

FRIENDSHIPS, ROMANTIC RELATIONSHIPS, AND
THE IMPORTANCE OF SELF-EXPANSION

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By

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CERTIFICATE OF APPROVAL

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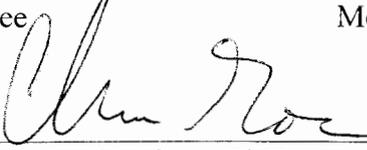
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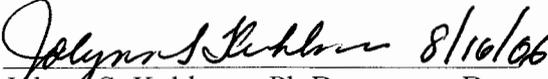
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ABSTRACT

Self-expansion theory (Aron & Aron, 1986) posits that individuals enter and maintain relationships in order to expand their sense of self and suggests that expanding the sense of self is a basic human motivation. In this study, I examined whether the perceived opportunities for self-expansion within a relationship predicted feelings of closeness and passion for a partner, and unlike many previous studies, I explored the importance of self-expansion in friendships as well as romantic relationships. I also explored individual differences in the importance of self-expansion opportunities in predicting closeness and passion. The results suggest that opportunities for self-expansion may motivate involvement in both friendships and romantic relationships, although the experience may be different in the two categories of relationship. The results also suggest that there may be individual differences in the importance of self-expansion, but these patterns were not as expected. I discuss the implications of these results for self-expansion theory and understanding close relationships.

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INTRODUCTION

The vagaries of love have long captured human attention. Novelists and poets have depicted the joys of love and the agony of heartbreak. Why do people “fall” in love? And why do they seemingly and without effort, fall back out? In recent times, these questions have been examined by social scientists as well as biologists - yielding an endless multiplicity of answers. Evolutionary theorists suggest that love is designed to take advantage of mating opportunities (Fisher, 2000). Social psychologists have offered that love may occur due to misattribution of arousal (Dutton & Aron, 1974). Physiologists note the importance of hormones and various forms of imprinting (Bem, 1996; Davies, Horn, & McCabe, 1985; Fisher, 2000; Kiyatkin, 1995; Marazziti, Akiskal, Rossi, & Cassano, 1999; Salamone, 1996; Scatton, D’Angio, Driscoll, & Serrano, 1988). Yet love still retains its mystery (Levinger, 1988). In this paper, I begin by reviewing evidence of the importance of love, describe a novel model that relates love to the experience of self-expansion, and propose a study to test the tenets of this “self-expansion” theory of love.

The Importance of Love

Companionship and love may be a basic human need (Branden, 1988). Indeed, research suggests that love is experienced across most - if not all - human societies

(Jankowiak & Fischer, 1992). Lack of love is even correlated with physical and mental illness. People who have no intimate relationships are likely to have higher blood pressure and weaker immune systems (Brehm, Miller, Perlman, & Campbell, 2002), and a variety of relationship problems are associated with depression (Brehm et al., 2002).

In spite of its importance for well-being, the study of love did not become a major topic in social psychology until the 1970's (Aron & Aron, 1986). One reason for this is that researchers refused to study it because they thought it was hard to examine scientifically and that their colleagues would frown on them for studying the topic (Aron & Aron, 1986). But research on close relationships expanded more rapidly during the 1980's, and the study of love has now become mainstream (Murstein, 1988).

Many theoretical models exist that contribute to our understanding of love. One prominent model originating in evolutionary psychology focuses on the ultimate function of love for human survival. These theorists propose that people have feelings for others for the purpose of mating or reproduction (Fisher, 2000). As evidence, they note that love is characterized by increased energy and focused attention on a potential mating partner which they claim cements pair bonding and promotes the survival of offspring (Burns, 2002; Fisher, 2000). This model has led to a great deal of research on sex differences in the characteristics sought in a mate, and it helps explain many historically observed patterns, for instance why men seem to fall in love with young, attractive women whereas women fall for wealthy, dominant men. But evolutionary theorists have done little to explore cognitive elements of the love experience.

