

EMOTIONAL PROMISCUITY: CONSEQUENCES  
FOR HEALTH AND WELL-BEING

by

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**Abstract**

Emotional Promiscuity (EP) refers to how easily and often an individual falls in love (Jones, 2011). This dissertation sought to elaborate the construct of EP, validate a questionnaire measure, and investigate the implications of EP for health and well-being. EP is first defined and then conceptually distinguished from relevant variables in the relationships literature such as: romantic idealism, sexual promiscuity, and attachment.

A scale to measure EP (the EP scale) was then developed and refined. The process began with the generation of a large pool of items. The items were then narrowed down with a series of principal component and confirmatory factor analyses. From these analyses, the final 10-item Emotional Promiscuity (EP) scale emerged. Its empirical two-facet structure maps onto the two aspects of promiscuity: frequency and ease.

A series of survey studies were then conducted to examine the convergent, and discriminant, and criterion validity of the EP scale. The EP scale exhibited modest positive correlations with sexual promiscuity, anxious attachment, borderline personality, and romantic idealism but weak correlations with other, less relevant, relationship variables. The EP scale was also associated with retrospective reports of major relationship outcomes including number of relationships and times engaged to be married. Among women, EP and sexual promiscuity interacted to predict multiple pregnancies from different partners.

Two studies then examined the ability of the EP scale to predict emotional infidelity. The EP scale predicted both past reports of emotional infidelity and prospective emotional infidelity using a diary study. The EP scale also had an important health application: High scores on both

the EP scale and Sociosexuality Orientation Inventory predicted unprotected sexual partners (for women only).

I conclude with an overview and conclusion suggesting future directions and important implications for EP and the EP scale. Taken together, the studies in this dissertation indicate that EP is a viable psychological construct and that the EP scale is a valid and reliable instrument capable of predicting important relationship outcomes.

## **Preface**

To date, none of the research in this dissertation has been published. However, one manuscript “The Role of Emotional Promiscuity in Unprotected Sex” is currently under a second round of review. This manuscript constitutes Chapter 5 of the dissertation.

I am first author (i.e., senior author) on this submitted manuscript with Dr. Del Paulhus as a co-author. I was solely responsible for the identification and design of the research program, performance of the various parts of research, analysis of the research data, and preparation of the first draft of the manuscript. Dr. Paulhus and I worked together in revising the manuscript for clearer writing and presentation style.

The second manuscript, to be submitted shortly, “Emotional Promiscuity Begets Emotional Infidelity” is in preparation to be submitted. I am the sole author of that manuscript, which constitutes Chapter 4 of the dissertation.

All research for this dissertation was approved by the University of British Columbia *Behavioural Research Ethics Board* (Approval #1: H08-01281, Approval #2: H08-01537).

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## **Dedication**

I dedicate this dissertation to the memory of Megan Tibbs.

You showed me what true beauty was.

# 1. Introduction

## 1.1 Overview of the Chapters

The goal of this dissertation was to develop and elaborate the construct of emotional promiscuity (EP), develop a reliable measure thereof, and establish the validity of that measure. The dissertation is organized into six chapters. Two of these chapters (Chapters 4 & 5) are manuscripts that have been formally written for publication.

*Chapter 1* provides an overview of the relevant literature. It introduces the novel concept of EP and distinguishes it from related constructs such as sexual promiscuity and anxious attachment. I detail the need for a solid instrument to measure EP.

*Chapter 2* describes the development of the EP scale and the establishment of its basic psychometric properties. Study 1 details the procedure for selecting the final items. Studies 2 and 3 confirm the factor structure of the final 10-item scale.

*Chapter 3* builds the nomological network around EP using correlations with a number of key variables. Convergence is established with several conceptually-related constructs and discriminant validity is established with others. Also addressed are associations with the fundamental dimensions of personality and self-reports of major life outcomes.

*Chapter 4* evaluated associations of the EP scale with emotional infidelity, that is, the volatility of participants' love experiences. In Study 1, emotional infidelity was measured with retrospective reports. In Study 2, emotional infidelity was measured longitudinally by tracking participants' weekly diary reports of their emotional attachments. In both cases, the EP scale was able to predict emotional infidelity. This chapter is presented in publication format.

**Chapter 5** consists of another publication-ready paper examining how EP contributes to health and well-being. Specifically, among sexually promiscuous women, the EP scale predicted rates of unprotected sexual intercourse.

**Chapter 6** was written to summarize the dissertation and outline future directions and applications of EP and the EP scale.

## 1.2 The Concept of Emotional Promiscuity

Much research has been devoted to individual differences in *sexual promiscuity*, that is, the willingness to have casual sex, have sex with multiple partners, and have sex sooner rather than later in relationships (e.g., Buss & Schmitt, 1993; Gangestad & Simpson, 2000; Hendrick & Hendrick, 1987; Simpson & Gangestad, 1991). By contrast, there has been comparatively little research on individual differences in the tendency to fall in love. This dearth of research seems surprising given that most relationships are initiated for more than sexual reasons. In fact, many individuals initiate relationships because of romantic interest or desire for intimacy, sometimes in the absence of sexual desire. In fact, there are distinct psychological and physiological substrates responsible for these different types of arousal and desire (Diamond, 2004).

My argument begins with a discussion of the well-known concept of *sexual promiscuity*, that is, individual differences in the ease and frequency for having multiple sexual partners. In the research literature, a commonly used definition is the one advanced by researchers Gangestad and Simpson (1990). They argued that both men and women vary in *sociosexuality* – a term used to describe one’s comfort and willingness to engage in casual sexual encounters. Simpson and Gangestad (1991) used the terms *restricted* and *unrestricted* to label the extreme ends of the sociosexuality dimension. Someone who is restricted, according to their definition, is not comfortable with casual sex, prefers long-term relationships, and waits a significant amount of time before having sexual relations with someone. By contrast, the sexually unrestricted individual is comfortable with casual sex, has many short-term relationships and does not delay before engaging in sexual relations. Throughout this dissertation I will use the terms such as sociosexually unrestricted, sexually permissive, and sexually promiscuous interchangeably.

To operationalize the construct of sociosexuality, Simpson and Gangestad (1991) developed the Sociosexual Orientation Inventory (SOI). This questionnaire poses questions about the respondent's prerequisites for sexual contact (e.g., "I would have to be closely attached to someone (both emotionally and psychologically) before I could feel comfortable and fully enjoy having sex with him or her."). These prerequisites include commitment, knowing a person for a length of time, comfort with the person, mutual trust, and attachment. Because they report fewer prerequisites, men tend to score higher on the SOI than do women. Nonetheless, much research has shown that there is substantial variation within both sexes with respect to sociosexuality (e.g., Buss & Schmitt, 1993; Gangestad & Simpson, 2000; Hendrick, Hendrick, Slapion-Foote, & Foote, 1985; Kenrick, Sadalla, Groth & Trost, 1990). Simpson and Gangestad emphasized that sociosexuality could not be explained as simply high sex drive.

It is important to note that Gangestad and Simpson's perspective and assessment on propensity for casual sexual contact are not only ones having an impact on the relationship literature. Hendrick, Hendrick, Slapion-Foote, and Foote (1985) also discussed sexual attitudes and measured them in an empirical fashion. However, the similarities and differences are worth noting between the two perspectives.

The evolutionary perspective by Simpson and Gangestad (1991) was grounded in mathematical biology, which discussed alternative strategies for reproductive success (e.g., Symons, 1979). By contrast, the social influence perspective advanced by Hendrick and colleagues (1985) focused on gender differences and social norms. In spite of the differences in their theoretical grounding, the two perspectives show substantial convergence with respect to their empirical findings. For example, both groups found that (a) men are more sexually permissive than are women but (b) the within-gender variation is greater than the between-gender variation (e.g., Hendrick et al., 1985; Simpson & Gangestad, 1991). Finally, both groups

found that men are more likely to use, and benefit from, dominance and power in sexual relationships (Hendrick et al., 1985; cf. Gutierrez, Kenrick, & Partch, 1999).

In this dissertation, I focus on the perspective forwarded by Simpson and Gangestad for three reasons. First, Simpson and colleagues have made great attempts to integrate both social and biological perspectives in their analysis (Simpson, Wilson, & Winterheld, 2004). Second, the *Sociosexual Orientation Inventory* (SOI) contains items that converge on both attitudinal and behavioral components of permissive sexuality (Simpson & Gangestad, 1991; Webster & Bryan, 2007). By contrast, the permissiveness subscale of the *Sexual Attitudes Scale* (SAS; Hendrick et. al., 1985; Hendrick & Hendrick, 1987; Hendrick, Hendrick, & Reich, 2006) asks only about attitudes. Third, the SOI scale is far more widely used in empirical research.

### **1.2.1 Implications for Emotional Promiscuity**

Given that differences in sexual style are measurable, it seems likely that the same would be true of romantic style. Emotional relationships can develop in addition to, or independently of, sexual relationships (see Diamond, 2004; Hendrick & Hendrick, 2002). Certainly, love sometimes develops where sexual desire never does and vice-versa. As a result, individuals should vary in their prerequisites for love as well as those for sex.

In this dissertation, I focus on the proposition that individuals vary in the ease and frequency with which they fall in love. Some individuals may require serious commitment, investment, and time before falling in love, or may simply never fall in love at all. I will refer to such individuals as *emotionally reserved*. On the other hand, individuals who find themselves on the *easy* and *often* end of this spectrum are hereby defined as *emotionally promiscuous*. I will show that, despite being overlooked by relationship researchers, the construct of emotional promiscuity (EP) has construct validity and real-world applications.

### 1.3 Defining Romantic Love

It is a daunting task to attempt a definition of romantic love. In fact, volumes of work have attempted to tackle the subject with little consensus on an answer (e.g., Hunt, 1959). For the purposes of this dissertation, I will focus on two Western notions that have been taken up in the empirical literature.

One definition of love comes from Diamond (2003; 2004) who claims, “*romantic love* typically denotes the powerful feelings of emotional infatuation and attachment between intimate partners.” (Diamond, 2004, p. 116). It is unclear from this definition how to differentiate concepts such as initial passion (e.g., Tennov, 1979) from other forms of companionate love (Hatfield, 1987) or combinations of these states (e.g., Fisher, 1998; Sternberg, 1986). In fact, debate exists over whether initial passion or *limerence* should even be considered “love” (Tennov, 1979). Nevertheless, Diamond’s definition is a starting point, and connotes that the strength of one’s romantic feelings directly predicts one’s perception of being in love.

On the other hand, Kephart (1967) argues that true love can be defined through endurance. For example, some individuals retrospectively ‘delete’ some partners from their list of former lovers. Kephart also found that this deletion tendency was more evident in women and speculated on its possible cognitive mechanisms. For example, people may reinterpret a past love to be the result of immaturity or misinterpreted infatuation. On the other hand, the examples not subject to deletion (if any) would remain as ‘true cases’ of love.

### 1.3.1 Implications for EP

These two brief definitions of love suggest two distinct ways to define the phenomenon of EP.

Based on Diamond's definition, high EP individuals experience deeper and stronger levels of romantic attraction when compared to low EP individuals. Based on Kephart's (1967) definition, however, high and low EP individuals may have identical emotional experiences, but high EP individuals are more liberal with their criteria for self-attributions of love.

For example, individuals who do not go through the editorial process with respect to former love interests or perceptions of former love interests (e.g., Kephart, 1967) are unique in many respects. Such lack of editing may underscore a propensity to more readily interpret emotional attraction as love. This propensity to attribute love more readily may be why some individuals seem to fall in love more than others do. Those individuals who more readily interpret emotional attraction as love would make greater investments in and pay greater attention to their romantic feelings, leading to differential outcomes.

This process may also be driven by an inability to take situational or mitigating circumstances into account when weighing in on which partners crossed the psychological threshold of "romantic love." Hunt (1959) noted that some took this perspective to a more cynical level, such as H.L. Mencken who referred to love as a form of perceptual anesthesia (see Hunt, 1959, p. 5). In this view, individuals may simply be unable to perceive the circumstances behind relationships when believing they are "in love." Such circumstances could include hormones, inexperience, and misattributed sexual desire.

To summarize this hypothesis, it is conceivable that individual differences in EP are really capturing a more liberal definition of what it means to be in love. I will refer to this perspective as the *semantic-categorical* perspective. Those who experience emotional feelings for another, and define those feelings as romantic love, would be fundamentally different from those who had the same emotional feelings and did

not perceive them as constituting romantic love. This comparison would be a meaningful individual difference even if it stems from a differential tendency to label romantic feelings as “love” versus “not love” and not an individual difference in intensity of romantic feelings. What it means to be in love is clearly different for these two groups of individuals, which still leads to a meaningful comparison.

The competing hypothesis was that individuals who are high in EP feel emotional attraction and attachments more powerfully in a shorter period of time than do those low in EP. I will refer to this perspective as the *experiential* perspective. In this case, there is a fundamental difference in the strength of the romantic feelings, the ease with which they are felt, and how often they are felt. By this definition, there is a genuine physiological difference in emotional feelings or at least perceptual difference in emotional feelings between individuals high versus low in EP.

These two definitions are difficult to tease apart operationally. Although they have somewhat different implications, they are certain to have mutual impact on each other and reinforce each other.

### **1.3.2 Self-Definition of Love.**

In some respects, allowing a self-definition is advantageous in the context of psychometric assessment. This advantage stems from the fact that individuals will draw on common cultural experiences and common norms to answer questions. For example, individuals often contextualize questions on surveys and are more accurate when they engage in surveys that are situated in social comparisons of their own defining. Regardless of instruction, individuals naturally use familiar others and social norms with which to couch their answers in a frame of reference (Lievens, De Corte, & Schollaert, 2008). In this way, allowing participants to self-define love is superior to providing a specific definition for participants. My choice of this self-definitional approach is supported by the fact that previous research with this type of self-operationalization has generated coherent results (Hendrick & Hendrick, 1987).

Thus I argue that, even though the concept of love may be difficult to universally define, self-reports of EP are still meaningful. If we allow respondents to define love for themselves, it is likely that some combination of these two processes of semantic-categorical vs. experiential (explicated above) are being measured. The distinction between these definitions should be addressed in future research when appropriate physiological tools are available. Until that point, the research on romantic experience must remain moot on that issue.

#### **1.4 Belief in Western Notions of Romantic Love: Romantic Idealism**

Although a universal definition of love is difficult to find, belief in and endorsement of Western notions of love has been studied and quantified by Sprecher and Metts (1989). The authors canvassed both existing research literature and popular press for enduring concepts of Western romantic ideals. They settled on four facets: (a) Love at first sight (e.g., “I am likely to fall in love almost immediately if I meet the right person”), (b) One and only (e.g., “I believe that to be truly in love is to be in love forever”), (c) Love finds a way (e.g., “If I love someone, I know I can make the relationship work, despite any obstacles”), and (d) idealization (e.g., “The relationship I will have with my 'true love' will be nearly perfect”). Together, these four facets appear to capture romantic idealism in the Western sense.

Much like the ideas of Hendrick and colleagues discussed above, Sprecher and colleagues focused on social norms and gender differences in their theoretical grounding (Sprecher & Metts, 1989; Sprecher, Cate, & Levin, 1998). Their finding that men are higher in romantic idealism was explained by greater economic freedom. This freedom affords them the luxury of selecting mates based on love rather than pragmatic issues such as potential income. As a result of their perspective, Sprecher and colleagues emphasize that changing social norms and gender roles are likely to influence the endorsement of romantic idealism.

The construct of romantic idealism has proved its worth in relationship research. For example, individuals high in romantic idealism often meet with disappointed expectations over time in their relationships (Sprecher & Metts, 1999) and that children of divorced parents are less likely to be idealistic romantically (Sprecher, Cate, & Levin, 1998; Weigel, 2007).

### **1.5 The Origins of the EP Scale**

Without the EP label, the concept of EP has been touched on by some researchers (Kephart, 1967), and even indirectly measured by others (Harms, Williams, & Paulhus, 2001). In their research, Harms and colleagues measured what they referred to as “love-proneness” among undergraduates. Their two-item measure (“How many times have you fallen in love at first sight?” “How many times have you been in love?”) showed rather different correlates from those of ‘lust proneness’ (as measured by the Sociosexual Scale or SS; see Bailey et al., 2000). To begin with, Harms and colleagues found that love-proneness was positively but only modestly correlated with lust-proneness. Furthermore, love-proneness had a positive correlation with the Big Five factor of neuroticism, whereas lust-proneness had a negative correlation with neuroticism. Moreover, love-proneness predicted low cognitive ability, a variable that is unrelated to lust-proneness.

Given the promising divergence in the correlates of love-proneness and sexual promiscuity, it seemed likely to me that a version of promiscuity centering on romantic love was a real possibility. To confirm that EP is a valid construct that is worthy of attention in the psychological literature, a reliable and valid measure would be required to measure it. Once established, the concept and empirical measure of EP could very well contribute to our understanding of relationship issues and individual differences.

## 1.6 Related Relationship Constructs: Overlap and Differentiation

To clarify the distinctiveness of EP, I must first address its links with several related constructs in the relationship literature. In the language coined by Cronbach and Meehl (1955), a construct should be situated in a *nomological network* of other psychological constructs in order to clarify its meaning. A nomological network is a set of laws that link or discriminate one construct from other relevant constructs.

In the present case, two psychological laws are especially relevant to frequent falling in love: (a) sex and love are intertwined (Hendrick & Hendrick, 1987) and (b) the loss of relationship bonds is emotionally painful (Bowlby, 1969). Based on these two laws, I describe below how EP shares conceptual overlap with both anxious attachment and sexual promiscuity.

### 1.6.1 Sexual Promiscuity

**Conceptual Similarities.** Although couples can certainly have sex without falling in love and vice-versa, there are at least two reasons why one form of promiscuity is likely to lead to promiscuity in the other. The first reason is that cultural norms often dictate that sex is acceptable only under the auspices of love (e.g., DeSteno & Salovey, 1996). A second reason is that actual sexual activity increases the likelihood of falling in love with a partner. In evolutionary terms, this propensity is typically referred to as *bonding* and occurs in many species during the mating process (Young & Wang, 2004). In biological terms, evidence indicates that relationship-promoting chemicals, such as oxytocin, are released during sex and orgasm (Carter, 1992).

**Conceptual Distinctions.** The conceptual differences between sexual and emotional promiscuity are fairly obvious given that one focuses on sexual behavior and the other on emotional feelings. Nevertheless, more discussion of how these constructs differ is warranted. Sexual promiscuity (also referred to as unrestricted sociosexuality) is characterized by comfort with, and desire for, sexual

relationships with multiple partners. EP is characterized by comfort with, and desire for, emotional relationships (i.e., love) with multiple partners either simultaneously or one after another<sup>1</sup>. The differential emphasis on the physical vs. emotional aspects of relationships captures the difference between the two constructs. This differential emphasis is also why these constructs would lead to different outcomes.

A further conceptual distinction emerges from associations with fundamental personality traits. It is well known that permissive sexuality is associated with disagreeableness (e.g., Schmitt, 2004). Given their affinity for intimate bonds, a disagreeable disposition seems less likely among individuals high in EP.

Another conceptual distinction between sexual promiscuity and EP is their differential association with avoidant attachment. Unrestricted sociosexuality is positively correlated with avoidant attachment (Mikulincer & Shaver, 2007, p. 354). This association emerges primarily because individuals who are high in avoidant attachment require no intimate emotional bond or commitment to engage in sexual relations. Moreover, avoidant individuals make a clear distinction between love and sex (Fraley & Shaver, 2000). I speculate, however, that EP would be negatively associated with avoidant attachment. This negative association should result from the fact that high EP individuals want to jump headlong into intimate situations, not avoid them.

### **1.6.2 Anxious Attachment**

**Conceptual Similarities.** According to Bowlby (1969), anxious attachment derives from inconsistent care giving from parents (see Shaver & Mikulincer, 2009). Such children develop distinctive behaviors for coping with this inconsistency. By using immediate contact seeking behaviors (i.e., crying, panicking, begging), the anxiously attached child seeks comfort from a primary attachment figure and thus

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<sup>1</sup> It should be noted that concern with polygamy and multiple partners differs between Western and other cultures. Indeed, it is entirely possible that EP is the norm in some cultures, or at least less of a social concern.

(temporarily) thwarts abandonment. Thus, hyper-vigilance in seeking the affection of close others evolves within the individual as a method of coping with or preventing loss and/or separation.

This propensity for preventing loss and seeking closeness plays itself out in adult romantic relationships (Brennan, Clark, & Shaver, 1998; Hazan & Shaver, 1987). Anxiously attached individuals often have increased intimacy and bonding motives behind their sexual behavior (Shaver & Mikulincer, 2009). Given the purpose of anxious attachment is preventing a partner from leaving, and anxious attachment often leads to and results in unsteady relationships, anxious attachment behaviors are a likely response to relationships formed prematurely by high EP individuals.

The link between EP and anxious attachment rests on their common argument that relationships are based on emotional bonds. For those high in EP, the unstable nature of rapidly-developing relationships should lead to premature bonds -- the hallmark of anxiously attached individuals (Hazan & Shaver, 1987). In fact, research indicates that those high on anxious attachment are likely to fall in love quickly and often (Hazan & Shaver, 1987) and are hyper-vigilant in seeking romantic love (Feeney & Noller, 1990; Simpson, 1990). In addition, anxiously attached individuals are emotionally labile (Nofle & Shaver, 2006) and are impulsive in their relationship decisions (e.g., Bouchard, Godbout, & Sabourin, 2009; Lopez, et. al., 2001).

