specific Model

The gender-specific model in heterosexual dyadic research “predicts that the man’s personality will have different effects on the relationship than will the woman’s personality” (Robins et al., 2000, p.252). Until recently, in studies where both partners have been included, this has been the default model (e.g., Botwin et al., 1997; Bouchard, Lussier & Sabourin, 1999;

Donnellan et al., 2004; Eysenck & Wakefield, 1981; Gill, Christensen & Fincham, 1999).

Campbell and Kashy (2002) argue that the ability to distinguish partners by gender in heterosexual research leads researchers to assume “that gender is an important factor, and that differences between men and women exist” without formally testing this assumption (Campbell & Kashy, 2002, p.327). Furthermore, attempts to test gender-effect differences are often based on comparison of coefficient sizes even when female and male data have been analysed separately. This is inappropriate as the population parameters may differ by gender.

### **2.2.5 Relationship Satisfaction Research: Issues**

A number of issues are associated with research into the determinants of relationship satisfaction.

#### **2.2.5.1 Theoretical Issues**

Fincham, Beach and Kemp-Fincham (1997) echo the sentiment expressed by Bowerman (1964) that close relationship research “is characterized by a lack of adequate theory” (p.276), and more often than not, studies do not explicate the specific theoretical tenets upon which their hypotheses are based (e.g., Barelds, 2005; Bouchard et al., 1999; Kelly, Huston & Cate, 1985; Markman, 1991; McGonagle, Kessler & Gotlib, 1993; Nemechek & Olson, 1999; Ting-Toomy, 1983a). Table A.6 documents examples of models that have been applied to relationship research.

This lack of theoretical underpinning has resulted in a proliferation of fragmented and unrelated research investigations resulting in mixed and

ambiguous findings. There is still, for example, little consensus about what factors constitute constructs like conflict behaviour and relationship satisfaction which in turn limits psychological understanding of relationship outcomes.

### **2.2.5.2 Dimensionality Issues**

The lack of consistent theoretical bases for the evaluation of couple relationships has led to disagreement regarding its dimensionality. The Dyadic Adjustment Scale (DAS; Spanier, 1976), for example, evaluates relationships in terms of four scales: dyadic satisfaction, dyadic consensus, affectional expression, and dyadic cohesion. A number of studies, however, have been unable to replicate this structure and have found only unidimensional or bidimensional factors (e.g. Norton, 1983; Sharpley & Cross, 1982). Kurdek (1992b) was able to replicate all four scales, but concluded that the only useful one for clinical assessment was dyadic satisfaction. The DAS has also been criticised by Roach, Frazier and Bowden (1981) for its excessive focus on cognitive constructs without sufficient emphasis on the affective dimension. Another popular multidimensional instrument, the Marital Adjustment Test (MAT; Locke & Wallace, 1959) was factor analysed by Eysenck and Wakefield (1981) yielding four distinct significant components: To Marry or Divorce, Agreement, Sex and Affection, and Time Together. A similar exercise by Johnson, White, Edwards and Booth (1986), however, revealed only two strongly correlated factors ( $r = .77$ ) – positive and negative relationship satisfaction. Kimmel and Van Der Feen (1974) concluded that the MAT represents a single factor.

Another criticism of multidimensional relationship evaluation instruments is that the scales are usually correlated to a degree where collinearity becomes an issue. It is claimed that they are usually tautological and circularly defined in terms of the independent variables that predict them (Fincham, 1998; Johnson et al., 1986).

In response to these criticisms, a number of unidimensional or global relationship assessment instruments have been developed. Among the most popular are the Quality of Marriage Index (QMI; Norton, 1983), the Kansas Marital Satisfaction Scale (Schumm et al., 1986), and the Relationship Assessment Scale (RAS; Hendrick, 1988). These instruments reflect a single construct view of relationship satisfaction, or at most, independent positive and negative attitude scales (DeLamater, 2003; Fincham & Bradbury, 1987; Fincham, Stanley & Beach, in press). Norton (1983) argues that unidimensional scales are more useful clinically because couple relationship evaluation does “not convey a fixed picture of discrete categories ... but suggests a continuum ranging from high to low” (Norton, 1983, p.141). In support of a global scale, Karney and Bradbury (1997) compared the multidimensional MAT and the QMI and found little difference between the slopes and intercepts of the scales. They concluded that a global instrument was more efficient for the assessment of relationship outcomes.

A criticism levelled at global relationship evaluation scales is that they do not usually assess possible causes of (dis)satisfaction such as personality, interpersonal conflict and demographic variables, and therefore do not provide clinicians with sufficient indication of relationship problem areas (Fruzzetti, 1996; Gottman, 1990). Furthermore, it is argued that

complex relationship attitudes cannot be meaningfully reduced to a single score without significant loss of information (Fincham & Linfield, 1987; Spanier & Lewis, 1980).

It may therefore be concluded that unless the assessment context specifically requires multiple dimensions, global measures are generally indicated. However, in clinical settings, multidimensional instruments may be more useful because they provide a realistic means of assessing a variety of potentially pertinent relationship factors (Christensen, 1998).

### **2.2.5.3 Non-uniform Assessment**

Concern has been expressed about the proliferation of satisfaction scales and measurement instruments in couple research resulting from the lack of definitional and theoretical consistency discussed in this section (Braiker & Kelley, 1979; Burnett, 1987; Roach et al., 1981; Snyder, 1979). This non-standardisation distorts between-study comparisons and hinders progress in the understanding of couple outcome mechanisms.

### **2.2.5.4 Partner Interdependence Issues**

It is argued that that "couples and families need to be studied as systems" (Raush, Barry, Hertel and Swain, 1974, p.5), a view that reflects a number of relationship theories acknowledging the role of partner interdependence in determining the relationship satisfaction of each (e.g. Kelley & Thibaut, 1978; Messick & Crook, 1983; Rusbult, Johnson & Morrow, 1986). Kenny (1996, 1998) cites four sources of non-independence in close dyads: *compositional effects* such as assortative mating where the partners' selection is based on similar attributes; *partner effects* where the behaviour

of one partner influences the other; *mutual influence* where partners both influence each other on a particular attribute; and *common fate* where members of the couple are influenced by the same external factors such as, for example, income.

Yet when studies appearing in five family and couple relationship research journals published between 1994 and 2002 were reviewed, it was found that 70% of the data was based on only one partner "in spite of the fact that a quintessential feature of relationships is that partners' thoughts, feelings and behaviors are causally connected" (Kashy, Campbell & Harris, in press, p.5).

Another concern linked to partner interdependence follows from the warning that "if observations on two individuals are independent of one another, then knowledge of scores on one individual provides no information whatever about scores on the other individual" (Cohen, Cohen, West and Aiken, 2003, p.536). As Table 2.1 indicates, this is clearly not the case in couple relationships because individuals in the same dyad are likely to be more similar to each other than individuals in different dyads (Hoffman & Gavin, 1998).

The random errors associated with the individual partners are therefore likely to include a constant error component attributable to the dyad. Such observations are therefore not independent and studies that have used traditional analytical techniques such as ordinary least squares regression and ANOVA have violated the independence of random errors assumption (e.g., Botwin et al., 1997; Bouchard et al., 1999; Watson, Hubbard & Wiese, 2000b). In addition, Raudenbush and Bryk (2002) note that in distinguishable

dyads, differing variances in partner populations may violate the homogeneity of variance assumption required by these techniques.

**Table 2.1**  
**Examples of Within-Dyad Partner Correlations Found by Previous Research Investigations**

<i>Study</i>	<i>Relationship Assessment Instrument</i>	<i>Within-dyad partner correlations (r)</i>
Barelds (2005)	DRQ	.58
Karney et al. (1994)	MAT	.70
Karney et al. (1994)	KMS	.66
Karney et al. (1994)	QMI	.66
Kurdek (1995a)	KMS	.45
Neyer & Voigt (2004)	German RAS	.44
Robins et al. (2000)	Own instrument	.33
Russell & Wells (1994b)	Own instrument	.49

DRQ: Dutch Relationship Questionnaire (Barelds & Luteijn, 2003)

KMS: Kansas Marital Scale (Schumm et al., 1986)

MAT: Marital Adjustment Test (Locke & Wallace, 1959)

QMI: Quality of Marriage Index (Norton, 1983)

RAS: Relationship Assessment Scale (Hendrick, 1998)

The most serious consequence of incorrectly assuming independence of observations is the unpredictable effect on standard error, bias in tests of significance, and distorted assessment of Type I and Type II errors (Bryk & Raudenbush, 1992).

### **2.2.5.5 Sample Sizes**

Karney and Bradbury (1995a) concluded in their meta-analysis of 115 relationship studies that sample sizes were generally too small to afford the power to detect small or even medium effects. This problem is exacerbated in studies that do not account for partner independence and which base power calculations on the number of individuals in the study rather than the number of dyads, or a function of the two (Kenny, 1995; Kenny & Judd, 1996; Satterthwaite, 1946).

### **2.2.6 Relationship Satisfaction: Summary**

Relationship satisfaction is an important construct in couple outcomes research because of its association with physical and mental health, and general well-being. A fundamental problem when researching the causes and correlates of relationship satisfaction is the lack of theory underpinning many research investigations. Without multivariate, multidisciplinary and multi-paradigm models, the mechanisms leading to changes in satisfaction cannot be understood and only limited variance in satisfaction can be explained.

The following section considers associations between interpersonal conflict behaviours and relationship satisfaction.

## **2.3 Conflict Behaviours and Relationship Satisfaction**

### **2.3.1 Introduction**

Conflict is an inevitable and integral element of intimate couple relationships (Bolger & Schilling, 1991; Christensen, 1987; Cramer, 2004a; Gottman, 1979; Noller & White, 1990). Some researchers contend that the more intimate the relationship, the greater the inevitability and potential for interpersonal conflict behaviour (Billingham, 1987; Braiker & Kelley, 1979; Rands et al., 1981).

The centrality of couple conflict behaviour in the psychology of couple dynamics is evidenced by the volume of related literature and the number of psychotherapeutic approaches dedicated to its reduction (e.g., Campbell, Simpson, Boldry & Kashy, 2005; Gottman & Krokoff, 1989; Jacobson & Margolin, 1979; Sillars, Canary & Tafoya, 2004; Snyder & Castellani, 2006; Stanley, Bradbury & Markman, 2000; Stuart, 1969).

The study of conflict behaviour in couple relationships is important not only because of its links to relationship distress, but because negative conflict has been associated with declines in physical and mental health, relationship instability, and physical abuse (Billingham, 1987; Booth, Crouter & Clements, 2001; Buss & Shackelford, 1997; Christensen & Heavy, 1999; Feldman & Ridley, 2000; Johnson & Ferraro, 2000; Rogge & Bradbury, 1999; Straus, 1979; Vivian & Heyman, 1996).

Yet despite the inevitability of conflict behaviour in couple relationships, scholars argue that it is not the existence of conflict that is threatening; it is the partners' behavioural responses to it that determines relationship

outcomes (Canary & Spitzberg, 1989; Gottman, 1994; Markman, Floyd, Stanley & Storaasli, 1988; Sillars & Weisberg, 1987). Koerner and Jacobson (1994) extend this argument and claim that the management of conflict behaviour is *the* central task for relationship success, and that relationship distress is a direct result of “couples’ aversive and ineffectual response to conflict” (p.208).

The current chapter therefore focuses on the role of conflict behaviour as a correlate of relationship satisfaction. It is relevant to the current investigation because in order to demonstrate that conflict behaviour mediates the association between a couple’s personalities and their relationship satisfaction, a significant association between conflict behaviour and relationship satisfaction must be demonstrated (Baron & Kenny, 1986; Shrout & Bolger, 2002).

This section will define couple conflict behaviour and discuss theoretical models underpinning its research and assessment. The literature linking conflict behaviours and relationship satisfaction will then be reviewed followed by a discussion of the issues in this area of research.

### **2.3.2 Defining Couple Conflict Behaviour**

As was the case in defining romantic relationship satisfaction, definitions of conflict behaviour vary to such an extent that Van de Vliert and Euwema (1994) argue that a “Babel-like confusion of tongues exists regarding the denomination and classification of conflict behaviours” (p.674), a sentiment echoed by many relationship researchers (e.g. Bradbury et al., 2001; Weiss & Dehle; 1994). Shantz (1987) argues that definitional

inconsistency arises because terms like *hostility* and *disagreement* are too broad, too difficult to operationalise, and lead to ambiguity. Canary, Cupach and Messman (1995) suggest that it is because conflict behaviours are studied at multiple levels such as microscopic verbal behaviours, specific conflict episodes, and global conflict tendencies across relationships.

The view favoured by the current research is that conflict arises in romantic relationships when one partner obstructs the personal or relationship goals of the other (Fincham & Beach, 1999; Lewin, 1948). However, other perspectives are also relevant. Holmes and Miller (1976), for example, contend that at least some conflict may reflect the internal state of the individual (*autistic conflict*) irrespective of actions of a relationship partner. This actor view of conflict behaviour will also play a role in the current investigation.

### **2.3.3 Theoretical context**

Interpersonal theories are a category of psychological models used to describe and predict interactional behaviour in social contexts. In the context of intimate couple relationships, the behaviourally based *social learning theory* (SLT) is an important paradigm (Hahlweg & Jacobson, 1984; Hahlweg & Markman, 1988; Jacobson & Margolin, 1979; Stuart, 1969). This is because a substantial portion of couple research to date has been undertaken by behavioural scientist-practitioners involved in assisting distressed couples (Christensen & Heavey, 1999; Markman et al. 1988; Rusbult & Van Lange, 2003). However, because traditional behavioural models have focused on the behaviour of the individual (e.g. Beck, 1967;

Skinner, 1938) rather than the dyad, supplementary models such as social exchange theory have been introduced to incorporate dyadic interaction.

Social exchange theory is a family of models based on behavioural economics (Braiker & Kelley, 1979; Homans, 1961; Huesmann & Levinger, 1976; Thibaut & Kelley, 1959). The central tenet is that relationship outcomes are a function of the rewards and costs associated with a relationship as perceived by the relationship partners. Rewards include social assets, and positive cognitions, behaviours, and affect. Costs are associated with social liabilities, and negative cognitions, behaviours, and affect (Rusbult, 1983; Rusbult & Van Lange, 2003). Furthermore, rewards and costs accumulate over the duration of the relationship (cf. Gottman's Balance Model, 1994, 1998). It is cost-reward balance at any time that determines relationship outcomes. Interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959), an important social exchange model – additionally incorporates partners' *expectations*. Specifically, it contends that individuals whose *actual* relationship outcomes in terms of rewards and costs are greater than their *expected* outcomes are more likely to experience relationship satisfaction.

While social exchange theory focuses on a broad spectrum of interactional relationship behaviours, the application of SLT to romantic relationships is typically restricted to conflict interactions (Gottman, 1979; Jacobson & Margolin, 1979; Stuart, 1969). More specifically SLT posits that conflict behaviour is the most important determinant of relationship satisfaction, a perspective supported by Clements, Cordova, Markman and Laurenceau (1997) who concluded that “the positive factors that draw people

together are indicative of marital choice, but not marital success. Instead how couples handle differences is the critical factor” (p.352).

Analogous to social exchange theory, rewards in social learning are associated with positive conflict behaviours while costs are associated with negative conflict behaviours. Examples of positive behaviours include constructive conflict resolution styles, infrequent conflict, positive conflict outcomes, and acknowledgment of a partner’s perspective. Negative behaviours include frequent, coercive, destructive conflict resolution styles, and an unwillingness to compromise (Canary & Cupach, 1988; Gottman & Levinson, 1992; Heavey et al., 1993). According to the social learning model, relationship distress occurs when the number of negative conflict behaviours exceeds the positive conflict behaviours. Gottman (1994, 1998) attempted to quantify this association with a ‘Balance’ or ‘Bank Account’ model arguing that the ratio of positive to negative behaviours in romantic relationships should be at least five positive to one negative to achieve relationship satisfaction. This is supported by Birchler et al.’s (1975) finding that for non-distressed couples the ratio was 29.66, and for distressed couples, 4.30 to 1.00

### **2.3.4 The Assessment of Couple Conflict Behaviour**

The assessment of conflict behaviour is often categorised into laboratory observation and self-report approaches. Observational methods are typically favoured by behaviourally oriented researchers in accordance with the oft-cited argument that “studying what people say about themselves is no substitute for studying how they behave” (Raush et al., 1974. p.5).

Observational techniques typically involve couples being requested to discuss a contentious relationship issue in a laboratory for between 15 and 60 minutes while their verbal and/or non-verbal behaviours are rated by trained assessors using predefined coding systems (Gottman, 1994). Commonly used coding systems include the Couples Interaction Scoring System (CISS; Gottman, 1979), the Marital Interaction Coding System (MICS; Weiss & Summers, 1983), and the Conflict Coding System (CCS; Sillars, 1986).

In contrast, self-report approaches usually utilise questionnaires (e.g. Straus, Hamby, Boney-McCoy & Sugarman, 1996) or diary methods (e.g. Bolger, Davis & Rafaeli, 2003; Feeney 2002) and focus on the partners' feelings, attributions, beliefs, experiences, attitudes, and perceptions of their conflict (Buysse et al., 2000). Examples of conflict-oriented self-report instruments include the Management of Differences Exercise (Kilmann & Thomas, 1977); the Conflict Tactics Scale (Straus, 1979); the Marital Coping Inventory (Bowman, 1990); and the Conflict Resolution Style Inventory (Kurdek, 1994a).

There is some debate about the relative advantages and disadvantages of each approach. Many behavioural psychologists argue that observational approaches can detect non-verbal conflict behaviours unavailable via self-report such as the use of micro-observational techniques for detecting conflict markers such as rapid variation in facial expression (Foster, 1987). They argue that together, observed micro- and macro-observational techniques predict relationship outcomes more reliably than self-report data

(e.g. Floyd & Markman, 1983; Hahlweg, Kaiser, Christensen, Fehm-Wolfsdorf & Groth, 2000; Margolin & Wampold, 1981).

Multiple-rater laboratory observation also helps to obviate common method variance, a problem that leads to inflated correlations when participants use self-report instruments for more than one variable in a study (Bank, Dishion, Skinner & Patterson, 1990; Canary et al., 1995).

Observational approaches also suffer from a number of disadvantages. The face validity of laboratory observational techniques for conflict assessment is unclear because of the uncertainty as to whether what is being observed is actually *conflict behaviour* or couples feigning these behaviours in an artificial environment (Cramer, 2002a; Resick et al., 1981). It is also unlikely that conflict tactics such as abuse, violence, and avoidance will be exhibited under laboratory conditions whereas they may be exhibited at home where social demand effects are unlikely to influence conflict behaviours (Vincent, Friedman, Nugent & Messerly, 1979). Cramer (2002b) also questions the validity of laboratory observed conflict behaviour in that the limited time usually afforded to couples (often only 15 minutes) may not be sufficient to observe the full range of conflict behaviours generally used, or to reach a typical relationship outcome.

Observational methods are also problematic because of the number of coding systems in use and the difficulties that this creates when attempting inter-study comparisons. Observational techniques are also costly and time consuming, and Gottman and Krokoff (1989) note that one hour of conflict may require up to 24 hours to code. Studies using observational techniques

therefore tend to use small samples and claims about predictive validity may therefore not be accurate (Kurdek, 1994a).

Self-report instruments offer a number of advantages over observational approaches. They are able to access partners' subjective experiences, attitudes, and interpretation of conflict. They also increase ecological validity in that self-reports facilitate an understanding of conflict behaviour in the natural settings where it occurs as opposed to artificial laboratory environments. Finally, self-reports are more efficient and cost-effective relative to observational methods (Canary et al., 1995).

A key disadvantage of self-reports is that as retrospective instruments, they may introduce perceptual and recall bias (Christensen & Nies, 1980; Noller, Feeney, Bonnell & Callan, 1994; Sillars, 1985). Bono, Boles, Judge and Lauver (2002) also found that partners' recall of conflict frequency was a function of their individual personality traits. Self-reports may also suffer from attribution bias in that participants may tend to over estimate the role of their partner's personality in conflict (Sillars, 1985). Gottman et al. (1976) argue that couples in distressed relationships are likely to overestimate the presence of negative interactions and underestimate positivity by up to 50%. Finally, Markman and Notarius (1987) note that it is unlikely that self-reports are capable of capturing the same levels of conflict granularity as observational methods.

#### **2.3.4.1 Conflict Assessment Approaches: Summary**

Observational and self-report assessment methods each offer unique and complementary perspectives into the assessment of couple conflict

behaviours. Ideally, both methods should be applied in the same study for optimal insight (Donnellan et al., 2004; McGonagle et al., 1993; Prins, Foster, Kent & O'Leary, 1979). However, given the extensive resource requirements associated with observational research, self-reports may be more appropriate for exploratory investigations.

In closing, it is worth noting Heavey, Larson, Zumtobel and Christensen's (1996) observation that in certain contexts, observational techniques and self-reports provide similar results. If suitable self-report instruments are developed, relationship psychologists may become less reliant on resource-intensive observational approaches.

### **2.3.5 Conflict Behaviour and Relationship Satisfaction: Research**

Numerous studies have considered associations between conflict behaviour and intimate couple relationship satisfaction (see Appendix A, Table A.5). This section will review key couple conflict research investigations using the taxonomy suggested by McGonagle et al. (1993) which is the one used in the current study. The conflict dimensions considered are conflict style, avoidance of conflict, conflict frequency, and conflict outcomes. These categories are by no means exhaustive, an issue that will be considered further in section 2.3.6.4.

#### **2.3.5.1 Conflict Style**

Conflict styles are defined as "individual tendencies to manage conflict episodes [in] a particular way" (Canary et al., 1995, p.10). Many studies have shown that conflict style is an important factor in discriminating between

distressed and non-distressed couples (Cramer, 2000; Gottman, 1979, 1994; Markman, 1981; Schaap, 1984). Constructive conflict styles are characterised by cooperative, transforming, prosocial, and relationship preserving behaviours such as openness, compromise, directness, and clear non-distorted problem-solving. Conversely, destructive conflict styles are competitive, negatively escalating, antisocial and relationship threatening and include manipulation, physical and emotional abuse, antagonism, emotional volatility, self-righteousness, blame, distorted communication, personal attacks, and unwillingness to compromise (Buss, 1991; Canary et al., 1995; Erber & Erber, 2001; Van de Vliert & Euwema, 1994; Weingarten & Leas, 1987).

Two theoretical perspectives are relevant here. Social learning theory (Jacobson & Margolin, 1979; Smith et al., 1990) contends that destructive conflict styles represent a cost to the relationship and will therefore result in decreased relationship satisfaction whereas constructive styles will have the opposite effect. In contrast, the negative confrontation model (Gill et al., 1999; Gottman & Krokoff, 1989; Karney & Bradbury, 1997) argues that certain negative conflict behaviours will result in longitudinal satisfaction because they represent a willingness to address difficult issues and thereby demonstrate commitment to the relationship.

The majority of studies support the social learning model with most studies finding negative associations between destructive styles and relationship satisfaction (e.g. Birchler et al., 1975; Canary & Cupach, 1988; Caughlin, Huston & Houts, 2000; Cramer, 2003a; Filsinger & Thoma, 1988; Gill et al., (1999); Gottman, 1994; Huston & Vangelisti, 1991; Kurdek, 1994b;

Noller et al., 1994; Rands et al., 1981). Gill et al. (1999), for example, used observational methods to assess the effect of conflict style on the relationship satisfaction of 30 couples using the Marital Adjustment Test (Locke & Wallace, 1959) over two months. They concluded that negative styles predicted a longitudinal decrease in wives' marital quality. As is typical of studies utilising observational methods, however, the sample size was small and the study therefore lacked sufficient power. Canary and Cupach (1988) assessed conflict behaviour in a sample of 244 students involved in couple relationships and found a negative association between distributive attacking conflict behaviours and communication satisfaction<sup>1</sup>. An investigation of 106 newlywed couples by Huston and Vangelisti (1991) found that destructive conflict behaviour predicted a decline in female satisfaction over 24 months. Finally in a 13 year longitudinal study, Caughlin et al. (2000) analysed data from 168 couples and reported strong negative associations between spousal negativity and both actor and partner relationship satisfaction ( $r = .51, p < .01$ ). This study is one of relatively few studies assessing the effects of conflict behaviour that controlled for partner interdependence.

Constructive conflict management has also been the subject of a number of studies with Canary et al. (1995) concluding that "partners in quality relationships manage conflict through positive interaction behaviours" (p.1). A number of research findings support this view (Canary & Cupach, 1988; Cramer, 2000; Gottman & Levinson, 1992; Heavey et al., 1993;

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<sup>1</sup> Links between communication satisfaction and relationship satisfaction are well established (Emmers-Sommer, 2004; Noller & Guthrie, 1992)

Kurdek, 1994a; Noller et al., 1994; Schaap, 1984; Ting-Toomey, 1983b). Noller et al. (1994) investigated 33 couples and found that relationship satisfaction, as measured by the Quality of Marriage Index (Norton, 1983), was positively related to an absence of manipulation, coercion and threats. Kurdek (1994a) developed a 16-item Conflict Resolution Style Inventory (CSRI) consisting of four conflict resolution styles: positive problem solving, conflict engagement, withdrawal, and compliance. The CSRI was then used to assess conflict behaviour in a sample of gay, lesbian, and heterosexual couples over five years, and the Kansas Marital Satisfaction Scale (Schumm et al., 1986) was used to assess relationship outcome. Kurdek (1994a,b) found that positive problem solving was associated with concurrent and longitudinal relationship satisfaction across all types of couples.

The negative confrontation model has also received support. A classic example is the so-called *reversal effect* observed by Gottman and Krokoff (1989). They used the CISS and MICS observational coding systems (Gottman, 1979; Weiss & Summers, 1983) to assess conflict behaviours and the MAT (Locke & Wallace, 1959) to assess satisfaction in 25 couples over three years. They found that while wives' disagreement and anger led to concurrent dissatisfaction for both partners, it also led to longitudinal satisfaction for wives three years later. This study has received a number of criticisms. First, it focused on couples who had been married for some time (mean duration of 24 years) and these findings cannot therefore be generalised to relationships of shorter duration. Second, Cramer (2003b) notes that the dependent variables were so strongly correlated between Times 1 and 2 that the reversal effect may have been a statistical artefact of

partial correlation when controlling for Time 1 satisfaction rather than supporting the negative confrontation model. Finally, the sample size was small and consisted of only 23 couples. In spite of these limitations, however, other studies have also reported reversal effects (e.g. Gill et al., 1999; Heavey, Christensen & Malmuth, 1995; Heavey et al., 1993; Karney & Bradbury, 1997; Smith et al., 1990). Gill et al. (1999), for example, found that husbands' negative behaviour predicted an increase in wives' satisfaction 12 months later. Using growth curve analysis, Karney and Bradbury (1997) found that a lack of female positivity early in the relationship predicted subsequent increases in satisfaction.

Gender effect differences for the effects of conflict styles on satisfaction have been noted. In particular, a number of studies have found that female partners are more affected by conflict style than males. Both Huston and Vangelisti (1991) and Gill et al. (1999), for example, found that negative conflict styles were associated more strongly with female longitudinal distress. Huston and Vangelisti (1991), however, analysed female and male data separately and coefficient sizes cannot therefore be directly compared. Using structural equation modelling to simultaneously analyse female and male partner data, Caughlin et al. (2000) reported no gender differences for the partner effects of negative conflict behaviour. There were, however, gender differences between the effects of actor negativity on relationship satisfaction. Finally, a number of studies have reported no gender differences in the effects of many conflict behaviours (Buss, Gomes, Higgins & Lauterbach, 1987; Canary & Hause, 1993; Metz, Rosser & Strapko, 1994; Noller et al., 1994). In particular, Canary and Hause (1993) concluded that

sex differences accounted for only 1% of the variance in social behaviours such as interpersonal conflict.

In summary, with the exception of reversal effects, constructive conflict behaviours are generally associated with increased relationship satisfaction while destructive styles have the opposite effect (Huston & Vangelisti, 1991; Kurdek, 1995a). There is therefore more support for the social learning model than for the negative confrontation model.

### **2.3.5.2 Conflict Avoidance and Withdrawal**

Conflict avoidance is characterised by withdrawal from conflict and an unwillingness to confront conflictual issues. It is typically associated with passivity, indirectness, and uncertainty (Sternberg & Dobson, 1987; Van de Vliert & Euwema, 1994).

Social learning theory is ambiguous with respect to the interpretation of conflict avoidance effects on relationship satisfaction. To the extent that conflict avoidance reduces the incidence of destructive conflict behaviours, social learning theory would predict that it is likely to increase relationship satisfaction. If, however, avoidance results in a reduction in constructive conflict resolution opportunities, then the attendant opportunity cost is likely to decrease satisfaction (Gill et al., 1999).

A number of studies have reported negative associations between conflict avoidance and relationship satisfaction (e.g. Cramer, 2002a, 2003a; Gottman & Krokoff, 1989; Heavy et al., 1995; Kurdek, 1994a; Noller et al., 1994). In a bid to replicate the demand-withdraw patterns found by Christensen and Heavey (1990), Heavey et al. (1993) videotaped 29 couples

with one partner requesting (*demanding*) change from each other. They found that while there were no concurrent effects on satisfaction, husbands' unwillingness to engage in the discussion (*withdrawal*) predicted a decrease in wife's longitudinal satisfaction. In a 30 month study, Smith et al. (1990) found that affective disengagement predicted a longitudinal decline in satisfaction and that it was moderated by the level of positivity in the relationship. This study used only newlywed couples and the results are therefore not necessarily generalisable to couples in later stages of romantic relationships.

Other studies have found that conflict avoidance is positively associated with relationship outcomes (e.g., Canary & Cupach, 1988; McGonagle et al., 1993; Raush et al., 1974). Raush et al. (1974) found that where affection was high, couples responded positively to avoidance, consistent with Rusbult et al.'s (1986) proposition that avoidance is relationship enhancing when associated with partner loyalty. Possible moderation effects such as this may explain the mixed findings on the effects of conflict avoidance and relationship satisfaction. Using self-report conflict data from 244 married couples, Rands et al. (1981) found that conflict avoidance was associated with decreased satisfaction in intimate non-aggressive couples, but that it increased satisfaction in aggressive pairs. In this instance, the effects of avoidance may have been moderated by conflict style.

Finally, gender differences for the effects of conflict avoidance have also been noted. Kurdek (1995a) used hierarchical multiple regression to analyse longitudinal data from 155 heterosexual couples. He found that the effects of male avoidance on actor satisfaction were contingent on wives'

conflict levels whereas wives' satisfaction was related primarily to their own withdrawal irrespective of husbands' conflict. However, when using growth analysis which facilitates control of partner interdependence and gender comparisons, Kurdek (1999b, 2005) could find little evidence of gender differences in the effects of conflict interactions on satisfaction.

It should be noted that in line with many studies, the above discussion has used the constructs *withdrawal* and *avoidance* interchangeably. McGonagle et al. (1993) warn, however, that their meaning may differ. They suggest that conflict avoidance should refer to the non-initiation of conflict engagement whereas conflict withdrawal should describe an exit from existing conflict interactions.

### **2.3.5.3 Conflict Frequency**

Research into associations between conflict frequency and relationship is limited (Kluwer & Johnson, in press; McGonagle et al., 1993). As was the case with conflict avoidance, two theoretical stances offer contradictory views on the likely effects of conflict frequency. The enduring dynamics position contends that the initial conditions of a romantic relationship – for example, the partners' intrapersonal characteristics – predict the frequency of conflict behaviour and the conflict styles that will be used over the course of the relationship (Huston & Houts, 1998; Kelly et al., 1985; Kluwer & Johnson, in press; Sprecher & Felmlee, 1993). This suggests that initial relationship conditions can therefore be used to predict longitudinal relationship satisfaction. The enduring dynamics model is partially supported by a number of studies. Kurdek (2002), for example, found in an eight year study of 522 couples, that initial levels of liking and love accounted for

longitudinal conflict frequency. Similarly, Huston, Caughlin, Houts, Smith and George (2001) found that early levels of negativity, ambivalence and responsiveness remained consistent throughout the relationship and were able to distinguish distressed from non-distressed couples.

An alternative perspective, the disillusionment model (Caughlin et al., 2000; Waller, 1938) predicts that conflict frequency will increase as initial facades designed to attract the partner (for example, masking undesirable personality characteristics such as neuroticism) begin to fade. Huston and Houts (1998) found partial support for this hypothesis in a study of 168 couples over thirteen years in that conflict frequency increased over the first year of marriage prior to stabilising. Sprecher and Felmlee (1993), analysed data from 256 sociology students over three months and found that while conflict frequencies were constant in stable relationships (thereby supporting the enduring dynamics model), unstable relationships were characterised by increasing frequency of negative conflict.

The effect of conflict frequency on relationship satisfaction has also been investigated with mixed findings. Some studies have found that distressed couples report greater conflict frequency than non-distressed couples (Birchler et al., 1975; Kelly et al., 1985; McGonagle et al., 1993; Sprecher & Felmlee, 1993; Vincent, Weiss & Birchler, 1975). Others, however, have found weak or no associations between conflict frequency and relationship satisfaction (e.g. Berg & McQuinn, 1986; Cramer, 2003a). Cramer (2000) analysed data from a sample of 95 British undergraduates. He found that while the zero-order correlation between conflict frequency and

satisfaction was significant, the first-order correlations were not significant when controlling for the effects of conflict style or conflict outcome.

Gender effects for conflict frequency have also been observed. Kelly et al. (1985) found that increasing conflict frequency in 21 newlywed couples correlated with greater dissatisfaction for wives than it did for husbands. This finding is supported by Heavey et al. (1993) who reported that husbands' conflict levels were associated with subsequent increases in wives' satisfaction. Similarly, in a five year longitudinal study of 216 couples and using growth curve modelling, Kluwer & Johnson (in press) found that the satisfaction of males reporting greater early conflict frequency declined less than males with lower initial conflict frequencies.

#### **2.3.5.4 Conflict Outcome**

Social learning theory predicts that unsatisfactorily resolved conflict interactions will represent a cost to the relationship and therefore have a negative influence on relationship satisfaction. This assertion has seldom been tested, but the few studies that did investigate have generally found support for it (Birchler & Webb, 1977; Bradbury et al., 2001; Cramer, 2000; Heavey et al., 1993; McGonagle et al., 1993). Birchler and Webb (1977), for example, compared a sample of 50 couples in marital therapy with a non-clinical control group of similar size. They found that 28.46% of the clinical group reported dissatisfaction with conflict outcomes compared to 6.9% in the non-clinical sample. Cramer (2003a) found that relationship satisfaction was inversely related to negative conflict outcomes ( $r = -.49, p < .001$ ) and unresolved conflict ( $r = -.48, p < .001$ ). The association between negative

conflict outcome and satisfaction became non-significant, however, when controlling for unresolved conflict. Furthermore, the high correlation between negative conflict outcome and unresolved conflict ( $r=.69, p<.001$ ) suggests that they may be components of an underlying conflict dimension.

In conclusion, these findings support the social learning theory hypothesis that negative and unresolved conflict outcomes are likely to be associated with relationship dissatisfaction.

### **2.3.5.5 Summary**

The overwhelming body of couple conflict research appears to support the social learning model in that the majority of evidence suggests that destructive, frequent, and unresolved conflict interactions are associated with relationship dissatisfaction. The most obvious counter-examples are the reverse effects associated with the negative confrontation model, and the mixed findings associated with conflict avoidance.

A possible explanation for the reversal effect that is consistent with social learning theory is that the satisfactory resolution of early negative conflict behaviour may help to create a sense of relationship efficacy that mediates and reverses its subsequent influence on relationship (Gottman & Krokoff, 1989; Raghavan, Swan, Snow and Mazure, 2005).

### **2.3.6 Conflict Behaviour Research: Issues**

Peterson (1983) noted that “although the several literatures on conflict are extensive, they are not as enlightening as one might hope for understanding conflict in romantic relationships” (p.363). While the realm of

conflict research has progressed significantly since that observation, a number of issues remain.

### **2.3.6.1 Reciprocity between Conflict Behaviour and Satisfaction**

It is possible that relationship satisfaction and conflict behaviour may be reciprocally linked rather than the oft assumed linear causal path from conflict to satisfaction (Canary et al., 1995; Huston & Vangelisti, 1991; Karney & Bradbury, 1997; Noller et al., 1994). If such a reciprocal relationship does exist, then claims that a reduction in conflict will necessarily lead to similar reductions in satisfaction may not be valid.