A more theoretical psychological model of love focuses on the interaction of

biological arousal, cognition, and culture. In particular, Dutton and Aron (1974) showed that people may experience love as a result of the misattribution of arousal. According to their theory, when people experience arousal, they search their environment for an explanation. Strong emotions in the presence of an attractive other are relabeled as sexual attraction and love in societies that believe in love. This theory has contributed to understanding many experiences of love, particularly increases in passion during stressful periods (as when a couple fights). Although this model has highlighted the importance of cognition (in the form of interpretation of arousal) on the experience of love, these researchers have not explored whether cognitive desires may themselves generate arousal and love.

Physiological psychologists have also become interested in love though they have typically focused on hormonal bases for feelings. They claim that different emotions are associated with different hormones and/or neurotransmitters (Fisher, 2000). For example, attraction is associated with high levels of dopamine and norepinephrine, and low levels of serotonin in the brain (Fisher, 2000; Kiyatkin, 1995; Marazziti et al., 1999; Salamone, 1996; Scatton et al., 1988). According to these theorists, increased dopamine in the central nervous system is associated with exposure to novelty, and increased norepinephrine is associated with focused attention (Fisher, 2000; Kiyatkin, 1995; Marazziti et al., 1999; Salamone, 1996; Scatton et al., 1988). This is consistent with evidence that dissimilarity may generate attraction during adolescence (Bem, 1996). However, the focus on neurochemistry offers a physical basis for feelings of love, but does little to explain subtle variation in cognition that accompanies feelings of love.

Together these theories have contributed substantially to our understanding of love. For instance, evolutionary theory provides a clear explanation for why people are attracted to others and why they have sex, and physiologists may help understand the physical neurotransmitters when we fall in love. But neither of these theories addresses the conscious experience of love. And even though “misattribution theory” touches on the importance of arousal in motivating feelings of love; as noted previously, it does nothing to address the cognitive changes associated with love, nor the possibility that cognitive factors may generate the arousal on which love is based. And none of these theories seems to articulate the experiences in a fully meaningful way to most people.

A new theory that seems to add considerably to the experiential phenomenon of love is Arons’ self-expansion theory (Aron & Aron, 1986). The self-expansion theory suggests that people form and maintain intimate relationships because they are motivated to expand their sense of self (Aron & Aron, 1986). Aron and Aron (1986) claim that expanding the sense of self through new experiences is a fundamental human motivation and the basic reason for entering relationships. By including others’ knowledge, skills, perspectives, and resources in the self, people can expand their sense of efficacy in the world. Aron and Aron (1986, 1996) claim that the experience of incorporating aspects of one’s partner into the self is a well-known relationship phenomenon. The main purpose of this paper is to determine if self-expansion motivates involvement in close relationships and in particular whether it motivates intimacy in both friendships and romantic relationships. A secondary purpose is to explore variability in the importance of self-expansion within relationships.

Overview of the Self

In order to understand self-expansion as a basis for love, we must begin by defining the “self.” Definitions of “self” as used by psychologists, psychotherapists, and other social scientists vary (Aron & Aron, 1986). Baumeister (1995) identifies that, as commonly used, one’s “self” includes at least three referents: one’s body, one’s social identity (such as social roles and membership), and one’s experience of an executive “agent” controlling cognitions and decision-making. In this paper, the latter two aspects, social identity and decision-making agent, were of particular interest, because it is these facets of the self where expansion may be experienced, and it is the cognitive representation of these facets that is explored in self-expansion theory.

As noted previously, the self-expansion model posits that people gradually expand their sense of self by incorporating various aspects of the other into the self through a relationship. That is, the processes of self-expansion include changing the cognitive representation of the self to include social roles and experiences, and traits and skills of the loved other.

The importance of “self” and its distinction from “others” has been shown in much research. For instance, considerable evidence of actor-observer discrepancies in attribution shows some evidence that an individual tends to perceive self and others in different ways. Specifically, people offer more dispositional and less situational attributions for others’ responses than they offer for themselves (Jones & Nisbett, 1972; Pronin, Gilovich, & Ross, 2004). In fact, people immediately and even unconsciously infer traits from others’ behaviors but apparently not their own (Winter & Uleman, 1984). Similarly, people also tend to display a self-serving bias such that people take

credit for their successes but deny responsibility for their failures (Brehm et al., 2002). Furthermore, people display a self-reference effect such that “information processing and memory are enhanced for information related to the self” (Aron & Aron, 1996, p. 326); in other words, people tend to remember information related to the self better than information related to others. Together, these phenomena reveal that people think about the self and others differently; that is, people apply different cognitive models to understand their own versus others’ behaviors.