Taken together, the conceptual overlap between EP and anxious attachment suggests that individual differences in one should be associated with the other. Moreover, anxious attachment mechanisms may be recruited to prevent the loss of the premature bond that was formed by the high EP individual.

**Conceptual Distinctions.** Anxiously attached individuals seem to fall in love more often than do avoidant or securely attached individuals (Tracy, Shaver, Albino, & Cooper, 2004; Hazan & Shaver, 1987). Given this propensity for sex motivated by intimacy, and the tendency to “latch onto” potential partners emotionally, the construct of anxious attachment appears to overlaps with but is distinct from EP.

First, anxious attachment is best conceptualized as a *need* process with respect to intimate contact and nurturance (Feeney & Noller, 1990), whereas EP is best described as a *want* process. Whatever the reason for initiation, anxiously attached individuals experience the relationships as a need. They possess a hyper-vigilant system that is evoked upon sensing the potential threat of loss (Mikulincer, Gillath, & Shaver, 2002). This system, once engaged, does not get disengaged until an attachment figure somehow reinforces an important bond (Shaver & Mikulincer, 2009).

By contrast, high EP individuals should enjoy the sensation of falling in love. Their speed and frequency of seeking new romantic partners suggests an extraverted form of excitement and sensation seeking. In addition, there is no reason to believe that high EP individuals suffer low self-esteem: They form bonds out of rapid affinity for partners rather than a psychological dependence.

Note that this want-need distinction has already been applied in the drug addiction literature. Addiction has multiple pathways of drug craving, which are often discussed in the literature (Verhuel, van den Brink, & Geerlines, 1999; see also Love, James, & Willner, 1998). Pathways that initiate a drug (often referred to as *want* pathways) are driven through dopamine reinforcement and pleasure (Esch & Stefano, 2004; Kelley & Berridge, 2002, White, 1998). These *want* pathways sometimes lead to neurological changes over time. Such changes result in psychological and/or physiological dependence (often referred to as *need* pathways). Thus, addiction processes that start in the form of reward (e.g., dopamine driven) eventuate into to processes that avoid punishment (e.g., serotonin driven; Barr et al., 2006; Robbins & Everitt, 1999; White, 1998). In other words, the neural process that leads to drug initiation (such as alcohol, cocaine, or methamphetamine) is not the same process that leads to inability to quit.

By analogy, high EP individuals are more likely addicted to the rush of falling in love, and the excitement which follows (a *want* process), rather than the fear of loss. If falling in love was compared to

an addictive drug, then EP and anxious attachment would represent a dual-pathway model to addiction (Verhuel et al., 1999; White, 1998). Both would be factors for rapid initiation of love. EP would drive initiation and anxious attachment would drive dependence.

In sum, I argue that the process driving EP parallels the want pathways explained by dopamine and reinforcement in drug initiation. By contrast anxious attachment parallels the need process of serotonin and avoiding pain in drug addiction (for a review, see Robinson & Berridge, 1993).

In some respects, EP may exacerbate anxious attachment. In a relationship initiated by EP, anxious attachment may be triggered in an effort to sustain the unstable relationship. This instability in EP relationships is due to the fact that they know little about their partners. When an individual jumps into a relationship prematurely, it may trigger the hyper-vigilance that anxious attachment provides. In the end, however, anxiously attached individuals have a difficult time holding together relationships (e.g., Kirkpatrick & Davis, 1994). EP may then take over in the search for a new romantic attachment figure, and the vicious cycle repeats itself.

A second argument for distinguishing EP and anxious attachment concerns the degree of anxiety and fear regarding new relationships. Such anxiety is maximal in anxious attachment (e.g., Mikulincer & Shaver, 2007, p. 354) but not necessarily present in those high in EP. Not surprisingly, Tracy and colleagues found that anxiously attached individuals have *fewer* dates than securely attached individuals. By contrast, high EP individuals should be seeking *and* having more dates than low EP individuals because of their disposition of falling in love easily and often. These findings suggest that anxiously attached individuals may latch onto partners, but are not really actively seeking new ones.

Such attachment to existing partners may be so strong that anxiously attached may forgo searches for new partners, even when their relationship is unsatisfying. To support this assertion, research has found

that, compared to all others, anxiously attached individuals are more likely to stay in unsatisfying relationships rather than seek someone new (Collins & Read, 1990; Kirkpatrick & Davis, 1994; Mikulincer & Shaver, 2007).

A third distinction between EP and anxious attachment is that the latter involves a negative self-view (Mikulincer & Horesh, 1999). Anxiously attached individuals have low self-esteem and would avoid behaviors that would risk rejection. By contrast, emotionally promiscuous individuals should have normal self-esteem and be open to frequently meeting and bonding with others. .

Although their normal self-esteem and extraversion are heralded as overall psychologically healthy, high EP individuals are likely to engage in certain socially harmful behaviors (e.g., infidelity). By contrast, their pattern of inhibition and fear makes it unlikely that anxiously attached individuals would be unfaithful. In fact, there is little association between anxious attachment and infidelity in the literature (e.g., Mikulincer & Shaver, 2007 p. 358).

In sum, EP should overlap with but be distinct from sexual promiscuity and anxious attachment. The overlap stems from the fact that EP individuals have few prerequisites for relationships, similar to sexual promiscuity. Likewise, EP and anxious attachment both focuses relationship initiation and maintenance. The differences, however, stem from the fact that high EP individuals are focused primarily on love, whereas sexually unrestricted individuals are primarily focused on sex. Likewise, EP differs from anxious attachment with respect to the process of falling in love, and a focus on initiation rather than maintenance of relationships.

### **1.6.3 Romantic Idealism**

**Conceptual Similarities.** Another important concept, which is central to the concept of EP, is romantic idealism. Given the emphasis on idealization of love and romantic beliefs, romantic idealism

seems central to the concept of EP. For example, an individual who endorses idealistic notions of love seems more likely than others to be susceptible to those feelings sooner upon meeting a prospective partner.

Aside from a romantic view that individuals high in either construct are likely to have towards the world, they are also both likely to believe in “love at first sight.” Love at first sight (LFS) is one of the four facets of the Romantic Beliefs Scale (Sprecher & Metts, 1989), and also constitutes one of the core dimensions of romantic idealism. For example, love at first sight inversely predicted number of dates until one felt they were in love, and was significantly associated with Eros love style. These findings are consistent with conceptualizations of EP, which should also predict fewer encounters before feeling love and be somewhat related to enjoying the game-playing aspects of love. Given that individuals high in either EP or romantic idealism would both be susceptible to romantic feelings easier, and endorse the idea that they have fallen in love at first sight, EP and romantic idealism seem related in important ways.

**Conceptual Distinctions.** However, there are important conceptual differences between the two constructs as well. First, EP is related to frequency and ease of feelings, not attitudes towards love itself. These two issues are related insofar as one who doesn’t believe in love is unlikely to report being in love. However, EP leads to a vulnerability to falling in love whereas romantic idealism only relates to how people think about love. In fact, one could generate opposing predictions about mate selection based on these two variables. For example, with respect to EP and finding a partner, the music group Crosby, Stills, and Nash probably said it best: “If you can’t be with the one you love, love the one you’re with.” In other words, individuals high in EP are likely to see love and relationships where others would not. By contrast, one high in romantic idealism is more likely to say they are holding out for their “one and only love.”

A second important distinction has to do with two facets of the Romantic Beliefs Scale (RBS; Sprecher & Metts, 1989): one and only, and love can conquer all. These two facets are positively

correlated with love at first sight and make sense against the backdrop of romantic idealism. By contrast, however, the EP scale should be negatively related to these two facets. This negative relationship should stem from the fact that high EP individuals move along from partner to partner. The behavior of individuals high in EP, such as serial relationship engagement, would be dissonant with these idealistic notions about love. Although it is entirely possible that individuals high in EP *believe* when they meet someone that love can (and will) conquer all, and that they have found the one and only for them, they may also realize that multiple people have fit that description in the past.

#### **1.6.4 Borderline Personality**

Another important variable to consider in relation to EP is borderline personality disorder (BPD). The borderline is characterized by negative emotionality, impulsivity, and identity confusion (for a review, see McGlashan, 1985). Such impulsivity and emotional flailing may drive premature romantic interests. However, much like anxious attachment, borderline behavior is likely driven by a neurotic reaction to potential or actual loss. Consequences for relationships include the physical abuse of partners (e.g., Dutton, 2002).

#### **1.7 Consequences of Promiscuity**

The consequences of sexual promiscuity usually focus on physical health outcomes (e.g., unwanted pregnancies, STDs). Although there is little evidence for psychological dysfunction (Schmitt, 2005), or cognitive deficit (Harms, Williams, & Paulhus, 2001), sexual promiscuity is clearly problematic for healthy relationships. For example, individuals who are sexually promiscuous are less likely to enter into long-term relationships (see Simpson, Wilson, & Winterheld, 2004) and are less faithful when they do so (e.g., Barta & Kiene, 2005; Schmitt, 2004). As a result, such individuals are considered less desirable as relationship partners (Baumeister & Vohs, 2004; Sprecher et al., 1997). In sum, being sexually

promiscuous may lead an individual to: (a) be unfaithful, (b) not commit to partners, and (c) be less desirable.

As with sexual promiscuity, EP may be problematic for relationships. Given the ease with which they fall in love, emotionally promiscuous individuals are likely to be *emotionally* unfaithful to current partners. EP may also result in a reputation of being unreliable in relationships, again reducing the individual's desirability as a potential partner. Other relationship troubles may also result from EP, including premature trust in others. For example, individuals high in EP may be more easily manipulated by those with antisocial agendas (an issue I will return to in the final chapter).

In sum, individual differences in EP appear to be linked to very meaningful outcomes that go beyond those caused by sexual promiscuity. Indeed, the potential consequences of EP warrant as much attention as that given to sexual promiscuity.

### **1.7.1 Health Consequences**

Along with the consequences for relationships, which come with high levels of EP, there may be consequences related to physical health as well. Individuals who fall in love easily and often are likely to be more susceptible to the influence and suggestion of more partners. One consequence that might follow from such influence would be drug use. For example, research has shown that romantic partners are a major cause of drug initiation (Anglin, Hser, & McGlothlin, 1987). Given that emotionally promiscuous individuals engage in premature commitment and have emotional exposure to multiple romantic partners, these individuals may be particularly susceptible to picking up destructive behaviors at the hands of their partners.

Another serious application of EP is condom use. Research on romantic love has shown that being in love can actually be a *barrier* to safer sexual practices (e.g., Flood, 2003; Manual, 2005). When love is

felt easily and often, and an individual is comfortable with early sexual contact, the outcome may be a failure to use condoms with a greater number of partners.

## **1.8 Introduction Summary**

In this introduction, I have built an argument that EP is a novel construct worthy of focused research. Just as individuals vary in prerequisites that must be satisfied for having sexual relations, individuals also vary in prerequisites for falling in love. The individual with minimal prerequisites for falling in love is the subject of this dissertation.

My definition of EP originated as a parallel with sexual promiscuity – including its facets of speed and frequency. Although consensus on a definition of love seems beyond reach, I argue that EP should be open to measurement using respondents' own subjective definitions. Such measurement, however, research will require a solid assessment tool. The process of developing and validating such a measure forms much of this dissertation.

I have situated EP in a nomological network by relating it to two major constructs in the relationship literature: Sexual promiscuity and anxious attachment. EP should be related to sexual promiscuity because both sex and love often occur together. As a result, promiscuity in one domain should result in promiscuity in the other. Likewise, EP should be related to anxious attachment in that both are focused on forming romantic bonds. However, I also differentiated EP from both of these constructs on a conceptual basis. For example, EP differs from sexual promiscuity in its emphasis on love rather than sex. Likewise, EP differs from anxious attachment in that the two constructs are related to different relationship processes.

Finally, I argued that EP should also have consequences related to interpersonal issues as well as health outcomes. Specifically, I argue that EP is likely to be related to emotional infidelity and other

destructive tendencies in relationships. EP is also likely to play a role in unprotected sex, because love and trust are barriers to condom use. Given that individuals high in EP experience love with many people, EP might also predict a tendency to have more unprotected sexual partners.

In sum, I argue EP is a clearly-defined construct that is open to empirical measurement. I also argue that, despite some overlap, EP is distinct from currently established constructs in relationship research. Finally, I argue that EP should be able to predict outcomes that are critical to both relationships and health.

### **1.8.1 Organization**

The empirical research that follows is organized into four different chapters. The next chapter (Chapter 2) will focus on scale construction, development, and psychometric structure. The subsequent chapter (Chapter 3) will be dedicated to establishing a nomological network using cross-sectional methods. Chapter 4 presents an empirical article dedicated to the predictive validity of the EP scale using emotional infidelity as the outcome variable. Chapter 5 comprises an empirical article dedicated to health implications of EP. The dissertation concludes with an overall summary labeled Chapter 6.

It is the purpose of this dissertation to persuade researchers that EP is: (a) a reliable and valid construct, (b) predictive of unique and critical outcomes in psychology, and (c) important and relevant in domains of health and relationships.

## 2. Scale Construction, Development, and Structure

This chapter will focus on the development and psychometrics of the EP scale. Key issues are: (a) how items were selected, (b) the factor structure, and (c) reliabilities of the subscales and total score.

It is important to note that a preliminary version of the EP scale has been previously published (Jones, 2011). In that brief chapter in the *Handbook of Sexuality-Related Measures*, I presented part-whole correlations and preliminary validity evidence. Within this chapter, however, I will delineate in much greater detail, the process of item generation, selection, and retention. Most important, I will evaluate the structure of the final EP scale.

### 2.1 Study 1: Item Generation and Refinement

Based on the conceptual analysis provided in the introduction, the first step was to generate items for the EP scale. I started with the two “love-proneness” items developed by Harms and colleagues (2001), which were “How many times have you fallen in love at first sight?” “How many times have you been in love?” In addition to these two items, I used popular sexual promiscuity scales such as the Sociosexual Orientation Inventory (SOI; Simpson & Gangestad, 1991) and the Permissiveness subscale of the Sexual Attitudes Scale (SAS; Hendrick, Hendrick, 1987) as a template for generating items.

Items that could be appropriately re-worded were simply altered to reflect emotional instead of sexual promiscuity. Other items were written to directly reflect the definition of EP (i.e., I fall in love easily, I fall in love frequently; See Table 2.1).

Most items were created in Likert format. But I also followed the SOI model in posing several questions about the frequency of relevant behavior (e.g., in your lifetime, how many times have you fallen in love?). The result was an item pool of 37 items.

### **2.1.2 Method**

A sample consisting of 397 UBC undergraduates completed the initial set of 37 items as part of a larger survey study on the “Dark Triad” of personality. The sample was typical of UBC undergraduates with 67 percent of the participants reporting their gender as female and a mean age of 20.35 ( $SD = 3.10$ ). Unfortunately, due to a computer error, ethnicity was not measured in this particular sample.

All Likert items were collected on 5-point scales (Strongly Disagree = 1; Strongly Agree = 5). All behavioral count items (e.g., how many times have you fallen in love in your life?) were open ended. Based on their distributions, I created five bins to match the 5-point Likert scales.

### **2.1.2 Results and Discussion**

To find the common factor in the 37 item set, I applied PCA and examined the First Unrotated Principal Component (FUPC). Note from Table 2.1 that all but two items showed positive loadings. The FUPC had an Eigenvalue of 6.75, and accounted for 18.24 of the total variance.

To reduce the item set, I considered only the 26 items loading above .35 on the FUPC. Several were eliminated for other reasons. For example, items that included the word “crush” and items such as “I’ve been swept off my feet” and “I am careful who I give my heart to” were eliminated because of their overly colloquial and gender-role specific nature. In retrospect, items pertaining to loving another person’s partner or getting over romantic partners quickly seemed too close to the callous concept of mate-poaching (e.g., Schmitt & Buss, 2001): They were also dropped. After this pruning stage, the core concept of EP (i.e., falling in love easily and often) seemed to emerge more clearly.

As a result, the 10 items marked in bold were retained for the final EP scale. They were published in a recent chapter (Jones, 2011). Fortunately, two of these were reverse-scored, thereby alleviating concerns with acquiescent response style (Paulhus, 1991).

**Table 2.1 Loadings on the First Principal Component of the Initial Item Pool (N = 397)**

## Items

- 
- 1. I feel romantic connections right away. (.45)**
  2. It is not a good idea to fall in love frequently. (.12)
  - 3. I fall in love easily. (.72)**
  - 4. I love the feeling of falling in love. (.36)**
  - 5. I often feel romantic connections to more than one person at a time. (.55)**
  6. True love means loving one person as long as you both shall live. (.01)
  - 7. For me, romantic feelings take a long time to develop. (R) (.61)**
  - 8. I tend to jump into relationships. (.61)**
  - 9. I am not the type of person who falls in love. (R) (.42)**
  10. It takes me a long time to be ready for another romantic relationship after one ends. (.42)
  11. It is OK to fall in love with someone you just met. (.36)
  12. I can get over former loves quickly. (.03)
  - 13. I fall in love frequently. (.63)**
  14. Sometimes feelings of love overpower me (.49)
  15. When I meet someone I like, I immediately spend a lot of time thinking about them. (.52)
  16. I can get over former partners quickly. (.07)
  17. I often think that a relationship is starting when it isn't. (.44)
  18. I am careful who I give my heart to. (.50)
  19. I have been "swept off my feet" (.43)
  20. I cannot help who I fall in love with. (.33)

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Items (continued)

1. There are a lot of people I have a crush on. (.51)
  - 2. I have been in love with more than one person at the same time. (.55)**
  3. I have had crushes on people that I just met. (.46)
  4. I fall out of love easily (-.01)
  - 5. During your entire life, with how many people have you fallen in love? (.62)**
  6. With how many people have you fallen in love within the past year? (.48)
  7. With how many people do you foresee falling in love with during the next five years? (-.01)
  8. How many times a year do you fall in love “at first sight”? (.32)
  9. How many times have you fallen in love with someone other than your relationship partner, while in a relationship? (.38)
  10. How often do you fantasize about falling in love with someone other than your current dating partner/spouse? (.28)
  11. How many people have you had a crush on in the past month? (.23)
  12. How many people have you developed deep emotional attachment to in the past year? (.45)
  13. How often have you fallen in love with someone else’s partner? (.38)
  14. How many committed romantic relationships have you had in the past year? (.37)
  15. How many times have you thought you were in love, but actually were not? (.44)
  16. How many people have you dated in the past month? (.30)
  17. With how many people have you felt an intimate connection with in the past month? (.41)
- 

*Note:* N = 397. The FUPC loading is in parentheses. Items in bold were retained for the final scale.

## 2.2 Study 2: Confirming the Factor Structure

In Study 1, I generated a broad set of items related to the concept of EP. To clarify the common thread running through these items, I pulled out the first principal component. The top 10 items were selected to form the tentative EP scale.

To evaluate the factor structure, I administered the tentative measure to a much larger and broader sample of adult respondents. Instead of examining the first unrotated principal component, I tested whether the a priori 2-factor structure held up in the 10-item set. For this purpose, confirmatory factor analysis (CFA) was used. Separate CFAs were conducted on two large samples.

I anticipate a 2-facet structure that parallels previous work on sexual promiscuity. In their work on Sexual Standards Theory (SST), Buss and Schmitt (1993) distinguished and measured two ways in which one can be promiscuous: One facet assessed how *soon* participants would have sex with someone attractive. The second facet assessed how *many* individuals one would want to have sex with.

The distinction was also evident in work by Simpson and Gangestad (1991). They noted that sexually promiscuous (referred to as sociosexually unrestricted) individuals did indeed have sex *sooner* and with *more partners* compared to those not sexually promiscuous. Therefore, I anticipate that the factor structure of EP will reveal a similar distinction: I propose the labels, *easily* and *often* to represent these characteristics. This distinction set up the hypothesized 2-factor structure indicated in Table 2.2

### 2.2.1 Method

**Participants.** A sample of 347 adults (65% female, 67% European Heritage, mean age: 30.55) were recruited from an on-line site -- Amazon's Mechanical Turk. That site connects researchers with a huge panel of respondents who are willing to complete questionnaires for modest remuneration. In short, Mechanical Turk is a practical source of inexpensive data from a diverse panel of participants. ([www.mturk.com/mturk/welcomeon.com](http://www.mturk.com/mturk/welcomeon.com)).

Recent research has established that data collected on Mechanical Turk are as valid as student samples in terms of response rates, internal reliabilities, and test-retest reliabilities as well as the patterns of external correlates. Moreover, data from Mechanical Turk are superior to student samples in utility with respect to diversity (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010; Rand, 2011).

**Measures and Procedure.** All participants completed the 10-item EP scale (Jones, 2011) along with several demographic questions (e.g., sex, age, ethnicity). As before, nine of the ratings were collected on 5-point scales anchored with "Strongly Disagree" and "Strongly Agree". To maintain the 5-point format, the final item assessing number of times one has fallen in love (lifetime) was coded: 0, 1, 2, 3, 4 or more. After reverse scoring items 2 and 5, the alpha reliability of the 10-item EP scale was solid: Sample 1: men,  $\alpha = .83$ , women,  $\alpha = .80$ .