### **2.3.6.2 Conflict Behaviour: Interpersonal versus Intrapersonal**

The extent to which couple conflict behaviour is an intrapersonal or interpersonal dynamic has been the subject of some debate. While it is reasonable to assume that both partners are typically required in order for couple conflict to exist, it is less clear whether couple conflict should be analysed at the dyadic (interpersonal) or individual (intrapersonal) level.

Arguing from a sociological perspective, Friedkin and Cook (1990) contend that any interaction between individuals reflects an underlying social structure. This would be “the dyad” in the current research context. In contrast, Holmes and Miller (1976), from a psychological perspective, argue that at least some of the variance in an individual’s observed conflict behaviour is attributable to the individual and not to the dyad, and that conflict behaviour should therefore be viewed as an intrapersonal construct.

In summary, research investigations that combine partner conflict data cannot determine the extent to which conflict is intrapersonal or interpersonal (Gillespie, personal communication, August 2005).

### **2.3.6.3 Inconsistent Findings**

Views about destructiveness of conflict behaviour in couple relationships vary (Bradbury, Cohan & Karney, 1998; Canary et al., 1995; Raush et al., 1974). It has been argued that couple conflict necessarily leads to negative relationship outcomes (e.g. Buysse et al., 2000; Noller & Feeney, 2002; Vincent et al., 1975). Another view is that conflict is not only desirable in romantic relationships, but that it is necessary for relationship maintenance, development, and survival (e.g., Erber & Erber, 2001; Gottman & Krokoff, 1989; Straus & Gelles, 1990). These contradictory findings suggest that couple relationships may benefit from differing levels and types of conflict behaviour. As yet, however, there has been little research to indicate what dyadic factors might determine optimal conflict levels and what these levels might be.

### **2.3.6.4 The Factor Structure of Conflict Behaviour**

A possible reason for the inconsistent findings in conflict research is the lack of consensus about the dimensionality and underlying factor structure of conflict behaviour. Indeed a criticism of conflict research is that it tends to focus on the effects of conflict style while excluding other possibly orthogonal dimensions such as conflict frequency and conflict outcome (Kluwer & Johnson, in press; McGonagle et al., 1993). The emphasis on conflict style

may, in part, be related to reliance on social learning theory that emphasises destructive conflict styles and does not emphasise dimensions like frequency and outcome. Yet, as noted in the literature review above, many studies have shown that all of these conflict components exert a significant influence on relationship satisfaction (e.g. Cramer, 2000; Kelly et al., 1985; McGonagle et al., 1993).

Various studies have factor analysed conflict data with a view to revealing a consistent underlying structure. McGonagle et al. (1993), for example, examined the associations between conflict behaviour and relationship disruption in 691 couples using items related to conflict frequency, style, and outcome. A factor analysis revealed two factors, one representing frequent, destructive, unresolved conflict which they labelled 'negativity' and a second factor related to the frequency with which spouses 'give in' during conflict and which was not utilised in the analysis. Effectively, therefore, the factor analysis yielded a global view of conflict.

Noller and White (1990) performed a principal axis factor analysis on data from 96 married couples who had completed the Communications Pattern Questionnaire (CPQ; Christensen & Sullaway, 1984 cited in Noller & White, 1990). The CPQ is a self-report instrument consisting of 45 items assessing conflict styles such as demand/withdraw, avoidance, blame, and conflict outcomes such as mutual understanding and resolution. Noller and White (1990) found four factors underlying the data: coercion, mutuality, post-conflict distress, and destructive process.

Kurdek (1994a) noted that "no measure of couple conflict resolution could be found that was brief, was based on a coherent conceptual

framework, and had comprehensively documented psychometric properties” (p.706). He therefore developed the 16-item self-report Conflict Resolution Styles Inventory (CRSI) and performed a confirmatory factor analysis on data collected from 75 gay, 51 lesbian, and 207 heterosexual couples. Kurdek found evidence for four distinct dimensions corresponding to Gottman and Krokoff's (1989) conflict behaviours taxonomy: positive problem solving, conflict engagement, withdrawal, and compliance.

Finally, Cramer (2003a) analysed conflict behaviour data from 161 individuals, 108 of whom reported being involved in romantic relationships. He assessed conflict variables using 23 self-report items based on how participants felt about conflict engagement versus avoidance, and about conflict resolution versus non-resolution. A principal components analysis revealed five factors: conflict frequency, conflict avoidance, conflict handling, unresolved conflict, and negative conflict outcome.

The above examples indicate the wide-ranging findings regarding the dimensionality of couple conflict behaviour. While there is some evidence to support McGonagle et al.'s (1993) conclusion that conflict behaviour may be underpinned by a unidimensional global construct (similar to relationship satisfaction), Cramer (2003a) cautions that inappropriately applied data reduction techniques may lead to unnecessary loss of conflict dimensionality. Cramer (2000), for example, found that conflict frequency had a significant relationship with satisfaction ( $r = -.35, p < .001$ ), but when controlling for the effect of negative style, frequency was no longer significant. Furthermore, Cramer (2003a, p.151) argues that because many studies do not publish the results of partial conflict correlations on relationship satisfaction, "it is not

known to what extent different conflict indices may be assessing separate rather than the same aspect of conflict" and concludes (p.151):

*One implication of the finding that the correlation between relationship satisfaction and the varying components of conflict resolution may not differ greatly is that distinguishing between these aspects is not worthwhile and that they should be combined into a single measure. An alternative implication, the one advocated here, is that the potential effect of any one component depends on the influence of other components. For example, as the partial correlation analyses showed here, unresolved conflict may not be associated with relationship dissatisfaction unless it is also accompanied by negative conflict handling and negative conflict outcome.*

#### **2.3.6.5 Small Effect Size**

Inconsistent findings for the effects of conflict behaviour may be because "conflict accounts for a relatively small portion of the variability of later relationship outcomes" (Fincham, 2003, p.25). In their meta-analysis, Karney and Bradbury (1995a) found that the effect size between wives negative behaviour and actor satisfaction was  $-.25$  (6 studies) and  $-.21$  for husbands (5 studies).

The view that conflict is not a consistent predictor of relationship satisfaction (e.g., Argyle & Furnham, 1983; Raush et al., 1974) may be because it is rare in couple relationships. McGonagle, Kessler and Schilling

(1992), for example, found in a random sample of 778 couples that in 78%, conflict was typically reported only once a month or less.

### **2.3.6.6 Limitations of Social Learning Theory**

A key restriction of social learning theory is its de-emphasis of constructive relationship behaviours, and its exclusion of intrapersonal, demographic, and external factors. This is in spite of studies demonstrating the association of these variables with relationship satisfaction<sup>2</sup> (Bradbury et al., 2001; Karney & Bradbury, 1995a). Duck (1994), for example, argues that constructive conflict tactics can not only help avert threats to the relationship, but maintain and even improve relationship satisfaction. Similarly, Bradbury et al., (1998) note that while focusing on destructive conflict behaviours

*... may be an appropriate and desirable constraint when the goal is to specify how discordant couples can be transformed with clinical interventions to become more maritally satisfied ... it may prove unduly restrictive when the goal is to understand how satisfactory marriages become distressed or unstable, or how distressed couples deteriorate further or improve naturally.*

### **2.3.7 Conflict Behaviour and Relationship Satisfaction: Summary**

This section has considered associations between couple conflict behaviours and relationship satisfaction. Research findings clearly support

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<sup>2</sup> It is interesting to note that Kelley et al.'s (1983) influential summary of the field at the time, *Close Relationships*, makes no mention of personality as a relevant correlate of close relationship outcomes.

the social learning model which asserts that problem-solving behaviours are the most proximal correlate of relationship satisfaction. In general, destructive, avoidant conflict styles, frequent, and unresolved conflict is associated with decreased relationship satisfaction.

There is, however, limited consensus about what constitutes conflict behaviour and what its dimensions might be. McGonagle et al. (1993) observed that many researchers assume that conflict style subsumes conflict frequency and conflict outcome without explicitly assessing these dimensions.

A key criticism of conflict research is that the social learning model upon which many conflict studies have been based excludes the effects of intrapersonal characteristics such as personality which has demonstrable associations with relationship satisfaction. The following chapter will review the intrapersonal approach to relationship psychology with particular emphasis on the Five Factor model of personality.

## **2.4 Personality and Relationship Satisfaction**

### **2.4.1 Introduction**

Individualism is an important Western discourse emphasising the importance and uniqueness of the individual. In psychological terms, it implies that behaviour is determined – at least in part – by intrapersonal characteristics such as personality traits (Pervin & John, 2001). From this perspective, couple relationships can be viewed as an intersection of two personalities each comprising unique traits and life experiences.

Intrapersonal characteristics are therefore likely to be important determinants of relationship satisfaction (Auhagen & Hinde, 1997; White et al., 2004)

The role of couples' personalities as determinants of their relationship outcomes has been researched since at least the early 20<sup>th</sup> century (e.g., Adams, 1946; Richardson, 1939; Terman & Bottenweiser, 1935; Terman et al., 1938). In the 1970s, personality research was to some extent displaced by interest in behavioural interactions partly because of the rise of cognitive behaviourism in clinical practice, and partly because of apparently close links between interpersonal behaviour and relationship satisfaction (Olson & Ryder, 1970; Stuart, 1969).

The field of personality research burgeoned again in the late 1970s and 1980s driven by advances in the genetic and physiological bases of behaviour, the availability of electronic data processors to perform complex statistical analyses on high volumes of intrapersonal data, and fresh taxonomies of personality (e.g. Caspi, 1987; Eysenck & Eysenck, 1975; Goldberg, 1981). These initiated a new round of personality research in relationship science (Eysenck, 1980; Eysenck & Wakefield, 1981; Newcomb & Bentler, 1980).

In recent years, there is growing recognition that "personality traits should be central to any analysis of why relationships thrive or falter" (Robins, Caspi & Moffitt, 2002, p.955). There are a number of reasons why this should be so. First, knowledge about personality has grown substantially over the past 20 years. Second, there is evidence that personality influences important proximal variables linked to relationship satisfaction such as, for example, conflict behaviour (Bradbury et al., 2001; Donnellan et al., 2004).

Finally, in spite of the accumulated body of knowledge surrounding personality and relationship outcomes, there are still a number of unanswered questions and inconsistencies (e.g. Caughlin et al., 2000; Kurdek, 1993; Reis, Capobianco & Tsai, 2002).

This chapter reviews theoretical models and research linking personality and relationship satisfaction. Its focus is primarily the total effects that exist between personality and relationship satisfaction. Indirect and mediated effects will be discussed in subsequent sections.

## **2.4.2 Theoretical Context**

### **2.4.2.1 Introduction**

Two theoretical orientations, one intrapersonal and one methodological, have influenced research investigations into the direct associations between personality and relationship satisfaction in recent years: the Five Factor Model of personality (FFM) and the Actor-Partner Interdependence Model (APIM).

### **2.4.2.2 The Five Factor Model of Personality**

#### ***2.4.2.2.1 Description***

The FFM is a nomothetic trait theory of personality. Its genesis lies in Goldberg's (1981) factor analyses of individuals' self-descriptive adjectives based on the fundamental lexical hypothesis that "the most important individual differences in human transactions will come to be encoded as single terms in some or all of the world's languages" (Goldberg, 1990, p.1216). Goldberg noted that the factor analyses consistently produced the

same five factors, the personality traits of the FFM (Costa & McCrae, 1992, 1995; McCrae & Costa, 1999a).

The construct *personality trait* lies at the heart of personality theory and has been defined in various ways. Tellegen (1991) defines traits as “relatively enduring organismic (psychological, psychobiological) structures underlying an extended family of behavioural dispositions” (p.13) and emphasises their temporal stability. Allport and Odbert (1936) define traits as “generalized and personalized determining tendencies – consistent and stable modes of an individual’s adjustment to his environment” (p.26) emphasising cross-situational behavioural consistency. In support of this position, Funder and Colvin (1991) found that cross-situational behaviour correlated greater than  $r = .40$  across at least two different situations.

The FFM personality traits are neuroticism, extraversion, openness, agreeableness, and conscientiousness. Neuroticism is characterised by persistently poor emotional adjustment and the tendency to experience self-consciousness, worry, and insecurity irrespective of situation or social context (Watson & Clark, 1984). Its facets include hostility, anxiety, impulsiveness, depression, and vulnerability (Costa & McCrae, 1992; McCrae & Costa, 1987). Neuroticism has also been consistently associated with *negative affect* or *emotionality* (Costa & McCrae, 1980; John, 1990; Tellegen, 1985; Watson & Clark, 1984), and Gray (1981) argues that neuroticism represents high susceptibility to aversive stimuli and is regulated by the *behavioural inhibition system*.

Extraversion describes outer-directed interpersonal behaviour and is associated with friendliness, talkativeness, affection, and sociability (Costa &

McCrae, 1992; McCrae & Costa, 1987). It includes interpersonal facets such as warmth, gregariousness, and assertiveness, and also temperamental facets such as activity, excitement seeking (Shaver & Brennan, 1992). Extraversion has been linked to *positive affect* (Costa & McCrae, 1980; Tellegen, 1985) and Gray (1981) proposes that extraversion is characterised by sensitivity to reward signals and is controlled by the *behavioural activation system*.

Openness to experience reflects cognitive and emotional flexibility, and is associated with daring, originality, and imagination, and includes facets such as feelings, values, aesthetics, fantasy, and ideas (Costa & McCrae, 1992; McCrae & Costa, 1987).

Agreeableness is an interaction preference ranging from compassion to antagonism, and is associated with sympathy, trust, and cooperation, and includes the facets straightforwardness, compliance, tender-mindedness, altruism, and modesty (Costa & McCrae, 1992; Costa, McCrae & Dye, 1991; McCrae & Costa, 1987). In their circumplex model, Wiggins and Trapnell (1996) argue that agreeableness is associated with a need for community.

The final trait, conscientiousness is associated with goal, task-oriented behaviour, reflects ambition, perseverance, and self-control, and includes the facets of dutifulness, order, deliberation, competence, self-discipline, and achievement striving (Costa & McCrae, 1992; Costa et al., 1991; McCrae & Costa, 1987).

#### **2.4.2.2.2 Support for the Five Factor Model**

McCrae and Costa (1999a) argue that the FFM meets four important criteria for a trait theory: proactivity in that behaviour is initiated within the individual; rationality because the model facilitates an understanding of self and others; knowability because personality is an appropriate area of study; and variability because the FFM accounts for individual differences.

With regard to the stability of FFM traits, there is evidence that this may be genetically and physiologically rooted (Bouchard & Loehlin, 2001; McCrae et al., 2000; Plomin & Caspi, 1999). For example, Jocklin et al. (1996) contend that genetic factors underpin enduring patterns of behaviours leading to relationship outcomes and in a twin study, found evidence that genetic factors were associated with a .59 probability of divorce for males and .55 for females.

Evidence for the validity of the five-factor model is evident from its associations with a variety of well established constructs. Conscientiousness, for example, correlates positively with positive affect (Watson & Clark, 1984, 1992), and negatively with psychoticism (Clark & Watson, 1999); Agreeableness is associated with positive affect and high self-esteem (Watson & Clark, 1992); Neuroticism correlates strongly with negative affect and low self-esteem (Berry & Hansen, 1996); Openness is associated with positive affect (Watson & Clark, 1992); and Extraversion is positively correlated with self-esteem (McCrae & Costa, 1988), and positive affect (Kokkonen & Pulkkinen, 2001).

Combinations of the five factors have also been shown to correlate with a number of known constructs. For example, subjective well being is

positively associated with high extraversion and low neuroticism (Headey & Wearing, 1995; McCrae & Costa, 1991); problem- and solution-focused coping styles are positively associated with high conscientiousness, extraversion and openness; emotion-focused coping styles correlate negatively with high neuroticism; and avoidant and ambivalent attachment styles are positively associated with high neuroticism (Carver, 1997). The five factors are also associated with behavioural dysfunction. Neuroticism, for example, has been found to be significantly correlated with personality disorders such as borderline and dependent personality disorders (Blais, 1997).

Further evidence for the validity of the Five Factor model is its high construct, convergent, and discriminant validity with many established measures including Eysenck's Personality Inventory (McCrae and Costa, 1985); MMPI Factor Scales (Costa, Busch, Zonderman & McCrae, 1986); California Q-Set (McCrae, Costa & Busch, 1986); Murray's Needs (Costa & McCrae, 1988); Wiggins' Circumplex (McCrae & Costa, 1989a); The Adjective Checklist (Piedmont, McCrae & Costa, 1991); The California Psychological Inventory (McCrae, Costa & Piedmont, 1993); Act-Report data (Botwin & Buss, 1989); and The Myers-Brigg Type Indicator (McCrae & Costa, 1989b).

#### ***2.4.2.2.3 Criticisms of Trait Theory and the Five Factor Model***

While there is broad support for the Five Factor model, it has also drawn criticism. The following criticisms are relevant to relationship outcome research.

## Stability

Studies suggest that personality traits are not stable over the life course (Roberts & DelVecchio, 2000; Roberts, Walton & Viechtbauer, 2006). There is, however, evidence that their stability increases with advancing age (Caspi, Roberts & Shiner, 2005; Lee & Hotopf, 2005; McCrae et al. 2000; McCrae & Costa, 1996). Robins et al. (2002) reported a decrease in negative emotionality and increases in constraint and positive emotionality in young adults over six years. Similarly, Roberts et al. (2006) in a meta-analysis of 92 longitudinal samples found increases in conscientiousness and social dominance (a facet of extraversion), and a decrease in neuroticism in young adults.

In summary, a recent review of the personality development literature (Caspi et al., 2005) concluded that “personality traits continue to change throughout adulthood, but only modestly after age 50” (p.467) confirming that while personality traits are not “set like plaster” (McCrae & Costa, 1994), they do demonstrate moderate mean-level and rank-order stability.

## Ideographic Issues

Proponents of ideographic approaches to personality argue that factor analysis limits understanding of personality and ultimately results in a loss of information about individual differences (Block, 1995a,b; Drew, 1996). Block (1995b) suggests that rank-ordered ipsative instruments like the Q-sort are more appropriate for personality description than nomothetic factor analytic techniques, and that even the use of non-aggregated FFM facets is preferable to factorial reductionism.

### Independence of the Five Factors

Although the FFM traits were orthogonally extracted there is evidence of intercorrelations between the factors. McCrae and Costa (1985) found correlations between openness and neuroticism; conscientiousness and agreeableness; and agreeableness and neuroticism. While Costa and McCrae (1991, 1992) were unable to replicate the correlation between openness and neuroticism, they did however find an association between extraversion, conscientiousness, and openness, and a negative correlation between extraversion and neuroticism.

Block (1995a) suggests that factor non-independence may be a consequence of increasing sample heterogeneity in larger samples. Digman (1990), however, argues that it is a consequence of inadequate consensus about the meaning of the factors.

### Number of Factors

There is a lack of consensus about the number of personality traits required to characterise human behaviour. Arguments for more than five traits suggest, for example, that cultural and value-based factors are required to describe individual differences (Clark, 1993; Coolidge et al., 1994; Montag & Levin, 1994). Conversely, it is argued that the three-factor Eysenck model (psychoticism, extraversion, and neuroticism) is sufficient to describe human personality (Eysenck & Eysenck, 1964; Peabody, 1987). Auhagen and Hinde (1997) caution, however, that the fewer the dimensions used to characterise

individual personality differences, the greater the number of mediating variables required to describe their influence on observable behaviour.

### Trait versus Situational Determinants of Behaviour

Social learning theorists argue that internal traits account for only a small amount of variance in observed behaviour (e.g. Bandura, 1999; Mischel, 1968) and that most behaviour can be explained in terms of situational influences. Defending their position, trait theorists argue that while traits may not account for specific behaviours, they do limit the range of behaviours presented in a given context, and that traits are associated with an increase in the likelihood of particular behaviours (Buss & Craik, 1983; Paulus & Martin, 1988; Lee & Hotopf, 2005).

Evidence for an interactional approach has grown significantly over the past thirty years (e.g., Bowers, 1973; Malloy & Kenny, 1984; Pervin, 1977). For example, McAdams (1995) proposed a three-level taxonomy to describe the individual. Level 1 considers the individual's dispositional traits. This is the traditional view of personality theory. Level 2 considers the individual's characteristic adaptations across differing situations such as work and home contexts, or behavioural consistency across multiple relationships. Level 3 considers the life narratives that integrate the individual's experiences over time creating a sense of identity. McAdams and Pals (2006) extend this view to include notions of interactions between the individual and culture as determinants of behaviour.

A variation on this view in the context of couple relationships argues that individuals select relationship environments – including their relationship

partners – that support and reinforce their personality traits and consequent behavioural patterns (Caspi, Herbener & Ozner, 1992).

## **2.4.3 Personality and Relationship Satisfaction: Research**

### **2.4.3.1 Introduction**

The majority of research into associations between personality and relationship satisfaction has occurred at McAdams's (1995) first or trait level and this will be the focus of the current chapter. These findings have remained consistent over the past 80 years in spite of methodological and analytical advances. In particular, studies have found that emotional stability is a key correlate of relationship satisfaction and that findings for the other traits, with the exception of agreeableness, are generally weaker or mixed. For example, Terman and his colleagues (1938) used the Bernreuter inventory (Bernreuter, 1931) to assess the effects of neurotic tendency, self-sufficiency, introversion, and dominance on marital satisfaction and stability of 1133 married couples and 109 divorced couples. Based on a gender-specific model, Terman et al. (1938) concluded that self-assured and optimistic wives reported happier relationships than emotionally labile women. Similarly, self-confident, extraverted and conscientious husbands reported greater happiness than those who were emotionally labile and domineering. Pickford, Signori and Rempel (1966) using the Guilford-Zimmerman Temperament Survey (Guilford & Zimmerman, 1956) reported that restraint and friendliness predicted satisfaction, anticipating recent

discoveries of associations between agreeableness, conscientiousness, and relationship satisfaction.

Few studies have examined McAdam's (1995) level 2 effects (Neyer & Asendorpf, 2001; Robins et al., 2002). Robins et al. (2002), for example, examined the personalities and relationship outcomes of individuals across multiple relationships and concluded that "personality effects held across different relationship partners" (p.955) supporting the contention of Terman et al. (1938) that some individuals enjoyed consistently positive relationships no matter who they are with while others experience consistently negative relationships. Karney and Bradbury (1997) also found evidence that personality exerts a constant influence on relationship satisfaction when they reported that while personality traits were associated with initial levels of relationship satisfaction, they were not associated with changes in satisfaction over four years.

No studies examining McAdams's (1995) level 3 category could be located.

A variety of personality assessment instruments have been used to assess personality in relationship outcome research including the Personality Rating Scale (e.g., Kelly & Conley, 1987); the Guilford- Zimmerman Temperament Survey (e.g. Pickford et al., 1966); the Sixteen Personality Factor model (e.g. Cattell & Nesselroade, 1967); the Eysenck Personality Questionnaire (e.g. Eysenck & Wakefield, 1981), the Multidimensional Personality Questionnaire (e.g. Robins et al., 2000); and the Positive & Negative Affect Schedule (e.g. Berry, Willingham & Thayer, 2000). The majority of these have been based on self-report inventories although some

studies have used partner and friend ratings as well (e.g. Donnellan et al., 2004; Kelly & Conley, 1987; Watson et al., 2000a).

The following sections will review existing research based on the FFM. Research findings on trait effects will be summarised in terms of the APIM and the gender-specific models.

#### **2.4.3.2 Actor-Partner Interdependence Model**

As noted previously, the majority of studies using data from two partners in heterosexual relationships have been based on the gender-specific model (e.g., Bouchard et al., 1999; Eysenck & Wakefield, 1981). In an attempt to present these findings in an APIM framework here, the convention used is that an effect will be noted if a significant finding was reported for either member of the couple. While not statistically accurate, the goal of this exercise is to provide an indication of the APIM associations between personality and relationship satisfaction found in previous studies.

##### **2.4.3.2.1 Actor Effects**

Table 2.2 summarises the number of studies finding negative, positive and no actor associations.

##### Actor Neuroticism

Terman and Buttenweiser (1935) asserted that neurotic individuals are unlikely "to achieve a very high order of marital happiness" (p.135). Kurdek (1997b) similarly concluded that neuroticism was the "only personality factor that poses unique risk for relationship outcomes" (p.121). Opinions like these have ensured neuroticism a prominent position in dyadic research and as a

consequence, neuroticism has received more research attention than any of the other FFM traits (Karney & Bradbury, 1997; Kurdek, 1997a,b; Moffitt, Eisen & Goldney, 1985; Suls, Martin & David, 1998; Zaleski & Galkowska, 1978). Furthermore, the contention that neuroticism has deleterious effects on couple relationship satisfaction is supported by numerous research investigations<sup>3</sup>. Only one of the studies reviewed found no association between actor neuroticism and concurrent relationship satisfaction (Neyer & Voigt, 2004). This is unusual because like many other studies, they used the NEO-FFI (German version, Borkenau & Ostendorf (1993) and the Relationship Assessment Scale (German version, Sander & Bocker, 1993). They did however note that this may be a consequence of their mean NEO being lower than that cited in the NEO manual.

Longitudinal effects for neuroticism have also been noted. Kelly and Conley (1987) studied 278 couples over 45 years and asked acquaintances of the couples to assess their personalities using the Personality Rating Scale (Kelly, 1940). They found a longitudinal association between the actor neuroticism of wives and husbands of  $r = -.263$  and  $-.308$  respectively ( $p < .001$ ). It is of interest to note that Kelly and Conley found no significant concurrent actor effects for female neuroticism on satisfaction suggesting that the effects of female neuroticism develop over the course of a

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<sup>3</sup> Barelds (2005); Berry et al. (2000); Botwin et al. (1997); Bouchard et al. (1999); Caughlin et al. (2000); Donnellan et al. (2004); Eysenck & Wakefield (1981), Karney & Bradbury (1995a, 1997); Kelly & Conley (1987); Lester, Haig & Monello (1989); McCrae, Stone, Fagan & Costa (1998); Robins et al. (2000, 2002); Russell & Wells (1994b); Sanderson & Kurdek (1993); Shaver & Brennan (1992); Terman et al. (1938); Watson et al. (2000a)

relationship. As noted above, this contrasts with Karney and Bradbury's (1997) finding that neuroticism was related to initial satisfaction, but that it was unrelated to changes in satisfaction over the duration of the four year study.

The effect of neuroticism on relationship satisfaction is so strong relative to other personality traits that Karney and Bradbury (1995a) argue that future studies should control for its influence. Only a few studies have implemented this recommendation using hierarchical regression to control for the effects of neuroticism (e.g. Bouchard et al., 1999; Watson et al., 2000a). Watson et al. (2000a), for example, found that extraversion accounted for an additional 10% of variance in female satisfaction after controlling for negative affect (neuroticism).

### Actor Extraversion

Like most FFM traits with the exception of neuroticism and agreeableness, findings on the actor effects of extraversion on relationship satisfaction are mixed. Of the 13 studies reviewed, six reported small to moderate positive associations<sup>4</sup> while six were unable to find any significant association between extraversion and relationship satisfaction<sup>5</sup>. It is possible that some of the studies using a gender-specific model may have found more

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<sup>4</sup> Barelds (2005); Eysenck & Wakefield (1981); Donnellan et al. (2004); Karney & Bradbury (1995a), Russell & Wells (1994a); Watson et al. (2000a).

<sup>5</sup> Botwin et al. (1997); Bouchard et al. (1999); Kelly & Conley (1987); Lester et al., (1989); Neyer & Voigt (2004); White et al. (2004)

significant effects had the APIM been used (e.g. Eysenck & Wakefield, 1981; Kelly & Conley, 1987).

Finally, Cramer (1993) who analysed personality data from 6572 British adults using the Eysenck Personality Inventory (Eysenck & Eysenck, 1964) found that extraversion showed a small negative association with relationship stability, a construct closely associated with relationship satisfaction (e.g. Fitzpatrick & Sollie, 1999; Kurdek, 1992a; Sprecher, 2001).

### Actor Openness

Findings on the effects of openness on relationship satisfaction are both sparse and mixed. In part, this may be because few personality inventories include openness as a measure. Three of the nine studies reviewed found small positive associations between actor openness and relationship satisfaction (e.g. Barelds, 2005; Bouchard et al., 1999; Botwin et al., 1997) and four found no significant associations (Donnellan et al., 2004; Neyer & Voigt, 2004; Watson et al., 2000a; White et al., 2004). A notable exception is Karney and Bradbury's (1995a) finding in their meta-analysis that openness and satisfaction share a small negative correlation (-.05 and -.01 for females and males respectively; this finding is, however, based on two studies only).

### Actor Agreeableness

Of the 12 studies reviewed, 11 reported small to moderate positive associations between actor agreeableness and relationship satisfaction<sup>6</sup>. No negative associations were found and only one study (Kelly & Conley, 1987) found no significant concurrent association between agreeableness and satisfaction. The latter effect may be attributed to a period effect (the data in question were gathered in the 1936 to 1941 wave) or to an artefact of the instrument used (the Personality Rating Scale, Kelly, 1940). Kelly and Conley did, however, report a positive association between actor agreeableness and satisfaction for husbands in the 1955 wave. This suggests that agreeableness may influence husbands' satisfaction over time, similar to their finding for female neuroticism which showed no concurrent effect, but did demonstrate a significant longitudinal effect.

The large number of studies reporting effects for agreeableness suggests that its association with relationship satisfaction may be at least as important as that of neuroticism.

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<sup>6</sup> Barelds (2005); Botwin et al. (1997); Bouchard et al. (1999); Buss (1991); Donnellan et al. (2004); Karney & Bradbury (1995a); McCrae et al. (1998); Neyer & Voigt (2004); Shaver & Brennan (1992); Watson et al. (2000a); White et al. (2004)

### Actor Conscientiousness

Ten of the 14 studies reviewed reported small to moderate positive associations between actor conscientiousness and relationship satisfaction<sup>7</sup>. Robins et al. (2000) also found that constraint (comparable to the self-discipline facet of conscientiousness) was associated with increased satisfaction for males.

Three of the studies found a negative association between actor conscientiousness and relationship satisfaction (e.g. Eysenck, 1980; Eysenck & Wakefield, 1981; Newcomb & Bentler, 1981). For example, Newcomb and Bentler (1981) analysed data from 77 newly wed couples over four years. They found that *orderliness*, a facet of conscientiousness, was associated with decreased relationship satisfaction. Finally White et al. (2004) could find no association between conscientiousness and relationship satisfaction.

#### **2.4.3.2.2 Partner Effects**

Relatively few studies have assessed partner effects of personality on relationship satisfaction. The rarity of these effects is evidenced by their non-inclusion in Karney and Bradbury's (1995a) comprehensive review of the marital outcomes literature. Table 2.2 summarises the number of studies reporting negative, positive and no association between partner FFM traits and relationship satisfaction.

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<sup>7</sup> Barelds (2005); Bentler & Newcomb (1978); Botwin et al. (1997); Bouchard et al. (1999); Donnellan et al. (2004); Karney & Bradbury (1995a); McCrae et al. (1998), Neyer & Voigt, 2004; Shaver & Brennan (1992); Watson et al. (2000a)

### Partner Neuroticism

Of the 10 studies reviewed, eight reported small negative associations between partner neuroticism and relationship satisfaction<sup>8</sup>. This is similar to the effects of actor neuroticism except that the partner effects were significantly smaller. Two studies found no significant association (Lester et al., 1989; Neyer & Voigt, 2004).

**Table 2.2**

**APIM Associations Between FFM Actor Personality Traits And Relationship Satisfaction**

	<i>Actor Effects</i>			<i>Partner Effects</i>		
	Negative association	Positive association	No association	Negative association	Positive association	No association
Neuroticism	19	0	1	8	0	2
Extraversion	1	6	6	1	2	4
Openness	2	3	4	0	3	1
Agreeableness	0	11	1	0	3	0
Conscientiousness	3	10	1	0	1	4

### Partner Extraversion

Like the finding for actor extraversion, findings for the effects of partner extraversion were mixed in the five studies reviewed. Four studies reported no significant partner effects (Bouchard et al., 1999; Donnellan et al., 2004; Eysenck & Wakefield, 1981; Neyer & Voigt, 2004). Donnellan et al. (2004),

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<sup>8</sup> Barelds (2005); Bouchard et al. (1999); Donnellan et al. (2004); Eysenck & Wakefield (1981); Kurdek (1997a, 1997b); Robins et al. (2000), Russell & Wells (1994a)

for example, assessed the personalities and relationship satisfaction of 418 couples over four years using the FFM NEO-FFI (Costa & McCrae, 1989) and two items to assess marital quality. No effects for partner extraversion were found. This study did not however control for the effects of actor or partner neuroticism and the effects of other personality traits may therefore have been masked.

Two of the studies found positive correlations between partner extraversion and relationship satisfaction (Barelds, 2005; Russell & Wells, 1994a), and one study, Lester et al., (1989) found a moderate negative association.

### Partner Openness

Four of the studies reviewed investigated the effects of partner openness on actor relationship satisfaction. Three of the studies reviewed reported positive associations (Barelds, 2005; Bouchard et al., 1999; Neyer & Voigt, 2004) and the other found no significant partner effects for openness (Donnellan et al., 2004),

Barelds (2005) for example used the Five Factor Personality Inventory (Hendriks, Hofstee & de Raad, 1999) and the Dutch Relationship Questionnaire (Barelds & Luteijn, 2003) to assess 282 Dutch couples. Using multiple regression, they found a positive association between partner autonomy (analogous to openness) and relationship satisfaction ( $r = .17, p < .01$ ). A community sample was used in this study and the findings may therefore not be generalisable to distressed couples.

### Partner Agreeableness

Four of the studies reviewed examined the effects of partner agreeableness. Three found small positive associations with relationship satisfaction (Barelds, 2005; Donnellan et al., 2004; Neyer & Voigt, 2004) and one study (Bouchard et al., 1999) found no significant association.

### Partner Conscientiousness

Of the five studies reviewed, four found no significant partner effects for conscientiousness and relationship satisfaction (Barelds, 2005; Bouchard et al., 1999; Neyer & Voigt, 2004; Robins et al., 2000) and one (Donnellan et al., 2004) found a small positive association.

#### **2.4.3.2.3 APIM Effects: Summary**

Neuroticism showed consistently negative actor and partner associations with relationship satisfaction. Similarly, actor and partner agreeableness demonstrated reasonably consistent positive links with relationship satisfaction. In contrast, actor and partner effects for extraversion, openness, and conscientiousness were mixed. This suggests that the latter traits may be moderated by other factors as yet unidentified. Finally, studies have also concluded that actor effects are stronger than partner effects (e.g. Barelds, 2005; Kurdek, 1997a; Robins et al., 2000).

### 2.4.3.2.4 Actor Contributions versus Partner Contributions

Examples of studies that assessed actor and partner personality using the NEO-FFI are reported in Table 2.3.

**Table 2.3**  
**Examples of Two-Partner Couple Research into Associations between Personality and Relationship Satisfaction**

	Unit of Analysis	Actor effects					Partner effects				
		N	E	O	A	C	N	E	O	A	C
Barelds (2005) <sup>a</sup>	Individual	-.37**	.40**	.35**	.14**	.14**	-.24**	.19**	.17**	.17**	.11
Bouchard et al. (1999)	Female	-.31***	.07	-.04	.09	.02	-.08	-.04	.10*	.06	.04
	Male	-.11*	-.01	.10*	.13**	.14**	-.19***	.05	-.02	.03	.01
Donnellan et al. (2004)	Female	-.23*	.11*	.01	.11*	.15*	-.13*	.05	.01	.1	.14*
	Male	-.23*	.18*	.02	.23*	.19*	-.20*	.07	.04	.13*	.07
Neyer & Voigt (2004)	Female	-.12	.18	.12	.22*	.33**	-.06	.09	.21*	.08	-.12
	Male	.11	.06	.11	.28**	.15	-.15	-.11	.12	.25*	.09

\*p<.05, \*\*p<.01, \*\*\*p<.001

N: Neuroticism E: Extraversion O: Openness A: Agreeableness C: Conscientiousness

<sup>a</sup> Neuroticism was reversed as emotional stability and the sign reversed. Openness was assessed as autonomy

None of these studies formally compared the relative strengths of actor and partner effects. Neyer and Voigt (2004), for example, simply counted the

number of significant and non-significant actor and partner effects in order to determine which was larger.

In the current review, a visual comparison of actor versus partner coefficients was performed to assess which had the larger effect. To report a difference, one effect would have to appear significantly larger than the other. While not statistically rigorous, this was the only means available based on the limited information from the studies.

In the cases of neuroticism, extraversion, and openness, the coefficients were not generally different in magnitude or significance; in the cases of agreeableness and conscientiousness, actor effects often appeared to be larger than partner effects.