However, Aron and Aron (1996) suggest that despite these patterns our thoughts about the self and others are not completely disparate; rather they argue that “self-other differences are arranged along a continuum on which one extreme represents self, the other extreme represents a generalized other or a stranger of some kind, and in between are people with whom one has interactions and relationships” (Aron & Aron, 1996, p. 326). In other words, people in close relationships perceive the other as close to and perhaps even as an extension of the self. As mentioned above, people make more situational attributions for themselves and make more dispositional attributions for others. However, Nisbett, Caputo, Legant, and Marecek (1973) revealed in their study that the longer people had been in a relationship with a close friend the less willing they were to make dispositional attributions about the friend. In another study, Goldberg (1981) found that people made more situational attributions for those who were familiar to them, compared to those who were unfamiliar to them. These findings indicate that differences in cognition between self and other may be reduced when the other has a close relationship to self; that is, people tend to extend their self-serving attributional pattern to close others, while robust discrepancies are maintained when the

other is a complete stranger. Interestingly, some research suggests that the self-reference effect is also extended to close others. For instance, memory of the close other's performance in a laboratory task was found to be intermediate between memory of one's own performance and memory of a stranger's performance (Aron, Aron, Tudor, & Nelson, 1991; Brenner, 1973). Also, Bower and Gilligan (1979) revealed that people recalled information relevant to strangers poorly, whereas their recollection was better when information was relevant to themselves and to their mothers, demonstrating that their participants extended the self-reference bias to their mothers. Although these results are consistent with the notion that we retain a distinction between self and others, Aron and Aron (1986) propose that unification of self with others frequently occurs in close romantic relationships.

Self-expansion Theory

As indicated above, the theory of self-expansion proposed by Aron and Aron (1986) presumes that people enter a relationship because they want to expand the self by incorporating new knowledge, skills, ideas, and so forth. According to the Arons (1986), this occurs in two phases. The first is the "expanding phase" (Aron & Aron, 1986). In this phase, people are motivated to seek changes or novel experiences that will contribute to expanding their notions of the self (Aron & Aron, 1986). For instance, when individuals start a new friendship with the other, they eventually come to discover various aspects of the other including the person's personality, knowledge, skills, experiences, and so forth. By doing a number of different activities together or sharing ideas, people can acquire new knowledge, new skills, and new experiences that

they have not had before. Some people actually might recognize that they are gaining many things from the relationship. That is, the expanding phase is motivated by a desire to seek complexity, novelty, and stimulation (Aron & Aron, 1986).

The second, “integrating” phase, is motivated by a need to reduce complexity until recent expansion experiences have been integrated into the self-concepts (Aron & Aron, 1986). In the self-expansion theory, the more differences between the self and the other in knowledge, skills, experiences, and other aspects, the more people can gain by establishing a relationship with the person since they can add more new perspectives to the self (Aron & Aron, 1986). However, the self will not be expanded if these elements cannot be integrated (Aron & Aron, 1986). For this reason, there is presumably some vacillation between novelty-seeking and preference for familiarity.

As noted above, evidence of extension of self-serving biases to those we form relationships with provide preliminary evidence of “self-expansion” processes. When people enter a close relationship, there is a tendency for them to act as if their partner were a part of the self (Aron, Paris, & Aron, 1995). In fact, that people develop a sense of “we-ness” also implies self-expansion; that is, people come to put the self and others into a single cognitive category as they become close (Meddvene, Teal, & Slavich, 2000). Further evidence of this was provided by Mashek, Aron, and Boncimino (2003). They found that people actually confuse the self with close others (Mashek et al., 2003). In their study, participants were first asked to rate different traits for self, close others, and less close others such as the U.S. presidents. A recognition task followed; each trait was presented at a time on the computer screen, and participants responded to questions (e.g. who was each trait rated for?). People tended to confuse

traits rated for self with those rated for the close other but not with those rated for a distant other (Mashek et al., 2003). Their findings are consistent with the notion that people indeed merge the self and close others at a cognitive level. Notably, Gottman (1994) revealed the importance of this process to promoting relationship maintenance: the more married couples framed their marital history as a joint undertaking, the more likely the couples were to remain happily married in the future.