I used *Mplus* software (Muthen & Muthen, 1998) to run all analyses using Weighted Least Squares Mean and Variance - adjusted (WLSMV) as the extraction method. Data that use Likert Scales – especially those less than 7-point – are to be considered ordinal in nature and not metric (Muthen & Muthen, 1998). *Mplus* was used because it provides the recommended technique for dealing with such Likert item data. This technique begins by converting the 5-point

data into approximated normal distributions. The correlations among these transformed variables are termed a polychoric matrix. This matrix provides the input for standard latent variable techniques.

By estimating threshold parameters that predict the likelihood of moving from one category (e.g., agree) to the next (e.g., strongly agree), a more accurate estimate of dimensionality emerges. In essence, one can better estimate the relationships among items (e.g., Muthen & Kaplan, 1985). A useful byproduct is that the inter-correlations tend to be higher than those achieved with conventional methods. As a result, software packages (e.g., SPSS) only capable of estimating correlations in a linear fashion underestimate the potential relationships among items.

An oblique rotation is appropriate because I expect the facets of the scale to be correlated and converge as a single measure. It is also important to note that item 6 and item 7 had very similar wording (“I often feel romantic connections to more than one person at a time.” and “I have been in love with more than one person at the same time.”). This similar wording resulted in an unusually high correlation between the two items ( $r = .62, p < .0001$ ). As a result, the error terms of these two items were not constrained, allowing them to correlate with each other. It should be noted that freeing correlated error terms should *only* be done when there is strong theory and such procedures should *always* be replicated.

### **2.2.2 Results and Discussion**

Table 2.2 presents the results of the first CFA. As predicted, the correlation between the two facets was positive and substantial ( $r = .71$ ). The model fit to the data was decent as

evidenced by three standard indexes (CFI = .87, TLI = .91, SRMR = .08).<sup>1</sup> The TLI, in particular, has been shown to be the most appropriate fit index, especially for complex models (i.e., three or more factors) of categorical nature (Beauducel & Herzberg, 2009).

Although those three fit indexes suggested an adequate fit, the Root-Mean Squared Error of Approximation (or RMSEA) was not acceptable (RMSEA = .150). However, it should be noted that in models using categorical estimation methods, a decent CFI score coupled with a poor RMSEA, often indicates that the latter value is inflated. This inflation suggests that RMSEA is underestimating the fit (Savalei, 2011; Yuan, 2005). In fact, it is unclear how RMSEA functions in categorical data estimation methods, and SRMR (a similar fit index) is a more appropriate in categorical models (e.g., Savalei, 2011).

Note from Table 2.2 that every item loaded on its hypothesized factor > .32, a recommended cut-off for item loading (see Worthington & Whittaker, 2006). In addition, the highest loading item (.84) for Facet 1 was Item 1: “I fall in love easy.” Similarly, the highest loading item (.87) for Facet 2 was Item 8: “I fall in love frequently.” These two pieces of evidence suggest that the facets of the EP scale are converging on their hypothetical underpinnings (i.e., *easy* and *often*).

Although the results of the first CFA were encouraging, it would be reassuring to see a replication of this factor structure on a separate sample. In particular, the need for a correlated error term suggests that replication is necessary (see Cole, 1987; see also Gignac, Bates, & Jang, 2007). Therefore, I conducted a second CFA.

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<sup>1</sup> Psychometricians have long argued that convergent evidence of fit indexes is needed to assess the fit of a CFA model (e.g., Brown, 2006). A CFI score of .90 or better is considered good fit (Brown, 2006; Muthen & Muthen, 1998), and a TLI of .95 or better is considered good fit. Moreover, an SRMR score of less than .08 also indicates good fit.

**Table 2.2 The First CFA of the EP Scale.**

Item:	F1 (Easily)	F2 (Often)
1. I fall in love easily.	<b>0.844</b>	0
2. For me, romantic feelings take a long time to develop. (R)	<b>0.699</b>	0
3. I feel romantic connections right away.	<b>0.814</b>	0
4. I love the feeling of falling in love.	<b>0.347</b>	0
5. I am not the type of person who falls in love. (R)	<b>0.384</b>	0
6. I often feel romantic connections to more than one person at a time.	0	<b>0.419*</b>
7. I have been in love with more than one person at the same time.	0	<b>0.444*</b>
8. I fall in love frequently	0	<b>0.870</b>
9. I tend to jump into relationships.	0	<b>0.648</b>
10. How many people have you fallen in love with?	0	<b>0.578</b>

Note: N = 347. \*The error terms of these two items were allowed to correlate ( $r = .52$ ). The Extraction method was Weighted Least Squares Mean and Variance adjusted (WLSMV), resulting in good fit: CFI = .87; TLI = .91; SRMR = .08.

## 2.3 Study 3: Replicating the CFA

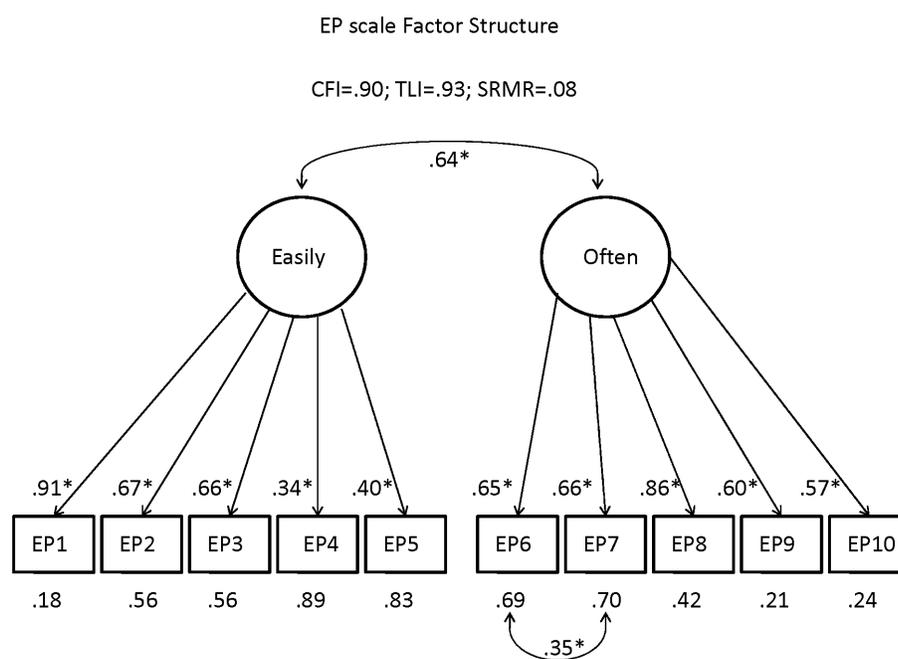
### 2.3.1 Method

The second sample of 323 participants was also drawn from MTurk and was virtually identical to the first in all demographics. The alphas for the 10-item EP scale were again excellent: men,  $\alpha = .80$ , women,  $\alpha = .84$ .

### 2.3.2 Results and Discussion

An identical CFA was conducted using Mplus software. Given the 5-point Likert nature of the data, which overall suggests categorical analysis, I again used Weighted Least Squares or WLSMV extraction. The CFA model was identical: items 1, 2, 3, 4, 5 loaded on Facet 1 (*easily*); and items 6 through 10 loaded on Facet 2 (*often*). Additionally, items 6 and 7 were allowed to correlate, and the two facets were also allowed to correlate.

The results indicated that this model replicated, as evidenced by another decent fit to the data (CFI = .90; TLI = .93; SRMR = .08). In addition, as can be seen in Figure 2.1, all items loaded appropriately on their assigned facet. Once again, Item 1 (“I fall in love easily”) and item 8 (“I fall in love frequently”) had the highest loadings on their respective facets. Thus, the EP scale appears to map onto the appropriate facet structure. Indeed, this facet structure was predicted *a priori* and is in line with theoretical arguments surrounding promiscuity (e.g., Buss & Schmitt; Simpson & Gangestad, 1991). In other words, the two facets of the EP scale appropriately match the two components associated with promiscuity: *easily* and *often*. Although the EP scale has two highly replicable facets that each have importance, the EP scale is appropriate as a composite as well because the two latent factors, which make up these facets, have an extremely large correlation between them ( $r = .71$  in Study 1 and  $r = .64$  in Study 2).

**Figure 2.1 The CFA Structure of the EP Scale.**

## 2.4 General Discussion

The results of Studies 2 and 3 indicate that EP has a reliable two-facet structure that maps onto the spirit of the construct, which is that people vary in their ease and frequency for falling in love. These findings have several important implications.

First, the EP scale represents a stable individual difference variable. In fact, to test whether EP was stable even across the lifespan, a cross-sectional analysis was done by age. I examined EP means by different age categories (i.e., 18 to 21; 22 to 25; 26 to 30; 31 to 39; 40 to 55; 56 to 99) and conducted a one-way Analysis of Variance (ANOVA) on EP scale scores. For both men and women, the omnibus *F*-test and all individual contrasts were not significant. These null findings suggest that EP is not simply a manifestation of age related life circumstances.

Second, the EP scale has good psychometric properties. For example, the total score and the subscales of the EP scale showed acceptable alpha reliabilities. The instrument also exhibits a coherent and replicable internal structure, which was the same across two samples and consistent with theory. This theory argued that promiscuity has two aspects: frequency and ease, and the EP scale measures both facets reliably.

Another important aspect of the factor structure of EP was that the two facets were highly correlated in both samples, suggesting a unitary scale<sup>2</sup>. However, both facets had sufficient reliability with just five items, suggesting they can be assessed independently. This type of factor structure is not unlike those in other multi-faceted instruments in psychology (e.g., Self-Report Psychopathy scale or Sociosexuality Orientation Inventory). Among such instruments, the

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<sup>2</sup> Some may argue that unit weighting is required for balanced research. However, using simple mean composite scores are usually as reliable in creating an index for predicting behavior (see Garb, Wood, & Fiedler, in press, for review).

individual facets are interpretable, but so is the composite score (e.g., Paulhus, Neumann, & Hare, in press; Webster & Bryan, 2007).

The correlation between facets is extremely important when making assertions about the unidimensional nature of a scale and how it can be scored. Measures that produce orthogonal – or near orthogonal – facets (properly referred to as factors when there is no correlation among them) cannot be summed or averaged into a meaningful composite (Carver, 1988).

One example of a violation of this rule comes from the psychopathy literature: The Levenson Primary and Secondary Psychopathy (LPSP) Scale. This measure produces two orthogonal factors, which were labeled “primary” and “secondary” psychopathy. These labels imply that both factors are measuring psychopathy; however, this assertion is untenable given that their correlation is consistently near zero. The literature has attempted to accommodate these dubious labels by asserting that there are two *kinds* of psychopathy that are unrelated. However, the logical deduction from using psychopathy on both scales is that they should have some relationship to one another and sum into a meaningful composite, which is not true.

A more recent measure, the Self-Report Psychopathy (SRP) Scale, addressed this misunderstanding in the psychopathy literature (Williams, Paulhus, & Hare, 2007). The SRP has four facets that are all strongly and positively inter-correlated. In this way, one can assess the unitary dimension that these four facets are measuring – a single construct called “psychopathy.”

Thus, if the correlation between the facets *easily* and *often* in the EP scale were unrelated, then these two facets are *not* tapping the unidimensional construct of *Emotional Promiscuity*. Fortunately, however, these facets were highly correlated, assuring us that the unidimensional score is meaningful and can be assessed reliably.

### 3. Nomological Network

#### 3.1 Introduction

The purpose of this chapter is to use concurrent and cross-sectional data to begin to validate the construct of EP and the EP scale. This validation process will begin by correlating EP with other psychological variables and important life outcomes. One of the goals of this chapter is to show that the EP scale fits appropriately within the nomological net of related constructs (Cronbach & Meehl, 1955). Of primary interest are its links with sexual promiscuity and anxious attachment.

**3.1.1 The Two Key Correlates.** The importance of the two key correlates arises from two prominent psychological “laws”. One is that humans are averse to loss (Tversky & Kahneman, 1991). Once in possession of something, people are especially averse to losing it (e.g., a romantic partner, money, status) than they are to missing future opportunities for gain. However, relationships and love affairs that are initiated rapidly and with little substance are, by nature, difficult to retain. Individuals who are in love – regardless of its temporal build-up – will be averse to losing their partner.

The construct most relevant to relationship loss is anxious attachment (Shaver & Mikulincer, 2009). High EP individuals initiate so many relationships that it may encourage the development of defensive responses (i.e., anxious attachment) to retain partners, at least until they find a new romantic interest. Following from this retention logic, I argue that (in most cases) aversion to risk coupled with a lack of relationship foundation becomes a guiding principle with respect to attachment in someone high in EP. Therefore, I predict a significant positive relationship between these two variables.

The second psychological law is grounded partially in the neurobiology of sex. Individuals are likely to fall in romantic love with those they have sex with, and are likely to have sex with those they fall in love with. This argument stems from the neurobiological reactions occurring during intercourse and orgasm that creates a bond with the partner (e.g., Carter, 1992). Therefore, someone who has sex with more people is likely to also have more romantic interests, and vice versa. An important exception to this rule are individuals (e.g., psychopaths) who may be incapable of forming “normal” human bonds that involve empathy and genuine concern for others (Cleckley, 1976), yet still have many sexual partners. Such exceptions notwithstanding, a second major correlate of the EP scale should be sexual promiscuity.

**Other Correlates.** The EP scale should have a modest positive association with romantic idealism. Both characters are likely to endorse notions such as belief in “love at first sight” and focus excessively on romantic aspects of their life. However, the two personalities could not differ more in their belief that love will endure.

EP should also exhibit a modest positive association with borderline personality. The two personalities share impulsive reactions to romantic feelings. However, the behavior of borderlines is driven by an excessive anxiety -- not expected to characterize individuals high in EP.

The EP scale should also show discriminant validity from other important relationship constructs. For example, the EP scale should be unrelated to long-term relationship orientation (Jackson & Kirkpatrick, 2007). This prediction stems from the predisposition of high EP individuals for changing partners frequently, but their desire for romantic commitment, which is a long-term desire. Thus, these two variables should be unrelated overall. The EP scale should

also have a negative correlation with avoidant attachment. This negative relationship should emerge because high EP individuals should be moving towards intimacy quickly and easily, not avoiding it.

Another aspect of the nomological network of EP is its associations with important relationship outcomes. Specifically, the EP scale should predict actual numbers of romantic relationships (i.e., boyfriends/girlfriends) and marital engagements. On the other hand, the EP scale should be independent of outcomes outside of its domain (e.g., number of children).

### **3.1.2 Predictions**

1. The EP scale should show positive associations with anxious attachment, sexual promiscuity, borderline personality and romantic idealism.
2. The EP scale should have discriminant associations (i.e., smaller correlations) with unrelated relationship constructs such as avoidant attachment and long-term mating orientation.
3. Compared with the competing relationship variables, the EP scale should show a distinctive pattern of associations with the Big Five traits and self-esteem.
4. The EP scale should uniquely predict number of marital engagements, relationships, and a younger age of first engagement.

### **3.1.3 General Method**

**Participants and Procedure.** In all studies reported in Chapter 3, participants were adults recruited online from Amazon's Mechanical Turk (MTurk) for various surveys. The

procedure was always the same with participants recruited through MTurk website: For every study, participants followed an embedded link containing the survey questions.

Participants were primarily from North America and had the following similar demographic distributions: In all cases the mean age was approximately 30 years, with the youngest participant being 18 and the oldest being 75. The primary ethnicity was European Heritage, followed by East and South Asians. The gender distributions were fairly even as well. All Likert responses were on a scale of 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Last, given that age is such a large factor that differentiates the MTurk samples from student samples, age was partialled out of all the correlations presented in this chapter.

**Measures.** Considering the important overlap that the EP scale should have with both anxious attachment and sexual promiscuity, a measure of these three constructs was included in every reported study.

**Emotional Promiscuity.** To measure EP, every study included the 10-item EP scale (Jones, 2011) using the scoring procedures outlined above.

**Anxious and Avoidant Attachment Style.** In order to assess attachment styles one of two measures were used for every study. When time permitted, the full 36-item Experiences in Close Relationships scale (ECR) was used (Brennan, Clark, & Shaver, 1998). However, when a more brief questionnaire was needed, I decided to use either the ECR short form (or ECR-SF) designed by Wei, Russell, Mallinckrodt, and Vogel (2007) or the Adult Attachment Questionnaire (AAQ; Simpson, Rholes, & Phillips, 1996). The ECR-SF is a validated 12-item short-form derived from the original 36-item ECR scale. Like the ECR, the ECR-SF breaks into

two factors: anxious and avoidant. The AAQ also breaks into the factors of anxious and avoidant.

**Sexual Promiscuity.** Sexual promiscuity was assessed in all studies using the 7-item Sociosexual Orientation Inventory (SOI; Simpson & Gangestad, 1991). The SOI is the most popular instrument in psychology to measure sexual promiscuity. The scoring procedure used in all studies was to cap free response items at 11+ and standardize all items. Items were then averaged into a composite score.

### 3.3 Study 1: Convergent and Discriminant Validity

#### 3.3.1 Method

**Participants.** Participants were 237 adults recruited from Mechanical Turk (64% women; Mean age = 27.61; 68% European Heritage, 11% East Asian, 7% Latino(a); 7% African Heritage; 7% other mixed ethnicities), who were recruited for a study on personality.

**Measures.** In addition to the ECR-SF, SOI, and EP Scale, the following measures were included:

**Romantic Idealism.** I used the 15-item Romantic Beliefs Scale (RBS; Sprecher & Metts, 1989) to assess romantic idealism. This scale consists of romantic notions taken from Western literature and films and breaks into four factors of: Love at first sight, one and only one love, and love can conquer all, and idealization of romantic partners. The RBS had excellent reliability in the present sample for men ( $\alpha = .81$ ) and women ( $\alpha = .87$ ).

**Long-term Mating Orientation (LTMO).** To assess how much individuals want a long-term relationship I used five items from Jackson and Kirkpatrick's Multidimensional Sociosexual

Orientation Inventory (MSOI; Jackson & Kirkpatrick, 2007). These five items were very reliable in men ( $\alpha = .85$ ) and women ( $\alpha = .86$ ).

**Borderline Personality Orientation (BPO).** Last, I measured Borderline Personality Organization (BPO) using the 28-item Likert scale questionnaire designed by Oldham and colleagues (1985). The items were averaged to form a composite of BPO for men ( $\alpha = .91$ ) and women ( $\alpha = .92$ ).

### 3.3.2 Results and Discussion

Table 3.1 presents all the correlation and regression results (regressions for all studies consisted of: age, EP scale, anxious attachment, and sexual promiscuity).

As predicted, the two highest positive correlations with EP – for both men and women – were anxious attachment and sexual promiscuity. The RBS had small to moderate positive correlations with the EP scale and anxious attachment. The RBS also negatively correlated with sexual promiscuity. This finding makes sense given that anxiously attached and emotionally promiscuous individuals are focused on love and romance rather than sex. In fact, it also makes sense that those seeking casual sex would find romantic idealism aversive.

Also as predicted, the EP scale was overall negatively related to avoidant attachment (when anxious attachment and sexual promiscuity are controlled for). This correlation stands in contrast to sexual promiscuity and anxious attachment, which were mostly positively related to avoidant attachment. Interestingly, the EP scale was positively related to long-term mating in women (and slightly positive in men). Thus, it appears that individuals high in EP are truly searching for a long-term partner – at least to some degree. This positive correlation was not found for sexual promiscuity or anxious attachment.

It is important to note that EP cannot be explained through the impulsive and erratic disposition of Borderline Personality. The EP scale had a modest (at best) positive correlation with the BPO scale, and that positive association disappeared when overlap with anxious attachment was controlled for. However, anxious attachment had very large correlations, in both men and women, with the BPO scale.

In sum, the EP scale showed important correlations that situate it properly among other important relationship constructs. In addition, the pattern of correlations provided convergent and discriminant validation evidence for the EP scale as well.

**Table 3.1 Correlations Between Relationship Variables and Key Variables.**

	Long-term Mating	Romantic Idealism	Avoidant Attachment	Borderline Personality	Anxious Attachment	Sexual Promiscuity
<i>Men (n=103)</i>						
EP Scale ( $\alpha = .72$ )	-.06 (.10)	.18* (.31**)	-.06 (-.19*)	.22* (.16)	.18* (.20*)	.31** (.31*)
Sexual Promiscuity ( $\alpha = .79$ )	-.49** (-.51**)	-.33* (-.42**)	.29* (.33**)	.09 (.02)	.18* (.07)	-----
Anxious Attachment ( $\alpha = .60$ )	-.06 (.00)	.08 (.05)	.14 (.13)	.59** (.41**)	-----	.18* (.07)
<i>Women (n=230)</i>						
EP Scale ( $\alpha = .78$ )	.15* (.20**)	.15* (.22**)	-.09 (-.24**)	.17* (.04)	.23** (.21**)	.31** (.30**)
Sexual Promiscuity ( $\alpha = .82$ )	-.13* (-.19**)	-.26** (-.34**)	.26** (.31**)	.14* (.07)	.12 (.05)	-----
Anxious Attachment ( $\alpha = .75$ )	.04 (.01)	.18** (.16**)	.22** (.24**)	.51** (.49**)	-----	.12 (.05)

Note: N = 237. \* =  $p < .05$ , \*\* =  $p < .01$ .