#### **2.4.3.3 Gender-Specific Model**

Karney and Bradbury (1995a) concluded that there was insufficient evidence to support the gender-specific model. The current section will review research on gender-specific actor and partner effects. Only three of the studies reviewed performed formal gender effect comparisons (Caughlin et al., 2000; Neyer & Voigt, 2004; Robins et al., 2000). As was the case with comparing actor and partner effects of personality on relationship satisfaction, the remainder of the studies reviewed either did not compare gender effects or inappropriately compared regression or correlation coefficients sizes even when separate analyses had been performed for female and male partners (e.g. Watson et al., 2000a).

For the purposes of the current review, the following approximate categories will be used to compare gender effects: *No difference* indicates that the effects of both genders were significant and of the same sign or that

both effects were not significant. *Female greater than male effect* means that the female effect is significant, and that the male effect is not. *Male greater than female effect* is the same, but with genders reversed. While these comparisons are not statistically accurate, they are the best that can be provided given the information reported in the studies<sup>9</sup>.

### 2.4.3.3.1 Gender-Specific Actor Effects

Table 2.4 summarises the gender effect findings of the studies reviewed.

**Table 2.4**

**Review of Gender-Specific Findings for Personality and Relationship Satisfaction**

	<i>Actor Effects</i>			<i>Partner Effects</i>		
	No difference	Female greater	Male greater	No difference	Female greater	Male greater
Neuroticism	11	1	1	6	0	1
Extraversion	8	0	3	5	1	0
Openness	6	0	1	1	2	0
Agreeableness	6	0	2	1	0	2
Conscientiousness	4	2	2	3	1	0

#### Actor Neuroticism

In a meta-analysis of 46 studies on gender differences, Hyde (2005) concluded that females experience greater levels of neuroticism than males. In spite of females' higher levels of neuroticism, eleven of the thirteen studies

<sup>9</sup> The current research will conduct more formal comparisons in section 5.7.

reviewed reported no gender differences in the effects of actor neuroticism on relationship satisfaction<sup>10</sup>. One study found that actor effects for female neuroticism were greater than male actor effects (Watson et al., 2000a), and one study found that the male actor effect was greater (Kelly & Conley, 1987).

### Actor Extraversion

Results in the 11 studies that investigated the effects of actor extraversion were mixed. Eight studies reported no gender differences for extraversion based on the criteria described above (Botwin et al., 1997; Bouchard et al., 1999; Donnellan et al., 2004; Karney & Bradbury, 1995a; Kelly & Conley, 1987; Lester et al., 1989; Neyer & Voigt, 2004; White et al., 2004;). Three studies reported that male extraversion had a greater actor effect on relationship satisfaction than female extraversion (Eysenck & Wakefield, 1981; Russell & Wells, 1994a; Watson et al., 2000a), and no studies found the opposite to be true.

An unusual finding was reported by Bentler and Newcomb (1978) who analysed data from 78 newly weds and found a positive association between actor extraversion and satisfaction for females, whereas this association was negative for males.

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<sup>10</sup> Botwin et al. (1997); Bouchard et al. (1999); Caughlin et al., (2000); Donnellan et al. (2004); Eysenck & Wakefield (1981); Karney & Bradbury (1995a); Lester et al. (1989); Neyer & Voigt (2004); Robins et al. (2000); Russell & Wells (1994a); White et al. (2004).

### Actor Openness

The majority of studies reviewed reported no gender differences for actor openness. Six studies found no significant gender differences (Botwin et al., 1997; Donnellan et al., 2004; Karney & Bradbury, 1995a; Neyer & Voigt, 2004; Watson et al., 2000a; White et al., 2004). Watson et al. (2000a), for example, assessed personality and satisfaction ratings of 74 married couples and 136 dating couples using the FFM-based NEO-FFI (Costa & McCrae, 1992), a composite satisfaction scale derived from the Marital Adjustment Test (Locke & Wallace, 1959) and the Quality of Marriage Index (Norton, 1983). No significant male or female actor effects were noted. No distal variables were included in this study and therefore hypotheses about the mechanism(s) through which personality acts on relationship satisfaction could not be investigated. One study found that male actor openness had a greater effect on satisfaction than female actor openness (Bouchard et al., 1999); and reported a larger female effect.

### Actor Agreeableness

The majority of studies found no gender differences in the effects of actor agreeableness on relationship satisfaction. Of the eight studies reviewed, six found no gender differences in the effects of actor agreeableness (Botwin et al., 1997; Donnellan et al., 2004; Karney & Bradbury, 1995a; Kelly & Conley, 1987; Neyer & Voigt, 2004; Watson et al., 2000a); and two studies found that male actor effects were greater than female actor effects (Bouchard et al., 1999; White et al., 2004). Bouchard et al. (1999), for example, used multiple regression to assess the personalities

of 446 couples using the NEO-FFI (Costa & McCrae, 1992) and the Dyadic Adjustment Scale (Spanier, 1976). They found that while the actor effect for husbands' agreeableness was .13 ( $p < .01$ ), there was no corresponding significant effect for wives' actor agreeableness. However because separate regression analyses were performed for males and females, coefficient sizes cannot be directly compared. No studies found female actor agreeableness to be greater than male actor agreeableness.

### Actor Conscientiousness

Findings for the effects of gender-based actor conscientiousness were mixed. Four of the eight studies reviewed found no gender differences in the effects of actor conscientiousness (Donnellan et al., 2004; Karney & Bradbury, 1995a; Watson et al., 2000a; White et al., 2004). White et al. (2004), for example, used multiple regression to analyse self-report personality and relationship satisfaction data from 196 students involved in committed relationships based on the NEO-PI-R (Costa & McCrae, 1992) and the Relationship Assessment Scale (Hendrick, 1988). No significant gender effects for actor conscientiousness and relationship satisfaction were found. The study had a number of limitations. First, data from only one partner in a couple was used. Had both partners been included, the resulting interactions may have yielded different findings. Second, the sample consisted of psychology students 63% of whom were aged 18 -19 years and therefore findings might not be generalisable to other populations. Two studies reported that male actor conscientiousness effects were greater (Bouchard et al., 1999; Robins et al., 2000), and two studies found that the

effects of female conscientiousness were greater (Botwin et al., 1997; Neyer & Voigt, 2004).

#### **2.4.3.3.2 Gender-Specific Partner Effects**

As was the case with non gender-specific APIM partner effects, few studies have considered gender-specific partner effects. Table 2.4 summarises the findings.

##### Partner Neuroticism

Of the seven studies reviewed, six found no differences between female and male partner effects for neuroticism (Donnellan et al., 2004; Eysenck & Wakefield, 1981; Lester et al., 1989; Neyer & Voigt, 2004; Robins et al., 2000; Russell & Wells, 1994a). Eysenck and Wakefield (1981), for example, assessed the personalities and relationship satisfaction of 556 couples using the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) and the Marital Adjustment Test (Locke & Wallace, 1959). They found that female and male partner neuroticism effects were similar ( $r = -.19$  and  $-.13$  respectively,  $p < .01$ ). These were of a similar magnitude to female and male actor effects reported ( $r = -.27$  and  $-.24$ ,  $p < .01$ ), an unusual finding since most other studies reported that partner effects were smaller than actor effects (e.g. Barelds, 2005; Bouchard et al., 1999; Russell & Wells, 1994a).

One study found that male effects were greater than female effects (Bouchard et al., 1999), and none of the studies reported greater female than male partner effects.

### Partner Extraversion

Seven studies investigating the gender effects of partner extraversion were reviewed. Five studies found no differences in gender effects (Bouchard et al., 1999; Donnellan et al., 2004; Eysenck & Wakefield, 1981; Lester et al., 1989; Neyer & Voigt, 2004), and one study found that female partner effects were greater than male effects (Russell & Wells, 1994a). Russell and Wells (1994a), for example, assessed the personalities, happiness, and marital quality of 1200 British couples with a mean age of around 37.5 years. They found that happiness and quality of marriage were correlated .78 ( $p < .001$ ) and that while husband's extraversion showed a positive association with female happiness ( $.05, p < .05$ ), there was no reciprocal finding for the effects of female extraversion on male happiness. The study did not use a widely-used personality inventory and findings may therefore not be readily comparable to similar investigations. Finally, no studies found male partner effects to be greater than female partner effects.

### Partner Openness

Only three of the studies reviewed reported gender effects for partner openness. Two studies found that female partner effects were greater than male partner effects (Bouchard et al., 1999; Neyer & Voigt, 2004). Neyer & Voigt, for example, used the German version of the NEO (Borkenau & Ostendorf, 1993) and the Relationship Assessment Scale (Sander & Bocker, 1993) to assess the personalities and relationship satisfaction of 100 couples. They used the pooled method (Kenny, 1996a,b) to control for within-couple interdependence. They found that the association for female

partner openness ( $\beta = .21, p < .05$ ) was greater than that for male partner openness ( $\beta = .12, ns$ ). The study used self-report data and therefore recall and attribution inconsistencies may have played a role in biasing responses.

Only one study found no gender differences in the partner effects of openness (Donnellan et al., 2004).

### Partner Agreeableness

As was the case with the effects of partner agreeableness, only three studies considered the effects of partner agreeableness. Two studies found that male partner effects were greater than female partner effects (Donnellan et al. 2004; Neyer & Voigt, 2004) while Bouchard et al. (1999) could find no gender differences in the effects of partner agreeableness.

### Partner Conscientiousness

Four of the studies reviewed assessed the effects of partner conscientiousness. Three of these found no gender differences in partner effects for conscientiousness on satisfaction (Bouchard et al., 1999; Neyer & Voigt, 2004; Robins et al., 2000). Robins et al. (2000), for example, used multiple regression to assess the personalities and satisfaction of 360 couples using the Multidimensional Personality Questionnaire (MPQ; Tellegen, 1982) and 14 interview questions about satisfaction in areas such as division of labour, sex, and finances. They found no significant associations between partner constraint (corresponding to the self-discipline facet of *conscientiousness*) and relationship satisfaction for either females or males. The corresponding female and male actor effects were .07 (not

significant) and .16 ( $p < .01$ ). Donnellan et al. (2004) found that the effects of female partner conscientiousness exceeded those of male partner conscientiousness.

#### **2.4.3.3.3 Gender-Specific Effects Summary**

In summary, few studies formally tested for differences in gender-based personality effects. An analysis of the findings seems to indicate few gender differences. Conclusions could not be reached for actor conscientiousness, partner openness and partner agreeableness because of the high degree of mixed findings. These mixed findings, however, may have more to do with the lack of studies investigating gender differences than the findings themselves.

#### **2.4.3.4 APIM and Gender Effects: Combined Summary**

Table 2.5 summarises the APIM and gender-specific findings. The most consistent APIM findings have been for actor and partner neuroticism, actor extraversion, actor and partner agreeableness, and actor conscientiousness. Few gender-effect differences were noted, but there is insufficient data for a conclusive opinion.

#### **2.4.3.5 Relationship Satisfaction: Variance Accounted for by Personality**

Estimates for the effect of personality on relationship satisfaction are reasonably consistent. Using multiple regression, Bentler and Newcomb (1978) in a four-year longitudinal study of 77 newlyweds estimated that the 28 personality factors assessed (Bentler Psychological Inventory) accounted

for 29% of relationship satisfaction whereas the eight demographic factors measured accounted for 18%. However, the accuracy of this finding is questionable given the ratio of the sample size to the number of variables regressed. Watson et al. (2000a) found similar totals for females and males of 25% to 35%. Other studies suggest that personality accounts for slightly lower variance in satisfaction. Bouchard et al. (1999) using the FFM found that personality accounted for a significant 17% of female relationship satisfaction in a cross-sectional study of 446 couples. Finally, Eysenck and Wakefield (1981) concluded that personality accounted for 18% of wives and husbands relationship satisfaction.

**Table 2.5**

**Summary of Actor-Partner and Gender-Specific Associations between Personality and Relationship Satisfaction**

	<i>APIM</i>		<i>Gender Specificity</i>	
	<b>Actor</b>	<b>Partner</b>	<b>Actor</b>	<b>Partner</b>
Neuroticism	Negative	Negative	No difference	No difference
Extraversion	Mixed findings	Mixed findings	No difference	No difference
Openness	Mixed findings	Positive	No difference	Mixed findings
Agreeableness	Positive	Positive	No difference	Mixed findings
Conscientiousness	Positive	No association	Mixed findings	No difference

### 2.4.3.6 Personality Homogamy in Couple Relationships

#### Assortative Mating

Assortative mating theory asserts that individuals select relationship partners similar to themselves on attributes such as personality, physical characteristics, attractiveness, and attitudes (Caspi & Herbener, 1990; Vandenberg, 1972). Caspi and Herbener (1990) explain assortative mating as people's tendency to "seek environments that are correlated with their dispositions" (p.256). Since these individuals are likely to pair with others seeking similar environments, it is therefore reasonable to suppose that people will end up with partners whose characteristics match their own.

Evidence for the existence of couple personality homogamy is mixed with earlier research providing more support for its existence than more recent findings. For example, Adams (1946) reported that partners tended to be similar in their personality characteristics, and Barry (1970) in a review of the homogamy literature argued that there is more evidence for homogamy than heterogamy. Recent findings, however, have been mixed<sup>11</sup>. Luo and Klohnen (2005), for example, found evidence of attitude similarity, but found no evidence for trait similarity. Others like Donnellan et al. (2004) reported limited support for partner similarity on neuroticism and openness whereas Barelds (2005) found that partners were alike on extraversion. Eysenck and Wakefield (1981) noted a similarity only on neuroticism.

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<sup>11</sup> Barelds (2005); Berry et al. (2000); Botwin et al. (1997); Buss (1991); Donnellan et al. (2004); Eysenck (1980); Eysenck & Wakefield (1981); Glicksohn & Golan (2001); Luo & Klohnen (2005); Watson et al. (2000a, 2000b).

These inconsistent and mixed findings led Klohnen and Mendelsohn (1998) to conclude that there is insufficient evidence to support homogamy or heterogamy hypotheses.

#### Effect of Assortative Mating on Relationship Satisfaction

The next question is the extent to which assortative mating, where it prevails, predicts relationship satisfaction. Huston and Houts (1998) propose that couple compatibility is more typically associated with partner similarity than with partner difference. There are several reasons why assortative mating may be associated with greater relationship satisfaction including increased mutual empathy and the creation of a relationship environment that is mutually supportive for the traits of both partners (Bentler & Newcomb, 1978; Botwin et al., 1997; Caspi & Herbener, 1990; Eysenck & Wakefield, 1981; Nemechek & Olson, 1999).

Like the findings for the existence of assortative mating, findings for its effects on relationship outcomes have been mixed<sup>12</sup>. Bentler and Newcomb (1978) found that partners who were similar on personality traits at time of marriage were still married after a four-year follow-up whereas a large proportion of those who had separated were dissimilar. Eysenck and Wakefield (1981) found that while similarity on low psychoticism and similarity on any level of neuroticism were associated with increased marital satisfaction, there were no effects for similarity on extraversion. Kurdek

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<sup>12</sup> Bentler & Newcomb (1978); Bono et al., (2002); Eysenck & Wakefield (1981); Lester et al., 1989; Luo & Klohnen (2005); Nemechek & Olson (1999), Pickford et al., (1966); Wilson & Cousins (2003)

(1993) in a study of 222 newly married couples found that couples in unstable relationships reported greater discrepancies between their neuroticism scores than couples in stable relationships. Similarly, Barelds (2005) found a positive association between similarity on neuroticism and relationship satisfaction, but found no support for any of the other traits. In summary, like the findings for the existence of assortative mating, findings for the effects of trait similarity on relationship satisfaction have been mixed and inconsistent.

A few gender effects for personality homogamy have also been noted. Robins et al. (2000) found that personality similarity led to increased satisfaction in males, but made little difference to female satisfaction. These findings are supported in part by Lester et al. (1989) who found that similarity in neuroticism led to increased satisfaction in men, but found no effect for women. Nemechek and Olsen (1999) found that similarity in conscientiousness predicted increased satisfaction for both male and female partners, but that similarity in agreeableness predicted increased satisfaction for males only, and that similarity in neuroticism predicted increased satisfaction only in females. However, they found no similarity effects for extraversion or agreeableness.

## **2.4.4 Personality and Relationship Satisfaction Research: Issues**

A number of issues have been identified in researching associations between personality traits and relationship satisfaction.

### **2.4.4.1 Controlling for the effects of neuroticism**

Compared to the other FFM personality traits, neuroticism has been shown to share consistently small to moderate effects with relationship satisfaction. Karney and Bradbury (1995a) argue that researchers should attempt to establish the contribution of the other FFM traits beyond that of neuroticism. Few studies have attempted this analysis (Bouchard et al., 1999; Watson et al., 2000a). Watson et al. (2000a) found that the incremental variance accounted for by extraversion and positive affect was 10% to 12%. In contrast, Bouchard et al. (1999) found extraversion, openness, agreeableness, and conscientiousness accounted for an additional 1% for females and 5% in males suggesting that these traits have more influence on male than on female satisfaction.

### **2.4.4.2 Moving beyond the effects of neuroticism**

Kurdek (1997a) notes that neuroticism receives more research attention relative to the other FFM traits in spite of a growing body of work examining the effects of FFM trait on relationship outcomes<sup>13</sup>. He recommends that these traits too require investigation.

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<sup>13</sup> Barelds (2005); Botwin et al. (1997); Bouchard et al. (1999); Buss (1991); Donnellan et al. (2004), Kurdek (1993); Nemecek & Olson (1999); Watson et al. (2000a); White et al. (2004)

#### **2.4.4.3 Testing for Partner Effects**

As noted in the review of the personality literature, few studies have tested for the presence of partner effects in spite of evidence of their demonstrable importance. One reason for this deficit is that it is often difficult to recruit both partners into relationship studies and many studies must therefore rely on data from one partner. However as Caughlin et al. (2000) observe, "one cannot demonstrate interpersonal processes with intra-individual analyses" (p.334).

#### **2.4.4.4 Small Effect Sizes**

The effect sizes reported to date between personality and relationship satisfaction are typically small to moderate (Karney & Bradbury, 1995a; Reis et al., 2002). As noted in Section 2.2, sample sizes in couple investigations are often small and may therefore lack sufficient power to detect such small effects. This limitation may explain mixed findings for small-effect traits and may also explain why small assortative mating effects are not consistently detected.

#### **2.4.4.5 Linking Personality to Relationship Outcomes**

Even though there are hypothesised biological bases for personality traits, they are none-the-less latent constructs and are different from the behaviours which they underpin. Intermediary factors are therefore required in order to link personality traits to relationship outcomes (Auhagen & Hinde,

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1997). In the context of social relationships, Caspi et al. (2005) refer to these as microinteractional processes although it is likely that this description extends beyond relationship science. Few studies have, however, researched the mechanisms through which personality influences relationship satisfaction (Cooper & Sheldon, 2002; Karney & Bradbury, 1995a; Reis et al., 2002).

#### **2.4.4.6 Inflexibility of Personality Traits**

Personality traits are distal, stable and enduring with possible genetic underpinnings. Their influence on relationship outcomes is therefore more difficult to modify clinically than proximal influences like conflict behaviour (Bateman, 2000; Trull & Durrett, 2005). Therefore, even if the influence of personality is an important determinant of relationship satisfaction, this information may be of limited clinical benefit.

#### **2.4.5 Personality and Relationship Satisfaction: Summary**

There is a large body of evidence suggesting that actor and partner personalities exert an influence on relationship outcomes. Indeed, they may share a reciprocal association (e.g., Neyer & Asendorpf, 2001). Effect sizes are generally small to moderate and the most consistent effects are associated with neuroticism and agreeableness. Furthermore, there is growing evidence to suggest that gender may not play an influential role in determining the effects of personality on relationship outcomes.

An important deficit in the field is the proposed mechanisms through which personality influences relationship satisfaction. The focus of the

current investigation is to examine the role of conflict behaviour in this regard.

Finally, it should be noted that while there appears to be evidence for the associations between personality and relationship satisfaction, there is still much to be explained. Kurdek (1993), for example, found that the association between intrapersonal characteristics and relationship outcomes could be accounted for by the combined effects of demographic factors, partner interdependence, and discrepancies between the spouses' intra-individual characteristics.

The following section explores the effects of personality on conflict behaviour.

## **2.5 Personality and Conflict Behaviour**

### **2.5.1 Introduction**

Links between dispositional traits and interpersonal conflict behaviour have been mooted frequently. Caspi et al. (2005) refer to these as the "microinteractional process" (p.471) linking personality to social outcomes. Bradbury et al. (2001), for example, argue that "poor communication appears to be rooted in the enduring traits and experiences that spouses would bring to any marriage and in the ecological niche in which their marriage exists" (p.77). This echoes the view of Kelly and Conley (1987, p.36) some 20 years earlier who surmised that "many of the disrupted patterns of communication and behaviour exchange that researchers have noted in disturbed couples may be seen as the outgrowths of the personality characteristics of the partners" (p.36).

In spite of this speculation, Wu and Clark (2003) note that “behavioral manifestations of personality traits remain largely ignored in the contemporary personality assessment literature” (p.231) not least because of the practical difficulties in assessing everyday behaviour (Tennen, Suls & Affleck, 1991). A search of PsycINFO for the term ‘personality traits’ yielded approximately 20 000 articles. However, when search terms related to behavioural investigations were added, this number of articles found was reduced to only 37.

The relationship between personality and conflict behaviour is of particular relevance to the current investigation because in order to demonstrate that conflict behaviour mediates the effects of personality, a significant association between personality and conflict behaviour must be established (Baron & Kenny, 1986; MacKinnon, Lockwood, Hoffman, West & Sheets, 2002).

This section reviews research into associations between FFM personality traits and conflict behaviour.

### **2.5.2 Personality and Conflict Behaviour: Research**

Few studies have investigated associations between couples’ personalities and their conflict behaviour using the FFM (Buss, 1991; Donnellan et al., 2004; Neyer & Voigt, 2004). These are therefore supplemented by investigations using non-couple samples such as friendships or workplace dyads (Asendorpf & Wilpers, 1998; Berry et al., 2000; Blickle, 1997; Bono et al., 2002) or those not using the FFM or full FFM (Buss et al., 1987; Caughlin et al., 2000).

Moreover, few studies have considered partner effects. Typically, either only one partner is used (e.g. Asendorf & Wilpers, 1998; Suls et al., 1998), or else within-couple conflict behaviour is pooled and analysed at the dyadic level (e.g. Donnellan et al., 2004; McGonagle et al., 1993).

These studies will be reviewed, but it should be noted that the relevance of these findings to the present research is questionable because many of the samples do not consist of intimate couples.

### **2.5.2.1 Actor Effects**

#### Neuroticism

As was the case with close relationship satisfaction, the majority of studies investigating the relationship between actor neuroticism and conflict behaviour have reported small to moderate positive associations (e.g., Bono et al., 2002; Buss, 1991, 1992; Buss et al., 1987; Caughlin et al., 2000; Donnellan et al., 2004; Huston & Houts, 1998; Kurdek, 1997b; Suls et al., 1998). Suls et al. (1998), for example, assessed the levels of neuroticism and agreeableness (NEO-PI; Costa & McCrae, 1985) and conflict behaviours (diary assessment) of 84 male participants with chronic health conditions. They found that neuroticism and conflict frequency were positively related ( $r = .33, p < .01$ ). The sample did not, however, consist of individuals in couple relationships and it is therefore unknown whether this result can be generalised.

A few of the studies reviewed found no association between actor neuroticism and conflict behaviour (Berry et al., 2000; Blickle, 1997; Karney

& Bradbury, 1997; Neyer & Voigt, 2004). None of the studies reported a negative link between neuroticism and conflict behaviour.

### Extraversion

Reports on the association between actor extraversion and conflict behaviour are mixed. Several studies found no association (e.g., Asendorpf & Wilpers, 1998; Bono et al., 2002; Buss, 1991; Buss et al., 1987; Neyer & Voigt, 2004). Others reported a negative association (e.g., Berry et al., 2000; Bono et al., 2002; Donnellan et al., 2004; Kurdek, 1997b). Buss et al. (1987), for example, assessed the personalities (Eysenck Personality Questionnaire; Eysenck & Eysenck, 1975) and manipulation tactics (own scale) used by 59 student couples. They reported no association between actor extraversion and conflict styles such as coercion or debasement. Because the sample consisted of student participants, it is uncertain whether these findings can be generalised to older couples.

Finally, only a few studies reported a positive association between actor extraversion and conflict behaviour (Blickle, 1997; Buss, 1992; Geist & Gilbert, 1996).

### Openness

As was the case with openness and relationship satisfaction, findings on the association between actor openness and conflict behaviour were mixed. Two studies reported positive associations between actor openness and conflict behaviour (Blickle, 1997; Bono et al., 2002). Blickle, for example, assessed the personalities (NEO-FFI) and argumentativeness (Tendency to

Approach Arguments; Infante & Rancer, 1982) of 286 college students. He found positive associations between openness and argumentativeness for female ( $r = .40$ ,  $p < .05$ ) and male participants ( $r = .34$ ,  $p < .05$ ).

Other studies reported no association between actor openness and conflict behaviour (Bono et al., 2002; Kurdek, 1997b; Neyer & Voigt, 2004) or a negative association between actor openness and relationship satisfaction (Berry et al., 2000; Suls et al., 1998).

### Agreeableness

A majority of studies have reported a negative association between actor agreeableness and conflict behaviour (Asendorpf & Wilpers, 1998; Buss, 1992; Bono et al., 2002; Caughlin et al., 2000; Donnellan et al., 2004; Kurdek, 1997b; Suls et al., 1998; Van de Vliert & Euwema, 1994). Asendorpf and Wilpers (1998), for example, assessed the personalities (NEO-FFI) and conflict behaviours (diary-based) of 132 students in social contexts over 18 months. They found that actor agreeableness and conflict behaviour were negatively associated ( $r = -.17$ ,  $p < .01$ ).

Two studies reported no associations between actor agreeableness and conflict behaviour (Berry et al., 2000; Blickle, 1997).

### Conscientiousness

Findings on the association between actor conscientiousness and conflict behaviours are mixed. Several studies reported negative associations (Berry et al., 2000; Botwin et al., 1997; Buss, 1992; Donnellan

et al., 2004; Kurdek, 1997b). Buss (1992), for example, assessed the personalities (40-item Goldberg inventory; Goldberg, 1983) and conflict style (own instrument) of 107 married couples. Buss found that low conscientiousness was associated with irrational styles of conflict resolution behaviour.

A few studies, however, found no association between conscientiousness and conflict behaviour (Asendorpf & Wilpers, 1998; Blickle, 1997; Bono et al., 2002; Neyer & Voigt, 2004).

#### **2.5.2.2 Partner Effects**

Few studies have investigated the effects of partner personality on conflict behaviour.

##### Neuroticism

Of the five studies examining the effects of partner neuroticism on conflict behaviour, four reported a positive association (Berry et al., 2000; Buss, 1991; Caughlin et al., 2000; Donnellan et al., 2004) and one study found no association (Bono et al., 2002). Bono and her colleagues, for example, assessed the personalities (NEO-FFI) and conflict frequency of 48 management students. They found no significant associations between partner personality and conflict frequency.

##### Extraversion

None of the studies reviewed found an association between partner extraversion and relationship satisfaction (Berry et al., 2000; Bono et al.,

2002; Buss et al., 1987; Donnellan et al., 2004; Neyer & Voigt, 2004). Berry et al. (2000) assessed the personalities (NEO-FFI; Costa & McCrae, 1992) and conflict behaviour frequency of 131 friendship dyads. They found no association between partner extraversion and conflict frequency. As was the case with other studies examining non-intimate couple samples, the extent to which it can be generalised to intimate couple conflict behaviours is unknown.

### Openness

Only a few studies examined the association between partner openness and conflict behaviour and most reported no association (Berry et al., 2000; Bono et al., 2002; Kurdek, 1997b; Neyer & Voigt, 2004). Kurdek, for example, assessed the personalities (NEO-FFI) and conflict behaviour (Conflict Resolution Styles Inventory; Kurdek, 1994a) of 155 married couples. He found no association for either gender.

Two studies reported some evidence of a negative association between partner openness and conflict behaviour (Buss, 1991; Donnellan et al., 2004).

### Agreeableness

A majority of studies found no association between partner agreeableness and conflict behaviour (Asendorpf & Wilpers, 1998; Bono et al., 2002; Buss, 1991; Donnellan et al., 2004; Kurdek, 1997b). Buss (1991), for example, requested 107 couples married for less than one year to record a list of upsetting behaviours exhibited by their spouses over the past 12

months. A factor analysis of these behaviours resulted in 15 negative conflict styles including condescending behaviour, abuse, inconsideration, and self-centredness. He found that partner agreeableness was negatively associated with condescending behaviour, abuse, and insulting behaviour. The study had a number of limitations. First, it is unknown whether the behaviours of newly married couples can be generalised to longer-married couples. Second, the study did not account for interdependence between the partners' scores.

A few of the studies reviewed also found no association between partner agreeableness and conflict behaviour (Berry et al., 2000; Blickle, 1997; Neyer & Voigt, 2004).

### Conscientiousness

Associations between conscientiousness and conflict behaviour were mixed with approximately equal numbers of studies reviewed reporting no significant finding (Asendorpf & Wilpers, 1998; Blickle, 1997; Neyer & Voigt, 2004) and others reporting a negative finding (Berry et al., 2000; Bono et al., 2002; Donnellan et al., 2004; Kurdek 1997b).

### **2.5.3 Gender-Specific Model**

Few studies have formally examined the gender differences in the effects of personality on conflict behaviour. The same principles used to compare associations in the section on personality and relationship satisfaction (Section 2.4.3.3) will be used here.

### Actor effects

Most studies found no gender differences for the effects of actor neuroticism (Buss, 1991; Buss et al., 1987; Caughlin et al., 2000; Donnellan et al., 2004; Kurdek, 1997b) and two studies found that male neuroticism showed a greater association than female neuroticism (Blickle, 1997; Huston & Houts, 1998).

None of the studies reviewed found gender differences for actor extraversion (Blickle, 1997; Buss, 1991; Buss et al., 1987; Donnellan et al., 2004; Kurdek, 1997b).

Findings for the gender effects of actor openness were mixed with a few studies reporting no difference (Blickle, 1997; Kurdek, 1997b), one study reporting that male actor openness had a greater influence (Buss, 1991), and one study reporting that female actor openness had a greater effect (Donnellan et al., 2004).

With regard to gender differences for actor agreeableness, three studies reported no difference (Blickle, 1997; Donnellan et al., 2004; Kurdek, 1997b) and one study found that the female effect was larger (Buss, 1991).

None of the studies reviewed found gender differences for actor conscientiousness (Blickle, 1997; Buss, 1991; Donnellan et al., 2004; Kurdek, 1997b).

### Partner Effects

Even fewer studies reported gender effects for partner personality traits. With regard to partner neuroticism, three studies all reported different findings. Buss (1991) found that females reported significantly greater partner abuse than male partners; Caughlin et al. (2000) found that partner

neuroticism led to greater conflict behaviours for males than females, whereas Donnellan et al. (2004) found no difference in gender effects for partner neuroticism.

Only two of the studies reviewed reported gender effects for partner extraversion: Buss (1991) found that female extraversion had a greater effect on male satisfaction than vice-versa whereas Donnellan et al. (2004) found no gender difference.

With regard to partner openness, Buss (1991) found that male openness was more strongly associated with female conflict behaviour than vice versa whereas Donnellan et al. (2004) reported no gender difference.

Buss (1991) reported that female partner agreeableness had a greater influence on conflict behaviour than male partner agreeableness; Donnellan et al. (2004) reported no gender effect differences.

Finally, with regard to partner conscientiousness, neither of the studies that examined gender effects reported any difference (Buss, 1991; Donnellan et al., 2004).

#### **2.5.4 Experience of Conflict**

Personality has also been found to influence the subjective perception of conflict behaviour. For example, Suls et al. (1998) concluded that whereas agreeable individuals tend to experience distress only in conflict situations, neurotic individuals react with distress to both conflict and non-conflict interactions. Bono et al. (2002), however, found that partners whose spouses were high in extraversion and conscientiousness reported the existence of conflict in their relationships more frequently than partners low on these traits.

## 2.5.5 Personality and Conflict Behaviour Research: Issues

At least three key problems dominate research into associations between personality and conflict behaviour. The first is that few studies have researched this area and very few have assessed couple samples. A second issue is the lack of theoretical models linking personality and conflict behaviour. A third problem is the plethora of instruments and definitions used to assess conflict behaviour; in the studies reviewed, the same assessment instrument was seldom used more than once and the differing findings are therefore unsurprising (e.g. Asendorpf & Wilpers, 1998; Berry et al., 2000; Buss, 1991; Caughlin et al., 2000; Donnellan et al., 2004; Suls et al., 1998).

## 2.5.6 Personality and Conflict Behaviour: Summary

A lack of research investigations and theoretical underpinnings limit the conclusions that can be drawn regarding associations between personality traits and conflict behaviour. Table 2.6 summarises the review based on the information available.

**Table 2.6**

**Summary of Actor-Partner and Gender-Specific Associations between Personality and Conflict Behaviour**

	<i>APIM Model</i>		<i>Gender-Specific Model</i>	
	Actor Effects	Partner Effects	Actor Effects	Partner Effects
Neuroticism	Positive	Positive	No difference	Mixed
Extraversion	Mixed	No association	No difference	Mixed
Openness	Mixed	No association	No hypothesis	Mixed
Agreeableness	Negative	Negative	No difference	Mixed
Conscientiousness	Mixed	Mixed	No difference	No difference

Given that a significant association between personality and conflict behaviour is required to assess conflict behaviour as a mediating variable, the non-associations and mixed findings in this table suggest that for some traits, conflict may not mediate the effects of personality.

The following section discusses research that includes personality, conflict behaviour and relationship satisfaction in a single model.

## **2.6 Personality, Conflict Behaviour and Relationship**

### **Satisfaction: Mediatory Associations**

#### **2.6.1 Introduction**

Karney and Bradbury (1995a) argue that models explaining couple relationship outcomes should “encompass a full range of predictors of marital outcome and should provide links between different levels of analysis” (p.4). The bivariate intrapersonal and interpersonal research models reviewed in the previous sections fall short of this requirement in a number of ways. First, personality traits are latent constructs and not identical with the behaviours they describe. Therefore it is likely that their influence on relationship satisfaction is mediated by other factors (Caughlin et al., 2000). Intrapersonal models describing the effects of personality on relationship satisfaction seldom, however, explain the mechanisms or process through which personality traits influence relationship satisfaction and therefore do not meet Karney and Bradbury’s criterion above. Second, research has demonstrated that relationship outcomes vary more over time than do personality traits

(Asendorpf & Wilpers, 1998; Neyer & Asendorpf, 2001). Other factors are therefore required to explain the additional variance in relationship outcomes. Finally, Karney and Bradbury (1997, p.1078) observe that "intrapersonal and interpersonal perspectives have seldom been combined in the same investigation, possibly because each model assigns a relatively minor role to variables from the other model" (p.1078). The use of single paradigms in relationship outcome research limits the explainable variance in relationship satisfaction. There is evidence, for instance, that the joint effects of intrapersonal and interpersonal factors explain more variance in relationship satisfaction than either of these variables alone (Karney & Bradbury, 1997; Rogge et al., 2006).

A number of scholars have therefore called on "researchers studying the correlates of relationship satisfaction ... to go beyond the bivariate perspective by conducting refined tests of multivariate integrative mediating models" (Kurdek, 1991b, p.921). Until recently, this appeal has been resisted. Behavioural researcher, John Gottman (1994), for example, argued that "research based on an individual psychopathology model...has little to say about the possible mechanisms that lead to marital dissolution" (p.87). Similarly, Davies (2004) and McAdams (1992) have noted that intrapersonal approaches are limited to the extent that cognitive, affective and behavioural factors are ignored.

To address these issues, Baron and Kenny (1986) recommend the use of path analytic frameworks to operationalise mediator mechanisms and facilitate the "prediction of social behavior from dispositional variables" (p.1180) in order to answer questions like "what conceivable processes link

traits to behavior?" (p.1180). The Vulnerability-Stress-Adaptation (VSA) model is an example of a model meeting these criteria (Karney & Bradbury, 1995a).

This section will discuss mediation theory and the Vulnerability-Stress-Adaptation model. Examples of related mediational research will then be reviewed.