According to Aron and Aron (1996), “including aspects of others into the self” is the most basic process of self-expansion. Notably, it is not merely that people bring the other “closer” to them, but presumably, people want to “own” the close others at a cognitive level - acquiring and sharing the other’s “self”. This includes both the other’s social and emotional resources as well as material resources. For example, people try to “possess” emotions of the others. When individuals form a close relationship, it seems that various emotions such as joy, pride, and confidence are also empathized with each other (Aron & Aron, 1986). We feel happy for close others when they are happy. In turn, we feel pain or sorrow when they are hurt. In this way, people often experience such emotional connectedness when they are close. This happens because people include the other’s emotion into the self and treat them as a part of the self. Therefore, we even feel hurt when close others do not share their feelings.

In order to measure people’s sense of interpersonal interconnectedness, the Arons created inclusion of others in the self scale (Aron, Aron, & Smollan, 1992). This pictorial scale consists of several Venn-like diagrams, each with a different degree of overlap of two circles (Aron et al., 1992). One circle is used to represent the self, and the other represents a partner. People select the figure that best describes their

relationship (Aron et al., 1992). According to the Arons, the degree of overlap of two circles represents interpersonal closeness or intimacy. A large area of overlap means that a pair has built many connections and implies that they share a wide variety of resources with each other (Aron et al., 1992). In contrast, a small overlap illustrates that they are not sharing many things with each other and are not “intimate.”

Self-expansion in Romantic Relationships

Self-expansion may take place in any type of human relationship. However, self-expansion is believed to be most accentuated in a romantic relationship, where it may contribute to the strong feelings of passion. Passion, “a state of strong physiological arousal and desire“, is generally recognized in the early stages of a romantic relationship (Baumeister & Bratslavsky, 1999; Brehm et al., 2002; Hatfield & Walster, 1978). People tend to experience relatively high passion when they start a new romantic relationship. During this period, people try to devote their efforts to know more about their new partners. Indeed, new couples tend to meet frequently, talk on the phone every night, and do many things together. This stage mostly involves an escalation of self-disclosure, which leads to a rapid, exhilarating expansion of self (Aron & Aron, 1996; Harvey & Omarzu, 1997). In other words, people tend to experience more self-expansion in the early stages of a relationship. Aron et al. (1995) conducted a longitudinal study over ten weeks and found that college students who had recently fallen in love significantly increased the variety of characteristics included in self-descriptions compared to those who did not fall in love. In their study, participants completed questionnaires five times over ten weeks and were given three minutes to

write a single-word or single-phrase to describe themselves. As a result, people who had recently fallen in love described themselves in more words than those who did not fall in love.

Aron and colleagues (1995) also found that people who fell in love showed significant increases in perceived self-efficacy and self-esteem. They measured participants' self-efficacy and self-esteem five times in the period of ten weeks and revealed that people who fell in love increased both self-efficacy and self-esteem more than those who did not fall in love. When people are in a romantic relationship, they come to integrate the partner's resources, perspectives, and characteristics into the self. Falling in love might be associated with a period of self-discovery, which might lead to new experiences, social roles, and social networks (Aron et al., 1995). Through such experiences, people realize an enhanced feeling of efficacy. The essence of self-expansion theory is that we utilize relationships in order to increase perception of resources to increase sense of self including self-efficacy and self-esteem. This comes from engaging in a novel activity. It is therefore logical that relationships that foster these changes will be likely to be maintained.