### 3.4 Study 2: Big Five and Self-esteem Correlations

#### 3.4.1. Method

**Participants.** Participants were 233 adults recruited through Mechanical Turk (53% women; Mean age = 31.27; 61% European heritage, 15% East Asian, 11% South Asian, 6% Latino(a), 4% African heritage, 3% other mixed ethnicities).

**Measures.** In addition to the ECR, SOI, and EP scale, participants filled out the following questionnaires:

**Big Five Inventory.** To assess the five factors of personality, I used the Big Five Inventory (BFI; Johns & Srivastava, 1999). The BFI reliably assesses Extraversion ( $\alpha = .80$ ), Agreeableness ( $\alpha = .73$ ), Conscientiousness ( $\alpha = .77$ ), Neuroticism ( $\alpha = .81$ ), and Openness to Experience ( $\alpha = .78$ ).

**Self-Esteem.** In addition to the BFI, Rosenberg's Self-Esteem (RSE) scale was used to measure global self-worth (Rosenberg, 1965). The RSE had excellent reliability ( $\alpha = .89$ ).

#### 3.4.2 Results and Discussion

As can be seen in Table 3.2, the correlates of the EP scale are separated for men and women. For women, the EP scale was positively correlated with extraversion but had no other significant correlations. In men, however, the EP scale was negatively correlated with agreeableness and self-esteem and positively correlated with neuroticism. However, these correlations disappear when overlap with anxious attachment and sexual promiscuity are taken into account. The only remaining EP correlate is Extraversion, but for women only.

As predicted, sexual promiscuity and anxious attachment had patterns of correlations that are similar to previous research. For example, sexual promiscuity was negatively correlated with agreeableness in men (e.g., Schmitt, 2004; Markey & Markey, 2007) and was overall unrelated to self-esteem (Schmitt, 2005). By contrast, anxious attachment was negatively correlated with both agreeableness and conscientiousness in men. In addition, anxious attachment was also positively correlated with neuroticism and negatively correlated with self-esteem for both genders.

Taken together, these correlations suggest that the three variables are distinct in their patterns with both the Big Five and self-esteem. Specifically, of the three, anxious attachment is related to low self-esteem and high neuroticism. These findings make sense against the backdrop of Study 1 showing that anxious attachment is also the only variable primarily associated with borderline personality. These results differentiate EP and sexual promiscuity from anxious attachment (both of which were overall unrelated to neuroticism and self-esteem).

Interestingly, of all the Big Five traits, EP was only correlated to extraversion and this correlation only emerged for women. This correlation, along with an absence of disagreeableness seemed to differentiate EP from sexual promiscuity.

**Table 3.2 Correlations Between the Relationship Variables and Personality Variables.**

	Big Five Personality Factors					
	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness	Self-esteem
<i>Men (n=110)</i>						
EP Scale ( $\alpha=.83$ )	-.01 (-.02)	-.22* (.07)	-.13 (.04)	.24* (.12)	-.05 (-.05)	-.19* (-.07)
Sexual Promiscuity ( $\alpha=.82$ )	.02 (.03)	-.30** (-.33**)	-.03 (-.03)	.05 (.00)	.16 (.18)	.07 (.09)
Anxious Attachment ( $\alpha=.93$ )	-.01 (.00)	-.30** (-.33**)	-.31** (-.33**)	.32** (.27*)	-.17 (-.15)	-.36** (-.33**)
<i>Women (n=123)</i>						
EP Scale ( $\alpha=.78$ )	.20* (.19)	.05 (.12)	-.09 (-.04)	.07 (.00)	.09 (.02)	-.04 (.05)
Sexual Promiscuity ( $\alpha=.77$ )	.11 (.02)	-.13 (-.18)	-.11 (-.09)	.07 (.04)	.17 (.16)	-.10 (-.09)
Anxious Attachment ( $\alpha=.90$ )	.03 (.00)	.02 (.01)	-.08 (-.06)	.30** (.30**)	.01(-.01)	-.31** (-.31**)

Note: \* =  $p < .05$ , \*\* =  $p < .01$

### 3.5 Study 3: Major Life Outcomes

#### 3.5.1 Method

**Participants.** The sample consisted of 656 adults recruited from Mechanical Turk (53% Women; Mean age = 31.76; 56% European heritage, 23% East Asian, 13% South Asian, 3% African heritage, 2% other mixed ethnicities).

**Measures.** In addition to the ECR-SF, SOI, and EP scale, participants filled out a battery of questions about their love-lives, demographics, and relationship history.

Participants were asked the following:

- How many boyfriends/girlfriends have you had in your lifetime?
- How many times have you been engaged?
- How many times have you been married?
- How many children do you have?
- How many different partners have gotten you pregnant (or have you gotten pregnant)?
- How many times have you been divorced?
- At what age did you first get engaged?
- At what age did you first get married?
- At what age did you first get pregnant (or get someone pregnant)?

Given that promiscuity with respect to both sexual and emotional bonds may lead to a synergistic effect for life outcomes, I also computed an EP x sexual promiscuity interaction when predicting each major life outcome. These questions were appropriate given that Mechanical Turk consists of a large adult population. It is important to note that this study would be impossible to run on college students.

#### 3.5.2 Results and Discussion

Table 3.4 shows that for both men and women, the EP scale and sexual promiscuity were significantly and uniquely related to how many boyfriends/girlfriends

individuals reported having. As expected, the EP scale was the lone predictor of number of marital engagements for both men and women. Anxious attachment had no significant association with either of these outcomes.

Interestingly, the EP scale seemed to be more predictive of major life outcomes for women than for men. For example, high EP women reported having a greater number of partners getting them pregnant compared to low EP women, where the number of partners a man got pregnant was unrelated to EP. High EP women also reported a significantly younger age for their first marital engagement.

There was also a strong and significant interaction between the EP scale and sexual promiscuity such that women who were high in both were significantly more likely than anyone to report getting pregnant by multiple men. In other words, women who are sexually and emotionally promiscuous have gotten pregnant by significantly more men compared to women who are not high in both constructs. This finding makes particular sense given later research, which demonstrates that women who are high in both constructs are more likely to have a greater number of unprotected sex partners.

Anxious attachment had no unique associations to any of the life outcome variables. Sexual promiscuity was only uniquely related to number of boyfriends/girlfriends (like EP), number of children (men only) and number of divorces. Among women, sexual promiscuity (like EP) was also associated with becoming pregnant by multiple partners.

Perhaps of most importance, EP seems to directly predict, or contribute to the prediction, of several important life outcomes. Broken engagements seem to be of

particular importance for mental health considering such break-ups would be more painful due to their greater investment. Likewise, EP and sexual promiscuity interact to predict a critical life outcome, which is number of pregnancies by different men.

**Table 3.3 Correlations between Relationship Variables and Major Life Outcomes.**

Predictor	#bf/gfs	#engaged	#married	#children	#pregnant	#divorced	first engaged	first married	first pregnancy
<i>Men (n=308)</i>									
EP Scale ( $\alpha=.84$ )	<b>.39 (.27)</b>	<b>.19 (.16)</b>	.07 (.02)	<b>.11 (.01)</b>	<b>.12 (.07)</b>	.07 (-.08)	-.22 (-.14)	.02 (-.05)	<b>-.36 (-.10)</b>
Sexual Promiscuity ( $\alpha=.82$ )	<b>.45 (.36)</b>	<b>.16 (.04)</b>	<b>.14 (.10)</b>	<b>.19 (.13)</b>	<b>.14 (.10)</b>	<b>.23 (.25)</b>	-.20 (-.18)	.00 (-.11)	<b>-.34 (-.15)</b>
Anxious Attachment ( $\alpha=.76$ )	.12 (-.06)	.06 (-.02)	.03 (-.01)	.09 (.04)	.05 (.00)	.11 (.10)	-.15 (-.02)	<b>-.26 (-.11)</b>	<b>-.42 (-.25)</b>
EP X Sexual Promiscuity	---- (.55)	---- (.13)	---- (.02)	---- (.11)	---- (.03)	---- (-.01)	--- (.33)	--- (.21)	--- (-.73)
<i>Women (n=348)</i>									
EP Scale ( $\alpha=.82$ )	<b>.44 (.33)</b>	<b>.27 (.22)</b>	<b>.15 (.12)</b>	.04 (.09)	<b>.26 (.13)</b>	<b>.19 (.06)</b>	-.16 ( <b>-.30</b> )	.08 (.09)	-.11 (-.12)
Sexual Promiscuity ( $\alpha=.79$ )	<b>.40 (.26)</b>	<b>.14 (.06)</b>	<b>.08 (.04)</b>	-.02 (-.07)	<b>.30 (.22)</b>	<b>.20 (.22)</b>	.06 (.09)	.03 (-.03)	-.01 (.12)
Anxious Attachment ( $\alpha=.70$ )	.06 (-.08)	-.02 (-.08)	-.03 (-.06)	-.04 (-.05)	.02 (-.06)	-.01 (-.06)	-.08 (.09)	.01 (.02)	-.17 (-.14)
EP X Sexual Promiscuity	---- (-.03)	---- (.22)	---- (.12)	---- (.04)	---- (.47)	---- (-.02)	--- (.48)	--- (.05)	--- (-.84)

Note Significant effects are in **bold**.

### 3.6 General Discussion

In general, the EP scale seemed to behave as predicted in cross-sectional, concurrent data. This evidence is encouraging but not sufficient for viewing the EP scale as a valid instrument for predicting important behaviors.

The EP scale makes sense against the backdrop of two important constructs already established in the psychological and relationship literature: Sexual promiscuity and anxious attachment. The EP scale is moderately and positively related to both anxious attachment and sexual promiscuity as theory would predict. More importantly, these correlations were higher than scales that were not directly related to the construct of EP (e.g., romantic idealism, long-term mating, borderline personality). The EP scale also had a negative (albeit small and non-significant) relationship with avoidant attachment. This correlation is important for two reasons: (1) It demonstrates that it can be distinguished from anxious attachment and (2) it suggests that individuals high in EP do generally embrace new potential partners and open up to them.

Approach motivation is also underscored by extraversion, which was correlated with the EP scale in women. Extraverted individuals approach situations with enthusiasm, especially relationship opportunities (e.g., Eysenck, 1976), and the EP scale had the highest association with extraversion when compared to sexual promiscuity or anxious attachment. However, it should be noted that this pattern of results only emerged in women.

High EP individuals, in addition to approaching situations with enthusiasm, also seem to deceive themselves more than low EP individuals do. In fact, the EP scale differentiated itself in terms of self-deception. This association between EP and self-deception makes sense given that self-deception may facilitate the belief that one is in love with a relatively unknown potential partner. Moreover, self-deception may provide optimism in the mind of a high EP individual that

each time the outcome will be favorable. Indeed, women high in EP were slightly more likely to self-deceive compared to those women low in EP. In fact, anxious attachment had a strong negative association with self-deception for both men and women. Once again, these patterns of results speak to the following distinction: EP is a want or initiation process and anxious attachment is a need or maintenance process.

### **3.6.1 Life Outcomes**

Likely the most important evidence for criterion validity of the EP scale came from the major life outcomes. The backdrop of approach, lack of inhibition, and self-deception, seems as though it would lead to specific outcomes. Indeed, the EP scale was the best predictor of number of times one is engaged to be married. Saying “yes” to a marriage question seems to be associated with falling in love easily and often. However, individuals high in EP do not seem to follow through with these engagement promises, as evidenced by no association with number of marriages.

Interestingly, EP and sexual promiscuity had a synergistic effect on women leading to multiple fathers for their children. This finding makes sense given that such women are more likely to want to unite (i.e., have a family, have children) with their partners and are simultaneously comfortable sleeping with many partners.

Overall, anxious attachment was not related to any of the major life outcomes selected in the present chapter. These results are not to say that anxious attachment does not contribute to major life outcomes, but there seems to be little predictive ability of anxious attachment for these particular outcomes.

### **3.6.2 Conclusions**

The present study found evidence for a coherent nomological network in which EP is embedded. This construct validity stems from the demonstration of appropriate correlations with extant measures in the relationship and psychological literature. However, one drawback of the present research is that these correlations were all cross-sectional in nature. Although these correlations provide confidence that the EP construct exists and fits nicely into a larger framework of variables, it is limiting in what it can tell us about the predictive validity of the EP scale.

Considering that the EP scale is meant to be used as a predictive device, as well as a measurement tool, it is critical to demonstrate predictive validity. The next chapter was designed to test the ability of the EP scale to predict a critical and germane outcome that should be exclusively related to EP in relationships, namely, emotional infidelity.

## 4. Emotional Promiscuity Begets Emotional Infidelity

### 4.1 Brief Synopsis

The previous chapters demonstrated that the EP construct is a valuable construct in the realm of relationships and that the EP scale has good psychometric properties and demonstrates convergent and discriminant validity.

The purpose of this chapter is to further evidence for the importance of EP and the validity of the EP scale. Specifically, this chapter is designed to provide evidence that EP is a good predictor of an important outcome: emotional infidelity. Further, this chapter seeks to provide evidence that the EP scale can be used as a predictive device when assessing emotional infidelity.

### 4.2 Introduction

Emotional infidelity is a destructive and pervasive phenomenon in romantic relationships. For example, emotional infidelity is extremely hurtful (Green & Sabini, 2006), and often leads to relationship dissolution (Shackelford, Buss, & Bennett, 2002). Emotional infidelity is also reported as more disturbing than is sexual infidelity in most cultures (e.g., Becker et al., 2004; Harris, 2003; Sagarin, 2005). Emotional infidelity victims also feel sadness, hopelessness, and even depression (Cano & O'leary, 2000; Sabini & Green, 2004; Shackelford et al., 2000). In spite of the consequences, little (if any) empirical evidence addresses the question of what predisposes some individuals to be emotionally unfaithful in relationships.

Sexual and emotional *infidelities* frequently co-occur, but can still happen independently of one another (Buss, Larsen, Westen, & Semmelroth, 1992; Sabini & Green, 2004). One can develop an emotional attachment for an alternative partner but have no sexual desire for that person. Likewise, one can engage in sexual infidelity with another partner but have no emotional

attachment to that person. Therefore, the two infidelities are best described as overlapping but distinct. Nonetheless, these infidelities are most damaging when they occur together (e.g., Hall & Fincham, 2006).

#### **4.2.1 Predictors of Infidelity**

Given that emotional infidelity overlaps with sexual infidelity, it might be a reasonable assumption that variables that predict one type of infidelity would predict the other. For example, sexual promiscuity and avoidant attachment have both been linked to sexual infidelity (e.g., Allen & Baucom, 2004; Barta & Kiene, 2005; see also Mikulincer & Shaver, 2007, pg. 358). In other words, both a desire for sexual variety (e.g., Barta & Kiene, 2005) and/or an aversion to commitment (e.g., Allen & Baucom, 2004) would predict sexual infidelity. However, not much has been done with respect to linking these or other individual difference variables specifically to emotional infidelity (see Hall & Fincham, 2006).

Although emotional infidelity has not been discussed directly, researchers have found that anxious attachment predicts infidelity that is driven by emotional needs (Allen & Baucom, 2004). Given the emphasis on filling an emotional void felt by anxiously attached individuals (Mikulincer & Shaver, 2007, pg. 358), anxious attachment seems like a prime candidate for predicting infidelity of an emotional nature. Anxious attachment, however, is fraught with ambivalence and fear over losing romantic partners in spite of their obsessive and rapid romantic interests (e.g., Hazan & Shaver, 1987). Thus, anxiously attached individuals may inhibit acting upon their romantic feelings for others because of their fear of rejection (e.g., Hazan & Shaver, 1987).

Other aspects of romantic love have been measured by Sprecher and Metts (1989). They focused on the Western idealization of partners and romance. Individuals who endorse high

levels of romantic beliefs seem no different than others to maintain their relationships over time (Sprecher & Metts, 1999). Romantic beliefs may interfere with fidelity insofar as they create a desire for the early passion in a relationship, but that this desire may spill over into seeking new partners. Thus, an indicator of romantic beliefs also seems like an important variable to study alongside EP and attachment when predicting emotional infidelity.

Another variable that might be a promising candidate for predicting emotional infidelity is *emotional promiscuity* (EP; Jones, 2011). Individuals high in EP fall in love easily and often. As mentioned in Chapter 1, EP is conceptualized as a want rather than need process in the brain. Similar processes of approach motivation have been implicated in infidelity (Finkel et al., 2009).

Moreover, as shown in Chapter 3, individuals who are high in EP have more relationships and more marital engagements. Interestingly they do not have more marriages suggesting that often things go awry between the promise of marriage and actual commitment to it. Taken together, the high number of romantic relationships suggests heightened interest in emotional connections with individuals outside of their current relationship.

As detailed in Part 3, measures of emotional and sexual promiscuity are moderately correlated, but emotional promiscuity predicts variables that are unassociated with sexual promiscuity such as romantic idealism and anxious attachment. Furthermore, the synergistic effect of high emotional and sexual promiscuity leads to pregnancies from multiple partners. Such emotionally promiscuous individuals, who fall in love easily and often, may also be highly susceptible to developing romantic feelings for someone other than a primary romantic partner.

In sum, sexual promiscuity, anxious attachment, and avoidant attachment have all been shown to predict extra-dyadic relations. However, sexual promiscuity and avoidant attachment primarily predict sexual infidelity, and do not seem likely candidates for predicting emotional

infidelity. EP seems like an ideal candidate for putting one at risk for emotional infidelity given its association with frequent and varied romantic interests.

#### **4.2.2 Present Research**

The literature reviewed above led to the prediction that the EP scale would emerge as the primary predictor of emotional infidelity and sexual promiscuity would emerge as the primary predictor of sexual infidelity. I also predicted that both would be uniquely associated with general infidelity. In addition, I predicted that these associations would hold even when controlling for anxious attachment, avoidant attachment, romantic beliefs, age, and gender.

I conducted two studies, using both a college sample and a wide-ranging adult community sample, to test the above predictions. In Study 1, I used a more traditional retrospective self-reports of infidelity (e.g., Drigotas, Safstrom, & Gentilia, 1999) and in Study 2, I used a novel approach using diary-based longitudinal data to examine sexual and emotional infidelity. In both studies, I controlled for the overlap with anxious attachment, avoidant attachment, romantic idealism, and age.

### **4.3 Study 1: Retrospective Accounts of Infidelity**

Study 1 examined the associations among a number of established individual difference questionnaires in a large diverse sample. Personality predictors, including the EP scale, were used to predict retrospective accounts of sexual and emotional infidelity

#### **4.3.1 Method**

**Participants.** Participants were 351 adults (148 men, 203 women) recruited from an online website called “Mechanical Turk” for payment. Mechanical Turk has proven to be as reliable as student samples, while also being more diverse (Burhmester, Kwang, & Gosling,

2011). Mechanical Turk is especially useful for studies addressing variables such as infidelity, which are most relevant to a community adult sample.

Participants spanned a wide range of ages (18 to 74;  $M = 30.07$ ,  $SD = 10.03$ ), incomes (less than \$12,500 to over \$100,000 per year income) as well as ethnicities (53% European Heritage, 22% East Asian, 13% South Asian, 4% Latino(a), 3% African Heritage, 2% Native North American, 3% other ethnicity).

Individuals who reported being homosexual, bisexual, or transgendered were removed from all analyses because previous research has shown that they differ from their heterosexual gender mates in important ways with respect to jealousy and infidelity (e.g., Harris, 2002). This procedure left a total of 272 participants (109 men, 163 women). Inclusion of these groups showed a similar but weaker pattern of results. The sizes of these groups were not sufficient to analyze separately.

**Emotional Promiscuity.** The Emotional Promiscuity Scale (EP scale; Jones, 2011) measures how easily and often people fall in love. Sample items include, “I fall in love easily” and “I love the feeling of falling in love.” In the present sample, the EP scale had acceptable internal reliability ( $\alpha = .75$ ). The EP scale had a moderate to strong positive correlation with sexual promiscuity and anxious attachment in both men and women (see Table 2.1).

**Sexual Promiscuity.** Sexual promiscuity was measured and defined by the Sociosexual Orientation Inventory (SOI; Simpson & Gangestad, 1991). The SOI is a well known 7-item measure with good reliability ( $\alpha = .78$ ).

**Romantic Idealism.** The Romantic Beliefs Scale (RBS; Sprecher & Metts, 1989) includes five facets capturing an idealistic perspective on romantic relationships (overall  $\alpha = .86$ ).

Sample items include, “I believe that to be truly in love is to be in love forever,” and “The relationship I will have with my 'true love' will be nearly perfect.”

**Anxious and Avoidant Attachment.** The Experiences in Close Relationships (ECR) questionnaire was used to measure anxious ( $\alpha = .91$ ) and avoidant ( $\alpha = .92$ ) attachment styles (Brennan, Clark, & Shaver, 1998). The ECR is a well accepted and widely used measure adult romantic attachment (Mikulincer & Shaver, 2007). Sample items measuring anxious attachment include, “I resent it when my partner spends time away from me,” and “I worry about being alone.” Sample items measuring avoidant attachment include, “I am nervous when partners get too close to me,” and “I prefer not to be too close to romantic partners.”