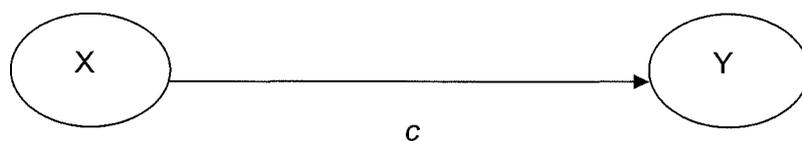
## **2.6.2 Theoretical Context**

### **2.6.2.1 Introduction**

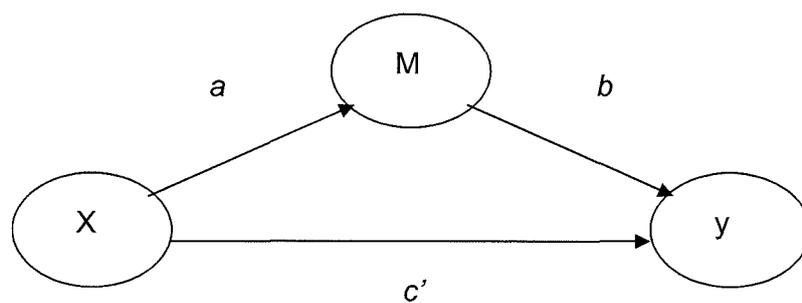
Two theoretical models are reviewed here. The first is a modified version of Baron and Kenny's (1986) approach to mediation hypotheses testing and the second is the Vulnerability-Stress-Adaptation model which proposes that interpersonal behaviours mediate the association between intrapersonal factors and relationship outcomes.

### **2.6.2.2 Mediation Modelling**

Mediation models are a type of causal model seen frequently in social psychology and which allow decomposition of interesting associations (Shrout & Bolger, 2002). Baron and Kenny (1986) in their seminal work on testing mediational hypotheses in psychology define a mediator as any variable that "accounts for the relation between the predictor and the criterion" (p.1176). This is illustrated in Figures 2.2(a) and (b). X is the predictor variable, Y is the criterion, and M is the mediator. The total effect of the predictor (prior to being decomposed) is  $c$ . This decomposes into an indirect (or mediated) effect, path  $ab$ , and a direct effect,  $c'$ .



(a)



(b)

**Figure 2.2: Mediation**

$X$  is the predictor,  $Y$  is the criterion, and  $M$  is the mediator.  $c$  is the total effect,  $a*b$  is the mediated or indirect effect, and  $c'$  is the direct effect.

To support a mediation hypothesis, three conditions must be satisfied (Baron and Kenny, 1986; Kenny, Kashy & Bolger, 1998):

1. Prior to decomposition, X must be significantly related to Y (path *c*).

This demonstrates that there is an effect to be mediated.

2. X must be significantly related to M (path *a*)
3. When Y is regressed on both X and M, M must be significantly related to Y (path *b*).

Complete mediation is said to occur when the direct effect *c'* becomes non-significant or reduced to zero; that is, the indirect effect is equal to the total effect. Partial mediation is said to occur when the absolute value of *c'* in step 3 remains significant, but is less than *c*; that is, the total effect is greater than the indirect effect.

The degree of mediation can be quantified as the reduction in total effect,  $c - c'$  (Kenny et al., 1998). Kenny (2006b), however, recommends using the product  $a*b$  when analysis is performed using multilevel models or structural equation modelling. The degree of mediation can also be expressed as the ratio of the indirect effect to the total effect *c*, or if using structural equation or multilevel modelling techniques,  $c' + ab$  (Kenny, 2006b).

The significance of the indirect effect is calculated using the Sobel (1982) large-sample equation:

$$z = \frac{a * b}{\sqrt{b^2 * sa^2 + a^2 + sb^2}}$$

### Issues and Considerations when Testing Mediation

It is possible that the mediating variable can lead to a *suppression effect* between the predictor and the criterion. There are many definitions of suppression (Cohen & Cohen, 1983; MacKinnon, Krull & Lockwood, 2000). The current research utilises Conger's (1974) definition of a suppressor as "a variable which increases the [absolute] predictive validity of another variable (or set of variables) by its inclusion in a regression equation" (p.36). In the context of mediation analyses, this manifests when the mediated and direct effects of the predictor variable are of opposite signs and is referred to as inconsistent mediation (Davis, 1985). Under conditions of suppression, the indirect effect to total effect ratio will be larger than one and should therefore not be calculated. Shrout and Bolger (2002) recommend exercising caution when labelling inconsistent mediation because the confidence interval containing the point estimates of the mediated or direct effects may contain zero and their signs may therefore not be different.

Another consideration when testing mediation is that in order to maximise the mediation effect  $ab$ ,  $a$  and  $b$  should be of approximately equal size (Kenny et al., 1998). This is unlikely to occur if the mediator is close in time to the predictor (proximal mediation) in which case  $a$  is likely to be larger than  $b$ , or if the mediator is close in time to the criterion (distal mediation) in which case  $b$  will be larger than  $a$ . In response, Shrout and Bolger (2002) argue that when  $X$  is a distal variable (like personality), then  $a$  is quite likely to be small and  $c$ , the total effect, may be small or not even significant; however, there may still be a mediation effect when a proximal variable is introduced. They therefore recommend relaxing the first requirement of the

Kenny et al. (1998) procedure when X is a distal variable. This is the same recommendation made by MacKinnon et al. (2000) above, but for a different reason.

Finally with regard to suppression, MacKinnon et al. (2000) note that inconsistent mediation can lead to the cancelling out of the direct and indirect effects leaving a non-significant or zero total effect. This means that the first of the Kenny et al. (1998) criteria outlined above would not be met.

MacKinnon et al. (2000) therefore recommend eliminating the requirement of a significant association between the predictor and mediator variables.

The effective sample size of a mediation test can be approximated by  $N/(1-r_{XM}^2)$ . Therefore, the larger the correlation between the predictor and the mediator, the lower will be the power of the test. Conceptually, high multicollinearity between the predictor and the mediator means that there will be little variance left in the mediator to explain variance in the criterion.

Feedback or reverse causal effects are another concern when testing mediation (Baron & Kenny, 1986). These occur when the criterion causes the mediator instead of vice versa; under these circumstances, mediation can not be demonstrated. Shrout and Bolger (2002) note that while ordering the variables in time may reduce the risks associated with reverse causal effects, it does not completely eliminate them because of issues like spuriousness for example.

Finally, Baron and Kenny (1986) note that error in the mediator variable will typically serve to overestimate a mediation effect. Kenny et al. (1998) recommend that if the variable does not have high reliability, then a multiple

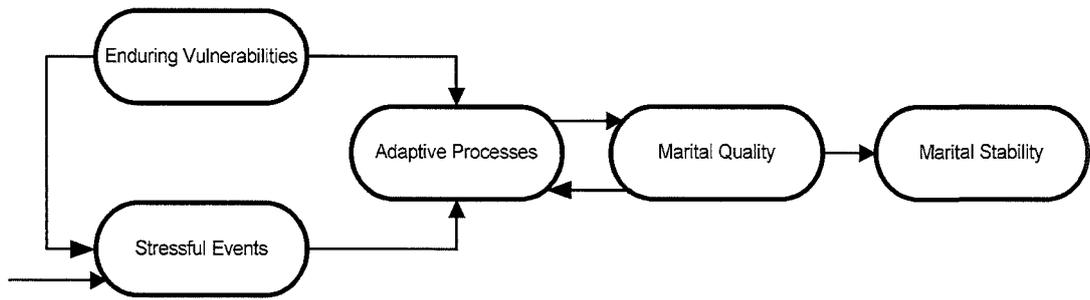
indicator structural equation model should be used to minimise biasing effects.

### **2.6.2.3 Vulnerability-Stress-Adaptation Model**

A number of mechanisms linking personality and social outcomes have been proposed (Neyer & Asendorpf, 2001; Reis et al., 2002; Robins et al., 2002) including relationship schemas (Fiske & Taylor, 1991); the relationship environment (Caspi & Herbener, 1990); physiological activity (Buss, 1991; Eysenck, 1967; Levenson & Gottman, 1983); perception (Kurdek, 1993; Rusting, 1998); and attributions about partners and the relationship (Bradbury & Fincham, 1991; Karney et al., 1994).

The majority of these associations suffer from limited and non-systematic empirical support. Few of them are associated with formal theoretical models with verifiable operationalised constructs.

One area that has received some formal attention, however, revolves around the mediational role of interpersonal interactions in Karney and Bradbury's Vulnerability-Stress-Adaptation model (VSA; 1995a) (Figure 2.3). The VSA was developed in response to the dominance of the social learning model and is an attempt to expand the determinants of relationship satisfaction beyond that of conflict behaviour. Justifying such models, Bradbury et al. (2001) argue that "models of marriage will yield better explanations and models of intervention will yield better outcomes, to the extent that conflict is seen as one link in a longer chain of variables by which marriages that are initially rewarding become a source of pain and despair" (p.78).



**Figure 2.3** A Vulnerability-Stress-Adaptation Model for Couple Relationships

### Model Components

The components of the VSA model are the enduring vulnerabilities of the partners, stressful events, adaptive processes, marital quality, and marital stability. *Stressful events* refers to the role of the inevitable stressors that couples encounter over the course of their relationship such as financial or social issues. Since these are not a focus of the current research, they will not be considered further here<sup>14</sup>. Similarly, the relationship outcome variables marital quality and marital stability are used in their usual sense.

*Adaptive processes* refer to the behaviours that couples use to maintain their relationships in response to challenging relationship events. This concept is analogous to, but wider than the role of interpersonal conflict behaviour in the social learning model because it can also include, for example, support behaviours. Like the social learning model, adaptive

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<sup>14</sup> Further details are available in Karney and Bradbury (1995a, p.23) and Bradbury et al. (1998, p.290)

processes are the only factor to directly influence relationship outcomes and all other variables are viewed as antecedents and must exert their influence on satisfaction through it (Levinger, 1983). Another difference between the VSA and social learning theory is the reciprocal association between marital quality and adaptive processes<sup>15</sup>. The current research considers only the unidirectional association from adaptive processes to marital quality (relationship satisfaction).

*Enduring vulnerabilities* refer to distal intrapersonal factors that individuals bring to relationships such as their personalities, histories, and cognitions. In a sense, they “set the stage” (Bradbury et al., 2001, p.291) for the manner in which stressful events and adaptive processes will be managed.

### Model Process

The model contends that the enduring vulnerabilities of dyad members influence their adaptive processes such as their interpersonal behaviour in conflictual situations. In turn, these adaptive processes determine their relationship satisfaction. Couples with problematic enduring vulnerabilities are therefore expected to adapt less well and exhibit negative conflict behaviours, and consequently report unhappier relationships.

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<sup>15</sup> For a full treatment of this reciprocal association, see Huston and Vangelisti (1991)

## Critique

The VSA has a number of strengths. First, the model is compatible with other views of relationship dynamics. Huston and Houts (1998), for example, describe personality (enduring vulnerabilities) as the psychological infrastructure in which interpersonal dynamics – such as adaptive processes – operate. Similarly, enduring vulnerabilities are an example of what Bradbury and Fincham (1988, 1991) refer to as the *distal context* in their contextual model of marital interaction. Second, the VSA framework is sufficiently broad to include many constructs known to influence relationship outcomes such as physiological, environmental, cognitive and attributional factors. Third, the model provides a possible mechanism through which personality can influence relationship satisfaction. Finally, the model is refutable. It also features a number of weaknesses. First, the concept of adaptive processes is contradictory. On the one hand, Bradbury et al. (1998) seek to replace the central role of conflict behaviour in the social learning model “with the more inclusive concept of adaptive processes” (p.290), but then go on to define adaptive processes “as the manner in which individuals and couples contend with differences of opinion and individual and marital difficulties and transitions” (p.290). Conceptually therefore, the role of adaptive processes is not significantly different from conflict behaviour as defined in the social learning model. Second, the model provides for no direct effects other than adaptive processes. It is possible, for example, that certain enduring vulnerabilities (such as attributions or affect) might exert a direct influence on relationship satisfaction independent of adaptive processes.

### **2.6.3 Mediation Research Findings**

Although a few mediation hypotheses have been tested, none have explicitly considered the extent to which multidimensional conflict behaviour mediates the association between five factor personality traits and relationship satisfaction, and none have considered partner effects. Related studies are considered below.

#### **2.6.3.1 Partial Mediation**

The majority of mediation studies have provided support for partial mediation hypotheses as might be expected in social psychology (Shrout & Bolger, 2002). Caughlin et al. (2000), for example, assessed the trait anxiety, negative communication, and marital satisfaction of 168 heterosexual newlywed couples over 13 years in 4 phases. Although they did not specifically test for mediation effects, they concluded that negative communication accounted for much of the association between trait anxiety and relationship satisfaction. A key advantage of this study is that it formally tested the gender-specific model using structural equation modelling by testing whether there was a difference between constrained and unconstrained gender paths (Kenny, 1996a,b). A disadvantage of the study is that conflict style was the only conflict behaviour assessed, and trait anxiety was the only personality trait included.

Donnellan et al. (2004) also found evidence of partial mediation in their sample of 418 couples. Personality was assessed using the Five Factor

model, negative interactions were assessed using trained observers as well as self and partner reports, and marital quality was assessed using a two-item scale. Negativity and satisfaction scores were averaged for each couple. The effects of both female and male actor neuroticism and agreeableness on mean dyad relationship satisfaction were partially mediated by the couple's mean level of negative conflict. The degrees of mediation for female and male actor neuroticism were 20% and 19% respectively, and for actor agreeableness were 14% and 37% respectively. None of the other personality traits showed evidence of mediation. The study had a number of strengths. Structural equation modelling was used which potentially would have facilitated a comparison of male and female effects (although conflict and satisfaction were pooled and there was therefore no opportunity to do this). The study also tested all five personality traits of the FFM. Finally, both self and partner reports of conflict and satisfaction were utilised increasing the reliability of these measures. The study featured a number of limitations. First, marital quality was assessed using only two items and therefore scale reliability cannot be adequately assessed (Costello & Osborne, 2005). Second, the unit of analysis for negative conflict and satisfaction was the couple and therefore hypotheses regarding direct and indirect conflict mediation on actor and partner satisfaction could not be tested. Third, the study applied the Baron and Kenny (1986) initial requirement that the predictor (personality traits) and the criterion (relationship satisfaction) should be significantly associated even though it has been argued (e.g. Shrout & Bolger, 2002) that the correlations between distal factors like personality and proximal factors like relationship

satisfaction are likely to be weak. Fourth, the study considered only negative conflict styles and did not assess conflict behaviours such as conflict frequency and conflict outcome which have been shown to exert a significant effect on relationship satisfaction (e.g. Cramer, 2000; Vincent et al., 1975). Fifth, only a gender-specific APIM model was tested rather than a gender-specific more generalised Actor-Partner Interdependence Model (Kenny, 1988). Finally, the homogeneity of the sample means that its findings cannot necessarily be generalised to other populations.

Schneewind and Gerhard (2002) also found evidence of partial mediation. They collected data from an initial sample of 180 newlyweds over five years. They assessed a construct they called *relationship personality* using a specially developed instrument consisting of three factors: general relationship competence, empathy, and relationship vulnerability which were combined to yield a single variable. Conflict behaviour was assessed using a two-factor instrument, positive and negative conflict behaviour, and relationship satisfaction was assessed using the Relationship Assessment Scale (Hendrick, 1988). They found that conflict partially mediated (37.7%) the association between relationship personality and relationship satisfaction. They also noted, however, that the effects of relationship personality on satisfaction became more strongly mediated by conflict behaviour as relationship length increased. A key weakness of this study is that the measure of relationship personality was not stable and that only couples with stable relationship personality patterns were selected for the analysis. In addition, the dyad was used as the unit of all analysis in this study and individual actor and partner effects were therefore not available. Finally,

because a non-standard personality rating instrument was used, results cannot be compared across studies.

### **2.6.3.2 Complete Mediation**

A few studies found support for a complete mediation hypothesis. For example, on a sample of 61 gay, 42 lesbian, and 155 heterosexual couples, Kurdek (1997b) assessed the Five Factor personalities (predictor), life satisfaction and partner conflict resolution (hypothesised mediators), and dimensions of relationship commitment. He found that conflict completely mediated the association between neuroticism and rewards, costs, ideal standard, alternatives, investments, and barriers, and concluded that neurotic individuals use dysfunctional conflict resolution styles that lead to dissatisfaction. A limitation of this study is that the analysis was based on cross-sectional data drawn from a longitudinal study and causality can therefore not be established. Furthermore, the only FFM trait considered was neuroticism.

### **2.6.3.3 No Mediation**

Finally, only one of the studies reviewed suggests that conflict may not mediate the effects of personality on relationship satisfaction. Karney and Bradbury (1997) used growth curve modelling to assess 60 newly wed couples over four years. Relationship satisfaction was assessed using the Marital Adjustment Test (Locke & Wallace, 1959) and the Quality of Marriage Index (Norton, 1983); neuroticism was assessed using the Eysenck

Personality Questionnaire (Eysenck & Eysenck, 1978); and marital interaction was assessed using the Verbal Tactics Coding Scheme (Sillars, 1986). They found that neuroticism and marital interaction were uncorrelated. This violates the Baron and Kenny (1986) requirement that the predictor and the mediator should be significantly associated and therefore a mediation hypothesis is not supported. In addition, neuroticism and interaction were shown to exert independent effects on relationship satisfaction. Specifically, neuroticism was associated with initial levels of relationship satisfaction while marital interaction was associated with the rate of change of marital satisfaction. This finding is consistent with the hypothesis that personality traits are likely to exert a constant influence on satisfaction because of their stability and that proximal conflict behaviours are likely to account for changes in satisfaction. A limitation of this research is the use of newlywed couples since other studies have found that conflict interactions may affect satisfaction differently depending on relationship duration (e.g. McGonagle et al., 1993; Schneewind & Gerhard, 2002). The study also did not examine the effects of the other FFM personality traits which may have supported complete or partial mediation hypotheses.

#### **2.6.4 Mediation: Summary**

In response to the bivariate, single paradigm studies that have dominated couples research, scholars are increasingly calling for the multivariate analysis of causal and path relationships. Consequently, a few studies have begun to collect and analyse the multivariate data required to test causal hypotheses such as mediation. This research has been limited in



a number of ways. In some cases, for example, even where adequate data has been collected, explicit mediation testing has not been performed (e.g. Caughlin et al., 2000). Another issue is that many researchers are still performing analyses at the level of the dyad that preclude the full testing of individual-level models like the APIM (e.g. Donnellan et al., 2004; Schneewind & Gerhard, 2002). Where the mediating effects of conflict have been tested, the dimensions of conflict frequency and conflict outcome have not been included and conflict style only has been tested (Donnellan et al., 2004; Schneewind & Gerhard, 2002).

A broad conclusion that can be drawn from the above investigations is that interpersonal factors tend to partially mediate the effects of intrapersonal factors. In addition, research confirms that proximal factors share a larger association with relationship outcomes than distal factors (e.g. Kurdek, 1993). This substantiates Shrout and Bolger's (2002) argument that the requirement for a significant association between distal personality factors and outcome variables when testing mediation should be excluded.

## **2.7 Literature Review: Overall Conclusions**

This chapter reviewed existing research investigations into various associations between couples' personalities, their interpersonal conflict behaviours, and their relationship satisfaction.

A key issue in couples' research revolves around the dimensionality of relationship satisfaction. There are strong arguments for both unidimensional and multidimensional scales with affective, behavioural, and cognitive components, but there is mounting evidence that relationship satisfaction is a

unidimensional global construct with at most two facets, positive and negative satisfaction.

With regard to the effects of conflict behaviours on relationship satisfaction, findings are consistent that destructive, frequent conflict with unresolved outcomes is associated with decreases in relationship satisfaction. Findings are however inconsistent about the effects of conflict avoidance on relationship satisfaction and about whether short-term destructive conflict leads to long-term increases in satisfaction. As was the case with relationship satisfaction, there are issues regarding the dimensionality of conflict behaviours. In particular, many researchers focus on the effects of conflict style and do not assess dimensions like conflict frequency and conflict outcome even though the latter have been shown to influence relationship satisfaction.

Findings on the association between couples' personalities and their relationship satisfaction have consistently shown that neuroticism is negatively linked to relationship satisfaction. There is also growing evidence that agreeableness has a positive influence on relationship satisfaction. These findings are not novel and have been reported many times since 1935 (Terman & Buttenweiser, 1935). There have, however, been advances in relationship science. Probably the most innovative of these has been the application of the Actor-Partner Interdependence Model in dyadic research and its demonstration that relationship outcomes are a function of both actor and partner personality. An important deficit in this research has been the non-articulation of the mechanisms through which personality exerts its influence on relationship satisfaction.

Research into the association between couples' personalities and their conflict behaviours has been minimal. This is important because support for mediation hypotheses requires a significant association here. The minimal research that there has been suffers from the same issue described above, namely that the effects of personality on conflict style have received the most attention without determining whether personality traits exert different influences on dimensions like conflict frequency and outcome. Generally, as was the case with relationship satisfaction, the findings are that high neuroticism and low agreeableness are associated with destructive conflict behaviours.

Finally, there is a tendency in science to persist with familiar paradigms rather than incorporating new and different theoretical and empirical perspectives as these become available (Kuhn, 1962). Research into the dynamics of couple relationships is no exception with intrapersonal and interpersonal researchers focusing on their respective epistemologies. Recently however, researchers have begun to explore multivariate influences on relationship outcomes. In particular, there have been tentative explorations into mediational associations between global dispositions and relationship outcomes. The most common finding has been that interpersonal variables partially mediate the effects of intrapersonal factors. A key weakness of this research is the use of the dyad rather than the individual as the unit of analysis which precludes an understanding of individual actor and partner mediation effects.

Having reached the end of the literature review, the following chapter outlines the hypotheses of the current research.

## CHAPTER 3

### CURRENT RESEARCH

#### 3.1 Introduction

A fundamental objective of contemporary psychology is “the prediction of social behaviours from global dispositional variables” (Baron & Kenny, 1986, p.1180). The current investigation supports this objective by examining the extent to which conflict behaviour mediates the association between couples’ personalities and their relationship satisfaction.

This knowledge is important because personality traits are enduring and pervasive and there is evidence that they are associated with consistent relationship outcomes (Robins et al., 2002). As yet, however, the factors through which personality influences relationship outcomes are unknown. The social learning model posits that conflict behaviour is the sole manifestation of all factors that influence relationship outcomes. If this contention is correct, then interventions – clinical or psychotherapeutic – designed to reduce the incidence of destructive conflict behaviours should be effective in raising couples’ satisfaction. If conflict behaviour does not mediate this association, then alternative mediators must be determined and targeted for therapeutic intervention

The current research tests the hypothesis that conflict behaviour mediates the effects of personality on relationship satisfaction using the Actor-Partner Interdependence and gender-specific models. The research design is a two-wave cross-panel study with six months between the waves.

Personality was assessed using the Five Factor Model NEO-FFI (Costa & McCrae, 1992); conflict behaviour was assessed using the Conflict Behaviours Questionnaire (CBQ; McGonagle et al., 1993); and relationship satisfaction was assessed using the Marriage and Relationship Questionnaire (MARQ; Russell & Wells, 1993).

### **3.2 Hypothesis 1: Dyadic Interdependence**

*The within-dyad between-partner intraclass correlation for relationship satisfaction will be greater than zero.*

Many studies have reported significant correlations between partners' satisfaction scores (see Table 2.1). There is a sound theoretical basis for this contention. Kenny (1998) argues that "married couples are not randomly paired" (p.410) and therefore "individuals involved in relationships are interdependent by definition" (Kashy & Grotevant, 1999, p.411). Partners in the same couple relationship are also likely to exert reciprocal influence on each other and be subject to the same relationship influences (*common fate*) (Caspi & Herbener, 1990; Kenny, 1996a,b).

## **3.3 Hypothesis 2: Conflict Behaviour and Relationship**

### **Satisfaction**

#### **3.3.1 Actor-Partner Interdependence Model**

##### **3.3.1.1 Hypothesis 2(a): Actor Effects**

*Actor conflict behaviour will show a negative association with relationship satisfaction*

Self-perception theory (Bem, 1972) asserts that individuals' attitudes are a consequence of behavioural self-observation. According to this model, relationship partners who perceive that they are exhibiting destructive conflict behaviours will conclude that they must be in an unsatisfying relationship. Based on existing findings (e.g. Caughlin et al., 2000; Cramer, 2003a; Gottman & Krokoff, 1989; Kurdek, 1995a) and the self-perception model, it is therefore hypothesised that conflict behaviours will be inversely associated with relationship satisfaction.

##### **3.3.1.2 Hypothesis 2(b): Partner Effects**

*Partner conflict behaviour will show a negative association with relationship satisfaction*

Numerous studies have found that partner conflict behaviour has a deleterious influence on relationship satisfaction (e.g., Gill et al., 1999; Heavey et al., 1993; Kurdek, 1994a). In support of these findings, social learning theory (Jacobson & Holtzworth-Munroe, 1986; Jacobson & Margolin,

1979) predicts that individuals will perceive relationship partners' negative conflict behaviour as a cost to the relationship and will consequently report decreased relationship satisfaction.

### **3.3.2 Hypothesis 2(c): Actor effects versus Partner Effects**

*No hypothesis*

The empirical evidence and theoretical justification underpinning the likely contribution of actor versus partner conflict behaviour to relationship satisfaction is too limited for hypothesis generation. No hypothesis is therefore proposed.

### **3.3.3 Hypothesis 2(d): Gender Specificity:**

*There are no significant gender differences in the effects of conflict behaviour on relationship satisfaction*

As noted in the literature review, the few studies that formally tested gender differences in conflict effects (e.g., Burleson, Kunkel, Samter & Working, 1996; Canary & Hause 1993; Kashy et al., in press) found little evidence for their existence. It is therefore hypothesised that no gender differences will be found.

### **3.3.4 Hypothesis 2(e): Change in Relationship Satisfaction**

*Time 1 negative conflict behaviour will be associated with a decline in actor and partner satisfaction over the six months of the study*

A number of studies have supported the social learning theory hypothesis that negative conflict behaviour will lead to longitudinal declines in actor and partner satisfaction. This is therefore hypothesised here.

### **3.4 Hypothesis 3: Personality and Relationship Satisfaction**

#### **3.4.1 Introduction**

Scientific method requires that scientific hypotheses be underpinned by adequate theoretical models (Popper, 1959). As noted in the literature review, however, models linking actor and partner personality traits to relationship satisfaction are scarce (Bradbury & Fincham, 1988; Karney & Bradbury, 1995a; Wiggins & Trapnell, 1996). In the current section, therefore, where appropriate theory is not available, hypothesis generation will be based on existing empirical findings. While not ideal, this highlights the need for additional models linking personality and relationship outcomes.

### 3.4.2 Actor-Partner Interdependence Model

Table 3.1 summarises the expected findings.

**Table 3.1**

**Hypotheses Summary for the Actor and Partner Effects of Personality and Relationship Satisfaction**

<i>FFM Personality Trait</i>	<i>Hypothesised association with Relationship Satisfaction</i>	
	<i>Actor Effect<sup>3(a)</sup></i>	<i>Partner Effect<sup>3(b)</sup></i>
Neuroticism	Negative	Negative
Extraversion	No hypothesis	No hypothesis
Openness	No hypothesis	Positive
Agreeableness	Positive	Positive
Conscientiousness	Positive association	No significant association

*Note: 3a and 3b refer to the hypotheses numbering in the body of the text*

#### 3.4.2.1 Hypothesis 3(a): Actor Effects

Hypothesis 3(a)j: Actor Neuroticism:

*Actor neuroticism shares a small to moderate negative association with relationship satisfaction*

Actor neuroticism is one of the few FFM traits for which mechanisms linking it to satisfaction have been proposed (e.g. Kurdek, 1993; Karney et al., 1994). It is hypothesised that neurotic individuals selectively process and recall negative relationship events (Kurdek, 1993), and that the negative attributions associated with neuroticism lead to relationship dissatisfaction

(Karney et al., 1994). Together with the large body of empirical evidence cited in the literature review, it is therefore hypothesised that actor neuroticism and relationship satisfaction will share a negative association.

Hypothesis 3(a)ii: Actor Extraversion:

*No hypothesis*

Actor extraversion is an outer-directed behaviour and as such, its facets do not suggest an obvious association with an individual's own relationship satisfaction (though partner extraversion may have an influence on relationship). No hypothesis is therefore proposed here.

Hypothesis 3(a)iii: Actor Openness:

*No hypothesis*

Openness to experience is associated with cognitive and emotional flexibility (Costa & McCrae, 1992; McCrae & Costa, 1987). In itself, these characteristics do not suggest a link to relationship satisfaction. In addition, past findings have been mixed. No hypothesis is therefore proposed.

Hypothesis 3(a)i: Actor Agreeableness:

*Actor agreeableness shares a small to moderate positive association with relationship satisfaction*

Agreeableness is an interaction preference and therefore there are no apparent links between it and actor relationship satisfaction (though there

may be for partner agreeableness). However, based on existing empirical findings and the argument that agreeable individuals experience positive affect during interpersonal personal interactions (Suls et al., 1998), it is hypothesised that ceteris paribus, agreeableness will be positively associated with relationship satisfaction given that couple relationships are characterised by frequent interaction (Kelly et al., 1983),

Hypothesis 3(a)v: Actor Conscientiousness:

*Actor conscientiousness shares a small to moderate positive association with relationship satisfaction*

Conscientiousness is associated with goal and achievement-oriented behaviour (Costa & McCrae, 1992; Costa, McCrae & Dye, 1991; McCrae & Costa, 1987). Conscientious individuals who invest in their couple relationships are therefore likely to work hard to achieve and maintain success in this domain. The above hypothesis also concurs with existing research findings.

**3.4.2.2 Hypothesis 3b: Partner Effects**

Hypothesis 3(b)i: Partner Neuroticism:

*Partner neuroticism shares a small negative association with relationship satisfaction*

Neuroticism is associated with hostility and impulsiveness (Costa & McCrae, 1992; McCrae & Costa, 1987) and partners of these individuals are

likely to be exposed to these behaviours during their interactions. It is therefore predicted that partner neuroticism will be associated with decreased relationship satisfaction. Similarly neurotic individuals' expectation of negative interactions is likely to result in a decrease in partner satisfaction through emotional contagion (Hatfield, Cacioppo, Rapson, 1994).

#### Hypothesis 3(b)ii: Partner Extraversion

##### *No hypothesis*

Few previous investigations have found an association between partner extraversion and relationship satisfaction. There is also minimal theory upon which to base hypotheses here. Wiggins and Trapnell (1997) propose that extraverts are driven to dominate in their social relationships and that partners of extraverts with a need for domination should therefore report greater levels of satisfaction. However, since there is no evidence to suggest that partners of extraverts have a need to be dominated, no hypothesis will therefore be generated here.

#### Hypothesis 3(b)iii: Partner Openness

##### *Positive association with relationship satisfaction*

Findings for the effects of partner openness on relationship satisfaction have been mixed. Evolutionary theory suggests that partners high in openness are likely to be creative and resourceful and will therefore find

innovative ways to care for their offspring thereby making them attractive partners (Buss, 1989). While this suggests that open individuals would make desirable partners, it does not suggest how these individuals would behave towards their partners. In addition, the distal influences of evolutionary theory are likely to exert only a small or trivial influence on proximal satisfaction. A positive association is therefore proposed here.

#### Hypothesis 3(b)iv: Partner Agreeableness

*Positive association with relationship satisfaction*

Agreeableness is associated with sympathy, trust and compassion (Costa et al., 1991; Costa & McCrae, 1992; McCrae & Costa, 1987), qualities conducive to satisfying partner needs for closeness and intimacy (e.g. Baumeister & Leary, 1995). In line with previous findings, it is therefore hypothesised that partner agreeableness will be positively associated with relationship satisfaction.

#### Hypothesis 3(b)v: Partner Conscientiousness

*No association with relationship satisfaction*

Conscientious individuals are dutiful and self-controlled. These are desirable partner behaviours and should therefore be positively associated with partner relationship satisfaction. Existing research has, however, been

unable to find any such association. No association between partner conscientiousness and relationship satisfaction is therefore hypothesised.

### **3.4.3 Hypothesis 3(c): Actor Effects versus Partner Effects**

*No hypothesis*

There are limited theoretical and empirical findings upon which to base hypotheses for the relative contributions of actor and partner effects on relationship satisfaction. No hypothesis is therefore proposed here.

### **3.4.4 Hypothesis 3(d): Controlling for the effect of neuroticism**

*Together, extraversion, openness, agreeableness, and conscientiousness will account for significant variance in relationship satisfaction beyond the effect of neuroticism*

This hypothesis is based on a suggestion by Karney and Bradbury (1995a) that unless the effect of neuroticism on relationship is controlled, the effects of the other personality traits (the non-neurotic traits) cannot be fully understood. A number of studies have found significant associations between non-neurotic traits and relationship satisfaction, and Bouchard et al. (1999) found that together, the non-neurotic traits accounted for additional variance beyond neuroticism. This finding is therefore hypothesised in the current investigation.

### **3.4.5 Hypothesis 3(e): Gender Specificity**

*There are no significant gender differences in the effects of personality on relationship satisfaction*

As was the case with the gender effects of conflict behaviour on relationship satisfaction, no gender differences for the effects of personality on relationship satisfaction are hypothesised.

### **3.4.6 Hypothesis 3(f): Change in relationship satisfaction**

*Time 1 personality will not be significantly associated with a change in satisfaction over the duration of the study*

Personality traits are moderately stable, and are not expected to change over the six month duration of the current investigation. They also share a distal association with relationship satisfaction. It is therefore hypothesised, in line with Karney & Bradbury's (1997) finding, that personality will not be associated with a change in relationship satisfaction. Actor-partner effects and gender specificity will also be tested.

### **3.4.7 Hypothesis 3(g): Homogamy**

#### **3.4.7.1 Hypothesis 3(g)i: Assortative mating:**

*Within-couple correlations of like personality traits will be non-significant*

Although assortative mating theory suggests that individuals tend to seek partners similar to themselves (e.g. Barry, 1970; Caspi & Herbener, 1990), it is argued that individuals are likely to mask negative aspects of their personalities early in the relationship and that pairing on personality traits is therefore likely to be random (Lykken & Tellegen, 1993). Based on this proposition and on existing empirical findings, the current research hypothesises that correlations between within-couple like traits will be non-significant.

#### **3.4.7.2 Hypothesis 3(g)ii: Association between assortative mating and relationship satisfaction**

*Trait similarity will not be significantly associated with relationship satisfaction.*

Findings for the effects of personality similarity on relationship satisfaction are mixed. It is therefore tentatively hypothesised that personality similarity will not be significantly associated with relationship satisfaction.

### **3.5 Hypothesis 4: Personality and Conflict Behaviour**

#### **3.5.1 Introduction**

As was the case with hypotheses linking personality and relationship satisfaction, there is a lack of coherent theory relating personality and conflict behaviour (Karney & Bradbury, 1995a; Wu & Clark, 2003). As before, where

theory is unavailable, hypotheses here will be based on existing empirical research findings.

### 3.5.2 Actor-Partner Interdependence Model

Table 3.2 summarises the hypothesised APIM associations between personality and conflict behaviour.

**Table 3.2**

**Hypotheses Summary for the Actor and Partner Effects of Personality and Conflict Behaviour**

<i>FFM Personality Trait</i>	<i>Hypothesised association with Conflict Behaviour</i>	
	<b>Actor Effect<sup>4(a)</sup></b>	<b>Partner Effect<sup>4(b)</sup></b>
Neuroticism	Positive	Positive
Extraversion	No hypothesis	No association
Openness	No hypothesis	No association
Agreeableness	Negative	Negative
Conscientiousness	No hypothesis	No hypothesis

*Note:* 4(a) and 4(b) refer to the hypotheses numbering in the text

#### 3.5.2.1 Hypothesis 4(a): Actor Effects

##### Hypothesis 4(a)i Actor Neuroticism

*Positive association with conflict behaviour*

A number of studies have found a positive association between actor neuroticism and conflict behaviour. It is also proposed that neuroticism is linked to physiological arousal which is in turn associated with unregulated and destructive conflict behaviour (Eysenck, 1967; Kurdek, 1997b; Levenson

& Gottman, 1983). It is therefore hypothesised that actor neuroticism will share a positive association with conflict behaviour.

#### Hypothesis 4(a)ii: Actor Extraversion

*No hypothesis*

Extraversion specifies an outward behavioural focus, and may be associated with behavioural dominance. There is, however, no indication of how actor extraversion might influence conflict behaviour. Similarly, findings for the effects of actor extraversion have, however, been mixed, No hypothesis is therefore presented.