In another important study, Lewandowski and Aron (2004) found that couples who engaged in novel activities together (presumably experiencing self-expansion) tended to experience greater love for each other. However, there has been little examination of the role of naturally perceived self-expansion opportunities in couples' attraction to each other. My primary hypothesis (Hypothesis 1) was that opportunities for self-expansion would motivate attraction for others. I examined whether the opportunity for self-expansion was associated with liking and loving of a partner.

Self-expansion in Friendships

Although Aron and Aron (1986; 2004) seem to have privileged romance and passion in their study and discussion of self-expansion, their theory supposes that self-expansion is a primary human motivation for involvement with others – not only for romantic involvement. In their research on the self-in-close-relationships, they have occasionally included friends and found that friends, for instance, seem to experience the “self-other confusion” described above. However, they have not examined self-expansion processes in friends and whether self-expansion in friendship increases attraction. As a corollary to hypothesis 1(above), I expected that opportunities for self-expansion would predict liking for friends as well as romantic partners.

Variability in Self-expansion

As noted above, Aron and Aron (1986) propose that expanding the sense of self is a basic human motivation, yet there are no studies documenting that the opportunity to experience self-expansion draws people together. Thus, it is still unclear whether self-expansion is as essential for relationships as Aron and Aron propose. In fact, there are important reasons to question the universal importance of this motive. First, although “self” is one of crucial components of self-expansion theory, there has been historical variability in the concept of self. In previous eras, for example, peoples’ selves were probably less expansive than today and relatively stable over periods of life (Baumeister, 1995). People did not travel as much as we do; they spent less time in school, and had far less ability to “explore” themselves. People married and often remained in their birth place, often for their whole lives. In many cases, women were

not allowed to work outside of the home, and men were expected to continue their fathers' jobs. As a result, identity was more unchangeable than for contemporary people (Baumeister, 1995). Similarly, there is considerable cultural variability in the concept of the self. Even today, the individual self is less prominent in the culture of some societies, in which the self is defined by its connection to others.

The existence of such historical and cultural variability in opportunities for self-expansion suggests that there may even be variability in motivation for self-expansion (and its relationship to love) within a single culture. Some individuals clearly appear more motivated to seek out new experiences than others. For instance, it is well established that there are individual differences in "experience seeking" tendencies, and these might predict the need for self-expansion. "Experience seeking," a subtype of Zuckerman's "sensation seeking" tendency, indicates a need for a broad variety of inner experience achieved through travel, drugs, music, art, and other activities (Zuckerman, Bone, Neary, Mangelsdorff, & Brustman, 1972). An experience seeker is a person who needs varied, novel, and complex sensations and experiences to maintain an optimal level of arousal (Zuckerman et al., 1972). Thus, individuals who tend to seek novel experiences might want self-expansion in their relationships, whereas individuals who do not seek experiences might not expect (or even desire) self-expansion in their relationships.

A related individual difference dimension is "openness" to experience, often reported as one of the "Big 5" dimensions of personality. According to Judge, Higgins, Thoresen, and Barrick (1999), people who are open to experience are characterized as flexible, creative, challenging, and broad-minded. Therefore, those who are open to

experience might be motivated to seek self-expansion more than those who are not open to experience (and to value relationships that support it).

Finally, recall that self-expansion is likely to be unsuccessful unless people can integrate their new experiences. The ability to do this may be limited by many factors, most notably stress. It is well known that physical, emotional, and cognitive symptoms often appear when the body is under stress. In many cases, people under high stress tend to be irritated, have a hard time concentrating on cognitive work, and want to be isolated from relationships. As a result, people under stress may be overwhelmed by self-expansion and unlikely to experience increased attraction toward its source.

Thus, I hypothesized that although self-expansion may be a motive underlying many relationships, it should be of greater importance in relationships of people high in experience seeking, high in openness, and under low stress. I examined these hypotheses using a sample of college students.

METHOD

Participants

Participants were 164 undergraduate students, attending an introductory psychology course at Indiana State University. The majority of participants were first-year students, and there were 89 female and 75 male students. Eighty-three participants were in an exclusive romantic relationship when they were tested (51 females, 32 males), and 81 participants were not (38 females, 43 males). Ages ranged from 17 to 40 years, and the mean age was 19.05. A majority of the participants were Caucasian (84.8%) or African-American (9%). The typical participant in a romantic relationship had been involved with their partner for 14 months (ranged 1 to 240); the typical person in a friendship had been friends with their partner for 12 months (ranged 2 to 360). Participants received extra credit for their psychology course in return for participation.