**Sexual, Emotional, and General Infidelity.** To assess self-reported infidelity, I used a measure designed by Drigotas, Safstrom, and Gentilia (1999). The questions were designed to measure behaviors that constituted infidelity that was exclusively sexual, emotional, or a combination of both. The 15 items all included twelve response options ranging from 0 to 11 or more. See Appendix A.

All participants were given the instructions: “Think about your present (or most recent) romantic relationship. With how many different people did you do the following with, while in your relationship?”

Separate scales were then computed for (a) emotional infidelity (e.g., “How many people have you felt butterflies for besides your partner?” “Was emotionally intimate with someone else?”) and (b) sexual infidelity (e.g., How many people have you had sex with besides your partner? How many people have you had oral sex with besides your partner?)

The correlation between the two factors was very high ( $r = .74$ ). Therefore, an overall infidelity index was also calculated. The three scales were scored as composites and each

demonstrated strong internal reliability (Sexual infidelity  $\alpha = .93$ ; Emotional infidelity  $\alpha = .87$ ; General infidelity  $\alpha = .94$ ).

#### 4.3.2 Results and Discussion

Correlations among the five predictor variables are presented in Table 4.1. The pattern of correlations are similar to those in Chapter 3.

**General Infidelity.** I first conducted a multiple regression predicting general infidelity from all the individual difference relationship variables: sexual promiscuity, emotional promiscuity, romantic idealism, anxious attachment, and avoidant attachment. As predicted, both the EP ( $\beta = .15, p = .036$ ) and SOI scales ( $\beta = .32, p < .001$ ) were unique predictors of general infidelity. No other variables were significant.

To determine that gender differences are not masking interesting effects, I calculated between EP and gender and sexual promiscuity and gender. Because the latter interaction was significant, I conducted the regressions separately for male and female participants. In fact, SOI ( $\beta = .53, p < .001$ ) was significant predictors of general infidelity only for men.

**Emotional Infidelity.** I then tested the hypothesis that EP would be the best predictor of emotional infidelity. I ran a hierarchical regression predicting emotional infidelity (controlling for sexual infidelity in Step 1) from the same five individual difference relationship variables (Step 2). As predicted, EP was the only significant predictor of emotional infidelity ( $\beta = .16, p = .002$ ).<sup>3</sup>

**Sexual Infidelity.** Sexual infidelity was predicted positively by sexual promiscuity ( $\beta = .15, p = .007$ ) and avoidant attachment ( $\beta = .11, p = .018$ ), and was (marginally) negatively predicted by anxious attachment ( $\beta = -.09, p = .059$ ).

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<sup>3</sup> The analyses were also re-run without controlling for the overlap in infidelity. Fortunately, the overall message did not change.

**Summary.** Overall, the results suggest that sexual promiscuity, EP, and avoidant attachment are all unique predictors of general infidelity. Sexual promiscuity, along with avoidant attachment, uniquely predicted sexual infidelity, whereas EP alone predicted emotional infidelity. In sum, EP was the primary predictor of emotional infidelity, whereas sexual promiscuity was the primary predictor of sexual infidelity.

**Table 4.1 Inter-correlations Among Predictors for Study 1.**


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	1	2	3	4	5
Emotional Promiscuity	---	.40**	.32**	-.14	-.04
Sexual Promiscuity	.39**	----	.16	.21*	-.35**
Anxious attachment	.44**	.05	----	.15	.18*
Avoidant attachment	.11	.22*	.11	----	-.26**
Romantic idealism	.23*	-.25**	.46**	-.06	----

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*Note:*  $N = 264$ . Results for women are above the diagonal; men are below. \* =  $p < .05$ , \*\* =  $p < .01$ , all tests are two-tailed.

#### 4.4 Study 2: Infidelity Based on Diary Entries

Study 1 supported the idea that sexual promiscuity uniquely predicts sexual infidelity and emotional promiscuity uniquely predicts emotional infidelity. There was, however, a major limitation: The data constituted a one-time, cross-sectional survey using retrospective self-reports. Recall of emotional infidelity is especially subjective and vulnerable to bias. An emotional experience may or may not constitute emotional infidelity depending on a person's intentions, experiences, or recall biases.

To address this limitation, Study 2 used a less subjective approach to investigating emotional (and sexual) infidelity -- one that does not rely on retroactive recall. I turned to a diary based methodology that has proven to be effective for capturing interpersonal variable of a dynamic nature (e.g., DeLongis & Holtzman, 2005). Once per week (on Monday), all participants listed their current sexual and romantic interests (initials only) as well as their current romantic partner. Monday was chosen because it immediately follows the weekend – the most likely opportunities for relationship initiation.

This request was repeated over a series of weeks. Emotional infidelity was then operationalized as the number of non-partner romantic interests over time: This statistic represents a relatively objective measure of emotional infidelity.

##### 4.4.1 Method

**Participants.** A total of 112 students at the University of British Columbia (78% women, 57% East Asian, 28% European Heritage, 13% South Asian; mean age 20.25, SD=1.95, range=18 to 25) were recruited for an 8 week study entitled, “Tracking Romantic Relationships.” Only participants who were in a current romantic relationship with at least four data points were

included in the study. Four points was sufficient for enough variance in infidelities, while providing a sufficiently powerful sample size. For consistency, only Baseline, the final week, and the first two follow-ups were used for each participant. (Note that the overall results did not change if all available data points were used for each subject.). The final sample consisted of 70 subjects (84% women, 51% East Asian, 34% European Heritage, 10% South Asian; mean age 20.10, SD = 2.02, range = 18 to 25).

These exclusions were made to ensure that all participants had four data points and all were in a romantic relationship. The participants who were eliminated did not differ on any of the baseline measures when compared to the participants who were not eliminated.

**Design and Procedure.** The experimental design consisted of a baseline questionnaire, and several online follow-ups. The baseline questionnaire was completed in the lab and contained all of the predictor variables. Additionally, there were eight small follow-up questionnaires (all completed online).

At every time point, participants were asked to provide the initials for the following people: Three best friends, current romantic partner, current romantic interests, and current sexual interests<sup>4</sup>. I then compared the initials they listed under “romantic interests” to that of their “romantic partner.” Every time there was a discrepancy between the two (initials that didn’t match those of the romantic partner, it was coded as an emotional infidelity. The same procedure was done for the “sexual interests” initials. I then summed all the discrepancies across the four data points to create a composite.

By tradition, simply having a sexual interest outside of a relationship does not constitute sexual infidelity if one does not act on that interest. Emotional infidelity, however, does not

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<sup>4</sup> We included best friends along with favorite TV shows, songs, foods, and magazines in order to obfuscate the true purpose of the study.

require acting on the emotion. Instead most emotional infidelities are limited to fantasies and, in some cases, intentions (e.g., Weeks et al., 2003). To maintain the parallel in this study, both infidelities were measured as desires rather than actions.

This diary-like design has the advantage of reducing memory or recall bias and socially desirable responding. Also, participants do not have to self-define emotional infidelity in subjective questions. Thus I created an unobtrusive measure of emotional infidelity and sexual infidelity interests (I refer to this as a proxy for sexual infidelity in order to maintain the parallel terminology). A general index of infidelity desires was calculated by averaging sexual and emotional interests.

All individual difference measures were administered at baseline and were identical to those in Study 1. In the initial questionnaire, I also added a two-item measure of relationship satisfaction that consisted of the items, “I am satisfied in my relationship,” and “I am in love with my partner.” The internal reliability of this scale was acceptable ( $\alpha = .71$ ). This measure of relationship satisfaction had a strong negative correlation with both anxious attachment ( $r = -.40$ ,  $p < .001$ ) and avoidant attachment ( $r = -.45$ ,  $p < .001$ ). Emotional promiscuity and sexual promiscuity both had small, negative, and non-significant correlations with relationship satisfaction (both  $r$ 's =  $-.09$ ,  $ns$ ). Last, romantic beliefs were positively and marginally correlated with relationship satisfaction ( $r = .22$ ,  $p = .078$ ).

#### **4.4.2 Results and Discussion**

The summed composite measures of sexual and emotional infidelities (ranging from 0 to 4) were then subjected to a series of regressions to determine their unique predictors. The results are presented in Table 4.2. Note that only emotional promiscuity ( $\beta = .42$ ,  $p = .001$ ) and low

relationship satisfaction ( $\beta = -.28, p = .043$ ) predicted general infidelity (i.e., mean of sexual and romantic interests).

Further regressions then tested the hypothesis that emotional promiscuity would uniquely predict emotional infidelity, and sexual promiscuity would uniquely predict sexual infidelity. Similar to Study 1, the overlap between the emotional and sexual infidelity ( $r = .76$ ) was controlled for in Step 1 of the regression analyses.

Also note from the table, that emotional promiscuity was positively associated with emotional infidelity. Interestingly, sexual promiscuity was *negatively* associated with emotional infidelity. In sum, emotional promiscuity predicts extra-dyadic romantic interest in others, but sexual promiscuity is actually a protective factor for emotional infidelity.

Sexual promiscuity, on the other hand, was the only predictor of sexual infidelity interests (as defined by extra-dyadic sexual interests). Therefore, only sexual promiscuity predicts infidelity intentions of a purely sexual nature.

**Table 4.2 Study 2: Predicting Emotional and Sexual Infidelity**

<i>Predictor</i>	Emotional Infidelity			Sexual Infidelity		
	<i>r</i>	$\beta$	SE	<i>r</i>	$\beta$	SE
Emotional Promiscuity	.48**	.30**	.19	.36**	-.10	.26
Sexual Promiscuity	.04	-.22*	.12	.24	.23*	.16
Anxious Attachment	.14	-.10	.12	.23	.12	.16
Avoidant Attachment	-.04	.02	.13	-.02	-.06	.16
Romantic Idealism	-.14	-.10	.20	-.10	.07	.26
Relationship Satisfaction	-.22	-.05	.14	-.30*	-.11	.18

*Note.*  $N = 70$ . \* =  $p < .05$ , \*\* =  $p < .01$ , all tests are two-tailed.

## 4.5 General Discussion

The results of two studies strongly support the case that EP is a risk factor for emotional infidelity. In fact, among six predictors, EP was the only independent risk factor. This finding held whether or not the outcome was assessed using traditional retrospective reports or the diary measure of emotional infidelity.

Sexual infidelity, by comparison was predicted by sexual promiscuity and avoidant attachment in Study 1. However, only sexual promiscuity was uniquely associated with sexual infidelity interests in Study 2. This supports evidence that those with avoidant attachment are uncomfortable with intimacy and seek casual sexual encounters, which leads to more sexual infidelity (e.g., Allen & Baucom, 2004; Mikulincer & Shaver, 2007, pg. 358). It is important to note that neither attachment style predicted emotional infidelity or general infidelity. Rather, EP was the only unique predictor of emotional infidelity and a unique predictor of general infidelity.

The present research clearly supports the assertion that sexual and emotional promiscuity are independent but overlapping constructs. In other words, they predict unique outcomes of relatively equal importance. Therefore, it is imperative that researchers examine *emotional* as well as *sexual* promiscuity when trying to predict relationship issues, mate preferences, and outcomes.

A second benefit to the present research is that a unique predictor of emotional infidelity has now been empirically identified. Professionals such as therapists, researchers, and educators are particularly likely to benefit from such knowledge. In particular, the cause of frequent amorous interests outside of a relationship may be misdiagnosed (e.g., a symptom of poor relationship satisfaction), where in fact, it may be a pervasive issue for individuals. Regardless,

the evidence suggests that EP is the strongest predictor of emotional infidelity. Future research should seek to uncover ways of dealing with EP, along with learning about its origins, etiology, trajectory, and potential treatments.

Last, the present research provides the field with a novel method for investigating emotional infidelity that is both less obvious and not dependent on subjective and retrospective self-report. By using the discrepancy between initials, participants are less likely to fall victim to response bias or disclosure issues. Therefore, this method may provide more accurate measures of emotional infidelity, thus creating a concrete measure out of a very subjective phenomenon.

In sum, there is now evidence for the following: (a) EP is a unique and important construct in the field of relationships and infidelity, (b) EP is associated primarily with emotional infidelity, and also uniquely associated with general infidelity. These findings build on our knowledge of what variables predict infidelity and also provides researchers with a new tool for investigating emotional infidelity in a more objective fashion.

#### **4.5.1 Conclusion**

The EP scale was the only predictor of emotional infidelity among the individual difference measures used here. This result was obtained using both retrospective and diary-based measures of infidelity. The latter was particularly important because it provided evidence that the EP scale can prospectively predict critical outcomes that other variables cannot. Hence the EP scale is a valid predictive tool as well as a measurement device for studying the construct of EP.

Given the construct validity of the EP scale, it can now be used to evaluate the relevance of EP to important health outcomes. To this end, the next chapter sought to determine if EP contributes to risky sexual activity.

## **5. The Role of Emotional Promiscuity in Unprotected Sex**

### **5.1 Brief Synopsis**

The previous chapters demonstrated that EP is the best predictor of emotional infidelity, and that the EP scale is a predictive device of this outcome using both prospective (i.e., diary-like) and retrospective accounts.

The purpose of this chapter is to provide evidence that the EP scale can predict critical outcomes for physical health. Given the importance of falling in love to safer sexual practices, the EP scale was used to examine condom use among adults.

### **5.2 Introduction**

Who is most likely to disregard the risks associated with unprotected sex, that is, pregnancy and disease? Studies of individual differences indicate that personality traits play a significant role (Hoyle, Fejfar, & Miller, 2000). In particular, sexual promiscuity and higher numbers of lifetime sexual partners are risk factors for having unprotected sex (Sheeran, Abraham, & Ordell, 1999). This risk is two-fold: Such individuals expose themselves to more sexual partners, and are also less likely to use condoms on any given occasion (e.g., Farmer & Meston, 2006).

As a result, it is not surprising that educational programs focus on casual sex as a risk (Shelton et al., 2004). By contrast, those programs tend to minimize problems with unsafe sex within romantic attachments (e.g., Corbin & Fromme, 2002) -- presumably under the assumption that such behavior has less serious consequences (Hoyle et al., 2000). However, there is evidence to suggest that much unsafe sex occurs in the context of a romantic relationship (see below). This oversight may explain why increased knowledge of risky sexual behavior has failed to translate into increased condom use (Fisher & Misovich, 1990).

Although the disposition toward sexual promiscuity is central to risk-taking in casual sex, another dispositional variable – emotional promiscuity – is more relevant to unsafe sex within romantic relationships. Emotional promiscuity (EP) is defined as the tendency to fall in love easily and often (Jones, 2011). When operationalized with the Emotional Promiscuity Scale (EP scale), this variable overlaps with, but is distinct from sexual promiscuity and anxious attachment (Jones, 2011). Using both cross-sectional and longitudinal methods, EP has been shown to uniquely predict emotional infidelity and more romantic interests over time (e.g., Jones & Paulhus, 2009).

### **5.2.1 Love and Health**

At first blush, being in love would seem to be a preventative factor with respect to risky sexual behavior: After all, people in love are motivated to stay with one partner. Romantic relationships, however, pose their own risks for unsafe sex. For example, there is evidence to suggest that those who are in love feel less at risk for contracting sexually transmitted diseases from their partner (Flood, 2003; Manuel, 2005). It is not surprising then that actual condom use is less likely for those in love (Rosenthal, Gifford, & Moore, 1998).

Other research highlights the potential health risks that might ensue from falling in love. When describing ideal (vs. other types) of sexual encounters, people are less likely to mention condoms (Hynie, Lydon, Cote, & Weiner, 1998). Indeed, condoms are associated with casual sex. Therefore, individuals (particularly women) seeking an ideal mate or ideal encounter seem less likely to consider condom use than those not in an idealistic frame of mind. In fact, romantic ideals (e.g., Sprecher & Metts, 1989) may interfere with condom use as well.

In addition to romantic idealism, another aspect of love that can lead to health issues is blind trust. In one study, trust in their romantic partner was specifically cited as decreasing the

need for condoms (Manuel, 2005). In fact, monogamy may lead to a sense of immunity (Flood, 2003). That sense of immunity, in turn, leads to reduced condom use. Independent of monogamy, passionate love also leads to lowered frequency of condom use (Manning, Flanigan, Giordano, & Longmore, 2009).

### **5.2.2 Dangers of Attachment**

Previous research has confirmed the impact of several individual difference variables on condom use. Anxious attachment, for example, is related to negative attitudes towards condoms (Bogaert & Sadava, 2002). Such individuals, especially women, may disregard condom use for fear of partner rejection and a desire to merge completely with a romantic partner (Mikulincer & Shaver, 2007, pg. 360). Ironically, avoidant attachment predicts improved attitudes towards condoms and increases safe sexual practices. One possibility offered for this interesting finding is their detachment of sex and love (Allen & Baucom, 2004, Mikulincer & Shaver, 2007). However, the desire for risky casual encounters still lingers in avoidant individuals (Mikulincer & Shaver, 2007).

That literature motivated us to include standard measures of attachment styles to serve as covariates. Given the overlap between anxious attachment and emotional promiscuity (Jones, 2011), it remains unclear whether the two will make independent contributions.

### **5.2.3 Summary**

There is reason to believe that love can be an impediment to safe sex. Especially vulnerable are those with a predisposition to fall in love easily and often, that is, the emotionally promiscuous. Our research is intended to clarify whether EP contributes to unprotected sex above and beyond previously identified risk factors such as sexual promiscuity (Farmer & Meston, 2006), lifetime number of sex partners (e.g., Sheeran et al., 1999), and anxious

attachment (e.g., Mikulincer & Shaver, 2007). Given its conceptual overlap, another variable – romantic beliefs (Sprecher & Metts, 1989), may also contribute to the problem.

Here I report the results of four large surveys investigating these variables in community samples. The above literature supported the prediction that all of these variables would be associated with unprotected sex. I also anticipated a synergistic interaction between sexual promiscuity and EP. Our rationale was as follows. One subset of sexually promiscuous people (i.e., those with low EP) should have realistic perceptions and concerns about sexual interactions. By contrast, those sexually promiscuous individuals who are high on EP are likely to be in love and do not want any barriers – psychological or otherwise -- between themselves and their partner. In other words, EP should moderate the deleterious effects of sexual promiscuity on unprotected sex.

### **5.3 Study 1**

#### **5.3.1 Method**

**Participants and Measures.** The present study included 382 paid participants. They were recruited through an online community called “Mechanical Turk” and advertised under the title “Sexual behaviors”. Evidence is accumulating that Mechanical Turk yields data that exceeds college samples in overall quality (Buhrmester, Kwang, & Gosling, in press). The fact that this source includes adult of all ages constitutes a major advantage in studying sexual behavior. Most undergraduate samples have mean ages under 21, thereby handicapping research on sexual experiences.

Respondents with no lifetime sexual partners were excluded, leaving a total of 173 men, and 163 women. The age range was substantial (18 to 64;  $M=30.87$ ;  $SD=10.02$ ). This sample included the following ethnicities: 52% European Heritage, 26% East Asian, 12% South Asian,

4% African Heritage, 3% Latino, 2% Native North American, and 1% other. Unlike student samples, the participants also differed widely with respect to occupations and socioeconomic status, with income ranging from less than \$12,500 to over \$100,000 per year.

**Emotional Promiscuity.** This concept was assessed with the recently published EP scale (Jones, 2011). The 10-item scale measures individual differences in how easily and often people fall in love. Sample items include, “I fall in love easily” and “I tend to jump into relationships”. Item responses range from 1 (*Strongly disagree*) to 5 (*Strongly agree*).

Across the four studies, the EP scale demonstrated acceptable alpha reliabilities for both women (range from .79 to .84) and men (range from .77 to .82). Men scored higher than women in all four studies with ( $t(908) = 5.95, p < .001$ ) with an overall effect size of  $d = .43$ .

**Sexual Promiscuity.** The Sociosexual Orientation Inventory (SOI; Simpson & Gangestad, 1991) was selected as the measure of sexual promiscuity. The SOI is a 7-item measure that focuses on how comfortable individuals are with having casual sex<sup>5</sup>.

In the four present studies, alpha reliabilities were respectable for women ( $\alpha = .73$  to .82) and men ( $\alpha = .76$  to .81). In line with previous research, men scored higher than women did on sexual promiscuity in all four studies,  $t(908) = 7.23, p < .001$ . The mean effect size was .46. Sexual promiscuity and EP were significantly correlated ( $p$ 's < .01) in all four studies: For men, the values ranged from .28 to .47. For women, they ranged from .31 to .53.

**Romantic Idealism.** The Romantic Beliefs Scale (RBS; Sprecher & Metts, 1989) was used in Study 1 to measure how much individuals identify with Western ideals of romantic love. Facets of the scale are: love at first sight, love can conquer all, and there will be only one true love. RBS was included as a covariate because it seems conceptually related to EP, and may

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<sup>5</sup> Webster and Bryan (2007) recommend analyzing SOI attitude and behavior facets separately. In the present research, both demonstrated near identical patterns of correlations with all variables. For the sake of simplicity and brevity, I will only report analyses for the total SOI score.

affect condom use. Alpha reliabilities were acceptable for both women ( $\alpha = .86$ ) and men ( $\alpha = .78$ ). Men ( $M = 3.32$ ,  $SD = .52$ ) scored higher than did women ( $M = 3.19$ ,  $SD = .61$ ;  $t(331) = 2.18$ ,  $p < .05$ ,  $d = .23$ ).