#### Hypothesis 4(a)iii: Actor Openness

*No hypothesis*

Openness is associated with cognitive and emotional flexibility. These characteristics do not in themselves suggest obvious links to conflict behaviours. This is reflected in the mixed findings from existing research and therefore no hypothesis is proposed.

#### Hypothesis 4(a)iv: Actor Agreeableness

*Negative association with conflict behaviour*

Agreeable individuals are more likely to regulate their emotions in the face of conflict behaviour (Graziano, Jensen-Campbell & Hair, 1996). It is

therefore hypothesised – in line with existing research – that actor agreeableness will show a negative association with conflict behaviour.

#### Hypothesis 4(a)v: Actor Conscientiousness

*No hypothesis*

Robins et al. (2000) suggest that individuals high in constraint (conscientiousness) are better able to regulate their behaviour during conflict. Empirical findings are, however, mixed. No hypothesis is therefore proposed.

#### **3.5.2.2 Hypothesis 4b: Partner Effects**

##### Hypothesis 4(b)i: Partner Neuroticism

*Positive association with conflict behaviour*

Self-fulfilling prophecy theory suggests that partners of neurotic individuals will exhibit negative conflict because they perceive that it meets the expectations of their neurotic partners (Jones, 1977). Based on this assertion and existing findings, it is therefore hypothesised that partner neuroticism will be positively associated with conflict behaviour.

#### Hypothesis 4(b)ii: Partner Extraversion

*No association with conflict behaviour*

In spite of extraversion being associated with dominating behaviour (which may actually suit submissive partners), the majority of reviewed studies were unable to find any association between partner extraversion and conflict behaviour. It is therefore hypothesised that no association will be found between partner extraversion and conflict behaviour.

#### Hypothesis 4(b)iii: Partner Openness

*No association with conflict behaviour*

It might be proposed that the cognitive and emotional flexibility associated with high openness individuals would help them to find creative ways to prevent conflict. Such a proposition suggests, however, that open individuals are motivated to reduce conflict. It could similarly be argued, for example, that open individuals could find creative means of displaying destructive conflict behaviours. Existing research has found no evidence of an association between partner openness and conflict behaviour and this is therefore hypothesised here.

#### Hypothesis 4(b)iv: Partner Agreeableness:

*Negative association with conflict behaviour*

In terms of self-fulfilling prophecy theory, agreeable individuals are likely to create an environment that minimises conflict behaviour (Jones, 1977).

This supports existing research findings and a negative association between partner agreeableness and conflict behaviour is therefore hypothesised here.

Hypothesis 4(b)v: Partner Conscientiousness:

*No hypothesis*

Exchange theory suggests that individuals high in conscientiousness are less likely to draw partner criticism and conflict because of their dutiful and consistent contribution to the relationship (e.g., Rettig & Bulbolz, 1983). Findings in previous studies have, however, been mixed. No hypothesis is therefore proposed.

**3.5.3 Hypothesis 4c: Actor effects versus Partner effects**

*No hypothesis*

There are limited theoretical and empirical findings upon which to base hypotheses about the relative strengths of actor and partner effects on conflict behaviour. No hypothesis is therefore proposed.

**3.5.4 Hypothesis 4d: Gender Specificity**

*There are no significant gender differences for the actor effects of personality on conflict behaviour*

For the reasons cited earlier and based on existing empirical evidence, it is hypothesised that there are no gender differences in the actor and partner effects of personality on conflict behaviour.

### **3.5.5 Hypothesis 4e: Change in satisfaction**

*Personality will not be significantly associated with a longitudinal change in conflict behaviour*

As before, it is argued that the stability of personality traits over the six months of this study suggests that they will not be associated with a significant change in conflict behaviour.

## **3.6 Hypothesis 5: Mediation Hypotheses**

Mediation hypotheses will be generated using Baron and Kenny's (1986) criteria modified by the Shrout and Bolger (2002) recommendation that the first condition, a significant association between personality and relationship satisfaction, be excluded (see Section 2.6.2).

The following hypotheses generation rules are therefore based on the associations between *personality* and *conflict behaviour* and between *conflict behaviour* and *relationship satisfaction*. They are applied in the following order:

1. If either of the associations is not significant, then no mediation is hypothesised.
2. If either of the associations is hypothesised to be small, partial mediation is hypothesised.
3. If both of the associations are hypothesised to be moderate, full mediation is hypothesised.

The hypotheses are presented in the Tables 3.3(a)-(d) below. Tables 3.3(a) and (b) are from the perspective of actor personality mediated by (a) actor conflict behaviour and (b) conflict behaviour. Tables 3.3(c) and (d) are from the perspective of partner personality mediated by (c) actor conflict behaviour and (d) partner conflict behaviour.

**Table 3.3(a)**

**Hypotheses Based On the Mediatory Associations Between Actor Personality, Actor Conflict, And Relationship Satisfaction**

	<i>Actor Personality on Actor Conflict</i>	<i>Actor Conflict on Satisfaction</i>	<i>Mediation effect</i>
Actor Neuroticism	Small to moderate	Moderate	Partial to complete mediation
Actor Extraversion	No hypothesis	Moderate	No hypothesis
Actor Openness	No hypothesis	Moderate	No hypothesis
Actor Agreeableness	Small to moderate	Moderate	Partial or complete mediation
Actor Conscientiousness	No hypothesis	Moderate	No hypothesis

**Table 3.3(b)**

**Hypotheses Based On the Mediatory Associations Between Actor Personality, Partner Conflict And Relationship Satisfaction**

	<i>Actor Personality on Partner Conflict</i>	<i>Partner Conflict on Satisfaction</i>	<i>Current Research Hypothesis</i>
Actor Neuroticism	Small	Small	Partial
Actor Extraversion	No association	Small	No mediation
Actor Openness	No association	Small	No mediation
Actor Agreeableness	Small	Small	Partial
Actor Conscientiousness	No hypothesis	Small	No hypothesis

**Table 3.3(c)**

**Hypotheses Based On the Mediatory Associations Between Partner Personality, Actor Conflict And Relationship Satisfaction**

	<i>Partner Personality on Actor Conflict</i>	<i>Conflict on Satisfaction</i>	<i>Current Research Hypothesis</i>
Partner Neuroticism	Small	Moderate	Partial mediation
Partner Extraversion	No association	Moderate	No mediation
Partner Openness	No association	Moderate	No mediation
Partner Agreeableness	Small	Moderate	Partial to complete mediation
Partner Conscientiousness	No hypothesis	Moderate	No hypothesis

**Table 3.3(d)**

**Hypotheses Based On the Mediatory Associations Between Partner Personality, Partner Conflict And Relationship Satisfaction**

	<i>Partner Personality on Actor Conflict</i>	<i>Conflict on Satisfaction</i>	<i>Current Research Hypothesis</i>
Partner Neuroticism	Small to moderate	Small	Partial
Partner Extraversion	No hypothesis	Small	No hypothesis
Partner Openness	No hypothesis	Small	No hypothesis
Partner Agreeableness	Small to moderate	Small	Partial
Partner Conscientiousness	No hypothesis	Small	No hypothesis

**3.7 Conclusion**

This chapter set out the hypotheses required to test a mediation hypothesis including hypotheses related to the associations between conflict behaviour and relationship satisfaction; personality and relationship satisfaction; personality and conflict behaviour; and mediation hypotheses.

## CHAPTER 4

### Method

#### 4.1 Introduction

The current research tests a number of bivariate and mediation hypotheses related to couple personality, conflict behaviour and relationship satisfaction.

This chapter describes the participants and method used to recruit them, and the instruments used to assess the above variables. Preliminary analyses on the conflict behaviour and relationship satisfaction scales are also performed here.

#### 4.2 Participants

Participants were individuals in intimate couple relationships with access to the Internet and all questionnaires were completed online. There was concern that self-selected Internet participants might not represent a random sample. It is argued, however, that the growing ubiquity of the Internet in Western countries and many developing countries suggests that self-selected Internet samples are at least as “random” as self-selected samples drawn from undergraduate populations or participants responding to media advertisements (e.g., Birnbaum, 2004; Gosling, Vazire & John, 2004; Hewson, 2003). This was confirmed by a review of the literature comparing the responses from Internet samples to those of traditionally recruited participants (Gosling et al., 2004). They found that compared to traditional

samples, the Internet samples were more diverse and representative with respect to gender, socioeconomic status, geographic location, and age. Racially, they were similar to traditional samples. They also found cross-method consistency for Internet and traditional self-report personality assessment methods. They noted that the primary drawback of Internet participation was the risk of fake responses.

In line with Levinger's (1997) definition of couple relationships, the only criterion used to identify participants as being in a "couple" relationship was that they identified themselves as such. Relationship duration, age and social status (for example, being married or cohabiting) were considered overly restrictive. Participation was, however, restricted to heterosexual dyads because of the lack of consensus about possible differences between relationship dynamics in heterosexual and homosexual relationships (e.g. Kurdek, 1997b, 2004; Metz et al., 1994).

Two subsamples each consisting of two waves were drawn from the 1122 individuals in couple relationships that participated in the study. The first sample consisted of 1122 individuals at Time 1 and 311 individuals at Time 2 and was used to create scales for the substantive analysis. The second sample consisted of 234 couples (468 participants) at Time 1 and 126 couples at Time 2. This information is summarised in Table 4.1.

**Table 4.1**

**Individual and Couple Sample Sizes at Times 1 and 2**

<i>Samples</i>	<i>Waves</i>	
	Time 1	Time 2
Individuals	1122 (562 females, 560 males)	311 (160 females, 151 males)
Couples	234	126

Time 1 participants completed the NEO, CBQ and MARQ questionnaires.

Time 2 participants completed the CBQ and MARQ questionnaires.

### **4.3 Measures**

Three online questionnaires plus demographic questions were used to collect data from the participants. These were the NEO Personality Inventory, the Conflict Behaviour Questionnaire, and the Marital and Relationship Questionnaire.

#### **4.3.1 The NEO-FFI Personality Inventory – Revised Form S**

Personality was assessed using the NEO-FFI Personality Inventory Revised Form S (NEO; Costa & McCrae, 1992). The NEO-FFI is a 60-item self-report instrument for assessing traits predicted by the Five Factor Model of personality: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Each of the five personality scales is assessed by twelve 5-point Likert-type items ranging from *strongly agree* to *strongly disagree*.

The scales demonstrate adequate reliability with coefficient alphas ranging from .86 to .92 (Costa & McCrae, 1992). The validity of the NEO-FFI is confirmed by its convergent and discriminant associations with a number of other instruments including the 243 item NEO-PI-R where correlations range from .77 to .92 with their corresponding domains. Adequate correlations have also been reported with Eysenck's Personality Inventory (McCrae & Costa, 1985), the MMPI Factor Scales (Costa et al., 1986), Wiggins's Circumplex (McCrae & Costa, 1989a), and the Myers-Briggs Type Indicator (McCrae & Costa, 1989b).

#### **4.3.2 Conflict Behaviour**

Participants' perception of interpersonal conflict behaviours in their relationships was assessed at Times 1 and 2 using a self-report questionnaire adapted by McGonagle et al. (1993) from the Conflict Tactics Scale (Straus, 1979). The Conflict Behaviours Questionnaire (CBQ) consists of 10 Likert-type questions.

Question 1 assesses the frequency of conflict in the relationship:

1. How often do you and your partner have an unpleasant disagreement?  
(Frequency)

Questions 2 to 6 assess conflict style:

2. How much do you avoid talking about certain things because of how he/she might react? (Avoidance)

3. When the two of you disagree, how often do you discuss your differences calmly? (Calmness)

4. When the two of you disagree, how often do you try to appreciate your partner's point of view? (Appreciate)
5. When the two of you disagree, how often do things become tense or unpleasant? (Tense)
6. When the two of you disagree, how often does your partner say cruel or angry things to you? (Cruel)

Questions 7 to 10 assess conflict outcome:

7. How often do you work things out so that both of you are satisfied? (Mutual Satisfaction)
8. How often do you both refuse to compromise? (Refuse to Compromise)
9. How often do you give in to your partner? (I Give In)
10. How often does your partner give in to you? (You Give In)

In the Couples sample, participants' responses to item 9 ('How often do you give in to your partner?') were added to their partners' responses to item 10 ('How often does your partner give in to you?') so that both scores referred to the same partner.

McGonagle et al. (1993) did not provide scale reliabilities or correlations with other instruments.

### **4.3.3 Relationship Outcomes**

The Marriage and Relationship Questionnaire (MARQ; Russell & Wells, 1993) consists of 61 Likert-type questions assessing 12 relationship scales:

1. Roles (4 items): the division of financial income in the relationship with low scores indicating a greater contribution.
2. Values (4 items): indicates whether the participant views the relationship as traditional versus modern. Low scores reflect a traditional view.
3. Family Ties (3 items): participants' level of interaction with their family of origin.
4. Partnership (9 items): assesses the degree to which participants are satisfied with their partner in the context of the relationship. Higher scores indicate greater satisfaction.
5. Love: (9 items): the degree of physical and emotional passion in the relationship.
6. Attractiveness (4 items): participants' views of their own attractiveness.
7. Sexual jealousy (4 items): Participants' concern with their partner's fidelity.
8. Conciliation (2 items): the extent to which participants accept responsibility for and contribute to the resolution of relationship conflict.
9. 'Problems: personal' (5 items): the degree of isolation and anxiety experienced by the participant in the relationship.
10. 'Problems: circumstances' (4 items): the extent to which participants feel that finances, money, or housing are a problem in the context of their relationship.
11. 'Problems: partner' (7 items): the degree to which participants are unhappy with their partners.
12. 'Problems: relationship' (7 items): the degree of participant non-involvement with their relationship and the extent to which individuals

outside of the relationship are relied upon to compensate for what is lacking in the relationship.

The MARQ has been found to correlate with a number of instruments including the Eysenck Personality Questionnaire (Eysenck, Eysenck & Barrett, 1985), the Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) and the Conflict Tactics Scale (Straus, 1979).

#### **4.3.4 Demographic Questions**

The following additional questions were included:

- Email address
- Date of birth
- Partner's date of birth
- Gender
- Date of questionnaire completion
- Number of children living at home
- Number of children from current relationship
- Number of committed relationships prior to the current relationship
- Geographic location
- A free-format question invited participants to comment on any factors that might have influenced their responses.

#### **4.4 Procedure**

Individuals in close or intimate couple relationships were invited to complete an online questionnaire through advertisements placed on a

number of Internet community websites, and via network sampling, a technique where participants are asked to request qualified members of their social network to participate in the study (Granovetter, 1976). A £300 prize was offered to couples as a participation incentive. Confidentiality was assured and the participant data were password protected.

Testing was unsupervised and there was no means of identifying the participants except from their voluntarily provided email addresses (*open mode testing*; Bartram, 2005) and their Internet protocol (IP) addresses. IP addresses were checked for multiple submissions from the same participant (Birnbaum, 2004) which would have resulted in a loss of degrees of freedom. No duplications were found.

The first wave of participants completed the NEO Personality Inventory (NEO; Costa & McCrae, 1992), the Conflict Behaviour questionnaire (CBQ; McGonagle et al., 1993), the Marriage and Relationship Questionnaire (MARQ; Russell & Wells, 1993) and the demographic questions. Participants were asked not to discuss responses with their partners until they had both completed the questionnaires.

Once they had completed the first wave of questionnaires, participants were acknowledged by email and reminded that they would be contacted again in six months to complete the second wave. They were also asked to remind their partners to complete the questionnaire if they had not already done so.

After six months, participants who had completed the first wave were emailed a request to complete the second wave consisting of the CBQ and the MARQ. The NEO was not included because there is evidence that NEO

personality traits are stable over a six-month period (Asendorpf & Wilpers, 1998; Costa & McCrae, 1992).

The second wave of questionnaires was also completed in open mode.

All responses were included in the *Individuals* sample. In addition, if both partners in a couple responded, they were also assigned to the *Couples* sample. Members from the same couple relationship were identified by cross-matching their birthdates (participants were asked to provide their own and their partner's birthdates).

#### **4.5 Data Preparation**

Case-wise deletion was used where more than five NEO responses (8%), five MARQ responses (8%) or two CBQ responses (20%) were missing. Mean substitution was employed in cases where fewer responses were not provided, as per the manual instructions. Additional cases were removed because of data runs, participants not meeting the study criterion (for example, if they were not part of a couple), or if their scores included univariate or multivariate outliers ( $z > 3.29$ ,  $p < .001$ ) using the Mahalanobis distance criterion (Tabachnick & Fidell, 1996).

#### **4.6 Preliminary Analyses**

Prior to the substantive analyses, the following preliminary analyses were performed to reduce collinearity and to ensure that all variables were normally distributed.

#### 4.6.1 Conflict Behaviour Scale Creation

As discussed in the literature review, scholars differ with regard to the factor structure of conflict behaviour (Cramer, 2003a; Kurdek, 1994a; McGonagle et al., 1993; Noller & White, 1990). With regard to McGonagle et al.'s (1993) Conflict Behaviour Scale, three items exhibited low variances suggesting that they did not discriminate well between the participants' conflict behaviours. These items were Appreciate ( $M = 2.18$ ,  $SD = .86$ ), I Give In ( $M = 3.09$ ,  $SD = .81$ ) and You Give In ( $M = 3.13$ ,  $SD = .79$ ). Also, when McGonagle et al. (1993) analysed the collinearity of CBQ data from 691 couples, they reported an intermediate condition number indicating some "underlying structure in the data, but also enough independence among the measures to study their separate effects in multivariate models" (p.391). However, the condition number of the current CBQ correlation matrix is 25.81 which is significantly higher than 15.0, the level at which there is concern about collinearity between the items, and close to 30.0, the level at which matrices are considered to be ill-conditioned, and where collinearity becomes an issue (Belsley, Kuh & Welsh, 1980).

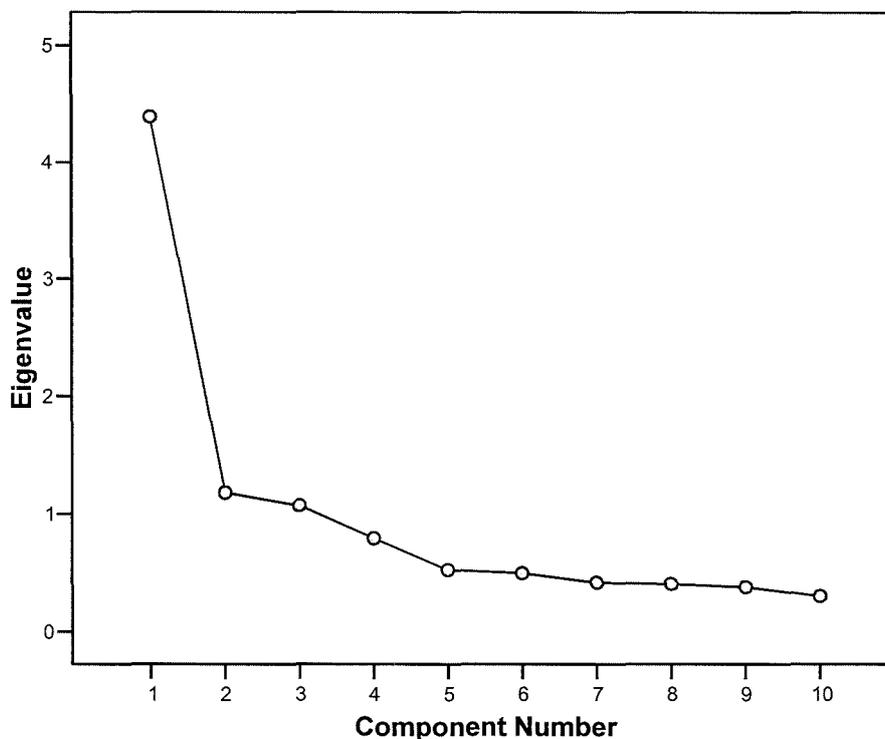
An assessment of the CBQ scale reliabilities revealed that the five-item Conflict Style scale had an acceptable internal consistency of .81. The Conflict Frequency scale consisted of a single item and its internal consistency was therefore not applicable. The alpha reliability of the four-item Conflict Outcome was .49, a value too low for robust statistical analyses (Rust & Golombok, 1989). Its internal consistency was improved by the removal of two items, but scales with fewer than four items are similarly not

considered sufficiently reliable for statistical investigation (Costello & Osborne, 2005).

To address these concerns, the 10 CBQ items from the individuals Time 1 sample (1122 participants) were subjected to a principle-components analysis (PCA) with Varimax rotation. Prior to the analysis, appropriate CBQ scales were reversed so that greater scores reflected greater levels of conflict behaviour.

Whereas McGonagle et al. (1993) found that two factors met the Kaiser criterion of  $\lambda > 1.0$ , the current analysis revealed three components meeting the Kaiser criterion. To resolve this discrepancy, a Cattell (1966) eigenvalue scree test was generated (Figure 4.1). This test clearly indicates the presence of only a single factor underlying the CBQ data.

### Scree Plot



**Figure 4.1** Scree Test for Components of Conflict Behaviour

Based on this single component, the communalities of the I Give In and You Give In items were less than .50 and therefore excluded from subsequent analyses. Similarly, the Frequency and Appreciate items were unstable when tested on randomly split samples and also excluded (Dunbar, 2005).

The final PCA produced a single factor with items Avoidance, Calmness, Tense, Cruel, Mutual Satisfaction, and Refuse to Compromise all loading significantly on it. The conflict behaviours component ( $\lambda = 3.56$ )

accounted for 59.26% of the CBQ variance. Loadings on each of the factors are presented in Table 4.2.

**Table 4.2**  
**Factor Loadings for Conflict Behaviour**

<i>Factor</i>	<i>Factor</i>
	<i>Loading</i>
Avoidance	.74
Calmness	.78
Tense	.81
Cruel	.78
Mutual Satisfaction	.78
Refuse to compromise	.73

The generalisability of the Conflict Behaviour factor was validated using both a split sample and also by testing the factor loadings separately on both male and female scores. In both validation analyses, all items had communalities greater than .50 and the pattern of factor loadings in the validation analyses matched the pattern of factor loadings of the full data set.

The alpha reliability of the Conflict scale was .86. The items loading on this component were summed to create a composite scale with skew of -.53 and kurtosis of -.27. Application of a Box-Cox (Box & Cox, 1964) square-root transformation produced a skew and kurtosis of .17 and -.61 respectively (M = 3.33, SD = .65)

#### 4.6.2 Relationship Satisfaction Scale Creation

Means, standard deviations and scale reliabilities for the Individuals Time 1 data appear in Table 4.3. While the means and standard deviation values are similar to those reported by Russell and Wells (1993), differences in the reliabilities were found. Variations are attributed to the types of couples participating in the studies, country and cultural differences, and the methods used to recruit participants. Specifically, the MARQ sample consisted of married British couples recruited via advertising in women's magazines, a market research company, and university students. The current research sample was recruited via the Internet and consisted of multinational participants (e.g. from the UK, the USA and Asia) who were not necessarily married, but living together.

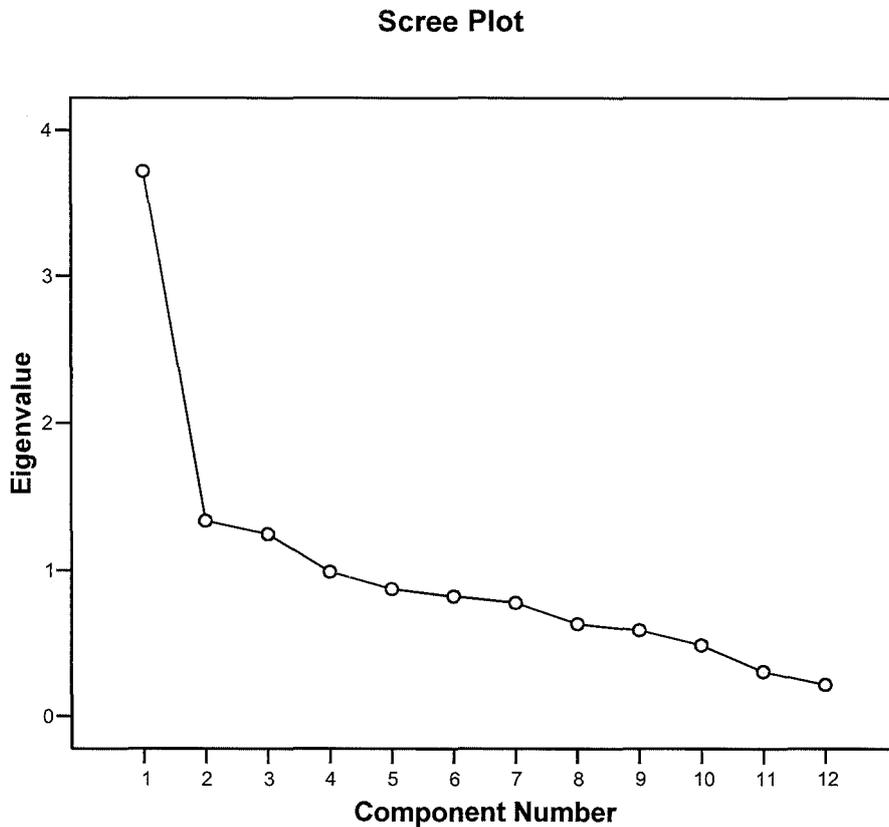
The MARQ uses 12 dimensions to assess relationship outcomes. As noted in the literature review, however, it is argued that relationship satisfaction is a unidimensional construct and that multidimensional scales add little value and contribute to unnecessary collinearity and attenuated correlations with predictor variables (e.g. Bradbury & Fincham, 1988; Hendrick, 1988; Johnson et al., 1986; Norton, 1983; Schumm et al., 1986). In the case of the MARQ, this is confirmed by the high correlation matrix condition number (32.68), a value in excess of 30.0 indicating an ill-conditioned matrix with collinearity issues (Belsley et al., 1980).

**Table 4.3****Current Sample and MARQ Manual Descriptive Statistics for Female Partners**

	<i>Cronbach's Alpha</i>		<i>Mean</i>		<i>Standard Deviation</i>	
	Current	MARQ	Current	MARQ	Current	MARQ
	Study	Manual	Study	Manual	Study	Manual
Roles	.56	.80	12.09	11.88	2.64	3.59
Values	.50	.55	13.07	13.13	2.31	2.29
Family ties	.61	.58	10.57	10.63	2.11	2.09
Partnership	.94	.88	36.55	36.11	6.99	5.62
Love	.92	.90	38.96	38.53	6.02	5.46
Attractiveness	.60	.65	15.13	14.64	2.58	2.51
Sexual jealousy	.64	.64	6.87	6.52	2.51	2.52
Conciliation	.55	.59	6.25	6.17	1.33	1.34
Problems:	.76	.69	14.64	14.23	3.50	3.36
Personal						
Problems:	.64	.60	10.29	9.59	2.84	2.64
Circumstances						
Problems: Partner	.85	.80	15.69	16.26	4.51	3.95
Problems:	.68	.64	17.08	15.57	3.69	3.12
Relationship						

In the light of this the inflated condition number and the collinearity between the MARQ scales (e.g.  $r = .75$ ,  $p < .001$  between Partnership and Love), the 12 MARQ scales of the individuals sample ( $n = 1122$ ) were subjected to a principal-components analysis (PCA) with Varimax rotation using the Individuals sample. Where necessary, items were reversed so that higher scores indicated greater satisfaction.

An eigenvalue scree test (Fig. 4.2) confirmed the presence of a single factor (Cattell, 1966).



**Figure 4.2** Scree Test for Components of Relationship Satisfaction

Items with communalities less than .50 were then removed (Costello & Osborne, 2005) and the test repeated. The eigenvalue ( $\lambda = 2.90$ ) of the resulting factor exceeded the Kaiser criterion of  $\lambda > 1.0$ , and accounted for 72.42% of the MARQ variance.

Based on factor loadings (Table 4.4), the factor was readily interpreted as Relationship Satisfaction. The items used were Partnership, Love, Problems Partner, and Problems Relationship. Although a five-item loading

would have been ideal (Costello & Osborne, 2005), four items are considered sufficient given the large sample size. No items were excluded since all loadings were greater than .76.

**Table 4.4**  
**Factor Loadings for Relationship Satisfaction**

<i>Factor</i>	<i>Factor Loading</i>
Partnership	.90
Love	.88
Problems: Partner	.86
Problems: Relationship	.76

The generalisability of the Relationship Satisfaction factor was validated using both a randomly split sample and by testing the factor loadings separately on both male and female scores. In both analyses, all items had communalities greater than .50 and the pattern of factor loadings in the validation analyses matched the pattern of factor loadings of the full data set.

High loading items were summed to create a Satisfaction scale with an alpha reliability of .87 ( $M = 16.43$ ,  $SD = 4.89$ ) and a skew and kurtosis of -.22 and .63 respectively (Fig 3).

## **4.7 Conclusion**

1122 participants including 234 couples were recruited via the Internet and invited to complete two waves of questionnaires. The first wave consisted of the NEO-FFI Revised Form S, the Conflict Behaviour Questionnaire, and the Marriage and Relationship Questionnaire. Where

both partners in a couple completed a wave, they were placed in both the couple and individual samples. Where only one partner completed a wave, they were placed only in the individual sample.

Analysis of the CBQ and MARQ revealed single factors underlying each of these scales which were used in subsequent analyses.

The following chapter reports the outcomes of the quantitative analyses performed on the participants' data.

## CHAPTER 5

### RESULTS

#### 5.1 Introduction

The current chapter tests the research hypotheses posited in Chapter 3. The chapter commences with a description of the data characteristics. The independence of the within-dyad partner data is then tested in order to determine which analytical techniques are appropriate for the subsequent analyses. This is followed by a description of the selected analytical approach. The hypotheses are then tested in the following order: conflict behaviour and relationship satisfaction; personality and relationship satisfaction; personality and conflict behaviour; and mediation.

Unless otherwise specified, all statistics are two-tailed allowing for relationships in the opposite direction to those hypothesised. Significance testing was conducted at the .05 alpha level. Analyses were performed using the Couples sample ( $n = 234$ ), and correlation effect sizes are described using Cohen's (1988) taxonomy where .1 represents a small correlation, .3 a medium correlation, and .5 a large correlation. Correlations less than .10 were considered trivial. In the context of the Actor-Partner Interdependence model, the prefixes *a* and *p* denote *actor* and *partner* effects respectively.

## 5.2 Descriptive Statistics and Intercorrelations

### 5.2.1 Demographic Descriptive Statistics

234 couples (234 females and 234 males) participated in Time 1 and 129 couples participated in Time 2. This represents an attrition rate of 45%, typical for Internet-based research (Birnbaum, 2004). The mean relationship length was 93.24 months ( $SD = 93.75$ ). There were no significant differences in the length of relationship reported by partners within dyads. There was also no significant difference between the length of relationships of couples that completed the first wave only compared to those who completed both waves.

The mean female partner age was 33.66 years ( $SD = 9.61$ ) and the mean male partner age was 35.77 years ( $SD = 10.58$ ). A paired t-test revealed that male partners were significantly older than female partners,  $t(231) = -5.73$ ,  $p < .001$ . Within-dyad partner ages were correlated  $r = .86$  ( $p < .001$ ) and there was no significant difference between the ages of participants who completed only one wave compared to those who completed both waves.

The majority of couples were located in the UK (59 couples, 67.9% of the sample) and the United States (44 couples, 18.8% of the sample). 38.9% of female partners and 43.6% of the male partners reported being in at least one previous relationship. About half of the couples had one or more children living with them.

**Table 5.1**

**Current Sample and NEO-FFI Manual Descriptive Statistics for Female and Male Partners**

	<i>Female partners</i>						<i>Male partners</i>					
	<i>Current Sample</i>		<i>NEO-FFI Manual</i>		<i>Independent t-ratio (732 df)</i>	<i>Sig. p</i>	<i>Current Sample</i>		<i>NEO-FFI Manual</i>		<i>Independent t-ratio (732 df)</i>	<i>Sig. p</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>			<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
Neuroticism	22.53	8.74	20.54	7.61	1.91	.17	19.26	8.19	17.60	7.46	2.72	.01
Extraversion	28.78	6.77	28.16	5.82	1.28	.21	27.46	6.83	27.22	5.85	.49	.62
Openness	31.51	6.57	26.98	5.87	9.37	<.001	30.63	6.62	27.09	5.82	7.34	<.001
Agreeableness	32.25	5.39	33.76	4.74	3.85	<.001	28.79	6.02	31.93	5.03	7.39	<.001
Conscientiousness	32.59	6.92	35.04	5.78	5.02	<.001	30.19	7.10	34.10	5.95	7.79	<.001

Current sample N = 234; NEO Manual N = 500

## 5.2.2 Personality

Independent t-tests were used to compare the descriptive personality statistics of the current sample with those in the NEO-FFI manual (Costa & McCrae, 1992). These findings are outlined in Table 5.1.

Compared to the manual norms, both genders in the current sample scored significantly higher on openness and significantly lower on agreeableness and conscientiousness.

Table 5.2 compares the internal consistencies of personality scores in the individuals sample (N = 1122) with those cited in the NEO-FFI manual.

**Table 5.2**  
**Current Sample and NEO-FFI Manual Cronbach Alphas**

	<i>Current</i>	<i>NEO-FFI</i>
	<i>Sample</i>	<i>Manual</i>
Neuroticism	.88	.92
Extraversion	.88	.89
Openness	.76	.87
Agreeableness	.77	.86
Conscientiousness	.84	.90

Current sample, N = 1122

NEO-FFI Manual, N = 500

For most traits, the internal consistency of the current sample was slightly lower than the norms cited in the manual with the largest discrepancies being those of openness and agreeableness.

A multivariate analysis of variance (MANOVA) using the personality traits as dependent variables and gender as a repeated measure revealed that female partners scored significantly higher than their male counterparts on neuroticism,  $F(1, 235) = 19,73$  ( $p < .001$ ), extraversion,  $F(1, 235) = 4.62$  ( $p < .05$ ), agreeableness,  $F(1,235) = 43.44$  ( $p < .001$ ), and conscientiousness,  $F(1, 235) = 16,76$  ( $p < .001$ ).

Correlations of within-partner personality associations are presented in Table 5.3.

**Table 5.3**

**Within-Individual Personality Trait Correlations**

<i>N = 234</i>		<i>Males</i>				
		<i>N</i>	<i>E</i>	<i>O</i>	<i>A</i>	<i>C</i>
<i>Females</i>	<i>N</i>	1.00	.38***	.07	-.19**	-.28**
	<i>E</i>	.43***	1.00	.24**	.30**	.26**
	<i>O</i>	-.01	.07	1.00	.18**	-.21**
	<i>A</i>	-.15*	.21**	.01	1.00	.01
	<i>C</i>	-.34**	.23**	-.07	.14*	1f.00

Female correlations are below the diagonal and male correlations are above the diagonal; N = Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness; \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Within-partner personality traits were significantly correlated for both genders with neuroticism and extraversion exhibiting the greatest correlations. This suggests that any analyses involving personality should include all personality traits simultaneously in order to control for multicollinearity.

### 5.2.3 Conflict Behaviour

A scale for conflict behaviour was created in Chapter 3 and descriptive statistics for the couples sample are reported in Table 5.4.

**Table 5.4**

**Time 1 and Time 2 Conflict Behaviour Descriptive Statistics**

<i>N</i> = 468	<i>Time 1</i>		<i>Time 2</i>		<i>Longitudinal correlations between Couple Scores</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	
Female partners	3.44	.66	3.48	.64	.83***
Male partners	3.52	.64	3.51	.59	.79***
Between Partners	.68***		.68***		

\*\*\* $p < .001$

Within-couple conflict scores were significantly correlated at both waves ( $r = .68$ ,  $p < .001$ ). Conflict scores were also significantly correlated across both waves for female partners ( $r = .83$ ,  $p < .001$ ) and male partners ( $r = .79$ ,  $p < .001$ ). Paired t-tests revealed no significant differences between Time 1 and Time 2 scores for either gender. Only Time 1 conflict behaviour scores were therefore used in this study.

Females that completed both waves reported significantly less conflict than those who participated in Time 1 only,  $F(1, 232) = 8.61$ ,  $p < .05$ . No significant difference was found for males.

## 5.2.4 Relationship Satisfaction

A relationship satisfaction scale was created in Chapter 3 and descriptive statistics for the couples' sample are summarised in Table 5.5.