Procedure

In order to test the current hypotheses, the study employed two different questionnaires, one for those who were in an exclusive romantic relationship and one for those who were not. Participants who were in a romantic relationship were asked to complete a questionnaire that contained demographic questions and measures of self

and self-expansion, liking and loving for a romantic partner, experience-seeking, openness, and stress. Participants who were not in a relationship were asked to complete another version of a questionnaire that asked about their same-sex best friends. The questionnaire for friendship was exactly the same as the one for romantic relationship except that the friendship questionnaire did not contain measures of passionate love.

Measures

Self Measures. After participants signed the consent form and completed demographic questions(See Appendix A), they were asked “Who are you today?” and given 3 minutes to write single-words or phrases to describe themselves on a piece of paper(See Appendix B). In order to assess the diversity of a participant’s self-concept, 2 judges scored responses separately. They were responsible for assigning each word or phrase to different categories. Inter-rater reliability (i.e., correlations of scoring by different judges) ranged from .44 to .87.

To assess how much participants confuse the self with other, participants were given 2 minutes to rate themselves and their romantic partners on a variety of personality traits (e.g. “sincere”, “sociable”, and “broadminded”) on a 1-7 scale (where 1 = not at all to 7 = very like me or my partner. See Appendix C). Participants were then presented with the list with the traits in a different order asked to remember who they rated for each trait (See Appendix D). Participants were given 1.5 minutes to complete this form.

Self-efficacy was measured using the Self-Efficacy Scale (Sherer et al., 1982).

This measure consists of 23 items that are rated on a scale ranging from “1 = Strongly Disagree” to “7 = Strongly Agree”. The Self-Efficacy Scale is a valid and reliable scale. Reported Cronbach alpha for the scale is .86, and the content validity index is .93 (Sherer et al., 1982). The Cronbach alpha coefficient for the current study was .86. . Sample questions include “When I set important goals for myself, I rarely achieve them” and “I feel insecure about my ability to do things”. Participants were asked to choose the number that described themselves the best. Participants who score high on this scale are more likely to have high self-efficacy(See Appendix E).

Self-Expansion Opportunities. In order to measure the degree of self-expansion opportunity within their relationship, the Self-expansion Questionnaire (SEQ) modified by Lewandowski (2003) was used. The measure consists of 14 items that are rated on a scale ranging from “1 = Not Very Much” to “7 = Very Much”. Sample items include: “How much does being with your partner result in your having new experiences?”, “How much does your partner help to expand your sense of the kind of person you are?”, and “How much do you feel that you have a larger perspective on things because of your partner?”. High scores on this measure indicate that participants perceive that they have many opportunities for self-expansion in the relationship (See Appendix F). Cronbach alpha was .89 in Lewandowski and Aron’s study (2002), and this measure was moderately correlated with companionate love (.31), passionate love (.38), and relationship satisfaction (.45). The Cronbach alpha in the current study was .89.

Intimacy and Love Measures. Participants also filled out Rubin’s (1973) Liking and Loving Scales. Both scales contain 13 items each, and participants were asked to respond on a 9-point Likert scale ranging from “1 = Not at all true; disagree

completely” to “9 = Definitely true; agree completely”. Examples of items on the Liking and Loving scales include; “I think that _____ and I are quite similar to one another” and “_____ is the sort of person who I myself would like to be” (See Appendix G). The scales have been shown to be highly reliable and valid; Cronbach’s alpha coefficients are between .81 and .83 for the Liking Scale and between .84 and .86 for the Loving Scale (Rubin, 1973). Rubin’s Liking and Loving Scales have been utilized by many researchers and been useful in measuring interpersonal attraction including feelings of attachment, caring, and intimacy. For the current study, the alpha coefficients were .91 for the Liking Scale and .86 for the Loving Scale.