**Number of Lifetime Sex Partners.** In Studies 1-3, the total number of different lifetime sexual partners (referred to as *lifetime partners*) was assessed in 12 categories (ranging from 0 to 11+). Means for men and women were not significantly different in any of the three studies (all  $t$  values  $< 1$ ). In Studies 1-3, number of lifetime partners was strongly correlated with sexual promiscuity ( $r$ 's  $.50$  to  $.68$ ,  $p$ 's  $< .001$ ) and EP ( $r$ 's  $.19$  to  $.35$ ,  $p$ 's  $< .01$ ).

**Number of Unprotected Partners.** In Studies 1-3, total number of lifetime unprotected partners was assessed with the following two questions: "How many different partners have you had unprotected sex with? (even once)," and "How many different partners have you had unprotected sex with more than once?" The first question was designed to capture frequent occasions with a few partners whereas the second was designed to capture fewer occasions with multiple partners.

Similar to the question assessing lifetime partners, possible responses to the questions about number of unprotected partners ranged from 0 to 11+. Both items were standardized and combined to create a single index of unprotected partners (alphas ranged from  $.78$  to  $.96$  for men and  $.92$  to  $.98$  for women). Study 4 asked the same questions, but with respect to the past year. In all studies, men did not significantly differ from women in unprotected partners (all  $t$ 's  $< 1.1$ ).

**Statistical Approach.** In all four studies, the regression analyses on number of unprotected partners entailed three steps. Step 1 entered number of lifetime sexual partners; Step 2 added the main predictors of the specific study; Step 3 added the product of sexual promiscuity and EP. Unless otherwise indicated, statistical tests were two-tailed.

### 5.3.2 Results and Discussion

For simplicity, the correlations and regression analyses for all four studies are reported in Table 5.1. In Study 1, number of unprotected partners was associated with sexual promiscuity in both men ( $r = .56, p < .001$ ) and women ( $r = .49, p < .001$ ). The prediction that EP would be positively correlated with unprotected partners was supported for women ( $r = .31, p < .01$ ) but not for men ( $r = .10, p > .05$ ). Romanticism showed a small negative correlation with unprotected partners in men ( $r = -.17, p < .05$ ) and women ( $r = -.15, p < .05$ ).

Regressions were conducted in order to control for the overlap between sexual and emotional promiscuity. Also controlled were number of lifetime partners and romanticism. The results are represented by the betas in Table 5.1. As predicted, sexual promiscuity was an independent risk factor for unprotected partners for both men ( $\beta = .20, p < .05$ ) and women ( $\beta = .12, p < .05$ ). Contrary to prediction, however, there was no independent effect for EP on unprotected partners for men ( $\beta = -.03, p > .05$ ) or women ( $\beta = .07, p > .05$ ).

There was also a significant EP by sexual promiscuity interaction for women ( $\beta = .28, p < .05$ ), but not men ( $\beta = .02, p > .05$ ). Figure 5.1 reveals the pattern of means. The highest risk for unprotected sex occurred in participants with high levels of both emotional and sexual promiscuity, but only for women.

In sum, Study 1 replicated previous research indicating that sexual promiscuity predicts unprotected sex for both men and women. EP was also correlated with unprotected sex, but was not a unique predictor in the regression analyses. The predicted interaction between sexual and emotional promiscuity did emerge in women: Those high in both sexual and emotional promiscuity were especially prone to engage in unprotected sex.

## 5.4 Study 2

Study 1 was successful in showing the synergistic effect of sexual and emotional promiscuity on unprotected sex: However, the effect held only for women. Hence I deemed it important to replicate this effect in a separate sample. Given that the Romantic Beliefs Scale failed to predict unprotected sex, it was removed from Study 2. Added to the study was the variable, anxious attachment, which has been linked to unprotected sex in the literature (Mikulincer & Shaver, 2007). I was concerned that its overlap with EP might account for the effects of the latter in Study 1.

### 5.4.1 Method

A total of 151 non-virgin participants (67 men, and 84 women) completed a second study on sexual behaviors. The age range and ethnic distribution was similar to that of Study 1. All measures were the same with the exception of two changes: The Romantic Beliefs Scale was dropped and the 18-item anxious attachment subscale of the Experiences in Close Relationships (ECR) questionnaire (Brennan, Clark, & Shaver, 1998) was added.

### 5.4.2. Results and Discussion

Results for Study 2 were similar to those of Study 1 (See Table 5.1 for all statistics). The additional variable, anxious attachment, had a solid reliability in this sample ( $\alpha = .73$ ). Anxious attachment was associated with more unprotected partners among women ( $r = .29, p < .01$ ) but not among men ( $r = .09, p > .05$ ).

Again, sexual promiscuity was a significant predictor of unprotected sex for women ( $\beta = .12, p < .05$ ), but the effect for men ( $\beta = .08, p = .08$ ) was only marginal. As in Study 1, there was a significant emotional x sexual promiscuity interaction for women. The pattern was similar to that of Figure 5.1.

In sum, Study 2 replicated the finding that high levels of both emotional and sexual promiscuity act synergistically to predict unsafe sex in women. This association held true even when controlling for anxious attachment and lifetime partners.

### **5.5 Study 3**

Although Study 2 replicated the intriguing synergistic interaction between sexual and emotional promiscuity, it did not include both anxious and avoidant attachment subscales. Therefore, Study 3 was conducted to add a second replication as well as a more detailed investigation of the influence of attachment styles.

#### **5.5.1 Method**

A total of 235 non-virgin participants (116 men, and 119 women) constituted our third sample. The age range and ethnic distribution was similar to that of Studies 1 and 2. Instead of the long form, the ECR Short-form (Wei, Russell, Mallinckrodt, & Vogel, 2007) was used to measure attachment styles (anxious attachment  $\alpha=.73$ ; avoidant attachment  $\alpha=.74$ ). All other measures were identical to Studies 1 and 2.

#### **5.5.2 Results and Discussion**

Once again, sexual promiscuity was associated with unprotected sex in men and women (See Table 5.1 for all statistics). As before, EP was associated with unprotected partners for women ( $r = .22, p < .05$ ) but only marginally for men ( $r = .14, p = .08$ ). For women, avoidant attachment had no effect, but anxious attachment showed a marginal effect ( $r = .12, p = .06$ ).

In a regression analysis, sexual promiscuity independently predicted unprotected partners for men ( $\beta = .18, p < .05$ ) and women ( $\beta = .10, p < .05$ ). For women, anxious attachment was also an independent predictor of unprotected partners but avoidant attachment was not. Again,

there was a significant emotional x sexual promiscuity interaction for women similar to that of Figure 5.1.

## **5.6 Study 4**

Studies 1-3 suggested that high levels of both sexual and emotional promiscuity promote unsafe sex in women. Note that, in all three studies, the time frame for reporting partners was the individual's lifetime. Although increasing the reliabilities of these reports, such a lengthy duration may favor a memory bias in the direction of personality dispositions regarding promiscuity. To balance these two effects in Study 4, I altered the time frame from 'lifetime' to 'the previous year'.

### **5.6.1 Method**

A total of 186 participants (66 men, and 120 women) completed the same battery of questionnaires as in Study 3. The age range and ethnic distributions were similar to the previous studies. All independent measures were identical to Study 3 with good alpha reliabilities (all  $\alpha$ 's  $> .73$ ). The two questions composing the dependent variable in Studies 1-3 were changed to "within the past year" rather than lifetime. A similar change was made in the wording for total number of sexual partners.

### **5.6.2 Results and Discussion**

Sexual promiscuity once again positively correlated with unprotected partners in men and women (See Table 5.1 for all statistics). In addition, EP and anxious attachment were positively correlated with unprotected partners.

In regression, there were no significant effects for men. However, for women, anxious attachment was a significant predictor of unprotected partners and avoidant attachment was a protective factor (i.e., negatively related to unprotected partners). Independent of those effects,

the significant EP x sexual promiscuity interaction emerged for a fourth time ( $\beta = .24, p = .03$ ).

This interaction pattern was once again similar to that of Figure 5.1.

**Table 5.1 Correlations and Regressions Predicting Unprotected Partners.**

	Men			Women		
	<i>r</i>	$\beta$	SE	<i>r</i>	$\beta$	SE
Study 1: # Lifetime Partners	.67**	.53**	.02	.75**	.65**	.02
Emotional Promiscuity	.10	-.03	.11	.31**	.07	.09
Sexual Promiscuity	.56**	.20*	.12	.49**	.12*	.10
Romantic Beliefs	-.17*	-.06	.11	-.15*	-.03	.09
EP x Sexual Promiscuity	----	.02	.13	-----	<b>.28*</b>	.12
Study 2: # Lifetime Partners	.70**	.66**	.03	.77**	.63**	.02
Emotional Promiscuity	.22	-.05	.17	.47**	.04	.13
Sexual Promiscuity	.52**	.08	.19	.61**	.12*	.14
Anxious Attachment	.09	.03	.13	.29**	.09	.10
EP x Sexual Promiscuity	---	.00	.19	----	<b>.37*</b>	.15
Study 3: # Lifetime Partners	.73**	.62**	.02	.68**	.63**	.02
Emotional Promiscuity	.14	-.12	.13	.22*	-.04	.13
Sexual Promiscuity	.58**	.18*	.14	.51**	.10*	.13
Anxious Attachment	-.04	-.01	.10	.12	.15*	.10
Avoidant Attachment	.17	.07	.11	.06	.05	.11
EP x Sexual Promiscuity	----	-.01	.18	----	<b>.30*</b>	.13
Study 4: # Partners Past Year	.30*	.25	.05	.53**	.33**	.04
Emotional Promiscuity	-.01	-.08	.15	.27**	-.04	.12
Sexual Promiscuity	.25*	.22	.18	.55**	.35**	.15
Anxious Attachment	.10	.04	.12	.25**	.18*	.10
Avoidant Attachment	-.04	-.14	.13	.00	-.15*	.11
EP x Sexual Promiscuity	----	.06	.12	----	<b>.24*</b>	.11

Note: \* =  $p < .05$ , \*\* =  $p < .01$ . Statistical tests in Study 1 are two-tailed, all replications are one-tailed.

## 5.7 General Discussion

Our four studies confirmed the traditional finding that, for both men and women, sexual promiscuity is a risk factor for unprotected sex. Our novel finding is that EP also plays a significant role for women: It moderates the impact of sexual promiscuity such that women high on both variables suffer an additional level of risk. This robust interaction replicated in all four samples, even when controlling for relevant variables such as attachment styles, romantic beliefs, and lifetime number of sex partners.

There are several potential explanations for this synergistic relation between the two types of promiscuity. First, emotionally promiscuous women may be especially likely to be “swept away” in the moment of passion, a factor that has been reported to deter condom use (Flood, 2003). A somewhat different possibility is that emotionally promiscuous women form deep and quick bonds with their partners. Thus they enter sexual relationships with idealism and naïve trust.

The combination of these dual promiscuities appears to create a person best described as *recklessly passionate*, that is, someone who indiscriminately pursues both emotional and sexual bonds. The simultaneous presence of such disinhibited sexual and emotional libidos leads to the premature formation of relational bonds. Such individuals want to merge with their partner on a sexual and emotional level. It is important to note that the approach process inherent in both sexual and emotional promiscuity is qualitatively different from the fear of loss process induced by anxious attachment (Jones, 2011).

As expected, sexual promiscuity predicted higher numbers of unprotected sex partners for both men and women. Interestingly, regression results indicated that sexual promiscuity is related to unprotected partners above and beyond its association with higher numbers of lifetime

sexual partners. Therefore, there is something unique about sexual promiscuity that is associated with infrequent condom use. Some possible explanations may be traced to the association of sexual promiscuity with such variables as impulsivity or sensation seeking (e.g., Eisenberg et al., 2007).

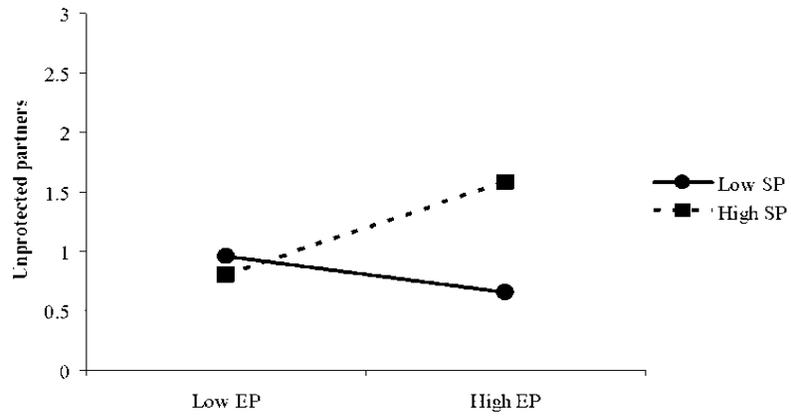
The expected impact of anxious attachment held for women but not for men. This finding is consistent with previous research and theory. The basic argument is that anxiously attached women do not insist on or even suggest condoms because of fear of her partner's reaction (Mikulincer & Shaver, 2007, pg. 360). However, anxious attachment did not account for the synergistic effect of emotional x sexual promiscuity. Avoidant attachment was actually negatively related to unprotected sex (among women) in Study 4, also replicating previous research (Mikulincer & Shaver, 2007). However, like anxious attachment, controlling for avoidant attachment does not change the emotional x sexual promiscuity interaction. Therefore, attachment styles, sexual and emotional promiscuity all seem to uniquely contribute in some way to unprotected sex.

However, regardless of sexual promiscuity or anxious attachment, the emotional x sexual promiscuity interaction emerged. This significant interaction suggests that there is a different process driving lack of condom use in sexually and emotionally promiscuous women that cannot be explained through attachment styles or sexual promiscuity alone.

**Conclusions and Recommendations.** Conclusions from our data are limited by its retrospective and self-report nature (Paulhus & Vazire, 2007). On the other hand, our internet methodology provided large samples of adults of diverse ages, incomes, and ethnicities. Thus, I believe that the overall goal, which was to provide initial evidence that EP warrants attention in research on unprotected sex, was achieved.

There are clear implications for health education programs and interventions. Such programs should go beyond standard warnings about casual sex. They should also make it clear to adolescents that having strong emotional feelings for someone does not reduce the risks associated with unprotected sex. When paired with the excitement of promiscuous sex, the fog of love can have serious health consequences.

**Figure 5.1. Study 1. Unprotected Sex as a Function of Emotional and Sexual Promiscuity in Women.**



## 6. Final Summary

At every stage of romantic relationships – from initial interest, to inception, to maintenance, and even termination -- individual differences play a role. With respect to interest and inception, however, research has been fixated almost entirely on sexual desire with little attention paid to love. Although some claims have been made that anxious attachment predicts multiple romantic interests (Hazan & Shaver, 1987), there is some contradictory evidence (Tracy et al., 2004). As a result, there remains a gap in the literature with respect to individual differences in interest and inception of relationships from emotional motives.

The research presented in this dissertation indicates that the construct of emotional promiscuity (EP) helps fill that gap. The construct emerged from various literatures suggesting that some people fall in love easily and often. Via a series of psychometric studies, I was able to construct an individual difference measure, which I labeled the EP scale. The validation process confirmed that the instrument possessed the two-facets hypothesized from theory. Care was taken to replicate the structure in several samples.

Establishing the factor structure was only the first step. To elucidate what it means to be dispositionally prone to emotional promiscuity, further research was needed to confirm what this EP scale can and cannot uniquely predict. Moreover, I needed to establish how this scale was similar to and different from related scales already present in the literature: In psychometric terms, convergent and discriminant validation was required.

My biggest concern was to avoid re-inventing the wheel. Two established constructs (sexual promiscuity and anxious attachment) have both predicted frequent relationship initiation (e.g., Simpson & Gangestad, 1991; Hazan & Shaver, 1987). One involves initiation driven by sexual interest (e.g., Simpson et al., 2004), and the other involves the speed of the bonding

process (Shaver & Mikulincer, 2009). In order for the construct to afford a novel contribution to the psychological literature, I had to establish that EP overlaps with these two measures without being redundant with them.

Therefore, these two variables should represent key aspects of the larger nomological network supporting for the EP scale (e.g., Cronbach & Meehl, 1955). They provide both convergent and discriminant elements.

Consider first, the notion of anxious attachment. Considering the fact that humans go to great lengths to avoid loss (Tversky & Kahneman, 1991), the inception of frequent unstable relationships resulting from EP traits should evoke certain attachment mechanisms (i.e., anxious attachment). These mechanisms would serve to keep those unstable relationships together. Thus, a positive correlation observed between anxious attachment and the EP scale needed to emerge.

Needless to say, love and sex are inextricably linked in the human mating process (DeSteno & Savoley, 1996). After all, we are biologically driven to romantically bond with sex partners (Carter, 1992). As a result of this close association, individuals who are promiscuous in one aspect of their relationship orientation should be more likely to be promiscuous in the other. Empirically, this positive correlation between the EP scale and sexual promiscuity was expected to emerge.

A series of cross-sectional surveys confirmed that the EP scale was indeed positively and modestly related to both of these variables. At the same time, these studies also provided discriminant validity, showing that other constructs did not correlate with the EP scale quite as strongly as did sexual promiscuity and anxious attachment. In sum, EP had an empirical relation to both variables that was consistent with theory.

In addition, the EP scale had smaller correlations with measures that were less central to the concept of EP. For example, the standard measure of romantic idealism had correlations less than .20. Emotionally promiscuous people find themselves falling in love but don't necessarily consider it to be an ideal state of affairs.

The next challenge to the concept of EP was demonstrating that it had coherent relationships to fundamental personality variables and could predict outcomes other scales cannot. The first support for EP as an independent concept came from Big Five data. EP, unlike anxious attachment and sexual promiscuity, was not negatively related to agreeableness. In women, the EP scale correlated with extraversion unlike sexual promiscuity or anxious attachment. This piece of evidence suggested that women high in EP are outgoing and are comfortable with others in a social setting.

Perhaps the most important piece of evidence, and the most applicable to society and everyday life, was the associations the EP scale had with major life outcomes. The EP scale was the best predictor of marital engagements, but was unrelated to marriage or divorce. This pattern suggests that high EP individuals have a lot of broken engagements. Emotionally promiscuous individuals are likely to feel in love, and desire to marry, many individuals. However, the desire seems to be fleeting and does not materialize into long-term commitments.

An interesting consequence of EP, when combined with sexual promiscuity (or SP), is an increase in number of pregnancies by different men. High levels of both EP and SP resulted in strong positive predictor of getting pregnant by different men. When examined against the backdrop of the second publishable unit in this dissertation – the condoms research – this outcome seems to make perfect sense. Once again, the *recklessly passionate* individual with high levels of EP and SP makes decisions with grave consequences.

## **6.1 Predictive Validity**

In addition to cross-sectional data, the EP scale needed to be validated as a predictive device. Chapter 4 was dedicated to accomplishing this task. In order to establish predictive validity, one must first find a behavior that is the hallmark of what the scale should predict (e.g., Messick, 1989).

One behavior that the EP scale should predict, above all others, is emotional infidelity. In two studies (one retrospective and one prospective), the EP scale emerged as the best predictor of emotional infidelity. These findings support the argument that the EP scale is a valid predictor of relationship relevant outcomes both concurrently and longitudinally.

Equally as important, the EP scale predicted an important health outcome. Four separate studies showed that the synergistic effect of being high in both EP and SP resulted in the greatest number of unprotected sex partners for women. This dangerous combination of emotional and sexual promiscuity appears to profile an individual who is recklessly passionate in her relationship and sexual behavior. Moreover, these findings corroborate an earlier finding that women high in both EP and sexual promiscuity are most likely to have become pregnant by multiple partners.

In sum, the construct of EP has consequences for critical life outcomes relevant to both men and women. The evidence presented above provides an initial exploration into the surrounding network of concepts (the nomological network), and hints at the driving forces behind EP behavior.

## **6.2 The Final Word on EP and Anxious Attachment**

The positive association between the EP scale and anxious attachment seems reasonable given that both characters are driven by immediate emotional connections. Any tendency toward

premature relationships (lacking fundamental knowledge and foundation), may well precipitate anxious attachment.

Clarification of the process behind this association requires a return to Bowlby's (1969) original theory. He argued that attachment systems, or styles, are learned very early in childhood. A parent that is inconsistently receptive to a child's needs may reinforce an anxiously driven system of attachment whereby the child uses crying and coercion to maintain proximity to an important loved one. One avenue for understanding how EP fits into this cycle is the impact of multiple and short lived parental figures. If a child is repeatedly learning to love and adapt to a new father or mother figure, the process may inculcate insecure attachment while at the same time reinforcing premature emotional investment (see Quinlin, 2003). Therefore, the two mechanisms of quick investment and responding anxiously to maintain attachment may both be shaped by frequent changing of parental figures in the home.