**Table 5.5**  
**Time 1 and Time 2 Relationship Satisfaction Descriptive Statistics**

	<i>Time 1</i>		<i>Time 2</i>		<i>Longitudinal correlations between Couple Scores</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	
Female partners	17.53	4.56	15.69	4.57	.83***
Male partners	17.65	4.52	15.52	4.51	.85***
Between partner correlations	.63***		.74***		

\*\*\* $p < .001$

Between partner satisfaction scores were significantly correlated at Time 1 ( $r = .63, p < .001$ ) and Time 2 ( $r = .74, p < .001$ ). Paired t-tests revealed no significant differences between partner means at either wave. Female and male partner satisfaction scores were highly correlated across Times 1 and 2 with female correlation  $r = .83$  and male correlation  $r = .85$  ( $p < .001$ ), a level “more characteristic of high test-retest reliability for a single measure than of a relationship between two different measures assessed at different times” (Cramer, 2003b, p.510). Cramer demonstrated that when dependent variables are highly correlated across time, controlling for the effects of one removes much of the variance in the other leading to possible unjustified reversal effects. Given this limitation, a decision was therefore

made not to test hypotheses relating to change in relationship satisfaction over time.

### **5.3 Dyadic Interdependence**

The null hypothesis is that within-dyads scores on the dependent variables are independent. Information relating to the independence of partner scores is important when selecting an appropriate tool for the analysis of clustered data such as intimate couples. When using statistical approaches like ordinary least squares (OLS) regression with interdependent couple data, for example, the resulting residual error terms reflect not only unique error specific to the individual, but also a degree of shared error relating to that individual's dyad. The degree of shared error is a function of the level of interdependence between the partners. Shared residual error violates the OLS assumption of independent observations and can lead to alpha inflation, reduction in effective sample size, and attendant loss of power (Cohen et al., 2003; Kenny, 1995).

Because the Baron and Kenny (1986) method for testing mediation requires that the criterion be regressed on the predictor and the mediator, and that the mediator be regressed on the predictor, there are effectively two dependent variables – conflict behaviour and relationship satisfaction – in the current research and the interdependence of both must be established.

Measurement of interdependence in distinguishable dyads (like heterosexual couples where gender is a distinguishing variable) can be assessed using the Pearson product-moment correlation or the intraclass correlation (Kenny, 1996a,b; Kenny et al., 1998). Table 5.6 shows the

Pearson product-moment correlation of conflict behaviour and relationship satisfaction for Times 1 and 2.

**Table 5.6**

**Within-Dyad Partner Correlations between Conflict Behaviour and Relationship Satisfaction**

	<i>Pearson Product –Moment Correlations</i>	
	<i>Time 1</i>	<i>Time 2</i>
Conflict behaviour	.68***	.68***
Relationship satisfaction	.63***	.74***

\*\*\*p<.001

All correlations were large. In Time 1 40% of the variation in relationship satisfaction was attributable to the dyad and in Time 2, it was 55%. For conflict behaviours, 46% of the variance in conflict behaviour was attributable to the dyad in both Times 1 and 2. Within-dyad partner conflict behaviour and relationship satisfaction scores are therefore not independent and the null hypothesis can therefore be rejected. Hypothesis 1 is therefore supported.

## **5.4 Multilevel Random Coefficient Regression Modelling**

### **5.4.1 Introduction**

Because within-dyad conflict behaviour and relationship satisfaction scores were significantly correlated, a statistical technique that does not require observational independence was required. Random coefficient regression modelling is a variant of multilevel modelling (MLM) – also known

as hierarchical modelling – and is particularly well-suited to dyadic analysis because it accounts for correlated standard errors between partners' scores when estimating regression coefficients (Bryk & Raudenbusch, 1992; Karney & Bradbury, 1995b).

The importance of MLM as an approach for analysing couple data is growing to the extent that Kenny, Kashy and Cook (in press) opine that "MLM is a very important tool for the estimation of dyadic models and will likely become increasingly popular. If one is serious about analyzing dyadic data, one should learn how to use it" (p.26).

Because MLM has not been widely used in the behavioural sciences, its theoretical underpinnings and mechanics will be introduced here.

#### **5.4.2 MLM Equations**

MLM simultaneously analyses data on multiple levels. In the context of couple research, these are the individual partner level (Level 1), and the dyadic level (Level 2)(Newsom, 2002; Whisman, Uebelacker, & Weinstock, 2004)

##### **5.4.2.1 Level 1 Equation**

Conceptually, Level 1 takes the form of an OLS regression equation. Illustratively, a Level 1 equation describing the effects of actor and partner conflict behaviour on the relationship satisfaction of partner *j* in dyad *i* is expressed as:

$$y_{ij} = \beta_{0i} + \beta_{1i}X_{1ij} + \beta_{2i}X_{2ij} + e_{ij} \quad (5.1.1)$$

Where:

$y_{ij}$  is the satisfaction of partner  $j$  in dyad  $i$

$\beta_{0i}$  is the average satisfaction of dyad  $i$

$X_{1ij}$  is the individual's actor conflict score

$\beta_{1i}$  is the average effect of actor conflict on satisfaction

$X_{2ij}$  is the partner's conflict score

$\beta_{2i}$  is the average effect of partner conflict on satisfaction

$e_{ij}$  is the unexplained residual in the individual's satisfaction (assumed to correlate with the partner's residual error). Its variance represents within-dyad individual variation in satisfaction controlling for actor and partner conflict behaviour.

Independent variables at Level 1 are referred to as *fixed effects* because the variables (actor and partner conflict in this example) apply to all members of the target couples' population.

#### 5.4.2.2 Level 2 Equations

Level 2 equations estimate the random dyadic coefficients in the Level 1 equations. *Random* in the context of random coefficient regression modelling implies that couples are selected randomly from the couples' population (Atkins, 2005). The Level 2 equations in this example are:

$$\beta_{0i} = \gamma_{00} + u_{0i} \quad (5.2.1)$$

Where:

$\gamma_{00}$  is a fixed effect intercept representing the grand mean for satisfaction of all dyads in the sample.

$u_{0i}$  is the between-dyad variation in satisfaction intercepts. It represents the deviation of the dyad  $i$  intercept from the satisfaction grand mean.

$$\beta_{1i} = \gamma_{11} \quad (5.2.2)$$

$$\beta_{2i} = \gamma_{12} \quad (5.2.3)$$

Where

$\gamma_{11}$  is the fixed average slope between actor conflict and relationship satisfaction across all dyads.

$\gamma_{12}$  is the fixed average slope between partner conflict and relationship satisfaction across all dyads.

Note that unlike equation 5.2.1, equations 5.2.2 and 5.2.3 contain no random residual term representing slope variation across dyads. This is because when working with dyadic data (nested clusters of size  $n = 2$ ), there are insufficient degrees of freedom to estimate both intercept and slope random coefficients (Newsom & Nishishiba, unpublished) and the model must therefore be restricted to only one of these. In the case of couple data, Kenny et al. (in press) recommend the application of *random intercept regression models* meaning that while satisfaction intercepts are free to vary from couple to couple, the association between satisfaction and conflict (using the current example) is constrained to be equal for all couples. This restriction does not bias coefficient estimation because the assumption of slope variance becomes confounded with the overall error term.

In summary, dyads are allowed to differ in their level of average satisfaction, but not in the manner in which the independent variables influence satisfaction.

#### 5.4.2.3 Combined Equation

The Level 1 and 2 equations can be combined and re-arranged to yield a single MLM equation:

$$y_{ij} = \gamma_{00} + \gamma_{11}X_{1ij} + \gamma_{12}X_{2ij} + (e_{ij} + u_{0i}) \quad 5.3$$

where the terms are defined above.

Note that the error term ( $e_{ij} + u_{0i}$ ) includes an individual level component and a dyadic level component, the variances of which are used to describe overall model behaviour.

Unlike OLS regression approaches, MLM coefficients are estimated using an iterative Empirical Bayes Maximum Likelihood (EB/ML) strategy that weights coefficients based on the reliability of the available data. The more reliable the dyadic level data in terms of greater between-dyad variability, the less the within-dyad variability, and the greater the number of dyads, the more the coefficient is weighted towards the individual-level data. Unreliable dyadic data results in coefficients being weighted towards overall sample averages (Raudenbush & Bryk, 2002; Atkins, 2006). The use of a maximum likelihood function also results in smaller standard errors for the coefficients than typically possible with OLS.

### 5.4.3 Computations

The following computations are used in the analyses contained in this chapter. The intraclass correlation indicates the between-dyads variance as a proportion of the total sample variance. The larger the between-dyad variance relative to the total sample variance, the smaller the within-dyad variance and the more similar the partners on the variable being assessed.

The intraclass correlation is calculated as:

$$\rho = \frac{u_0^2}{u_0^2 + e^2}$$

where the terms are defined as above.

A special case of the intraclass correlation occurs in the unconditional means (unrestricted) model which contains no independent variables and partitions the sample variance into its Level 1 and Level 2 components.

The amount of variance in the outcome variable explained by the independent variables is calculated as a pseudo  $R^2$ :

$$R^2 = 1 - \frac{e^2 + u_0^2}{e'^2 + u'^2}$$

where  $e'$  and  $u'$  are the residual terms of the unrestricted or unconditional means model (Atkins, 2006).

To determine whether actor and partner effects of a predictor variable differ significantly, the effects of the average and the difference of the predictor scores on the outcome variable are compared<sup>16</sup>. If the effect of the

---

<sup>16</sup> The average of the predictor scores represents the extent to which dyads differ from each other while controlling for the independent variable and the difference represents the extent to which partners within a dyad differ from one another.

average is significant, but the effect of the difference is not, then it is concluded that actor and partner effects do not differ significantly (Kenny et al., in press).

Effect size was calculated by first determining the effect size  $d_D$  assuming independent observations and then multiplying it by a dyadic adjustment factor (Kenny et al., in press). The unadjusted effect size is:

$$d_D = \frac{2\sqrt{F}}{\sqrt{n}}$$

Where  $n$  is the number of dyads.

The dyadic adjustment factor is

$$\sqrt{\frac{(r_x + 1)^2}{2(1 + r_y)} + \frac{(1 - r_x)^2}{2(1 - r_y)}}$$

where  $r_x$  is the Pearson or intraclass correlation of the independent variable and  $r_y$  is the Pearson or intraclass correlation of the dependent variable.

## 5.5 Model Preparation and Overview of Research Analyses

The MLM random intercept regression models used in this dissertation were created using SPSS mixed models (SPSS, 2003). Independent variables were grand-mean centred. Degrees of freedom for the estimated coefficients were calculated using the Satterthwaite (1946) formula which accounts for mixed independent variables like conflict behaviour and personality which vary within and between couples. Gender was treated as a covariate rather than as a categorical factor because SPSS version 12 (incorrectly) does not use the Satterthwaite calculation to calculate degrees

of freedom for categorical variables (Kenny, personal communication, January 16, 2006a).

Restricted maximum likelihood (REML) and maximum likelihood (ML) strategies are typically used for MLM coefficient estimation. REML provides less biased coefficients, but with samples of  $N$  greater than 50 such as in the current study, ML and REML provide similar estimates. ML offers an advantage in that it allows comparison of nested models with differing fixed effects based on the difference in  $-2$  Log likelihood ( $-2L$ ) criteria between them. This difference is distributed as a chi-squared ( $\chi^2$ ) function with degrees of freedom equal to the difference in number of fixed coefficients between the models (Kashy et al., in press). The current research used this approach (analogous to hierarchical multiple regression) to determine whether additional independent variables explained incremental variance in the dependent variable (Caughlin & Huston, 2002). In each case, the first step was to create a baseline unconditional means (unrestricted) model. Variables were then added in blocks of one or more variables. The nested models approach described above was then used to determine the significance of each added block.

To test gender differences in the effects of independent variables, gender was effect-coded (1 for females and -1 for males) and included as a lower-level variable in an MLM model. Its interactions with the independent variables were then assessed. If an interaction was significant, it indicated that the effects of the independent variable differed by gender. Kenny et al. (in press) recommend that the main effects of all independent variables are

controlled in such models to ensure that main effect variance is not incorrectly attributed to an interaction.

Power requirements were calculated *a priori* using Optimal Design software (Raudenbush, Spybrook, Lui & Congdon, 2005). To detect a medium effect size ( $r = .30$ ) based on a significance level of .05, a cluster size of two, and 80% power, 184 couples are required. In the event, 234 couples were obtained yielding power of 88%.

## **5.6 Conflict Behaviour and Relationship Satisfaction**

This section analyses the association between actor and partner conflict behaviours on relationship satisfaction using the Actor-Partner Interdependence model (APIM) and gender-specific models. A similar analysis, but controlling for the effects of personality is considered in the section on mediation below.

### **5.6.1 Actor Partner Interdependence Model**

The APIM assesses the effects of Time 1 actor and partner conflict behaviour on Time 1 relationship satisfaction. Table 5.7 summarises the zero-order correlations between these variables.

**Table 5.7**

**Zero-order Correlations Between Conflict Behaviour and Relationship Satisfaction**

	<i>Actor Conflict</i>	<i>Partner Conflict</i>
Relationship satisfaction	-.74***	-.59***

\*\*\*p<.001

The correlation between actor conflict behaviour and satisfaction was large ( $r = -.74$ ,  $p < .001$ ) while the correlation between partner conflict and relationship satisfaction was moderate ( $r = -.59$ ,  $p < .001$ ).

An APIM model including Time 1 actor and partner conflict behaviour and Time 1 relationship satisfaction was then created. The effect of actor conflict behaviour was controlled by entering it in the first block followed by partner conflict behaviour in the second block. The model is summarised in Table 5.8.

The introduction of actor conflict behaviour improved model fit significantly compared to the baseline model ( $\Delta\chi^2 = 272.11$ ,  $p < .001$ ) and explained a significant 54% of the variance in relationship satisfaction. The presence of actor conflict reduced between-dyad variance to .15 (-76%) while the intraclass variance was reduced to .32 (-49%) indicating that the majority of variance explained by actor conflict behaviour was between couples rather than within couples. Actor conflict showed a significant association with relationship satisfaction ( $\beta = -.70$ ,  $p < .001$ ).

**Table 5.8**

**Multilevel Model of Relationship Satisfaction regressed on Actor and Partner Conflict Behaviour**

<i>Block</i>	<i>Conflict Variables</i>	<i>Coefficient <math>\beta</math></i>	<i>SE</i>	<i>df</i>	<i>t-ratio</i>	<i>Cohen's d</i>	<i>Explained variance</i>	<i><math>\Delta\chi^2</math></i>
Block 1	Actor conflict	-.70***	.03	383.30	-21.07	2.02	54%	-272.11***
Block 2	Actor conflict	-.63***	.04	195.70	-17.27	1.66	56%	-17.84***
	Partner conflict	-.16***	.04	195.47	-4.30	.41		

All coefficients are standardised

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Partner conflict behaviour was added in block 2 and improved model fit significantly, but only marginally relative to block 1 ( $\Delta\chi^2 = 17.84, p < .001$ ) and explained only an additional 2% of the variance in relationship satisfaction. It showed a smaller but still significant association with relationship satisfaction ( $\beta = -.16, p < .001$ ), and its presence reduced the Block 1 association between actor conflict behaviour and relationship satisfaction from  $-.70$  to  $-.63$  ( $p < .001$ ).

In summary, both actor and partner conflict behaviour were negatively associated with relationship satisfaction and hypotheses 2(a) and 2(b) were therefore supported.

### 5.6.2 Comparing Actor and Partner Effects

The following analysis compared the sizes of the relative contributions of actor and partner conflict behaviour to relationship satisfaction. This was achieved by comparing the effects of the average of, and difference between within-dyad conflict behaviours on relationship satisfaction. The findings are summarised in Table 5.9.

**Table 5.9**  
**Multilevel Model of Relationship Satisfaction Regressed on the Dyadic Average and Difference in Conflict Behaviour**

<i>Average dyadic conflict <math>\beta</math></i>	<i>Actor conflict behaviour</i>	<i>Partner conflict behaviour</i>	<i>Difference in dyadic conflict <math>\beta</math></i>	<i>Actor effect different from partner effect?</i>
$-.72^{***}$	$-.63^{***}$	$-.16^{***}$	$-.19^{***}$	Yes

All coefficients are standardised

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Both the average and the difference effects were significant and it was therefore concluded that actor and partner conflict behaviour have significantly different effects on relationship satisfaction. Since actor effects were larger than partner effects (Table 5.8), it was concluded that the effects of conflict behaviour on relationship satisfaction are actor oriented.

### 5.6.3 Gender-Specific Model

While the APIM considers differences from the perspective of self and other, the gender-specific model considers whether actor and partner effects differ by gender. Table 5.10 shows the zero-order Pearson product-moment correlations between female and male actor and partner conflict behaviour with relationship satisfaction. All correlations were moderate to large, and negative.

**Table 5.10**

**Zero-order Correlations Between Female and Male Conflict Behaviour Correlations and Relationship Satisfaction**

	<i>Female satisfaction</i>	<i>Male satisfaction</i>
Actor conflict	-.74***	-.74***
Partner conflict	-.61***	-.56***

\*p<.05, \*\*p<.01, \*\*\*p<.001

Next, an MLM model was built that included gender, main effects for actor and partner conflict behaviour, and the interactions between gender and conflict behaviour. A heterogeneous compound symmetry covariance

structure was used to allow variances to vary by gender. The model is summarised in Table 5.11.

**Table 5.11**  
**Multilevel Model of Relationship Satisfaction Regressed on Interactions between Gender and Conflict Behaviour**

	<i>Coefficient <math>\beta</math></i>	<i>SE</i>	<i>Df</i>	<i>t-ratio</i>
Gender	-.01	.02	420.34	-.38
Actor conflict	-.63***	.04	419.62	-17.26
Partner conflict	-.16***	.04	420.79	-4.28
Actor conflict x gender	.03	.05	278.38	.69
Partner conflict x gender	-.04	.05	278.47	-.92

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

The main effect of gender on relationship satisfaction was not significant. Both actor and partner conflict behaviours had significant negative influences on relationship satisfaction as demonstrated in the APIM model (Table 5.8). Neither of the interactions of gender with actor or partner conflict was significant indicating no gender differences for the effects of actor or partner conflict behaviour. Hypothesis 2(d) was therefore supported.

## 5.7 Personality and Relationship Satisfaction

In mediation terms, the zero-order association between personality and relationship satisfaction represents the unmediated or total association between these variables (MacKinnon et al., 2000; Shrout & Bolger, 2002). This association was tested using both APIM and gender-specific models.

### 5.7.1 Actor Partner Interdependence Model

The zero-order correlations between actor and partner personality traits and relationship satisfaction are presented in Table 5.12.

**Table 5.12**  
**Zero-order Correlations Between Actor and Partner**  
**Personality Traits and Relationship Satisfaction**

	<i>Relationship Satisfaction</i>	
	<i>Actor Effect</i>	<i>Partner Effect</i>
Neuroticism	-.26***	-.16**
Extraversion	.24***	.09
Openness	.24**	.12**
Agreeableness	.25***	.19***
Conscientiousness	.16**	.14**

\*\*p<.01, \*p<.05, \*\*\*p<.001

All correlations were significant except for the effect of partner extraversion ( $r = .09$ , ns). Actor correlations were all small with correlations ranging from .16 ( $p < .01$ ) for conscientiousness to -.26 ( $r < .001$ ) for neuroticism. Partner correlations were also small ranging from .09 (ns) for partner conscientiousness to .19 ( $p < .001$ ) for partner agreeableness.

A hierarchical APIM was built controlling for both actor effects and the effects of actor and partner neuroticism using the unconditional means model as a baseline. Actor neuroticism was added in Block 1. Block 2 added the rest of the actor personality traits. In Block 3, partner neuroticism was added. Finally, the rest of the partner personality traits were added in Block 4. The model block effects are summarised in Table 5.13.

**Table 5.13**

**Multilevel Model Block Analyses of Relationship Satisfaction Regressed on Actor and Partner Personality**

<i>Variables in block</i>	<i>Between-dyad variance <math>u_0^2</math> and % change</i>	<i>Intraclass correlation controlling for predictors</i>	<i>Explained variance</i>	<i><math>\Delta\chi^2</math> (Change in - 2LL)</i>
Block 1	.58 (-8%)	.62	6%	-21.40*** (1df)
Block 2	.53 (-9%)	.60	12%	-44.20*** (4df)
Block 3	.51 (-4%)	.60	14%	-9.14*** (1df)
Block 4	.46 (-10%)	.58	20%	-23.72*** (4df)

\*\*\* $p < .001$ . Baseline = intercept only; Block 1 = Base line + actor neuroticism; Block 2 = Block 1 + actor extraversion, openness, agreeableness, and conscientiousness; Block 3 = Block 2 + partner neuroticism; Block 4 = Block 3 + partner extraversion, openness, agreeableness, and conscientiousness

The addition of actor neuroticism significantly improved model fit relative to the baseline model ( $\Delta\chi^2 = -21.40$ , 1df,  $p < .001$ ). It accounted for 6% of the variance in relationship satisfaction. Between-dyad variance and the intraclass correlation were reduced by 8% and 1.6% respectively suggesting that actor neuroticism accounted for more of the variance between couples than within couples. The effect of adding the four non-neurotic FFM actor traits in block 2 was also significant ( $\Delta\chi^2 = -44.20$ , 4df,  $p < .001$ ) and explained an additional 6% of the variance in satisfaction bringing the total explained variance to 12%. This suggests that together, actor extraversion, openness, agreeableness, and conscientiousness explain as much variance as actor neuroticism. The addition of partner neuroticism in Block 3 was

significant ( $\Delta\chi^2 = 9.14$ , 1df,  $p < .001$ ) and explained an additional 2% of the variance in relationship satisfaction suggesting that its effect was not large. Finally, the other four non-neurotic partner personality traits were added. These also contributed significantly to the model ( $\Delta\chi^2 = 23.72$ , 4df,  $p < .001$ ) and explained an additional 6% of the variance in relationship satisfaction bringing the total variance in satisfaction explained by actor and partner personality traits to 20%.

In summary, actor personality effects explained 12% of the variance in relationship satisfaction and partner effects explained an additional 8%. Hypothesis 3d was therefore supported.

Table 5.14 summarises the final block standardised beta coefficients between actor and partner personality traits and relationship satisfaction. The final block standardised coefficients for actor and partner personality indicated that actor agreeableness showed the strongest association with relationship satisfaction ( $\beta = .20$ ,  $p < .001$ ). The second largest association with relationship satisfaction was partner agreeableness ( $\beta = .17$ ,  $p < .001$ ) and actor neuroticism was third largest ( $\beta = -.14$ ,  $p < .001$ ). Of the other actor traits, the association between extraversion and relationship was small but significant ( $\beta = .10$ ,  $p < .05$ ) while the effects of conscientiousness and openness were not (although openness was significant at the  $p < .10$  level). Of the remaining partner personality traits, the effect of partner openness was small and significant ( $\beta = .10$ ,  $p < .05$ ) while the effects of partner neuroticism, extraversion, and conscientiousness were not significant (although partner neuroticism was significant at the  $p < .10$  alpha level). The

effects of actor and partner agreeableness were greater than the effects of actor and partner neuroticism.

**Table 5.14**

**Multilevel Model of Relationship Satisfaction Regressed on Actor and Partner Personality (Final Block)**

<i>Personality Variables</i>	<i>Coefficient <math>\beta</math></i>	<i>SE</i>	<i>df</i>	<i>t-ratio</i>	<i>Cohen's D</i>
aN	-.14**	.05	351.21	-3.12	.49
aE	.10*	.05	351.16	2.21	.36
aO	.08	.04	350.49	1.89	.27
aA	.20***	.04	344.45	4.49	.75
aC	.06	.04	351.24	1.40	.21
pN	-.08	.05	351.21	-1.82	.28
pE	-.03	.05	350.84	-.56	.09
pO	.10*	.04	349.81	2.43	.35
pA	.17***	.04	344.95	3.89	.65
pC	.07	.04	351.16	1.67	.25

All coefficients are standardised

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

These findings are compared to the hypothesised associations in Table 5.15.

**Table 5.15**

**Summary of Hypotheses and Findings for the Associations between Actor and Partner Personality and Relationship Satisfaction**

	<i>Hypothesised Association</i>	<i>Current Finding</i>	<i>Hypothesis support</i>
<i>Actor effects</i>			
Neuroticism	Negative	-.14**	Supported
Extraversion	No hypothesis	.10*	NA
Openness	No hypothesis	.08	NA
Agreeableness	Positive	.20***	Supported
Conscientiousness	Positive association	.06	Not supported
<i>Partner effects</i>			
Neuroticism	Negative	-.08	Not supported
Extraversion	No hypothesis	-.03	NA
Openness	Positive	.10*	Supported
Agreeableness	Positive	.17***	Supported
Conscientiousness	No association	.07	Supported

NA Not applicable; \*p<.05, \*\*p<.01, \*\*\*p<.001.

**5.7.2 Comparing Actor and Partner Effects**

Having estimated the actor and partner effects of personality and relationship satisfaction, the relative strength of these variables on relationship satisfaction was assessed by comparing the effect of the within-dyad average and difference of each trait on relationship satisfaction. The findings are summarised in Table 5.16.

**Table 5.16**

**Multilevel Model of Relationship Satisfaction Regressed on the Dyadic Average and Difference in Personality Traits**

	<i>Actor Effect</i>	<i>Partner Effect</i>	<i>Dyadic average <math>\beta</math></i>	<i>Dyadic difference <math>\beta</math></i>	<i>Actor effect different to partner effect?</i>
Neuroticism	-.14**	-.08	-.29***	-.07**	Yes
Extraversion	.10*	-.03	.23***	.11***	Yes
Openness	.08	.10*	.16**	.01	No
Agreeableness	.20***	.17***	.32***	.04	No
Conscientiousness	.06	.07	.20***	.02	No

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Actor neuroticism and extraversion were significantly larger than their partner counterparts. The actor and partner effects of openness, agreeableness and conscientiousness did not differ significantly.

### 5.7.3 Gender-Specific Model

Having examined actor and partner effects between personality and relationship satisfaction, this section focuses on whether these effects differ by gender. Gender-based actor and partner correlations are presented in Table 5.17.

With the exception of male actor openness, all actor correlations were significant with actor neuroticism and agreeableness showing the greatest associations with relationship satisfaction for both genders. Of the partner effects, female satisfaction was most strongly associated with male

agreeableness and neuroticism while males showed small positive associations with female openness and conscientiousness.

To test whether personality effects on relationship satisfaction differed significantly by gender, a model was built that included gender, the main personality effects, and gender and personality interactions. The model is summarised in Table 5.19.

From the model, it can be seen that actor openness and partner agreeableness differed with respect to gender. Specifically, the effects of actor openness and partner agreeableness were greater for female partners than for male partners (though the difference in actor openness was trivial). Hypothesis 3c was therefore largely supported.

**Table 5.17**  
**Zero-order Correlations Between Female and Male Personality and Relationship Satisfaction**

	<i>Female Satisfaction</i>	<i>Male Satisfaction</i>
Actor neuroticism	-.21**	-.32***
Actor extraversion	.18**	.29***
Actor openness	.16*	.10
Actor agreeableness	.20**	.32***
Actor conscientiousness	.17*	.16*
Partner neuroticism	-.21**	-.12
Partner extraversion	.16*	.02
Partner openness	.09	.16*
Partner agreeableness	.29***	.09
Partner conscientiousness	.14*	.13*

\*p<.05, \*\*p<.01, \*\*\*p<.001.

### 5.7.4 Personality Similarity and Relationship Satisfaction

The next analysis considered the effects of partner personality similarity on relationship satisfaction. Between-partner personality correlations are shown in Table 5.18.

**Table 5.18**  
**Zero-order Correlations Between Partners NEO-FFI Trait Scores**

	<i>Correlation</i> <i>(r)</i>
Neuroticism	.12
Extraversion	.04
Openness	.24***
Agreeableness	.01
Conscientiousness	.18**

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

The only significant trait correlations were small and occurred for openness ( $r = .24$ ,  $p < .001$ ) and conscientiousness ( $r = .18$ ,  $p < .001$ ). Zero-order correlations do not however account for partner-specific within-individual collinearity between personality traits. The MANOVA analysis using gender as a repeated variable (as discussed in section 5.2.2 under personality descriptive statistics) therefore provides a more accurate depiction of between-partner personality similarity as it controls simultaneously for all of the traits and their intercorrelations. The MANOVA findings are reproduced in Table 5.20.

**Table 5.19**

**Multilevel Model of Relationship satisfaction Regressed on Interactions Between Gender and Personality**

	<i>Coefficient <math>\beta</math></i>	<i>SE</i>	<i>df</i>	<i>t-ratio</i>
<i>Gender</i>	-.01	.03	354.10	-.29
aN	-.14**	.05	354.14	-2.94
aE	.12*	.05	354.01	2.57
aO	.07	.04	353.30	1.77
aA	.20***	.04	353.13	4.49
aC	.06	.04	354.14	1.40
pN	-.09	.05	354.06	-1.87
pE	-.02	.05	353.82	-.51
pO	.09*	.04	352.86	2.26
pA	.17***	.04	353.48	3.78
pC	.08	.04	354.08	1.76
aN x gender	.07	.05	332.72	1.33
aE x gender	.00	.05	333.96	-.08
aO x gender	.09*	.05	310.44	2.00
aA x gender	-.04	.05	346.96	-.92
aC x gender	.01	.05	330.84	.14
pN x gender	-.04	.05	332.67	-.84
pE x gender	.00	.05	333.84	.04
pO x gender	-.08	.05	310.28	-1.71
pA x gender	.10*	.05	347.27	2.25
pC x gender	.01	.05	330.80	.15

\*p<.05, \*\*p<.01, \*\*\*p<.001.

**Table 5.20**

**MANOVA Analysis of Differences Between Partners' NEO-FFI Scores**

<i>N</i> =234	<i>F Ratio (1, 233)</i>
Neuroticism	19.72***
Extraversion	4.62*
Openness	2.75'
Agreeableness	43.44***
Conscientiousness	16.76***

'p < .10 \*p<.05, \*\*p<.01, \*\*\*p<.001.

The analysis revealed that the only trait on which partners were similar was openness,  $F(1, 233) = 2.75$  and even this finding was significant only at the .10 level of significance. Hypothesis 3(g)i was therefore generally supported and there was little evidence of assortative mating.

While relationship satisfaction is often regressed on between-partner trait interactions to determine their effect of similarity, Kenny et al. (in press) suggest that the use of trait-score differences is preferable and that "if a product is used, one should not interpret it as a similarity measure" (p.10). Relationship was therefore regressed on the differences between actor and partner similarity scores and the findings summarised in Table 5.21.

All similarity coefficients were trivial with the only one reaching significance being extraversion ( $\beta = .09, p < .001$ ). Hypothesis 3(g)ii was therefore generally supported.

**Table 5.21**

**Associations between differences in partner personality trait scores and relationship satisfaction**

<i>Personality trait</i>	<i>Association between trait difference and Relationship Satisfaction</i>
Neuroticism	-.04
Extraversion	.09**
Openness	-.02
Agreeableness	.02
Conscientiousness	-.01

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## **5.8 Personality and Conflict Behaviour**

This section assesses the association between personality and conflict, central to demonstrating the extent to which conflict behaviour mediates the association between personality and relationship satisfaction. Both the APIM and gender-specific models are examined.

### **5.8.1 Actor Partner Interdependence Model**

Correlations between actor and partner personality and conflict behaviour are reported in Table 5.22.

All actor personality traits were significantly correlated with conflict behaviour. The only moderate association was actor neuroticism ( $r = .34$ ,  $p < .001$ ), and the smallest association was openness ( $r = -.10$ ,  $p < .05$ ). All partner traits except for openness were small, but significantly associated

with satisfaction ranging from .26 ( $p < .001$ ) for neuroticism to -.10 ( $p < .05$ ) for extraversion.

**Table 5.22**  
**Actor and Partner Correlations between Personality and Conflict Behaviour**

	<i>Conflict behaviour</i>	
	Actor Effect	Partner Effect
Neuroticism	.34***	.26***
Extraversion	-.18**	-.10*
Openness	-.10*	-.09
Agreeableness	-.17***	-.22***
Conscientiousness	-.19***	-.13**

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

The next step was the development of a hierarchical MLM model regressing conflict behaviour on personality traits. Actor personality was controlled by entering it first in Block 1, and then adding partner personality traits in Block 2. The effect of neuroticism was not controlled as there is no evidence that neuroticism masks the effects of non-neurotic personality traits on conflict behaviour. The model is summarised in Tables 5.23 and 5.24.

The actor personality traits introduced in the first block improved model fit significantly relative to the baseline model ( $\Delta\chi^2 = -36.95$ ,  $p < .001$ ) accounting for 11% of the variance in conflict behaviour, 16.42% of the conflict variance between couples, and 5.9% of within couple conflict variance. The addition of partner personality contributed significantly to model fit ( $\Delta\chi^2 = -48.02$ ,  $p < .001$ ) and accounted for an additional 12% of the variance in conflict behaviour, slightly more than accounted for by actor

personality and bringing the total variance accounted for by conflict behaviour to 23%. It accounted for an additional 18% of between-dyad variance and an additional 6.4% of within-couples variance.

**Table 5.23**  
**Multilevel Model Block Analyses of Time 1 Conflict Behaviour Regressed on Actor and Partner Personality**

<i>Variables in block</i>	<i>Between-dyad variance <math>u_0^2</math> and % change</i>	<i>Intraclass correlation controlling for predictors</i>	<i>Explained variance %</i>	$\Delta\chi^2$
Block 1	.56 (-16%)	.64	11%	-36.95*** (5df)
Block 2	.46 (-18%)	.60	23%	-48.02*** (5df)

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Baseline = intercept only; Block 1 = Baseline + actor neuroticism, extraversion, openness, agreeableness, and conscientiousness; Block 2 = Block 1 + partner neuroticism, extraversion, openness, agreeableness, and conscientiousness

Table 5.24 documents the standardised coefficient estimates from the final block analysis.

Actor and partner neuroticism and agreeableness were the only traits significantly associated with conflict behaviour, and all effects were small ( $\beta < .30$ ) although the effect of actor neuroticism on conflict behaviour approached a moderate effect size ( $\beta = .26$ ,  $p < .001$ ). The effects of actor and partner neuroticism were greater than those of actor and partner agreeableness.

**Table 5.24**

**Multilevel Model of Time 1 Conflict Behaviour Regressed on Actor and Partner**

**Personality**

<i>Personality Variables</i>	<i>Coefficient</i> $\beta$	<i>SE</i>	<i>df</i>	<i>t-ratio</i>	<i>Cohen's D</i>
aN	.26***	.05	342.56	5.87	.955
aE	-.02	.05	341.92	-.32	.055
aO	-.08	.04	340.67	-1.94	.286
aA	-.11**	.04	337.21	-2.64	.463
aC	-.08	.04	342.45	-1.80	.279
pN	.19***	.05	342.56	4.26	.694
pE	.05	.05	342.78	1.06	.183
pO	-.05	.04	342.47	-1.28	.189
pA	-.19***	.04	335.91	-4.46	.784
pC	-.03	.04	342.66	-.76	.118

\*p<.05, \*\*p<.01, \*\*\*p<.001.

Baseline = intercept only; Block 1 = Baseline + actor neuroticism, extraversion, openness, agreeableness, and conscientiousness; Block 2 = Block 1 + partner neuroticism, extraversion, openness, agreeableness, and conscientiousness

A comparison of hypothesised and actual findings is presented in Table 5.25.

**5.8.2 Comparing Actor and Partner Effects**

Having established the actor and partner effects of personality on conflict behaviour, the dyadic average and differences in each trait were compared to assess whether actor and partner effects differed significantly. The findings are summarised in Table 5.26.

**Table 5.25****Summary of Hypotheses and Findings for the Associations between Actor and Partner Personality and Time 1 Conflict Behaviour**

	<i>Hypothesised Association</i>	<i>Actual Finding</i>	<i>Hypothesis support</i>
<i>Actor effects</i>			
Neuroticism	Positive	.26***	Supported
Extraversion	No hypothesis	-.02	NA
Openness	No hypothesis	-.08	NA
Agreeableness	Negative	-.11**	Supported
Conscientiousness	No hypothesis	-.08	NA
<i>Partner effects</i>			
Neuroticism	Positive	.19***	Supported
Extraversion	No association	.05	Supported
Openness	No association	-.05	Supported
Agreeableness	Negative	-.19***	Supported
Conscientiousness	No hypothesis	-.03	NA

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

There was no significant difference between the actor and partner effects of neuroticism and agreeableness, the two traits significantly associated with conflict behaviour. All other traits showed significant differences although their effects were not significant.

### 5.8.3 Gender-Specific Model

This extent to which gender influences this association was tested next. Zero-order correlations between personality and conflict behaviour are reported in Table 5.27.