A second possibility is that anxious attachment is the driving force and emotional promiscuity develops as a compensatory mechanism. For example, anxiously attached individuals seek partners to confirm their self-concepts and enhance security. However, because anxiously attached individuals often struggle to maintain relationships (Fraley & Davis, 1997), EP may be an adaptive mechanism: It facilitates finding new partners to replace the ones lost by toxic behavior.

In any case, EP and anxious attachment often accompany each other, but are not redundant. Nevertheless, it is unclear as to whether high EP individuals are a special case of anxious attachment, whether they are distinct but overlapping constructs in relationship initiation and maintenance. Another possibility is that they both result from the same environmental trauma.

### 6.3 The Final Word on EP and Sexual Promiscuity

The link between EP and SP seems more straightforward. Humans commonly link their sexual and romantic feelings. The two are mutually enhancing forces in the process of relationship initiation. Therefore, being promiscuous in one process may promote promiscuity in the other.

There is one glaring exception to this – those who lack empathy. Indeed, Markey and Markey (2007) demonstrated that empathy, and interest in forming close bonds was curvilinear in its relationship with number of sexual partners. As expected, the empathic individuals reported many sexual partners. On the other hand, individuals who lacked empathy also reported many sexual partners. In short, the positive link between EP and sexual promiscuity is most likely to be seen when individuals are highly interested in uniting with others (i.e., most people). Individuals at the other end of the spectrum – those who are cold and disinterested in forming interpersonal bonds – would have no association between EP and SP.

### 6.4 EP Mechanisms and Consequences

Moving past the fundamental concepts related to EP, there seems to be a combination of other motivating factors that drive EP-related behavior. Extraversion may be one element. There does seem to be an aspect of EP that may be driven by sensation seeking, sociability, and desire to form many social bonds. Unlike the low self-esteem and inhibitory processes of anxious attachment, EP seems to be driven by a desire to approach and engage with others.

Beyond mechanisms, EP also had many consequences, such as being the sole predictor of emotional infidelity. Emotional infidelity is *often* discussed by many popular theorists (e.g., Buss, 2000), but is hardly ever defined or quantifiably measured (for an attempt see Drigotas, Safstrom, & Gentilia, 1999). Using retrospective accounts and a novel paradigm, this rather

elusive phenomenon was adequately quantified in a way that doesn't immediately lend itself to self-presentation or hindsight bias.

Emotional infidelity was therefore selected as a critical outcome for EP to predict. However, beyond validation, the findings of the first publishable unit are multi-faceted. If individuals who are high in EP are more emotionally unfaithful, and emotional infidelity is considered by many to be one of the more damaging and painful infidelities (e.g., Shackelford, LeBranc, & Drass, 2000), then this finding contributes a major piece of the puzzle concerning who is at risk for hurting others.

It seems that high EP individuals, although they may choose partners that are bad for them, may also be destructive to those who they are with. This assertion stems from the fact that EP individuals are likely to fall in love again, even after they've committed to a primary partner.

The real-world consequences of EP also extend to major life outcomes and demographics. High EP individuals get engaged more frequently and at younger ages, have more relationships, and, among women, get pregnant by more partners. These outcomes are not trivial and are likely to have mental as well as financial and physical consequences.

## **6.5 Strengths and Limitations**

Any attempt at construct validation is likely to fall short in some aspects. At this point, the EP scale is the only operationalization of EP. Although the tasks may prove difficult, future studies should attempt to assemble peer-rating and behavioral assessments. Consider how much more difficult it would be to collect behavioral measures of emotional states as opposed to the actual behavior targeted in sexual promiscuity. Nonetheless, Cronbach and Meehl (1955) argued that convergence of these three sources is necessary to maximize confidence in a construct.

Only one real-world application – prediction of condom use – was tested in this research program. Prospective prediction of other important health outcomes would add significantly to the list of applications. Ideally such studies would be based on longitudinal data.

On the strength side, this dissertation, does provide substantial evidence for the validity of the construct of EP and equally substantial evidence for the validation of the EP scale. Consider the degree to which the present research program satisfies Messick's (1995) criteria for construct validity. First, Messick required specification of the defining boundaries of the construct. Here, the key contenders for relationship initiation were ruled out one by one.

Messick also required a specification of operationalization procedures. Here, emotional promiscuity was operationalized with the new EP scale. It was formulated to correspond to previous scales measuring sexual promiscuity. Messick also argued for interpretable internal structure. The two facet-structure of the EP scale clearly mapped onto the theoretical 2-facet spirit of the construct. I went on to provide support for criterion validity. The EP scale was the major predictor of two relationship outcomes that are directly and theoretically related to EP: Diving headlong into relationships (i.e., significantly more relationships and marital engagements) and emotional infidelity. The EP scale also showed convergent and discriminant validity with competing relationship concepts and predictive validity using behavioral outcomes and longitudinal methods. The research went further to demonstrate relevance to a critical health variable, namely, unprotected sex.

An additional strength of the present dissertation included the diversity of the samples used. In addition to students, I studied real-world adults of various ages and backgrounds via Mechanical Turk. Compared to student-only studies, these results are likely to generalize to different populations.

## 6.6 Future Directions

One of the most important future directions is determining what partners tend to be chosen by the emotionally promiscuous. I suspect that, unfortunately, they are likely to end up with relationship partners who are a burden or even antisocial. Consider the burgeoning interest in the psychology of “bad boys” and why some people are attracted to them (e.g., Urbaniak & Kilmann, 2003). The tendency of the emotionally promiscuous toward premature trust makes them vulnerable to such dark characters. Application of the concept of EP may elucidate such romantic dynamics.

This tendency is supported by my data showing links between EP and extraversion (at least among women). It is well-known that extraversion drives assortative mating on sensation seeking and social visibility – traits that are known to correlate with short-term, not long-term, mating strategies (e.g., Eysenck, 1976). The approach motivation of extraverts (the active seeking of reward) is also likely to drive a search that may lead to a partner who is fun and rewarding in the short term, but with no ability (i.e., lack of inhibitions) to regulate impulses.

It is possible that self-deception may play a role in the vulnerability of the emotionally promiscuous. Even confronted with evidence her new love interest has no long-term potential, self-deception may take over in the form of thinking she can change her partner and make him commit. Moreover, self-deception may play several crucial roles in how a high EP woman selects partners. For example, she may also overestimate the reciprocity of feelings or overestimate his levels of empathy through self-deceptive processes. Future research should include measures of self-deception (Paulhus, 1991).

Ultimately, the most hazardous side-effect of poor mate choice is physical and/or psychological harm. Women who are high in EP may be attracted to and then edit out warning signs about dangerous partners.

## **6.7 Conclusion**

At the beginning of this endeavor, there was a gap in the relationship literature. It seemed dubious that any established individual difference variable could capture the self-evident fact that people vary with respect to ease and frequency of falling in love. I now feel confident that EP is a valid construct that can fill this gap. EP predicts variation in romantic interests, broken engagements, emotional infidelity, reckless passion, poor mate choice, and a whole host of relationship-relevant variables.

Finally, I have laid out a wide range of possible applications for this unique concept. In conducting future research, I would encourage future researchers to study EP against the backdrop of its close cousins, insecure attachment and sexual promiscuity. These three form a constellation of constructs of great import to understanding the course of relationship development.

## References

- Allen, E.S., & Baucom, D.H. (2004). Adult attachment and patterns of extradyadic involvement. *Family Processes, 43*, 476-488.
- Anglin, M.D., Hser, Y., & McGlothlin, W.H. (1987). Sex differences in addict careers 2. Becoming addicted. *American Journal of Drug and Alcohol Abuse, 13*, 59-71.
- Bailey, J.M., Kirk, K.M., Zhu, G., Dunne, M.P., & Martin, N.G. (2000). Do individual differences in sociosexuality represent genetic or environmentally contingent strategies? Evidence from the Australian twin registry. *Journal of Personality and Social Psychology, 78*, 537-545.
- Barta, W.D., & Kiene, S.M. (2005). Motivations for infidelity in heterosexual dating couples: The roles of gender, personality differences, and sociosexual orientation. *Journal of Social and Personal Relationships, 22*, 339-360.
- Baumeister, R. F., & Vohs, K. D. (2004). Sexual economics: Sex as female resource for social exchange in heterosexual interactions. *Personality and Social Psychology Review, 8*, 339–363.
- Becker, D.V., Sagarin, B.J., Guadagno, R.E., Millevoi, A., & Nicastle, L.D. (2004). When the sexes need not differ: Emotional responses to the sexual and emotional aspects of infidelity. *Personal Relationships, 11*, 529-538.
- Bogaert, A.F., & Sadava S. (2002). Adult attachment and sexual behavior. *Personal Relationships, 9*, 191-204.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1, Attachment*. New York: Basic Books. (Original work published 1969).

- Bouchard, S., Godbout, N., & Sabourin, S. (2009). Sexual attitudes and activities in women with borderline personality disorder involved in romantic relationships. *Journal of Sex & Marital Therapy, 35*, 106-121.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York: Guilford.
- Brown, T.A. (2006). *Confirmatory Factor Analysis for Applied Research*. New York: Guilford.
- Buhrmester, M., Kwang, T., & Gosling, S.D. (2011). Amazon's Mechanical Turk: A new source of cheap, yet high-quality, data? *Perspectives on Psychological Science, 6*, 3-5.
- Buss, D. M. (2000). *The dangerous passion*. New York: Free Press.
- Buss, D. M., Larsen, R. J., Westen, D., & Semmelroth, J. (1992). Sex differences in jealousy: evolution, physiology and psychology. *Psychological Science, 3*, 251-255.
- Buss, D.M., & Schmitt, D.P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological review, 100*, 204-232.
- Cano, A., & O'Leary, K. D. (2000). Infidelity and separations precipitate major depressive episodes and symptoms of nonspecific depression and anxiety. *Journal of Consulting and Clinical Psychology, 68*, 774–781.
- Carter, C.S. (1992). Oxytocin and sexual behavior. *Neuroscience and Biobehavioral Reviews, 16*, 131-144.
- Christopher, F.S., & Sprecher, S. (2000). Sexuality in marriage, dating, and other relationships: A decade review. *Journal of Marriage and Family, 62*, 999-1017.
- Cleckley, H. (1976). *The mask of sanity* (4th Ed). St. Louis: Mosby.
- Collins, N.L., & Read, S.J. (1990). Adult attachment, working models, and relationship quality in

- dating couples. *Journal of Personality and Social Psychology*, 58, 644-663.
- Corbin, W.R., Fromme, K. (2002). Alcohol and serial monogamy as risks for sexually transmitted diseases in young adults. *Health Psychology*, 21, 229-236.
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validation in psychological tests. *Psychological Bulletin*, 52, 281-302.
- Delongis, A., & Holtzman, S. (2005) Coping in context: The role of stress, social support, and personality in coping. *Journal of Personality*, 73, 1-24.
- DeSteno, D. A., & Salovey, P. (1996). Evolutionary origins of sex differences in jealousy? Questioning the “fitness” of the model. *Psychological Science*, 7, 367–372.
- Diamond, L.M. (2003). What does sexual orientation orient? A biobehavioral model distinguishing romantic love and sexual desire. *Psychological Review*, 110, 173-192.
- Diamond, L.M. (2004). Emerging perspectives on distinctions between romantic love and sexual desire. *Current Directions in Psychological Science*, 13, 116-119.
- Drigotas, S.M., Safstrom, C.A., & Gentilia, T. (1999). An investment model prediction of dating infidelity. *Journal of Personality and Social Psychology*, 77, 509-524.
- Dutton, D.G. (2002). Personality dynamics of intimate abusiveness. *Journal of Psychiatric Practice*, 8, 216-228.
- Eisenberg, D.T.A., Campbell, B., MacKillop, J., Lum, J.K., & Wilson, D.S. (2007). Season of birth and dopamine receptor gene associations with impulsivity, sensation seeking and reproductive behaviors. *PLoS ONE*, 11, 1-10.
- Eysenck, H. J. *Sex and personality*. Austin: University of Texas Press, 1976.
- Farmer, M.A., & Meston, C.M. (2006). Predictors of condom use self-efficacy in an ethnically diverse university sample. *Archives of Sexual Behavior*, 35, 313-326.

- Feeney, J. A., Kelly, L., Gallois, C., Peterson, C., & Terry, D. J. (1999). Attachment style, assertive communication, and safer-sex behavior. *Journal of Applied Social Psychology*, 29, 1964- 1983.
- Feeney, J.A., & Noller, P. (1990). Attachment style as a predictor of adult romantic relationships. *Journal of Personality and Social Psychology*, 58, 281-291.
- Finkel, E. J., Molden, D. C., Johnson, S. E., & Eastwick, P. W. (2009). Regulatory focus and romantic alternatives. In J. P. Forgas, R. F. Baumeister, and D. M. Tice (Eds.), *Self regulation: Cognitive, affective, and motivational processes* (pp. 319-335). New York: Psychology Press.
- Fisher, H.E. (1998). Lust, attraction, and attachment in mammalian reproduction. *Human Nature*, 9, 23–52.
- Fisher, J. D., & Misovich, S. J. (1990). Social influence and AIDS-preventive behavior. In J. Edwards, R. S. Tindale, L. Heath, & E. J. Posavac (Eds.), *Social influence processes and prevention* (pp. 39–70). New York: Plenum Press.
- Flood, M. (2003). Lust, trust and latex: why young heterosexual men do not use condoms. *Culture, Health, & Sexuality*, 5, 353-369.
- Fraley, R.C., Davis, K.E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships*, 4, 131-144.
- Gangestad, S. W. & Simpson, J. A. (1990) Toward an evolutionary history of female sociosexual variation. *Journal of Personality* 58, 69–96.
- Gangestad, S.W., and Simpson, J.A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences*, 23, 573-644.

- Garb, H.N., Wood, J.M., & Fiedler, E.R. (in press). A comparison of three strategies for scale construction to predict a specific behavioral outcome. *Assessment*.
- Green, M.C., & Sabini, J. (2006). Gender, socioeconomic status, age, and jealousy: Emotional responses to infidelity in a national sample. *Emotion, 6*, 330-334.
- Hall, J.H., & Fincham, F.D. (2006). Relationship dissolution following infidelity: The roles of attributions and forgiveness. *Journal of Social and Clinical Psychology, 25*, 508-522.
- Hall, L.A., Williams, C.A., & Greenberg, R.S. (1985). Supports, stressors, and depressive symptoms in low-income mothers of young children. *American Journal of Public Health, 75*, 518–522.
- Harms, P. D., Williams, K. M., & Paulhus, D. L. (2001). *Predictors of love-proneness vs. lust-proneness*. Poster presented at the 109th annual convention of the American Psychological Association, San Francisco.
- Harris, C.R. (2002). Sexual and romantic jealousy in heterosexual and homosexual adults. *Psychological Science, 13*, 7-12.
- Harris, C. R. (2003). A review of sex differences in sexual jealousy, including self-report data, psychophysiological responses, interpersonal violence, and morbid jealousy. *Personality and Social Psychology Review, 7*, 102–128.
- Hatfield, E. (1987). Passionate and companionate love. In R.J. Sternberg & M.L. Barnes (Eds.), *The psychology of love* (pp. 191–217). New Haven, CT: Yale University Press.
- Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational Research Methods, 7*, 191-205.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process.

- Journal of Personality and Social Psychology*, 52, 511-524.
- Hendrick, S., & Hendrick, C. (1987). Multidimensionality of sexual attitudes. *The Journal of Sex Research*, 23, 502-526.
- Hendrick, C., Hendrick, S.S., & Reich, D.A. (2006). The brief sexual attitudes scale. *Journal of Sex Research*, 43, 76-86.
- Hendrick, S. S., & Hendrick, C. (2002). Linking romantic love with sex: Development of the Perceptions of Love and Sex Scale. *Journal of Social and Personal Relationships*, 19, 361–378.
- Hendrick, S.S., Hendrick, C., Slapion-Foote, M.J., & Foote, F.H. (1985). Gender differences in sexual attitudes. *Journal of Personality and Social Psychology* 48, 1630-1642.
- Hoyle, R.H., Fejfar, M.C., & Miller, J.D. (2000). Personality and sexual risk taking: A quantitative review. *Journal of Personality*, 68, 1203-1231.
- Hser, Y., Anglin, M.D., & McGlothilin, W. H. (1987). Sex differences in addict careers. 1. Initiation of use. *The American Journal of Drug and Alcohol Abuse*, 13, 33-57.
- Hunt, M. (1959). *The natural history of love*. New York: Knopf.
- Hynie, M., Lydon, J.E., Cote, S., & Weiner, S. (1998). Relational sexual scripts and women's condom use: The importance of internalized norms. *Journal of Sex Research*, 35, 370-380.
- Jackson, J.J., & Kirkpatrick, L. (2007). The structure and measurement of human mating strategies: toward a multidimensional model of sociosexuality. *Evolution and Human Behavior*, 28, 382-391.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality:*

- Theory and research* (2nd ed., pp. 102–138). New York: Guilford Press.
- Jones, D.N. (2011). The emotional promiscuity scale. In T.D. Fisher, C.M. Davis, W.L. Yarber, & S.L. Davis (Eds.) *Handbook of Sexuality-Related Measures* (3rd ed., pp. 226–227). New York: Routledge.
- Jones, D.N., & Paulhus, D.L. (2009, November). *Emotional Promiscuity: A critical variable in relationships and health research*. Poster presented at the International Association for Relationships Research meeting, Lawrence, Kansas.
- Kenrick, D.T., Sadalia, E.K., Groth, G., & Trost, M.R. (1990). Evolution, traits, and the stages of human courtship: Qualifying the parental investment model. *Journal of Personality*, *58*, 97-116.
- Kephart, W.M. (1967). Some correlates of romantic love. *Journal of Marriage and the Family*, *29*, 470-474.
- Kershaw, T.S., Milan, S., Westdahl, C., Lewis, J., Rising, S.S., Fletcher, R., & Ickovics, J. (2007). Avoidance, anxiety, and sex: The influence of romantic attachment on HIV-Risk among pregnant women. *AIDS Behavior*, *11*, 299-311.
- Kirkpatrick, L.A., & Davis, K.E. (1994). Attachment style, gender, and relationship stability: A longitudinal analysis. *Journal of Personality and Social Psychology*, *66*, 502-512.
- Levenson, M.R., Kiehl, K.A., & Fitzpatrick, C.M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, *68*, 151-158.
- Lopez, F.G., Mauricio, A.M., Gormley, B., Simko, T., & Berger, E. (2001). Adult attachment orientations and college student distress: The mediating role of problem coping styles. *Journal of Consulting & Development*, *79*, 459-463.

- Love, A., James, D., & Willner, P. (1998). A comparison of two alcohol craving questionnaires. *Addiction, 93*, 1091-1102.
- Manning, W.D., Flanigan, C.M., Giordano, P.C., & Longmore, M.A. (2009). Relationship dynamics and consistency of condom use among adolescents. *Perspectives on Sexual and Reproductive Health, 41*, 181-190.
- Manuel, S. (2005). Obstacles to condom use among secondary school students in Maputo City, Mozambique. *Culture, Health & Sexuality, 7*, 293-302.
- Markey, P.M., & Markey, C.N. (2007). The interpersonal meaning of sexual promiscuity. *Journal of Research in Personality, 41*, 1199-1212.
- McGlashan, T.H. (1985). *The borderline: Current empirical research*. Washington, D.C.: American Psychiatric Association.
- Messick, S. (1989). Validity. In R. L. Linn (Ed.), *Educational measurement* (3rd ed., pp. 13-103). New York: American Council on Education/Macmillan.
- Messick, S. (1995). Standards of validity and the validity of standards in performance assessment. *Educational Measurement: Issues and Practice, 14*, 1-8.
- Meyer, B., Olivier, L., & Roth, D.A. (2005). Please don't leave me! BIS/BAS, attachment styles, and responses to a relationship threat. *Personality and Individual Differences, 38*, 151-162.
- Mikulincer, M., Gillath, O., & Shaver, P. R. (2002). Activation of the attachment system in adulthood: Threat-related primes increase the accessibility of mental representations of attachment figures. *Journal of Personality and Social Psychology, 83*, 881-895.
- Mikulincer, M., & Horesh, N. (1999). Adult attachment style and the perception of others: The role of projective mechanisms. *Journal of Personality and Social Psychology, 76*, 1022-

1034.

- Mikulincer, M., & Shaver, P.R. (2005). Mental Representations of Attachment Security: Theoretical Foundation for a Positive Social Psychology. In M. W. Baldwin (Ed.), *Interpersonal Cognition* (pp. 233-266). New York: Guilford Press.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York: Guilford Press.
- Murray, S. L. (1999). The quest for conviction: Motivated cognition in romantic relationships. *Psychological Inquiry, 10*, 23–34.
- Murray, S.L., Holmes, J.G., & Griffin, D.W. (1996). The self-fulfilling nature of positive illusions in relationships: Love is blind, but prescient. *Journal of Personality and Social Psychology, 71*, 1155–1180.
- Murstein, B. I., Chalpin, M. J., Heard, K. V, & Vyse, S. A. (1989). Sexual behavior, drugs, and relationship patterns on a college campus over thirteen years. *Adolescence, 24*, 125-139.
- Muthen, B., & Kaplan, D. (1985). A comparison of some methodologies for the factor analysis of non-normal Likert variables. *British Journal of Mathematical and Statistical Psychology, 38*, 171-189.
- Muthen, L. K., & Muthen, B. O. (1998). *Mplus: The comprehensive modeling program for applied researchers: User's guide*. Los Angeles: Author.
- Noftle, E.E., & Shaver, P.R. (2006). Attachment dimensions and the big five personality traits: Associations and comparative ability to predict relationship quality. *Journal of Research in Personality, 40*, 179-208.
- Oldham, J., Clarkin, J., Appelbaum, A., Carr, A., Kernberg, P., Lotterman, A., and Haas, G. (1985). A self-report instrument for borderline personality organization. In T.H.