**Table 5.26**

**The effects of dyadic personality average and difference on Conflict behaviour**

	<i>Association with actor conflict</i>	<i>Association with partner conflict</i>	<i>Dyadic average <math>\beta</math></i>	<i>Dyadic difference <math>\beta</math></i>	<i>Actor effect different to partner effect?</i>
Neuroticism	.26***	.19***	.33***	.05	N
Extraversion	-.02	.05	.02	-.04	Y
Openness	-.08	-.05	-.10	-.02	Y
Agreeableness	-.11**	-.19***	-.21***	.06	N
Conscientiousness	-.08	-.03	-.08	-.03*	Y

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

For females, the only moderate actor correlation was neuroticism ( $r = .32$ ,  $p < .001$ ) whereas both partner neuroticism ( $r = .30$ ,  $p < .001$ ) and agreeableness ( $r = -.35$ ,  $p < .001$ ) showed negative associations with conflict behaviour. For males, all actor traits were significant with the exception of openness. Actor neuroticism showed the largest association with conflict behaviour ( $r = .39$ ,  $p < .001$ ). Only female neuroticism ( $B = .22$ ,  $p < .01$ ) and conscientiousness ( $B = -.20$ ,  $p < .001$ ) showed associations with male satisfaction, and these associations were small.

To assess whether the association between personality and conflict behaviour was influenced by gender, an MLM model containing main effects for gender and actor and partner personality traits, and interactions between gender and personality was created. The outputs are summarised in Table 5.28.

**Table 5.27**

**Zero-order Correlations Between Female and Male Personality and Conflict Behaviour**

	<i>Female Satisfaction</i>	<i>Male Satisfaction</i>
	Actor effects	
Neuroticism	.32***	.39***
Extraversion	-.06	-.29***
Openness	-.15*	-.05
Agreeableness	-.08	-.27***
Conscientiousness	-.19**	-.19**
	Partner effects	
Neuroticism	.30***	.22**
Extraversion	-.16**	-.04
Openness	-.08	-.10
Agreeableness	-.35***	-.10
Conscientiousness	-.08	-.20**

\*p<.05, \*\*p<.01, \*\*\*p<.001.

The model showed that gender differences were present for actor extraversion, actor openness, and partner agreeableness. Specifically, the association between actor extraversion and conflict behaviour was stronger for males (though this difference was trivial), while the associations for actor openness and partner agreeableness were stronger for females (a pattern similar to that found for the gender differences in personality and relationship satisfaction). Hypothesis 4d was therefore partially supported.

**Table 5.28**

**Multilevel Model of Conflict Behaviour Regressed on Interactions Between Gender and Personality**

	<i>Coefficient <math>\beta</math></i>	<i>SE</i>	<i>df</i>	<i>t-ratio</i>
Gender	-.05	.03	345.70	-1.65
aN	.27***	.04	345.73	6.11
aE	-.03	.04	345.60	-.58
aO	-.06	.04	344.94	-1.45
aA	-.10*	.04	344.83	-2.31
aC	-.06	.04	345.73	-1.51
pN	.18***	.04	345.67	4.05
pE	.03	.04	345.45	.74
pO	-.04	.04	344.58	-.93
pA	-.18***	.04	345.11	-4.20
pC	-.04	.04	345.68	-.96
aN x gender	-.01	.05	325.46	-.13
aE x gender	.09*	.05	326.63	1.99
aO x gender	-.12*	.05	304.62	-2.53
aA x gender	.07	.04	338.97	1.53
aC x gender	-.03	.05	323.70	-.59
pN x gender	.04	.05	325.43	.87
pE x gender	-.03	.05	326.53	-.62
pO x gender	.09	.05	304.49	1.88
pA x gender	-.11*	.04	339.21	-2.45
pC x gender	.07	.05	323.66	1.50

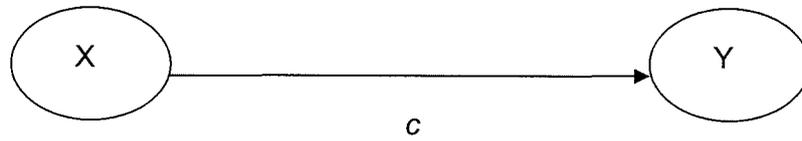
\*p<.05, \*\*p<.01, \*\*\*p<.001.

## 5.9 Mediation Testing

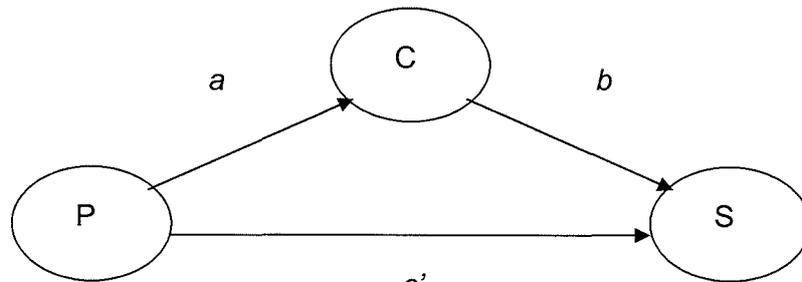
Mediation testing was accomplished using regression equations according to the criteria specified in Section 2.6.2. Fig 5.1 illustrates the process used.

To support a mediation hypothesis, a significant association was required between personality and conflict behaviour (path *a*) and between conflict behaviour and relationship satisfaction (path *b*) while controlling for personality. Mediation occurs when the unmediated effect of personality on relationship (path *c*) is reduced in the presence of conflict behaviour (path *c'*). The Baron and Kenny (1986) requirement of a significant association between personality and relationship satisfaction was not applied in the current analysis because a non-significant correlation due to distal association or suppression effects does not negate the possibility of mediation (Mackinnon et al., 2000; Shrout & Bolger, 2002).

Unmediated associations between personality and relationship satisfaction (path *c*) and between personality and conflict behaviour (path *a*) were obtained from the analyses in the previous sections. To obtain the required association between conflict behaviour and relationship satisfaction while controlling for personality, an MLM model was created with personality entered first and conflict behaviour second. The output is summarised in Table 5.29.



(a)



**Figure 5.1 Mediation**

P is personality, C is conflict behaviour, and S is satisfaction.  $c$  is the total unmediated effect of personality on satisfaction;  $a*b$  is the mediated or indirect effect, and  $c'$  is the direct effect.

The model revealed that personality accounted for 20% of the variance in relationship satisfaction and conflict behaviour accounted for a further 39%. To calculate their unique and shared contributions, a second model was created by entering conflict behaviour first followed by personality. The incremental variance explained by personality was 3%.

**Table 5.29**

**Multilevel Model of Relationship Satisfaction Regressed on Personality and Conflict Behaviour**

<i>Variable</i>	<i>Coefficient <math>\beta</math></i>	<i>SE</i>	<i>t-ratio</i>	$\Delta R^2$
<b>Block 1</b>				20%
aN	.05	.03	1.42	
aE	.10**	.03	3.07	
aO	.02	.03	.76	
aA	.10**	.03	3.07	
aC	.01	.03	.21	
pN	.08*	.03	2.23	
pE	.00	.03	.01	
pO	.06	.03	1.84	
pA	.01	.03	1.29	
pC	.05	.03	1.44	
<b>Block 2</b>				39%
Actor conflict	-.61***	.04	-16.22	
Partner conflict	-.16***	.04	-4.12	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

The unique variance in satisfaction accounted for by personality was therefore 3%; the unique variance accounted for by conflict is 39%, and their shared variance explained 17%. If all of the shared variance is given to personality, this suggests that 85% of the variance in personality (17/20) is mediated by conflict behaviour.

The results of the mediation analysis for the individual variables are summarised in Table 5.30(a) and (b). Table 5.30(a) documents the effects of actor personality on relationship satisfaction and Table 5.30(b) documents

the effects of *partner* personality on relationship satisfaction. Mediation findings in table 5.30 were labelled as follows:

1. Not applicable (NA): NA indicates that either the association between personality and conflict behaviour, or between conflict behaviour and relationship satisfaction when controlling for personality was not significant, the Baron and Kenny (1986) criteria were not met, and that mediation analysis was therefore not applicable.
2. Inconsistent: This indicates that the direct effect ( $c'$ ) and the indirect effect ( $a*b$ ) were both significant but of opposite signs. The ratio of indirect to total effect was not calculated in this instance (Shrout & Bolger, 2002).
3. Complete mediation: Complete mediation was identified when the direct effect ( $c'$ ) became non-significant in the model containing both personality and conflict.
4. Partial mediation: Partial mediation was said to occur when direct effect ( $c'$ ) was reduced from the total effect ( $c$ ), but remained significant

Table 5.30(a)

Mediation Analysis of Actor Personality on Relationship Satisfaction

			<i>Mediated by actor conflict</i>				<i>Mediated by partner conflict</i>			
	<i>Total effect c</i>	<i>Direct effect c'</i>	<i>Indirect effect<sup>1</sup></i>	<i>Indirect/Total ratio</i>	<i>Mediation finding</i>	<i>Hypothesised Association</i>	<i>Indirect effect<sup>1</sup></i>	<i>Indirect/Total ratio</i>	<i>Mediation finding</i>	<i>Hypothesised Association</i>
aN	-.14**	.05	-.16***	1.00	Complete	Partial to complete mediation	-.03*	1.00	Complete	Partial mediation
aE	.10*	.10**	.01	NA	NA	No hypothesis	-.01	NA	NA	No mediation
aO	.08	.02	.05	NA	NA	No hypothesis	.01	NA	NA	No mediation
aA	.20***	.10**	.07**	.41	Partial	Partial to complete mediation	.03**	.23	Partial	Partial
aC	.06	.01	.05	NA	NA	No hypothesis	.00	NA	NA	No hypothesis

\*p<.05, \*\*p<.01, \*\*\*p<.001.

<sup>1</sup>When using multilevel modelling, the denominator used for the indirect ratio calculation is  $c' + ab$  rather than  $c$  (Kenny, 2006b)

**Table 5.30(b)**

**Mediation Analysis of Partner Personality on Relationship Satisfaction**

			<i>Mediated by actor conflict</i>				<i>Mediated by partner conflict</i>			
	<i>Total effect c</i>	<i>Direct effect c'</i>	<i>Indirect effect<sup>1</sup></i>	<i>Indirect/Total ratio</i>	<i>Mediation type</i>	<i>Hypothesised Association</i>	<i>Indirect effect<sup>1</sup></i>	<i>Indirect/Total Ratio</i>	<i>Mediation type</i>	<i>Hypothesised Association</i>
pN	-.08	.08*	-.04**	NA	Inconsistent	Partial	-.12**	NA	Inconsistent	Partial
pE	-.03	.00	.00	NA	NA	No mediation	-.03	NA	NA	No hypothesis
pO	.10*	.06	.01	NA	NA	No mediation	.03	NA	NA	No hypothesis
pA	.17***	.04	.02*	1.00	Complete	Partial	.11**	1.00	Complete	Partial
pC	.07	.05	.01	NA	NA	No hypothesis	.02	NA	NA	No hypothesis

\*p<.05, \*\*p<.01, \*\*\*p<.001.

<sup>1</sup>When using multilevel modelling, the denominator used for the indirect ratio calculation is  $c' + ab$  rather than  $c$  (Kenny, 2006b)

Tables 5.30(a) and (b) reveal that the only traits mediated by conflict behaviour were actor and partner neuroticism and agreeableness. With regard to neuroticism, the effect of actor neuroticism on relationship satisfaction was completely mediated by actor and partner conflict behaviour and the effect of partner neuroticism was inconsistently mediated by both actor and partner conflict behaviour. The confidence interval for the inconsistent mediation was  $-.02$  to  $.11$ . Because this interval includes zero, it is possible that the direct and indirect effects of neuroticism on relationship satisfaction are both negative (that is, they are both of the same sign) and that the inconsistent finding reflects the use of point estimates rather than confidence intervals (Shrout & Bolger, 2002). In summary, it is possible that partner neuroticism is completely rather than inconsistently mediated by actor and partner conflict behaviour.

With regard to agreeableness, the effect of actor agreeableness was partially mediated by actor and partner conflict behaviour with indirect to total ratios of 41% and 23% respectively. The effect of partner agreeableness was completely mediated by both actor and partner conflict behaviour.

## **5.10 Summary**

This chapter analysed data and tested hypotheses relating to data from 234 heterosexual couples. Because within-dyad partner correlations were interdependent, multilevel random coefficient regression modelling was used for the analyses. Both actor-partner and gender-specific differences were tested.

Actor and partner conflict behaviour were negatively associated with relationship satisfaction and accounted for 56% of the variance in

relationship satisfaction. Actor effects were more strongly associated with satisfaction than partner effects. There were no gender differences in the effects of conflict behaviour on relationship satisfaction.

Actor and partner personality traits accounted for 20% of the variance in relationship satisfaction. Satisfaction showed a small negative association with actor neuroticism, a small positive association with actor agreeableness, a small positive association with partner openness and a small negative association with partner agreeableness. The effects of actor and partner agreeableness on relationship satisfaction were larger than the effects of actor and partner neuroticism. The only significant differences in actor and partner effects were for actor neuroticism and extraversion which were significantly larger than their partner equivalents. The only differences in gender effects were for actor openness and partner agreeableness and both were trivial.

An analysis of personality homogamy revealed that the only trait on which partners were similar was openness and even this was significant only at the .10 level of significance. The only effect of personality similarity and relationship satisfaction was for extraversion and this association was trivial.

Personality traits accounted for 23% of the variance in conflict behaviour. Relationship satisfaction showed positive associations with actor and partner neuroticism, and negative associations with actor and partner agreeableness. The effects of actor and partner neuroticism on conflict behaviour were greater than those of actor and partner agreeableness. There was no difference in the effect of the actor and partner effects of these

variables on relationship satisfaction. Gender differences in the effects of conflict behaviour on relationship satisfaction were trivial.

The final analysis examined the extent to which conflict behaviour mediated the association between personality and relationship satisfaction. Only the effects of actor and partner neuroticism and agreeableness on relationship were mediated by conflict behaviour. The effect of actor neuroticism on relationship satisfaction was completely mediated by both actor and partner conflict behaviour while the effect of partner neuroticism was inconsistently mediated. The effects of actor agreeableness on relationship satisfaction were partially mediated by actor and partner conflict behaviour and the effect of partner agreeableness was completely mediated by actor and partner conflict behaviour.

## **CHAPTER 6**

### **Discussion**

#### **6.1 Introduction**

The current study investigated associations between couples' personalities, conflict behaviours, and relationship satisfaction. Having analysed data from 234 couples in chapter 5, the findings will be interpreted and evaluated in terms of previous research and the hypotheses presented in Chapter 3.

The chapter opens with an overview of the findings on dyadic interdependence followed by a discussion on the contribution of individual personality traits to conflict behaviour and relationship satisfaction. The section concludes with macro-level discussions about the application of the Actor-Partner Interdependence and gender-specific models to associations between conflict and relationship satisfaction; personality and relationship satisfaction; personality and conflict behaviour; and mediation.

#### **6.2 Dyadic Interdependence**

The current research found that couples' relationship satisfaction scores were highly interdependent. The level of interdependence was similar to that reported by Karney et al., (1994) and Barelds (2005), and greater than that reported by Robins et al. (2000) and Kurdek (1995a). A possible reason for the discrepancy with the finding of Robins et al. (2000) is that the mean length of relationship in the current study is longer than that of theirs. It may

be that longer relationship durations afford greater opportunities for interaction leading to greater similarity. Future investigations should examine the association between degree of couple interaction and similarity in relationship satisfaction.

The interdependence of partner scores supports Kenny's (1995, 1996) contention that relationship partners report similar scores because they exert mutual influence on each other and that they are subject to common factors such as levels of conflict and similar external influences (Williams, 1995).

### **6.3 Individual Personality Traits**

The association between each actor and partner personality trait is discussed in terms of the Vulnerability-Stress-Adaptation (VSA) model (Karney & Bradbury, 1995a) focusing on associations with conflict behaviour, relationship satisfaction and mediation effects.

#### **6.3.1 Actor Neuroticism**

As hypothesised, actor neuroticism showed a negative association with relationship satisfaction, a finding consistent with many previous studies (e.g., Barelds, 2005; Botwin et al., 1997; Bouchard et al., 1999; Donnellan et al., 2004; Kelly & Conley, 1987; Robins et al., 2000; Russell & Wells, 1994a; Watson et al., 2000a). The hypothesis that actor neuroticism would share a positive association with conflict behaviour was also supported and is consistent with the majority of studies investigating the effects of actor personality on couple conflict behaviour (e.g., Buss et al., 1987; Caughlin et al., 2000; Donnellan et al., 2004; Kurdek, 1997b).

Most couples research to date has focused on the effects of neuroticism on relationship satisfaction. Yet the current investigation found that neuroticism was more closely linked to conflict behaviour than it was to relationship satisfaction, a finding similar to other investigations (Caughlin et al., 2000; Donnellan et al., 2004). The effects of neuroticism on relationship satisfaction may therefore benefit from a deeper understanding of the relationship between neuroticism and conflict behaviour and future research should focus more on this association.

The hypothesis that the effects of actor neuroticism would be completely mediated by actor conflict behaviour was supported and supports related research findings (Kurdek, 1997b; Schneewind & Gerhard, 2002). In contrast, only Donnellan et al. (2004) found evidence of partial mediation. The latter study, however, assessed conflict behaviour using an observational approach whereas studies that found evidence of complete mediation (Kurdek, 1997b; Schneewind & Gerhard, 2002) used self-reports. It is therefore possible that inflated associations between neuroticism, conflict behaviour, and relationship satisfaction caused by common method variance (Bank et al., 1990) may have contributed to the finding of complete mediation.

The finding that the effect of actor neuroticism on relationship satisfaction is completely expressed by actor and partner behaviour is consistent with the VSA (Karney & Bradbury, 1995a) and with a variety of proposed models linking actor neuroticism to actor conflict behaviour. Gray (1981), for example, contends that neurotic individuals are generally susceptible to negative stimuli leading to diffuse physiological arousal often

associated with destructive conflict styles and relationship distress (Gottman, 1998; Levenson & Gottman, 1983). Caspi and Roberts (2001) also argue that individuals are driven to create environments that support their dispositional tendencies and that conflict in relationship environments is a possible expression of neurotic facets such as hostility, anxiety, and impulsiveness (Costa & McCrae, 1992). The association between neuroticism and conflict behaviour also supports the self-verification model (Swann, 1983) that individuals behave in accordance with their self-concept.

The role played by partner conflict behaviour as a mediator of actor neuroticism on actor satisfaction can be explained by negative reciprocity theory (Gottman, 1993a,b; 1994) which suggests that destructive actor conflict behaviour resulting from actor neuroticism is likely to evoke destructive partner conflict behaviour which will in turn lower actor relationship satisfaction.

### **6.3.2 Actor Extraversion**

#### Actor Extraversion and Relationship Satisfaction

Actor extraversion showed a small positive association with relationship satisfaction supporting findings from a number of investigations (e.g. Barelds, 2005; Donnellan et al., 2004; Eysenck & Wakefield, 1981; Russell & Wells, 1994a; Watson et al., 2000a). A few studies also found no association between actor extraversion and relationship satisfaction (e.g., Eysenck & Wakefield, 1981; Lester et al., 1989), but they used earlier Eysenck personality inventories (Eysenck & Eysenck, 1964, 1975) that characterised

extraversion as impulsive and excitable whereas the NEO-FFI used in the current research emphasises facets such as warmth, gregariousness, and assertiveness. The emphasis on impulsiveness may therefore account for reduced or reversed associations of extraversion with relationship outcomes (Watson et al., 2000a).

The effect of extraversion has received little attention compared to that of neuroticism and consequently there are fewer models proposing mechanisms through which extraversion influences relationship satisfaction. One possibility is that extraversion may lead to increased satisfaction through its links with subjective well-being and positive affect (Argyle & Lu, 1990; Headey & Wearing, 1995; Tobin, Graziano, Vanman & Tassinary, 2000). Another option is that because extraverts are possibly more skilled in solving interpersonal problems (Bolger, 1990; Costa & McCrae, 1980), there may be an indirect link between actor extraversion and actor relationship satisfaction via the partners' interpersonal conflict behaviours. Specifically, positive actor conflict behaviour resulting from actor extraversion may lead to positive partner conflict behaviour which reciprocally leads to increased actor relationship satisfaction. There was, however, no support for this indirect model as actor and partner extraversion were not linked to conflict behaviour.

#### Actor Extraversion and Conflict Behaviour

No significant association was found between actor extraversion and conflict behaviour, a finding consistent with several previous studies (e.g., Asendorpf & Wilpers, 1998; Bono et al., 2002; Buss, 1991; Buss et al., 1987; Neyer & Voigt, 2004). Other findings, however, have been mixed. For

example, a number have reported a negative association between extraversion and conflict behaviour (e.g., Berry et al., 2000; Bono et al., 2002; Donnellan et al. (2004); Kurdek, 1997b) while others have reported positive associations (Blickle, 1997; Buss, 1992; Geist & Gilbert, 1996). These mixed findings are unsurprising given the variety of instruments used to assess conflict behaviour including self-report, observational, and diary approaches (e.g. Infante & Rancer, 1982; Jehn, 1995; Kurdek, 1994a; Neyer & Asendorf, 2001).

The mixed findings are also consistent with the observation that while extraversion is linked to social impact and the *desire* to commune with others, this does not in itself suggest whether extraversion will influence interpersonal interaction in a positive or negative fashion (Tobin et al., 2000).

### Mediation

There was no evidence that actor or partner conflict behaviour mediated the effects of actor extraversion, and no other studies have tested this association. However, given that actor extraversion is significantly associated with relationship satisfaction, future research should attempt to determine the intermediate paths through which extraversion exerts its influence.

### **6.3.3 Actor Openness**

#### Actor Openness and Relationship Satisfaction

No significant association was found between actor openness and relationship satisfaction, a finding consistent with many other studies using the NEO-FFM to assess personality (e.g., Donnellan et al., 2004; Watson et al., 2000a; White et al., 2004). No hypothesis for this association was

proposed, however, because there were neither theoretical nor consistent empirical findings upon which to base it. It should be noted, however, that while actor openness and relationship satisfaction were not significantly associated at the .05 alpha level, they were positively associated at the .10 level. This may be related to the openness scores in the current sample being greater than those reported in the NEO-FFI manual (Costa & McCrae, 1992). It may also be because of intercorrelations between the NEO-FFI scales reported in Table 5.3. Indeed, openness and relationship satisfaction showed a small, positive significant zero-order correlation (Table 5.12) that became non-significant when controlling for the other actor personality traits. Furthermore, studies that did not use the NEO-FFI (e.g. Barelds, 2005; Botwin et al., 1997) found significant positive associations between openness and satisfaction suggesting that use of the NEO-FFI may have contributed to the finding of a non-association.

#### Actor Openness and Conflict Behaviour

Consistent with many studies that included both dyad members and controlled for partner interdependence, no significant association was found between actor openness and conflict behaviour (e.g., Kurdek, 1997b; Neyer & Voigt, 2004). Conversely, however, studies that included only one partner or did not control for interdependence tended to find significant associations (e.g., Asendorpf & Wilpers, 1998; Berry et al., 2000; Blickle, 1997).

Additionally, studies that have found a significant association between actor openness and conflict behaviour differ as to whether this association is positive (e.g. Blickle, 1997; Bono et al., 2002) or negative (Berry et al., 2000;

Donnellan et al., 2004; Suls et al., 1998). Donnellan et al., for example, suggest that open individuals will tend to find creative ways of avoiding conflict. Conversely, Bono et al. (2002) argue that open individuals may be drawn to conflict because they find the experience stimulating.

The mixed findings associated with actor openness may result from moderation by other traits. For example, individuals who are open to experience, but who are also neurotic may use their creativity in destructive ways in order to verify their negative self-image. Future studies should examine the effects of trait interactions on relationship outcomes particularly for traits where findings are mixed such as openness, extraversion, and conscientiousness.

### Mediation

Given that actor openness was associated with neither relationship satisfaction nor conflict behaviour, it seems unlikely that this trait plays a significant role in shaping models of relationship outcome. In spite of this, couple education programs like PREP (Markman, Stanley & Blumberg, 1994) argue that openness to experience can provide relationship partners with the flexibility and creativity required to overcome relationship stress in their relationships.

### **6.3.4 Actor Agreeableness**

Actor agreeableness showed a small positive correlation with relationship satisfaction, a finding consistent with many other studies (Barelds, 2005; Bouchard et al., 1999; Donnellan et al., 2004; Neyer & Voigt, 2004; White et al., 2004). Watson et al. (2000) found a moderate positive

correlation for males, but they did not use the NEO-FFI and findings may therefore not be directly comparable.

Similarly, as hypothesised, agreeableness was negatively associated with conflict behaviour, also consistent with many other investigations (Asendorpf & Wilpers, 1998; Bono et al., 2002; Buss, 1991; Donnellan et al., 2004; Kurdek, 1997b).

The effects of actor agreeableness on relationship satisfaction were partially mediated by both actor and partner conflict behaviour although actor conflict was a stronger mediator. This finding supports that of Donnellan et al. (2004) who also reported partial mediation of agreeableness on satisfaction. No other studies examined this association.

The partial mediation finding implies that agreeableness has a direct (unmediated) and an indirect association with relationship satisfaction. The direct association between agreeableness and relationship satisfaction is consistent with Wiggins' Circumplex (McCrae & Costa, 1989a; Wiggins & Trapnell, 1996) which posits that agreeableness is associated with a need for community and that agreeable individuals are more likely, *ceteris paribus*, to report satisfaction once they are in a meaningful communal relationship. This need for community is also likely to motivate agreeable individuals to maintain existing positive relationships (Graziano & Eisenberg, 1997).

The indirect mediation of actor agreeableness by conflict behaviour is consistent with the argument that agreeable individuals are less likely to adopt destructive conflict behaviours. This is because they are more able to control their emotional responses to negative emotional situations and are less likely to interpret ambiguous or provocative behaviour as aggressive

(Graziano et al., 1996; Graziano & Tobin, 2002). It has also been proposed that agreeable individuals are more likely to suffer negative affect during conflict and are therefore motivated to avoid it (Moskowitz & Cote, 1995; Suls et al., 1998).

The current investigation found that the association between agreeableness and satisfaction was stronger than that between neuroticism and satisfaction, a finding consistent with a growing number of other studies (Botwin et al., 1997; Neyer & Voigt, 2004; Watson et al., 2000a). Therefore, although it is often suggested that the influence of neuroticism on relationship satisfaction may be the strongest of all the FFM traits (e.g., Bolger & Schilling, 1991; Karney & Bradbury, 1995a, 1997; Kurdek, 1997a,b; Moffitt et al., 1985; Zaleski & Galkowska, 1978;), this may not be the case. Future research should focus on determining other mediating factors (in addition to conflict behaviour) through which agreeableness exerts its influence on relationship satisfaction (Graziano et al., 1996; Jensen-Campbell, Gleason, Adams & Malcolm, 2003).

### **6.3.5 Actor Conscientiousness**

#### Actor Conscientiousness and Relationship Satisfaction

There was no significant association between actor conscientiousness and relationship satisfaction and the hypothesised positive association was therefore not supported. This is surprising because the majority of the studies reviewed reported a positive association (e.g., Barelds, 2005; Bentler & Newcomb, 1978; Botwin et al., 1997; Bouchard et al., 1999; Donnellan et al., 2004; Neyer & Voigt, 2004; Shaver & Brennan, 1992; Watson et al.,

2000a). It is also surprising because it is reasonable to expect that ambition and the desire to succeed would lead conscientious individuals to persist and invest in their relationships until they achieved acceptable levels of relationship satisfaction. A possible reason for this unusual finding is that the conscientiousness scores of the current sample were significantly lower than those reported in the NEO-FFI manual (Table 5.1).

### Actor Conscientiousness and Conflict Behaviour

The current study found no association between actor conscientiousness and conflict behaviour. This finding was consistent with several similar investigations (Asendorpf & Wilpers, 1998; Blickle, 1997; Bono et al., 2002; Neyer & Voigt, 2004). A few investigations have, however, reported negative links between these variables (Berry et al., 2000; Botwin, 1997; Buss, 1992; Donnellan et al., 2004; Kurdek, 1997b).

These mixed findings may be a consequence of the small effect size for conscientiousness confounded by the use of differing conflict assessment approaches. Alternatively, the effect of conscientiousness may be confounded by factors such as the length of relationship; evidence for this possibility comes from Robins et al (2002) who reported that conscientiousness (constraint) increased with relationship duration. Future investigations should focus on the effects of such interactions.

### Mediation

Given the non-associations between actor conscientiousness and relationship satisfaction and the non-association with conflict behaviour, it

seems unlikely that conscientiousness plays a significant role in relationship outcomes with or without mediation.

### **6.3.6 Partner Neuroticism**

The association between partner neuroticism and relationship was not significant<sup>17</sup>. This differs from the majority of studies that reported small negative associations (Barelds, 2005; Bouchard et al., 1999; Donnellan et al., 2004; Eysenck & Wakefield, 1981; Robins et al., 2000; Russell & Wells, 1994a). The only other recent investigation that found no significant association between partner neuroticism and relationship satisfaction was Neyer and Voigt (2004). As in the current investigation, Neyer and Voigt also used the NEO-FFM to assess personality and controlled for partner non-independence which may account for the non-significant association. Another factor contributing to the non-significant association may have been the current investigation's choice of a multi-dimensional instrument to assess relationship satisfaction. Finally, as will be discussed shortly, it is possible that conflict behaviour suppresses the influence of partner neuroticism on relationship satisfaction.

The hypothesis that partner neuroticism would be positively associated with conflict behaviour was supported and is in line with comparable investigations (Berry et al., 2000; Buss, 1991; Caughlin et al., 2000; Donnellan, 2004). There are a number of ways in which partner neuroticism might influence conflict behaviour. As discussed earlier, neurotic individuals

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<sup>17</sup> The effect of partner neuroticism was significant at the .10 alpha level, but not at the .05 alpha level adopted by the current investigation.

are likely to build relationship environments that support their neurotic and conflictual behavioural tendencies (Caspi & Herbener, 1990; Caspi et al., 1992). Given that both partners in the relationship 'inhabit' this environment, even non-neurotic partners would be subject to its conflict-provoking stimuli leading to a positive association between partner neuroticism and conflict behaviour. Emotional contagion (Hatfield et al., 1994) and self-fulfilling prophecy theory (Jones, 1977) could also account for the positive association between neuroticism and conflict behaviour in that partners of neurotic individuals may exhibit destructive conflict behaviours because they believe that these behaviours are expected of them.

The effect of partner neuroticism on relationship satisfaction was inconsistently mediated by actor and partner conflict behaviour suggesting that conflict behaviour may suppress the effects of partner neuroticism and accounts for the non-significant total association found between partner neuroticism and relationship satisfaction. The small positive direct effect of partner neuroticism on relationship satisfaction is also consistent with Gottman and Krokoff's (1989) negative confrontation model. This model contends that neurotic partners' tendency to engage in conflict issues may be perceived as an indication of relationship commitment, a desire to clear issues before they magnify, and as creating a sense of relationship efficacy leading to increased relationship satisfaction. As noted in the results section, however, the apparent positive direct effect of neuroticism may simply be a consequence of estimating parameters using point estimates rather than confidence intervals. Confirming the potential spuriousness of this finding, Weiss (personal communication, 7 March, 2006) urges "staying away from

neo-masochism theories until we know more about the statistical soundness of the 'phenomenon'".

### **6.3.7 Partner Extraversion**

#### Partner Extraversion and Satisfaction

No significant association was found between partner extraversion and relationship satisfaction and in general, these findings have been mixed. Like the current investigation, some studies have found non-significant associations (Bouchard et al., 1999; Donnellan et al., 2004; Eysenck & Wakefield, 1981; Neyer & Voigt, 2004) while others have reported small significant associations (Barelds, 2005; Lester et al., 1989; Russell & Wells, 1994a). A possible reason for this inconsistency is that the effects of partner extraversion may be moderated by other variables. For example, it has been argued that agreeable individuals will experience positive affect when partnered with extraverts (Watson, Wiese, Vaidya & Tellegen, 1999).

#### Partner extraversion and Conflict Behaviour

The hypothesis that partner extraversion would not be significantly associated with conflict was supported, a finding consistent with the majority of studies reviewed (Berry et al., 2000; Bono et al., 2002; Buss et al., 1997; Donnellan et al., 2004; Neyer & Voigt, 2004) and in line with Tobin et al.'s (2000) argument that although extraversion is a social trait, it does not necessarily predict positivity or negativity in communication or conflict style.

### Mediation

Partner extraversion was unrelated to either relationship satisfaction or conflict behaviour suggesting that, like actor extraversion, partner extraversion does not play a significant role in determining relationship outcomes.

### **6.3.8 Partner Openness**

#### Satisfaction

The hypothesis that partner openness would show a small positive association with relationship satisfaction was supported. This finding is consistent with other studies that have reviewed this trait (Barelds, 2005; Bouchard et al., 1999; Neyer & Voigt, 2004). Bouchard et al. (1999) argue that individuals high in openness are likely to be attitudinally liberal and would therefore listen to their partners actively and non-judgementally. There is some support for this contention in that listening skills and relationship satisfaction have been positively linked (e.g., Birchler, 1979; Emmers-Sommer, 2004). However, no evidence linking openness to listening skills could be found and this view should therefore be treated with caution.

#### Actor Openness and Conflict Behaviour

The hypothesis that partner openness would not be significantly associated with conflict behaviour was supported and consistent with most studies investigating this trait (Berry et al., 2000; Bono et al., 2002; Kurdek, 1997b; Neyer & Voigt, 2004).

## Mediation

Although partner openness was significantly associated with relationship satisfaction, it was not mediated by conflict behaviour. Future investigations should therefore determine which mechanisms are responsible for the effect of partner openness on relationship satisfaction (assuming that the effect is not direct).

### **6.3.9 Partner Agreeableness**

Partner agreeableness showed a small positive association with relationship satisfaction, a finding consistent with the few studies that have tested this association (Barelds, 2005; Donnellan et al., 2004; Neyer & Voigt, 2004). Similarly, partner agreeableness showed a negative association with conflict behaviour, also consistent with studies that investigated this relationship (Asendorpf & Wilpers, 1998; Bono et al., 2002; Buss, 1991; Donnellan et al., 2004; Kurdek, 1997b).

There are at least two reasons why partner agreeableness should be associated with low incidence of conflict behaviour. First, agreeable partners are more likely to create relationship environments that facilitate de-escalation of conflict behaviour (see Caspi & Herbener, 1990). Second, agreeable individuals are more able to manage their behavioural responses in the face of conflict and in doing so disrupt cycles of negative reciprocity (Gottman, 1998; Graziano et al., 1996).

The effects of partner agreeableness on relationship satisfaction were completely mediated by actor and partner conflict behaviour, and partner conflict behaviour was a stronger mediator of partner agreeableness than

actor conflict behaviour. This suggests that individuals paired with agreeable partners experience lower levels of destructive conflict behaviour from their partners and consequently report greater relationship satisfaction.

### **6.3.10 Partner Conscientiousness**

#### Satisfaction

As hypothesised, there was no significant association between partner conscientiousness and relationship satisfaction, a finding consistent with the majority of studies reviewed (Barelds, 2005; Bouchard et al., 1999; Donnellan et al., 2004; Robins et al., 2000). This finding is similar to that of actor conscientiousness and confirms that as a main effect, conscientiousness does not appear to play a significant role in determining relationship outcomes. It may be, however, that the effects of conscientiousness are moderated by other variables. Nemechek and Olson (1999), for example, found that partner similarity on conscientiousness was associated with increased relationship satisfaction. Future investigations should examine the effects of interactions between actor and partner conscientiousness and other variables on relationship satisfaction.

#### Conflict Behaviour

The association between partner conscientiousness and conflict behaviour was not significant, a finding that supports a number of previous investigations (Asendorpf & Wilpers, 1998; Bickle, 1997; Neyer & Voigt, 2004). Others, however, have found a negative association between partner

conscientiousness and conflict behaviour (Berry et al., 2002; Bono et al., 2002; Donnellan et al., 2004; Kurdek 1997b). It has been suggested that the effects of partner conscientiousness may be modified by individuals' level of neuroticism (Markey, Funder & Ozer, 2003). As noted above, future investigations should examine the effects of interactions between partner conscientiousness and other personality traits.

### Mediation

The lack of significant association between partner conscientiousness and relationship satisfaction, and partner conscientiousness and conflict behaviour suggests that partner conscientiousness is not a significant factor in models of relationship outcome.

## **6.4 Conflict behaviour and relationship satisfaction**

### **6.4.1 Actor-Partner Interdependence Model**

The hypothesised negative association between self-reported conflict behaviour and relationship satisfaction was supported and is in line with numerous previous investigations (e.g., Caughlin et al., 2000; Cramer, 2003a; Donnellan et al., 2004; Gill et al., 1999; Gottman & Krokoff, 1989; McGonagle et al., 1993). Furthermore, the actor effect of conflict behaviour was greater than the partner effect. This finding is consistent with that of Gill et al. (1999) who found that the actor effect of male conflict behaviour was significant whereas the partner effect was not. Several studies, however, have reported minimal differences between the magnitudes of actor and partner conflict behaviour (Gottman & Krokoff, 1989; Heavey et al., 1993; Kurdek, 1994a). However, given that these studies did not control for the

effects of partner interdependence and that some reported only zero-order correlations, the reported effect sizes may have been distorted (e.g., Gottman & Krokoff, 1989; Heavey et al., 1993).

The significance of the associations between self-reported actor and partner conflict behaviour and relationship satisfaction support both the self-perception model (Bem, 1972) and the social learning model (Jacobson & Margolin, 1979), but with greater emphasis on the self-perception model given the size of the actor effects. This suggests that individuals' perception of their own conflict behaviour accounts for more variance in their relationship satisfaction than the costs associated with their partner's conflict behaviour.

The importance of self-perception as a determinant of relationship satisfaction carries a number of implications. First, self-perception theory is particularly relevant in contexts where internal cues are weak or unavailable (Bem, 1967, 1972). These situations may result from external stressors such as the loss of a job, poor health or social stress (Burns, 1984; Cleek & Pearson, 1985; Fruzzetti, 1996). In such contexts, the current findings suggest that it is particularly important for relationship partners to attribute their negativity to the correct source and not blame it on their couple relationship.

A second implication of the finding that actor conflict behaviour is more strongly associated with relationship satisfaction than partner conflict behaviour is that individuals can, at least to some extent, determine their own relationship satisfaction by managing their behavioural responses in conflictual situations. This supports individual agency models of personality

and therapy such as cognitive behavioural (Beck, 1967; Ellis, 1958) or psychoanalytic theory (Freud, 1938). These approaches argue that attitudes (such as relationship satisfaction) are largely determined by intrapersonal factors and that therefore, psychotherapeutic interventions need only be applied to affected individuals and not their partners. This conclusion is inconsistent with systemic perspectives (e.g., Bateson, 1972; Becvar & Becvar, 1996; Raush et al., 1974) which contend that relationship outcomes are a function of interactions between all system components and that interventions must be applied to all members of a system in order to effect attitudinal and behavioural changes.

#### **6.4.2 Gender-Specific Model**

As hypothesised, the current investigation found no gender differences in the effects of actor or partner conflict behaviour on relationship satisfaction corroborating a number of previous studies (e.g., Burleson et al., 1996; Canary & Hause, 1993; Heavey et al., 1993; Huston & Vangelisti, 1991; Kurdek, 1994a). Canary and Hause, for example, found that sex differences accounted for only 1% of variance in social behaviour. This finding supports assertions that while cultural discourses may lead to certain stereotypical gender differences in conflict behaviour, these effects will be small and that the main determinants of conflict behaviour are likely to be non gender-based factors such as attributions or the external environment (Deaux & Lewis, 1984; Schaap, Buunk & Kerkstra, 1988).

Taken together, the APIM and gender-specific models suggest that the effects of actor-partner differences in conflict behaviour are more significant

than those of gender differences. This suggests that unless there are good theoretical reasons for doing so, gender should not be used as a dichotomising variable when analysing heterosexual couple data. It also implies that clinicians working with conflicting heterosexual couples should take care to avoid interpreting the effects of conflict behaviour in terms of cultural stereotypes.

## **6.5 Personality and Relationship Satisfaction**

### **6.5.1 Actor-Partner Interdependence Model**

Actor effects for neuroticism and extraversion were significantly greater than the corresponding partner effects. No significant actor-partner differences were found for openness, agreeableness, and conscientiousness. With regard to neuroticism, the current findings support two earlier investigations that found greater effects for actor neuroticism (Bouchard et al., 1999; Lester et al., 1989). Some studies, however, reported no difference in actor and partner effect magnitudes (e.g. Barelds, 2005; Donnellan et al., 2004). Findings for the relative magnitudes of actor and partner effects of other traits were equally mixed. This inconsistency may have been caused by the variety of instruments used to assess personality and relationship satisfaction. It may also be that sample-specific factors confounded or moderated actor-partner orientation. Individuals with a low need for approval, for example, may be more influenced by actor effects than by partner effects (Cramer, 1993, 2003c; Olson & Defrain, 2005).

The finding that there was no significant difference between the actor and partner effect of agreeableness, the FFM trait contributing most strongly

to relationship satisfaction, supports a couple-oriented model of relationship dynamics (Kenny & Cook, 1999).

### **6.5.2 Gender-Specific Model**

Gender differences were found for the effects of actor openness and partner agreeableness only with the effects on female satisfaction being slightly larger in both cases and the hypothesis that no gender differences would be found was therefore only partially supported. The only study reviewed that used the NEO-FFI and formally evaluated differences in gender effects was Neyer and Voigt (2004). They found gender differences for actor conscientiousness, partner openness, and partner agreeableness. More replications are required to confirm these findings.

The general lack of gender differences suggests that, as was the case with conflict behaviour, clinicians working with distressed couples should avoid gender-based interventions for trait-based issues with the possible exceptions of actor openness and partner agreeableness. Similarly, researchers should not assume that gender is an important variable for distinguishing trait effects in heterosexual couples unless specifically demanded by theoretical models.

### **6.5.3 Homogamy**

#### **6.5.3.1 Partner Personality Similarity**

Like many studies, the current investigation found only limited evidence for assortative mating (e.g., Barelds, 2005; Eysenck & Wakefield, 1981; Luo & Klohnen, 2005). There was however, a trivial effect for similarity on openness consistent with a finding by Donnellan et al. (2004). It is

reasonable to expect that partners might be similar on openness because in terms of the hypothesis that individuals tend to choose relationship environments that support their dispositions, it is difficult to conceive of a relationship environment that can simultaneously support one partner that thrives on new experiences and another that prefers consistency and the familiar (Caspi & Herbener, 1990).

#### **6.5.3.2 Assortative Mating and Relationship Satisfaction**

Of all the FFM traits, only similarity on extraversion showed a small positive association with relationship satisfaction. No similar finding in other studies could be located. In general, findings for the effects of trait similarity on relationship satisfaction have been mixed. This may be because such associations are small and that the small sample sizes of many studies means they lack the power to detect them. The current non-significant finding is also in line with Lykken and Tellegen (1993) who argue that individuals tend to mask their personalities, and in particular their negative personality traits, in the early stages of mating and that trait matching is therefore likely to be random. As Bentler and Newcomb (1978) found, however, it is unlikely that couples who are too dissimilar will remain together very long once their true dispositions emerge.

#### **6.5.4 Controlling for the Effects of Neuroticism**

Taken together, the non-neurotic actor traits (extraversion, openness, agreeableness, and conscientiousness) contributed uniquely to variance in relationship satisfaction beyond actor neuroticism. An analogous finding

applied to partner non-neurotic traits. The only other studies that controlled for the effects of neuroticism as recommended by Karney & Bradbury (1995a) were Bouchard et al. (1999) and Watson et al. (2000a). Both of these studies found evidence for trait effects beyond neuroticism.

These findings support calls for researchers to investigate the influence of other traits such as agreeableness shown to significantly influence relationship outcomes (Karney & Bradbury, 1995a).

## **6.6. Personality and Conflict Behaviour**

### **6.6.1 Actor-Partner Interdependence Model**

The current investigation found no differences between the actor and partner effects of neuroticism and agreeableness, and found that the actor effects of extraversion, openness, and conscientiousness were greater than those of their partner counterparts. Except for Caughlin et al. (2000), none of the studies reviewed formally compared actor and partner effects. Caughlin et al. (2000) found no differences for the effects of actor and partner negativity. This study did not assess the effects of agreeableness. Similarly, an inspection of coefficients from Donnellan et al. (2004) suggests no difference between the actor and partner effects of neuroticism or agreeableness.

These findings suggest that there are no differences between the actor and partner effects of neuroticism, the FFM trait most strongly associated with conflict behaviour. Given that the influence of these traits approached moderate effect sizes, future research should investigate the mechanisms through which neuroticism influences conflict behaviour.

### **6.6.2 Gender-Specific Model**

The only gender differences found for the effects of personality on conflict behaviour were for actor openness and partner agreeableness. In both cases, the effect on female satisfaction was greater. An inspection of coefficients suggests that few studies found gender differences for the effects of personality on conflict behaviour (Blickle, 1997; Buss et al., 1987; Donnellan et al., 2004; Kurdek, 1997b). For example, Caughlin et al. (2000) reported no evidence of gender differences for the effects of neuroticism on conflict behaviour. Similarly, the differing gender effects for actor openness were consistent with Donnellan et al. (2004) who found that the effects of female actor openness were significant, but that male actor effects were not.

Given that actor and partner neuroticism showed the largest trait association with conflict behaviour, the finding that their effects do not differ by gender is important and suggests that gender analysis should be performed only if there are good theoretical reasons to do so (Kashy et al., in press).

### **6.7 Mediation Effects**

The effects of actor and partner personality on relationship satisfaction were largely mediated by actor and partner conflict behaviour. These findings support the VSA (Karney & Bradbury, 1995a) in that the effects of intrapersonal factors such as personality were mediated by adaptive processes such as conflict behaviour.

The finding is consistent with Kurdek's (1997b) finding that conflict behaviour completely mediated the effects of neuroticism on relationship commitment. It is unknown, however, whether the association between personality and commitment is comparable to the association between personality and satisfaction, and whether conflict behaviour mediates this association in the same way. The finding is also in line with that of Schneewind and Gerhard (2002) who found that conflict behaviour increasingly mediated the effects of *relationship personality* on satisfaction as relationship duration increased. Again, it is unknown how *relationship personality* relates to the FFM personality constructs. The current finding differs from that of Donnellan et al. (2004) who concluded that FFM personality was only partially mediated by conflict behaviour. This difference may reflect their use of observational techniques to assess conflict behaviour whereas studies that reported complete mediation used self-report methods.

Relative to actor personality, the effects of partner personality on relationship satisfaction were more strongly mediated by conflict behaviour. This suggests that the influence of partner satisfaction is expressed primarily through interpersonal behaviour whereas the influence of actor personality is expressed by both interpersonal behaviour and intrapersonal actor variables such as partner attributions and perception of the relationship. Future research would benefit by supplementing the VSA model's focus on adaptive behaviours with Bradbury and Fincham's (1988) Contextual model which gives more weight to intrapersonal factors as mediators of relationship satisfaction.

There were few differences between actor and partner conflict behaviour as mediators of personality except that the effects of actor agreeableness were mediated slightly more strongly by actor conflict behaviour than by partner conflict behaviour. This suggests that conflict behaviour may reflect an underlying dyadic-level conflict construct (Gillespie, personal communication, August 2005). Future research should focus on methods of determining the unique contributions of actor and partner conflict as mediators of couples' personalities.

In summary the finding that both actor and partner personality effects were significantly mediated by conflict behaviour suggests that couple satisfaction can be increased through interventions focusing on conflict management (e.g. Dunn and Schwebel, 1995; Hahlweg & Markman, 1988; Shadish & Baldwin, 2003). It can be argued that the aspects of conflict behaviour governed by personality factors will not be amenable to therapeutic change (Bateman, 2000; Russell, Syrris & Ahmed, unpublished manuscript). This is unlikely to be an issue, however, as the current investigation found that personality accounted for only one fifth of the variance in conflict behaviour.

## **CHAPTER 7**

### **Conclusion**

#### **7.1 Introduction**

The current investigation examined associations between the personalities, conflict behaviour, and relationship satisfaction of 234 intimate couples. Personality was assessed using the NEO-FFI (Costa & McCrae, 1992); conflict behaviour assessed using the Conflict Behaviour Questionnaire (McGonagle et al., 1993); and relationship satisfaction assessed using the Marriage and Relationship Questionnaire (Russell & Wells, 1993). The research was based on the Actor-Partner Interdependence model (Kashy & Kenny, 1999; Kenny, 1988, 1996), the gender-specific model (Robins et al., 2000), and the Vulnerability-Stress-Adaptation model (Karney & Bradbury, 1995a).

#### **7.2 Summary of findings**

##### **7.2.1 Dyadic Interdependence**

Analysis revealed that within-dyad relationship satisfaction scores were significantly correlated and that analytical techniques capable of accounting for non-independent residual errors of association should be applied to the data (Cohen et al., 2003; Kenny, 1995). A multi-level modelling approach was selected (Bryk & Raudenbusch, 1992).

### **7.2.2 Conflict Behaviour and Relationship Satisfaction**

Associations between the couples' self-reported conflict behaviours and their relationship satisfaction revealed that both actor and partner conflict behaviour showed a significant negative association with relationship satisfaction and jointly explained 56% of the variance. The effect of actor conflict behaviour was greater than that of partner conflict behaviour. A test of gender specificity revealed no gender differences for the associations between actor and partner conflict behaviour and relationship satisfaction.

### **7.2.3 Personality and Relationship Satisfaction**

Analysis of the unmediated associations between couples' personalities and their relationship satisfaction revealed that actor personality accounted for 12% of the variance in relationship satisfaction and that partner personality contributed a further 8%. Actor neuroticism showed a small negative association with relationship satisfaction. Actor extraversion, actor agreeableness, partner openness, and partner agreeableness showed small positive associations with relationship satisfaction. No significant associations were found for actor openness, actor conscientiousness, partner neuroticism, partner extraversion, and partner conscientiousness.

When controlling for the effects of neuroticism, the combined effects of extraversion, openness, agreeableness, and conscientiousness contributed significant additional variance to relationship satisfaction. This finding applied to both actor and partner personality traits.

The actor effects of neuroticism and extraversion were significantly larger than their partner counterparts, but there was no difference between

the actor and partner effects of agreeableness, the largest correlate of relationship satisfaction. Gender effect differences were trivial.

There was no evidence for assortative mating on personality traits although similarity on openness came close to being significant. The association between trait similarity and relationship satisfaction was significant only for extraversion, and this association was trivial.

#### **7.2.4 Personality and Conflict Behaviour**

Personality traits accounted for 23% of the variance in conflict behaviour. Actor and partner neuroticism showed small positive associations with conflict behaviour while actor and partner agreeableness showed small negative associations. None of the other trait associations were significant.

Actor effects for extraversion, openness, and conscientiousness were significantly larger than their partner counterparts. There were no differences between the actor and partner effects of neuroticism and agreeableness, the most significant FFM correlates of conflict behaviour.

Application of the gender-specific model indicated that gender effects for personality and relationship satisfaction differed only trivially on actor extraversion, actor openness, and partner agreeableness.

#### **7.2.5 Mediation**

In general, the effects of personality on relationship satisfaction were largely mediated by conflict behaviour with partner personality being relatively more strongly mediated than actor personality. From an individual trait perspective, the effect of actor neuroticism was completely mediated by both actor and partner conflict behaviour, while the effect of actor

agreeableness was partially mediated by actor and partner conflict behaviour. The effect of partner neuroticism was inconsistently mediated by actor and partner conflict behaviour while the effect of partner agreeableness was completely mediated by actor and partner conflict behaviour. No other mediation effects were noted.

### **7.3 Study Strengths**

The current research exhibited a number of strengths differentiating it from similar investigations. First, a common criticism of couple research is that it is opportunistic and that its hypotheses are seldom based on articulated models (Fincham, Beach & Baucom, 1997). The current research differs in that it specifically tested three models: Karney and Bradbury's (1995a) Vulnerability-Stress-Adaptation model, the Actor-Partner Interaction model (Kashy & Kenny, 1999; Kenny, 1988), and the gender-specific Model (Robins et al., 2000).

Second, no other studies have tested the extent to which couple personality traits are mediated by both actor and partner conflict behaviour.

A third strength is that where research is based on theory, variables are typically limited to those from a single paradigm such as personality or social learning theory (e.g., Gottman & Krokoff, 1989; Kelly & Conley, 1987). The current investigation differed in that it combined intrapersonal and interpersonal perspectives into a single study.

Fourth, in their analysis of studies examining the effects of personality in couple relationships, Cooper and Sheldon (2002) found that one third of the couple research studies they examined used data from one partner (e.g. Booth & Johnson, 1992; Sprecher & Feilmlee, 1993; White et al., 2004).

Furthermore, many studies that include data from both partners perform analyses at the dyadic level (e.g., Donnellan, 2004; McGonagle et al., 1993). Both approaches result in a loss of information, and preclude analysis of couple interactions. The current study used data from both partners in a couple and analyses were performed using the individual as the unit of analysis.

Fifth, several studies analyse male and female partner data separately based on the assumption that gender is an important distinguishing determinant of relationship outcomes (Bentler & Newcomb, 1978; Botwin et al., 1997; Kelly & Conley, 1987). There is, however, evidence that actor and partner effects may be more significant than gender specificity (Campbell & Kashy, 2002; Kashy et al., in press). The current research did not assume that gender is a critical variable and tested both the Actor-Partner Interdependence and gender-specific models.

Sixth, several studies use data from both partners, but do not account for the interdependence of partner scores thereby violating the independence of errors assumptions of analytical techniques like ordinary least squares regression and ANOVA (e.g. Botwin et al., 1997; Bouchard et al., 1999; Gottman & Krokoff, 1989; Noller et al., 1994). The current investigation used a random intercepts multilevel regression model to account for partner interdependence and to facilitate comparisons between actor-partner and gender effects.

Seventh, few studies have systematically assessed associations between personality and conflict behaviour in couple relationships (Wu &

Clark, 2003). The current investigation assessed both of these variables and analysed actor-partner and gender-based associations between them.

Eighth, couple investigations often use small samples leading to issues of low power (e.g., Gottman & Krokoff, 1989; Noller et al., 1994). To detect interdependence effect sizes of .20 at the .05 significance level, for example, requires a sample of 193 couples (Kenny et al., in press). The sample size in the current investigation was 234 couples.

Ninth, Karney and Bradbury (1995a) observed that the effects of neuroticism on relationship satisfaction may be so strong as to mask the effects of other personality traits. They therefore recommend controlling for the effects of neuroticism. To date, only two other studies have done this (Bouchard et al., 1999; Watson et al., 2000a).

Tenth, few studies have formally compared the relative contribution of actor-partner and gender effects to relationship satisfaction and to conflict behaviour. Instead, they have relied on informal (visual) comparisons of coefficient effect sizes even where separate actor-partner and gender analyses have been performed (Barelds, 2005; Donnellan et al., 2004; Neyer & Voigt, 2004). The current research performed formal analyses to test these contrasts.

Finally, participants in the majority of couple investigations are often homogenous with respect to age, background and nationality (Karney & Bradbury, 1995a; Goodwin, 2005). The current investigation draws couples not only from varying ages and backgrounds by using the Internet as a recruitment vehicle, but also supports Goodwin's (2005) suggestion that participants should be drawn from multiple geographies; in the present study,

participants were drawn from Europe, the United States, Asia, Australia, and Africa.

Taken together, the above features constitute a novel and unique research investigation.

#### **7.4 Study Limitations**

Several limitations may have influenced the findings in this thesis. The first issue relates to the use of self-report instruments as applied in the current research. Using self-report instruments to assess more than one variable can lead to common method variance resulting in inflation of associations between variables (Bank et al., 1990; Gottman, 1998). It is also argued that individuals tend to over-estimate levels of relationship conflict when self-reporting (Canary & Spitzberg, 1989; Gottman et al., 1976). This issue could have been addressed by the use of observational, partner-rating, and multi-rater techniques to assess conflict behaviour and may have resulted in smaller, perhaps more realistic effect sizes between the variables, particularly between conflict behaviour and relationship satisfaction.

Second, unlike the Vulnerability-Stress-Adaptation model (Karney & Bradbury, 1995a), the current research assumed that relationship satisfaction was a non-reciprocal consequence of conflict behaviour. This assumption is a necessary condition of mediation analysis, namely that the outcome variable must be a simple consequence of the mediating variable (Baron & Kenny, 1996a,b). Studies have shown, however, that this may not always be true and that conflict behaviour and relationship satisfaction may share a reciprocal association (Canary et al., 1995; Huston & Vangelisti, 1991; Noller et al., 1994). This limitation could be addressed by using an

analytical approach such as structural equation modelling that can assess reciprocity between variables.

A related limitation is that because only cross-sectional data were used, causality cannot be inferred. An attempt was made to address this issue by using a cross-panel design that re-assessed conflict behaviour and satisfaction six months after the initial assessment. The period of six months may, however, have been too short as the changes in mean conflict behaviour and relationship satisfaction over this period were not statistically significant. This limitation can be addressed by ensuring a longer period between assessment waves.

Third, a limitation of the multilevel modelling analytical method used in the current research is that unlike structural equation modelling, it does not account for measurement error in the variables (DeShon, 1988; Kenny et al., in press). This issue could have been addressed by repeating the analyses using a technique that allows for the control of measurement error. In the event, however, both the conflict and satisfaction scales exhibited high internal consistencies.

Fourth, the length of couples' relationships may modify the association between their conflict behaviour and their relationship satisfaction (Donnellan et al., 2004; Karney & Bradbury, 1997; McGonagle et al., 1993). McGonagle et al. (1993), for example, found that the satisfaction of couples that had been together for longer than nine years was more likely to be influenced by the conflict frequency whereas couples who had been together for shorter periods were more likely to be influenced by conflict style. The current research did not examine the possible moderating effects of relationship

duration on relationship satisfaction and it is recommended that future research includes this analysis.

Fifth, the correlations between conflict behaviour and relationship were sufficiently large to suggest that the instruments may reflect a common underlying factor. This may be because the MARQ scales selected in the preliminary factor analysis of the current investigation (for example, Relationship and Partner Problems) may have been too closely related to items assessed by the Conflict Behaviour Questionnaire. Given that there are strong arguments that relationship satisfaction is a unidimensional construct (e.g., Johnson et al., 1986; Kimmel & Van Der Feen, 1974; Norton, 1983), this could have been remedied by using a unidimensional instrument such as the Relationship Assessment Scale (Hendrick, 1988).

Sixth, within-couple partner conflict behaviour scores were strongly correlated as were their relationship satisfaction scores. This may be a consequence of using Internet-based testing and the possibility that one partner completed the assessments on behalf of both relationship members. It may also be a result of social desirability effects (or more accurately partner desirability effects) if partners completed their questionnaires together. These issues could be addressed by performing supervised assessments. The high correlations may also reflect underlying dyadic level conflict and relationship satisfaction latent variables (Gillespie, personal communication, August 2005). The latter issue could have been addressed by performing analysis at the dyadic level.

Seventh, because the sample was drawn from the Internet, its generalisability to the couples' population may be limited. A number of

researchers argue, however, that self-selected Internet samples are no less random than student convenience samples or participants recruited through media advertising as is often the case in couples' research (Birnbaum, 2004; Gosling et al., 2004; Hewson, 2003). Furthermore, there is evidence that Internet samples may be more diverse and representative than self-selected samples recruited by other means (Gosling et al., 2004).

Eighth, the current sample was drawn from an ostensibly non-clinical population and the findings cannot therefore be generalised to clinical populations. For example, conflict behaviour may be differently mediated in clinical populations.

Ninth, while the sample size had sufficient power to detect moderate effects, it may not have been sufficiently large to detect small effects. Tenth, questionnaire length constraints resulted in the study not assessing stressful events, a factor that Karney and Bradbury (1995a) include in the Vulnerability-Stress-Adaptation model as a correlate of enduring vulnerabilities (personality) and adaptive processes. Future investigations should include this variable.

Finally, a limitation that may have influenced findings on the association between couples' personalities and relationship satisfaction is that the means for neuroticism, openness, agreeableness, and conscientiousness differed from the norms cited in the NEO-FFI manual (Costa & McCrae, 1992). These small differences may be attributed to cultural differences in that the NEO-FFI sample was standardised on US couples whereas the current sample was international. It may also be that these differences are characteristic of self-selected Internet samples such as were used in the current investigation.

As noted above, however, there is no evidence to suggest that self-selected Internet samples differ from self-selected samples in other populations (Birnbaum, 2004; Naglieri et al., 2004).

## **7.5 Implications**

The current investigation yielded two primary implications. The first relates to the relative contributions of personality and conflict behaviour as correlates of couple relationship satisfaction, and the second relates to the application of the APIM model.

### **7.5.1 Personality and Conflict Behaviour as Correlates of Couple Relationship Satisfaction**

The finding that couples' personalities influence their relationship satisfaction primarily through their conflict behaviour confirms that "personality traits affect relationships by influencing and altering microinteractional processes" (Caspi et al., 2005, p.472). This also refutes Gottman's observation that "research based on an individual psychopathology model ... has little to say about the possible mechanisms that lead to marital dissolution" (1994, p.87).

Furthermore, the finding that the association between conflict behaviour and satisfaction is larger than that between personality and satisfaction implies that couple interventions focusing on the reduction of destructive conflict behaviours are more likely to increase satisfaction than approaches emphasising personality management. At the same time, it should be recognised that personality does contribute to conflict behaviours in couple

relationships, but that this contribution is small compared to the overall contribution of conflict behaviour to relationship outcomes.

### **7.5.2 Actor-Partner Effects**

The finding that actor conflict behaviour had a significantly greater influence on relationship satisfaction than partner conflict behaviour has a number of implications. The first relates to Kamp Dush and Amato's (2005) conclusion that individuals in satisfactory intimate couple relationships reported greater overall wellbeing than single individuals. The current research finding potentially extends this conclusion by suggesting that individuals in couple relationships can further enhance their sense of overall wellbeing through positive management of their responses to dyadic conflict.

The actor-oriented influence of conflict behaviour on satisfaction also suggests that individuals who are dissatisfied with their relationships could, in the first instance, benefit by modifying their own conflict responses rather than seeking to change their partner's behaviour.

Finally, the significant influence of actor conflict behaviour on relationship satisfaction supports individual models of psychotherapy such as cognitive behavioural therapy (e.g., Beck, 1967), psychoanalytic theory (Freud, 1938), and client-centred therapy (Rogers, 1951). These models assert that at least some of the distress resulting from negative actor behavioural responses to conflict issues can be ameliorated by modifying the behaviour and attitude of the distressed individual as opposed to treating both members of the couple. Such individualistic approaches should, however, be treated with caution. First, systemic perspectives view individual interventions as reductionistic, and argue that modifying the behaviour of

only one partner may have unpredictable effects on the behaviour of the other possibly leading to dyadic heterostasis and relationship instability (Bateson, 1972; Becvar & Becvar, 1996). Second, the current investigation found that couples' satisfaction scores were significantly correlated and that it is therefore unlikely that only one partner in a relationship will complain of low satisfaction. Further research is required to determine the contexts in which treatment of one versus both partners would be optimal for improving relationship satisfaction.

## **7.6 Future Research**

The findings of the current investigation suggest a number of areas for future couples research investigations.

### **7.6.1 Investigate Broader Conceptions of Personality**

Reis et al. (2002) propose that "it would be difficult to conclude that the conceptual yield from ... research into the dispositional determinants of relationship success and failure has been anything more than modest" (p.814). These modest findings may, in part, be a consequence of an overly restrictive conception of *personality* in terms of a set of intrapersonal traits. McAdams (McAdams, 1995; McAdams & Pals, 2006) contends that in order to characterise and predict individual behaviour, conceptualisations of personality should include not only traits, but also characteristic adaptations in varying situations, and narratives used by individuals to integrate their life experiences. This broader view of personality – still uniquely characteristic of the individual – may well account for more variance in relationship

satisfaction than narrower personality constructs. A subset of this approach was adopted by Robins et al. (2002) when they examined individuals' relationship outcomes across multiple relationships and found that personality was indeed associated with consistent relationship outcomes. Future couple research should attempt to replicate Robins et al.'s findings and include the multiple levels of personality as proposed by McAdams.

### **7.6.2 Investigate Additional Intrapersonal Mediators**

The current findings suggest that relative to actor personality, partner personality is more strongly mediated by conflict behaviour. This implies that actor and partner personality may be mediated by different factors. For example, the effects of partner personality may be primarily mediated by conflict behaviour whereas the effects of actor personality may be mediated by both conflict behaviour *and* intrapersonal factors. Future investigations should determine whether actor and partner personalities are mediated by different factors, and what those factors might be.

### **7.6.3 Refine and Standardise Construct Definitions**

The reliability and validity of findings and conclusions in relationship psychology are hampered by inconsistent definitions for commonly used constructs such as *relationship satisfaction* and *couple conflict behaviour* (Fincham et al., 1997; Karney & Bradbury, 1995a; Van de Vliert & Euwema, 1994). These inconsistencies lead to detrimental outcomes for the field as a whole and include limiting the generalisability of research findings, and distorting inter-study comparisons because there is no assurance that like is

being compared with like. Illustratively, the mixed associations between personality traits and conflict behaviour reported in the literature review of this dissertation may, to some extent, be due to the plethora of construct definitions and associated instruments used to assess variables in the various studies. Inconsistent definitions also limit the growth of relationship psychology as a discipline because they hinder the integration of component models and limit the development of larger inclusive theories. More effort should therefore be invested in coordinating the development of standard instruments and definitions for use in couple research.

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## APPENDIX A

### Examples of Research Findings from Previous Investigations

Table A.1

**Examples of Studies Investigating the Associations Between Intrapersonal Factors  
and Relationship Outcomes**

<i>Intrapersonal Factor</i>	<i>Examples of studies</i>
Affect	Davila, Bradbury & Fincham (1998) Smith, Vivian & O'Leary (1990) Johnson & Greenberg (1994)
Attachment style	Shaver & Brennan (1992)
Attitudes	Amato & Rogers (1999) Bentler & Newcomb (1978) Fowers & Olson (1986)
Attractiveness	Kurdek & Schmitt (1986)
Attributions	Bradbury & Fincham (1988) Stander, Hsiung & MacDermid (2001)
Beliefs	Cramer (2004a) Moller & Van Zyl (1991)
Childhood	Belt & Abdin (1996)
Commitment	Rusbult & Buunk (1993)
Equity	Cate, Lloyds, Henton, & Larson (1982)
Family history	Donnellan, Larsen-Rife & Conger (2005)
Gender	Schumm, Webb & Bollman (1998) Heaton & Blake (1999)

**Table A.1 (continued)**

Gender roles	Bradbury, Campbell & Fincham (1995)
Health	Burman & Margolin (1992) Booth & Johnson (1992)
Investment	Kurdek (1991a)
Love	Hendrick & Hendrick (1997)
Mental health	Ulrich-Jakubowski, Russell & O'Hara (1988)
Parents	Amato & Booth (1997)
Perception	Feffer & Suchotliff (1966) Long & Andrews (1990)
Personality	Terman, Bittenweiser, Ferguson, Johnson & Wilson (1938) Eysenck & Wakefield (1981) Kelley & Conley (1987) Russell & Wells (1994a) Robins, Caspi & Moffitt (2000)
Physiology	Levenson & Gottman (1983)
Race	Sanderson & Kurdek (1993)
Self-disclosure	Meeks, Hendricks & Hendricks (1998)
Self-esteem	Cramer (2003d)
Sentiment override	Weiss (1980) Fincham, Garnier, Gano-Phillips, & Osborne (1995)
Sexuality	Kurdek (1994b)

**Table A.2**

**Examples of Studies Investigating Associations Between Socioeconomic and Demographic Factors, and Relationship Outcomes**

<i>Demographic Factor</i>	<i>Examples of studies</i>
Culture	Ferri, Bynner & Wadsworth (2003)
Demographic factors	Newcomb & Bentler (1980) Kurdek (1993)
Economic factors	Conger et al. (1990)
Employment	Larson, Wilson & Beley (1994) Voydanoff (1990)
Remarriage	Booth & Edwards (1992)

**Table A.3**

**Examples of Studies Investigating Associations Between Dyadic Factors and Relationship Outcomes**

<i>Dyadic Factor</i>	<i>Examples of studies</i>
Age at marriage	Amato & Booth (1997) Eysenck (1980) Glenn (1990)
Childbearing	Glenn & McLanahan (1982) Rogers (1999)
Division of labour	Wilkie, Ferree & Ratcliff (1998), Houseknecht & Macke (1981)
Duration	Burgess & Wallin (1953) Karney & Bradbury (1997) Vaillant & Vaillant (1993) Glenn (1998)
External events	Williams (1995)
Homogamy	Richardson (1939) Caspi & Herbener (1990)
Length of pre-marital relationship	Thomson & Colella (1992) Kamp Dush, Cohan & Amato (2003)
Relationship duration	Karney & Bradbury (1997)
Religiosity	Clarke & Berrington (1999)
Resource exchange	Rettig & Bulbolz (1983)

**Table A.4**

**Examples of Studies Investigating Associations Between External Factors and Relationship Outcomes**

<i>External factor</i>	<i>Examples of studies</i>
Adverse Life Events	Poulton & Andrews (1992)
Social support	Pasch & Bradbury (1998)
Stress	Cohan & Bradbury (1997)
Unemployment	Aubry, Tefft, & Kingsbury (1990)

**Table A.5**

**Examples of Studies Investigating Associations Between Interpersonal Factors and Relationship Outcomes**

<i>Interpersonal Factor</i>	<i>Examples of studies</i>
Communicative competence	Gottman & Porterfield (1981)
Conflict avoidance	Gottman (1993b) Gill, Christensen & Fincham (1999)
Conflict engagement	Kurdek (1995a)
Conflict frequency	Vincent, Weiss & Birchler (1975) Kelly, Huston & Cate (1985) McGonagle, Kessler & Gotlib (1993)
Conflict outcome	Birchler & Webb (1977) McGonagle, Kessler & Gotlib (1993) Cramer (2002a)
Conflict resolution style	Markman (1981) Rands, Levinger and Mellinger (1981) Kurdek (1994a) Noller, Feeney, Bonnell & Callan (1994)
Conflict severity	Cramer (2002b)
Consensus	Cramer (2001)
Demand-withdraw behaviour	Sullaway & Christensen (1983) Christensen & Heavey (1990)
Interaction patterns	Gottman & Krokoff (1989) Driver, Tabares, Shapiro, Young Nahm & Gottman (2003)
Negativity	Vincent, Weiss & Birchler (1975) Gottman & Krokoff (1989)
Power	Gray-Little & Burks (1983)

**Table A.5 (continued)**

Problem-solving	Vincent, Weiss & Birchler (1975)
Reciprocity	Halford, Hahlweg & Dunne (1990)
Support	Cramer (2004b) Campbell, Simpson, Boldry & Kashy (2005)
Verbal communication	Gottman, Markman & Notarious (1977) Margolin & Wampold (1981) Ting-Toomey (1983a)
Violence	O'Leary, Barling, Arias, Rosenbaum, Malone & Tyee (1989) Russell & Hulson (1992)

**Table A.6**

**Examples of Theoretical Models used to Underpin Studies of Couple Relationships**

<i>Theory</i>	<i>Source</i>
Accommodation processes	Rusbult, Verette, Slovik & Lipkus (1991)
Actor-Partner Interaction Model	Kenny (1988) Kenny (1996a,b) Kashy & Kenny (1999)
Attachment Theory	Bowlby (1969)
Balance theory	Heider (1958)
Cascade model	Gottman & Levenson (1992)
Contextual model	Bradbury & Fincham (1988)
Crisis theory	Hill (1949)
Disillusionment model	Waller (1938)
Emotional contagion processes	Hatfield, Cacioppo & Rapson (1994)
Enduring dynamics model	Huston & Houts (1998) Huston, Caughlin, Houts, Smith & George (2001)
Equity theory	Walster & Walster (1975) Walster, Berscheid & Walster (1973)
Gender-specific model	Robins, Caspi & Moffitt (2000)
Interdependence theory	Kelley & Thibaut (1978) Rusbult (1983)
Investment model	Rusbult (1980)
Lovestyles	Lee (1973)
Negative confrontation model	Gottman & Krokoff (1989) Gill, Christensen & Fincham (1999)
Psychodynamic theory	Paolino & McCrady (1978)

**Table A.6 (continued)**

Self-fulfilling prophecy theory	Jones (1977) Merton (1948) Snyder, Tanke, Berscheid (1977)
Self-perception theory	Bem (1967, 1972)
Situation Congruence Model	Diener, Larsen & Emmons (1984)
Social exchange theory	Blau (1964) Homans (1961) Thibaut & Kelley (1959)
Social learning theory	Stuart (1969) Jacobson & Margolin (1979)
Vulnerability-Stress-Adaptation Model	Karney & Bradbury (1995a)