- McGlashan (Eds.), *The borderline: Current empirical research*. Washington, D.C.: American Psychiatric Association.
- Robinson, T.E., & Berridge, K.C. (1993). The neural basis of drug craving: An incentive-sensitization theory of addiction. *Brain Research Review*, *18*, 247-291.
- Paolacci, G., Chandler, J., & Ipeirotis, P.G. (2010). Running experiments on Amazon's Mechanical Turk. *Judgement and Decision Making*, *5*, 411-419.
- Paulhus, D. L., & Reid, D. B. (1991). Enhancement and denial in socially desirable responding. *Journal of Personality and Social Psychology*, *60*, 307-317..
- Paulhus, D.L., Neumann, C.S., & Hare, R.D. (in press). *Manual for the Self-report Psychopathy scale*. Toronto: Multi-Health Systems.
- Paulhus, D.L., & Vazire, S. (2007). The self-report method. In R.W. Robins, R.C. Fraley, & R.F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224-239). New York: Guilford.
- Rosenberg, M. (1965). *Society and adolescent self-image*. Princeton, NJ: Princeton University.
- Rosenthal, D., Gifford, S., & Moore, S. (1998). Safe sex or safe love: Competing discourses? *AIDS Care*, *10*, 35-45.
- Rubin, Z. (1973). *Liking and loving: An invitation to social psychology*. New York: Holt, Rinehart & Winston.
- Sabini, J., & Green, M.C. (2004). Emotional responses to sexual and emotional infidelity: Constants and differences across genders, samples, and methods. *Personality and Social Psychology Bulletin*, *30*, 1375-1388.
- Sagarin, B.J. (2005). Reconsidering evolved sex differences in jealousy: Comment on Harris (2003). *Personality and Social Psychology Review*, *9*, 62-75.

- Savalei, V. (2011). *The relationships between RMSEA and model misspecification in CFA models*. Manuscript under review.
- Scheier, M.F., & Carver, C.S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4*, 219-247.
- Schindler, A., Thomasius, R., Sack, P.M., Gemeinhardt, B., Kustner, U., & Eckert, J. (2005). Attachment and substance use disorders: A review of the literature and a study in drug dependent adolescents. *Attachment & Human Development, 7*, 207-228.
- Schmitt, D.P. (2004). The Big Five related to risky sexual behaviour across 10 world regions: differential personality associations of sexual promiscuity and relationship infidelity. *European Journal of Personality, 18*, 301-319.
- Schmitt, D.P. (2005). Is short-term mating the maladaptive result of insecure attachment? A test of competing evolutionary perspectives. *Personality and Social Psychology Bulletin, 31*, 747-768.
- Schmitt, D.P. & Buss, D.M. (2001). Human mate poaching: Tactics and temptations for infiltrating existing relationships. *Journal of Personality and Social Psychology, 80*, 894-917
- Shackelford, T.K., Buss, D.M., & Bennet, K. (2002). Forgiveness or breakup: Sex differences in responses to a partner's infidelity. *Cognition & Emotion, 16*, 299-307.
- Shackelford, T.K., LeBlanc, G.J., & Drass, E. (2000). Emotional reactions to infidelity. *Cognition and Emotion, 14*, 643-659.
- Shaver, P.R., & Mikulincer, M. (2009). Attachment styles. In M.R. Leary & R.H. Hoyle (Eds.). *Handbook of Individual Differences in Social Behavior* (pp. 68-81). New York: Guilford.
- Sheeran, P., Abraham, C., & Orbell, S. (1999). Psychosocial correlates of heterosexual condom

- use: A meta-analysis. *Psychological Bulletin*, 125, 90-132.
- Shelton, J.D., Halperin, D.T., Nantulya, V., Potts, M., Gayle, H.D., & Holmes, K.K. (2004). Partner reduction is crucial for balanced “ABC” approach tot HIV prevention. *British Medical Journal*, 328, 891-893.
- Simpson, J. A. (1990). Influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology*, 59, 971–980.
- Simpson, J. A., & Gangestad, S. W. (1991). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology*, 60, 870-883.
- Simpson, J.A., & Gangestad, S.W. (1992). Sociosexuality and romantic partner choice. *Journal of Personality*, 60, 31-51.
- Simpson, J.A., Rholes, S.W., Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality and Social Psychology*, 71, 899-914.
- Simpson, J. A., Wilson, C. L., & Winterheld, H. A. (2004). Sociosexuality and romantic relationships. In J. H. Harvey, A. Wenzel, & S. Sprecher (Eds.), *Handbook of sexuality in close relationships* (pp. 87–111). Mahwah, NJ: Erlbaum.
- Sprecher, S., Cate, R., & Levin, L. (1998). Parental divorce and young adults’ beliefs about love. *Journal of Divorce & Remarriage*, 28, 107-120
- Sprecher, S., & Metts, S. (1989). Development of the ‘Romantic Beliefs Scale’ and examination of the effects of gender and gender-role orientation. *Journal of Social and Personal Relationships*, 6, 387-411.
- Sprecher, S., & Metts, S. (1999). Romantic beliefs: Their influence on relationships and patterns of change over time. *Journal of Social and Personal Relationships*, 16, 834-851.

- Sprecher, S., Regan, P.C., McKinney, K., Maxwell, K., & Wazienski, R. (1997). Preferred level of sexual experience in a date or mate: The merger of two methodologies. *The Journal of Sex Research, 34*, 327-337.
- Sternberg, R.J. (1986). A triangular theory of love. *Psychological Review, 93*, 119-135.
- Symons, D. (1979). *The evolution of human sexuality*. New York: Oxford University Press.
- Tennov, D. (1979). *Love and limerence: The experience of being in love*. New York: Stein and Day.
- Tracy, J. L., Shaver, P. R., Albino, A. W., & Cooper, M. L. (2003). Attachment styles and adolescent sexuality. In P. Florsheim (Ed.), *Adolescent romance and sexual behavior: Theory, research, and practical implications* (pp. 137-159). Mahwah, NJ: Lawrence Erlbaum.
- Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent model. *Quarterly Journal of Economics, 106*, 1039-1061.
- Urbaniak, G.C., & Kilmann, P.R. (2003). Physical attractiveness and the “nice guy paradox”: Do nice guys really finish last? *Sex Roles, 49*, 412-426.
- Webster, G.D., & Bryan, A. (2007). Sociosexual attitudes and behaviors: Why two factors are better than one. *Journal of Research in personality, 41*, 917-922.
- Weeks, G.R., Gambescia, N., & Jenkins, R.E. (2003). *Treating infidelity: Therapeutic dilemmas and effective strategies*. New York: W.W. Norton & Co.
- Wei, M., Russel, D.W., Mallinckrodt, B., & Vogel, D.L. (2007). The experiences in close relationships scale (ECR)-short form: Reliability, validity, and factor structure. *Journal of Personality Assessment, 88*, 187-204.

- Weigel, D.J. (2007). Parental divorce and the types of commitment-related messages people gain from their families of origin. *Journal of Divorce & Remarriage*, *47*, 15-32.
- Widiger, T.A. (2009). Neuroticism. In M.R. Leary & R.H. Hoyle (Eds.) *Handbook of Individual Differences in Social Behavior* (pp. 129-146). New York: Guilford.
- Young, L.J., & Wang, Z. (2004). The neurobiology of pair bonding. *Nature Neuroscience*, *10*, 1048-1054.
- Yuan, K. H. (2005). Fit indices versus test statistics. *Multivariate Behavioral Research*, *40*, 115-148.

## Appendix A: Questionnaires

**Unless otherwise indicated, all questionnaire responses were collected in the following 5-point scale format with the following instructions.**

*Rate your agreement or disagreement with each item using the following guidelines*

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

**Emotional Promiscuity Scale (EP scale)****(Jones, 2011)**

1. I fall in love easily.
2. For me, romantic feelings take a long time to develop.
3. I feel romantic connections right away.
4. I love the feeling of falling in love.
5. I am not the type of person who falls in love.
6. I often feel romantic connections to more than one person at a time.
7. I have been in love with more than one person at the same time.
8. I fall in love frequently.
9. I tend to jump into relationships.
10. During your entire life, how many people have you fallen in love with? \_\_\_\_\_

(item 10 is binned as follows: 1 = none 2 = one 3 = two 4 = three 5 = four or more)

## Sociosexual Orientation Inventory

(Simpson & Gangestad, 1991)

Please answer all of the following questions honestly. For the questions dealing with behavior, *write* your answers in the blank spaces provided. For the questions dealing with thoughts and attitudes, *circle* the appropriate number on the scales provided.

1. With how many different partners have you had sex (sexual intercourse) within the past year? \_\_\_\_\_
2. How many different partners do you foresee yourself having sex with during the next five years (Please give a *specific, realistic* estimate)? \_\_\_\_\_
3. With how many partners have you had sex on *one and only one* occasion? \_\_\_\_\_
4. How often do you fantasize about having sex with someone other than your current (or most recent) dating partner (Circle one)?

1. Never
2. Once every two or three months
3. Once a month
4. Once every two weeks
5. Once a week
6. A few times a week
7. Nearly every day
8. At least once a day

5. Sex without love is OK.

1	2	3	4	5	6	7	8	9
I strongly disagree					I strongly agree			

6. I can imagine myself being comfortable and enjoying "casual" sex with different partners.

1	2	3	4	5	6	7	8	9
I strongly disagree					I strongly agree			

7. I would have to be closely attached to someone (both emotionally and psychologically) before I could feel comfortable and fully enjoy having sex with him or her.

1	2	3	4	5	6	7	8	9
I strongly disagree					I strongly agree			

## Experiences in Close Relationships

(Long Version)

(Brennan, Clark, & Shaver, 1998)

1. \_\_\_\_\_ I prefer not to show a partner how I feel deep down.
2. \_\_\_\_\_ I worry about being abandoned.
3. \_\_\_\_\_ I am very comfortable being close to romantic partners.
4. \_\_\_\_\_ I worry a lot about my relationships.
5. \_\_\_\_\_ Just when my partner starts to get close to me I find myself pulling away.
6. \_\_\_\_\_ I worry that romantic partners won't care about me as much as I care about them.
7. \_\_\_\_\_ I get uncomfortable when a romantic partner wants to be very close.
8. \_\_\_\_\_ I worry a fair amount about losing my partner.
9. \_\_\_\_\_ I don't feel comfortable opening up to romantic partners.
10. \_\_\_\_\_ I often wish that my partner's feelings for me were as strong as my feelings for him/her.
11. \_\_\_\_\_ I want to get close to my partner, but I keep pulling back.
12. \_\_\_\_\_ I often want to merge completely with romantic partners, and this sometimes scares them away.
13. \_\_\_\_\_ I am nervous when partners get too close to me.
14. \_\_\_\_\_ I worry about being alone.
15. \_\_\_\_\_ I feel comfortable sharing my private thoughts and feelings with my partner.
16. \_\_\_\_\_ My desire to be very close sometimes scares people away.
17. \_\_\_\_\_ I try to avoid getting too close to my partner.
18. \_\_\_\_\_ I need a lot of reassurance that I am loved by my partner.
19. \_\_\_\_\_ I find it relatively easy to get close to my partner.
20. \_\_\_\_\_ Sometimes I feel that I force my partners to show more feeling, more commitment.
21. \_\_\_\_\_ I find it difficult to allow myself to depend on romantic partners.
22. \_\_\_\_\_ I do not often worry about being abandoned.
23. \_\_\_\_\_ I prefer not to be too close to romantic partners.
24. \_\_\_\_\_ If I can't get my partner to show interest in me, I get upset or angry.
25. \_\_\_\_\_ I tell my partner just about everything.
26. \_\_\_\_\_ I find that my partner(s) don't want to get as close as I would like.
27. \_\_\_\_\_ I usually discuss my problems and concerns with my partner.
28. \_\_\_\_\_ When I'm not involved in a relationship, I feel somewhat anxious and insecure.
29. \_\_\_\_\_ I feel comfortable depending on romantic partners.
30. \_\_\_\_\_ I get frustrated when my partner is not around as much as I would like.
31. \_\_\_\_\_ I don't mind asking romantic partners for comfort, advice, or help.
32. \_\_\_\_\_ I get frustrated if romantic partners are not available when I need them.
33. \_\_\_\_\_ It helps to turn to my romantic partner in times of need.
34. \_\_\_\_\_ When romantic partners disapprove of me; I feel really bad about myself.
35. \_\_\_\_\_ I turn to my partner for many things, including comfort and reassurance.
36. \_\_\_\_\_ I resent it when my partner spends time away from me.

## **Experiences in Close Relationships**

### **(Short Version)**

**(Wei, Russell, Mallinckrodt, & Vogel, 2007)**

1. It helps to turn to my romantic partner in times of need.
2. I need a lot of reassurance that I am loved by my partner.
3. I want to get close to my partner, but I keep pulling back.
4. I find that my partner(s) don't want to get as close as I would like.
5. I turn to my partner for many things, including comfort and reassurance.
6. My desire to be very close sometimes scares people away.
7. I try to avoid getting too close to my partner.
8. I do not often worry about being abandoned.
9. I usually discuss my problems and concerns with my partner.
10. I get frustrated if romantic partners are not available when I need them.
11. I am nervous when partners get too close to me.
12. I worry that romantic partners won't care about me as much as I care about them.

## **Romantic Beliefs Scale**

**(Sprecher & Metts, 1989)**

1. I need to know someone for a period of time before I fall in love with him or her.
2. If I were in love with someone, I would commit myself to him or her even if my parents and friends disapproved of the relationship.
3. Once I experience 'true love', I could never experience it again, to the same degree, with another person.
4. I believe that to be truly in love is to be in love forever.
5. If I love someone, I know I can make the relationship work, despite any obstacles.
6. When I find my 'true love' I will probably know it soon after we meet.
7. I'm sure that every new thing I learn about the person I choose for a long-term commitment will please me.
8. The relationship I will have with my 'true love' will be nearly perfect.
9. If I love someone, I will find a way for us to be together regardless of the opposition to the relationship, physical distance between us or any other barrier.
10. There will be only one real love for me.
11. If a relationship I have was meant to be, any obstacle (e.g., lack of money, physical distance, career conflicts) can be overcome.
12. I am likely to fall in love almost immediately if I meet the right person.
13. I expect that in my relationship, romantic love will really last; it won't fade with time.
14. The person I love will make a perfect romantic partner; for example, he/she will be completely accepting, loving, and understanding.
15. I believe if another person and I love each other we can overcome any differences and problems that may arise

## Big Five Inventory (V44)

(John & Srivastava, 1999)

### I See Myself as Someone Who . . .

- |                                                  |                                                         |
|--------------------------------------------------|---------------------------------------------------------|
| _____ 1. Is talkative                            | _____ 23. Tends to be lazy                              |
| _____ 2. Tends to find fault with others         | _____ 24. Is emotionally stable,<br>not easily upset    |
| _____ 3. Does a thorough job                     | _____ 25. Is inventive                                  |
| _____ 4. Is depressed, blue                      | _____ 26. Has an<br>assertive personality               |
| _____ 5. Is original, comes up with new ideas    | _____ 27. Can be cold and aloof                         |
| _____ 6. Is reserved                             | _____ 28. Perseveres until the task<br>is finished      |
| _____ 7. Is helpful and unselfish with others    | _____ 29. Can be moody                                  |
| _____ 8. Can be somewhat careless                | _____ 30. Values artistic, aesthetic<br>experiences     |
| _____ 9. Is relaxed, handles stress well         | _____ 31. Is sometimes shy, inhibited                   |
| _____ 10. Is curious about many different things | _____ 32. Is considerate and<br>kind to almost everyone |
| _____ 11. Is full of energy                      | _____ 33. Does things efficiently                       |
| _____ 12. Starts quarrels with others            | _____ 34. Remains calm in<br>tense situations           |
| _____ 13. Is a reliable worker                   | _____ 35. Prefers routine work                          |
| _____ 14. Can be tense                           | _____ 36. Is outgoing, sociable                         |
| _____ 15. Is ingenious, a deep thinker           | _____ 37. Is rude to others                             |
| _____ 16. Generates a lot of enthusiasm          | _____ 38. Makes plans and                               |

follows through with them.

- |                                    |                                                           |
|------------------------------------|-----------------------------------------------------------|
| _____17. Has a forgiving nature    | _____39. Gets nervous easily                              |
| _____18. Tends to be disorganized  | _____40. Likes to reflect, play<br>with ideas             |
| _____19. Worries a lot             | _____41. Has few artistic interests                       |
| _____20. Has an active imagination | _____42. Likes to cooperate<br>with others                |
| _____21. Tends to be quiet         | _____43. Is easily distracted                             |
| _____22. Is generally trusting     | _____44. Is sophisticated in art,<br>music, or literature |

**Rosenberg's Self-Esteem Scale****(Rosenberg, 1965)**

1. \_\_\_\_\_ I feel that I am a person of worth, at least of an equal basis with others.
2. \_\_\_\_\_ I feel that I have a number of good qualities.
3. \_\_\_\_\_ All in all I am inclined to feel that I am a failure.
4. \_\_\_\_\_ I am able to do things as well as most other people.
5. \_\_\_\_\_ I feel I do not have much to be proud of.
6. \_\_\_\_\_ I take a positive attitude toward myself.
7. \_\_\_\_\_ On the whole, I am satisfied with myself.
8. \_\_\_\_\_ I wish I could have more respect for myself.
9. \_\_\_\_\_ I certainly feel useless at times.
10. \_\_\_\_\_ At times I think I am no good at all.

## **Long-Term Mating Orientation**

**(5-item version)**

**(adapted from Jackson & Kirkpatrick, 2007)**

1. I would like to have a romantic relationship that lasts forever.
2. Finding a long-term romantic partner is not important to me.
3. I am interested in maintaining a long-term romantic relationship with someone special.
4. Long-term romantic relationships are not for me.
5. I hope to have a romantic relationship that lasts the rest of my life.

## **Borderline Personality Organization Scale**

**(Oldham et. al., 1985)**

### Identity Diffusion Items

1. I feel like a fake or an impostor that others see me as quite different at times.
2. I see myself in totally different ways at different times.
3. I feel empty inside.
4. It is hard for me to be sure about what others think of me, even people who have known me very well.
5. I'm afraid of losing myself when I get sexually involved.
6. I find it hard to describe myself.
7. I don't feel like myself unless exciting things are going on around me.
8. Some of my friends would be surprised if they knew how differently I behave in different situations.

### Reality Testing Items

9. I feel almost as if I'm someone else like a friend or relative or even someone I don't know.
10. I find I do things which get other people upset and I don't know why such things upset them.
11. I hear things that other people claim are not really there.
12. I've had relationships in which I couldn't feel whether I or the other person was thinking or feeling something.
13. People see me as being rude or inconsiderate and I don't know why.

14. I can't tell whether certain physical sensations I'm having are real, or whether I am imagining them.
15. I believe that things will happen simply by thinking about them.
16. I am not sure whether a voice I have heard, or something that I have see, is my imagination or not.
17. I have heard or seen things when there is no apparent reason for it.
18. Somehow, I never know quite how to conduct myself with people.

#### Primitive Defense Items

19. It is hard for me to trust people because they so often turn against me or betray me.
20. People tend to respond to me by either overwhelming me with love or abandoning me.
21. I act in ways that strike others as predictable and erratic.
22. Uncontrollable events are the cause of my difficulties
23. I tend to feel things in a somewhat way, experiencing either great joy or intense despair.
24. I feel that certain episodes in my life do not count and are better erased from my mind.
25. I feel people don't give me the respect I deserve unless I put pressure on them.
26. I find myself doing things which feel okay while I am doing them but which I later find hard to believe I did.
27. I feel I don't get what I want.
28. I need to admire people in order to feel secure.

## Drigotas Infidelity Scale

(Based on: Drigotas, Safstrom, & Gentilia, 1999)

*Instructions: "Think about your present (or most recent) romantic relationship. With how many different people did you do the following with, while in your relationship?"*

1. Dates with someone else
2. Kissed someone else
3. Held hands with someone else
4. Had online affair with someone else
5. Had sexual desire for someone else
6. Had emotional desire for someone else
7. Did couple things with someone else
8. Flirted with someone else
9. Shared secrets with someone else<sup>6</sup>
10. Was emotionally intimate with someone else
11. Felt butterflies for someone else
12. Made out with someone else
13. Had oral sex with someone else
14. Had sex with someone else
15. Had an affair with someone else

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<sup>6</sup> It should be noted that this item could be applied to best friends and not in a romantic fashion. However, this item did load highly (e.g., > .33) with the other emotional infidelity items, and the results were unchanged with its exclusion.