Two measures were used to measure passionate love. First, participants were asked to complete the short version of the Passionate Love Scale (PLS) designed by Hatfield and Sprecher (1986). PLS is a well known scale which assesses cognitive, affective, and behavioral components of passionate love. Although PLS originally contained 30 items, the short version of PLS was used in this study, and it contain 15 questions (See Appendix H). This short version of PLS has been shown to be highly reliable, with a reported alpha of .91 (Hatfield & Sprecher, 1986) and alpha of .83 for the current study. Also, it has been found to be significantly correlated with other measures of love (Hatfield & Sprecher, 1986). Participants responded on a 9-point Likert scale ranging from “1 = Completely Disagree” to “9 = Completely Agree”. Questions include “I want _____ to know me- my thoughts, my fears, and my hopes” and “I get extremely depressed when things don’t go right in my relationship with _____”.

Participants also completed the Romantic Feelings Scale. This scale was

developed by Mathes (1982) to measure romantic love. Mathes's Romantic Feelings Scale includes 76 possible feelings that participants may have for their romantic partners. Example items are "Happy about everything", "Thrills of anticipation", and "As if a rainbow were shining just for me". An internal consistency for the full scale has been reported to be .95 (Aron et al., 1995; Mathes, 1982). Also, the measure has been shown to be valid since it is significantly correlated with Rubin's Loving Scale (.48 for women and .37 for men). Participants were asked to indicate which feelings they get while thinking about their partners (See Appendix I).

The Kansas Marital Satisfaction Scale (Eggenan, Moxely, & Schumm, 1992) was used to measure how satisfied participants are with the romantic relationships they currently have. The Kansas Marital Satisfaction Scale (KMS) was originally developed to measure how satisfied people are in their marriages, but can be applied to any romantic relationship. The scale has been shown to be a valid and reliable measure. It has been found to correlate significantly with other marital satisfaction scales (Schumm, Paff-Bergen, Hatch, & Obiorah, 1986). Cronbach alpha for this study was .95. This scale consists of three questions rated on a 7-point Likert scale ranging from "Not at all satisfied" to "Very satisfied". Questions are "How satisfied are you with your current romantic relationship?," "How satisfied are you with your current romantic partner?," and "How satisfied are you with your romantic relationship with your current partner?" (See Appendix J).

In addition, participants answered the Inclusion of Other in the Self Scale (IOS) designed by Aron et al. (1992). The IOS scale assesses the degree of self-other overlap. Participants chose the picture that best described their relationship from a set

of Venn-like diagrams (Aron et al., 1992). Generally, the larger the overlaps, the more intimate participants and their partners are. The IOS has been found to be both reliable and valid. Aron et al. (1992) reported an alpha coefficient of .95 for alternate-form reliability in a sample of those in a romantic relationship and .85 for test-retest reliability for the same sample. The measure has been also found to be significantly correlated with other measures of relationship closeness. The IOS scale was used to assess intimacy for this study (See Appendix K).

Individual Characteristics Measures. Lastly, differences in individual characteristics might impact the desire for self-expansion. In order to assess individual differences in various aspects, three measures were used in this study. First, the Experience-Seeking subscale of Zuckerman's Sensation Seeking Inventory (Zuckerman et al., 1972) was completed by participants. This scale has been used to assess individual differences in experience seeking. It contains 10 questions and each question has two sentences. Participants read both sentences and circled the one that best described them. Examples of sentences include; "A) I like to try new foods that I have never tasted before", and "B) I order the dishes with which I am familiar, so as to avoid disappointment and unpleasantness" (See Appendix L). Then, participants were asked to fill out the openness and extraversion subscales of the Five-Factor Inventory (FFI) to assess their personality. This has been shown to be a valid measure. The FFI has been correlated with other personality measures, and it has been frequently used in clinical settings. In this study, alpha was .57 for openness to experience and .78 for extraversion. There are 17 items in this scale, and participants responded on a 5-point Likert scale from "Disagree Strongly" and "Agree Strongly". Participants answered

questions about whether or not they are talkative, reserved, outgoing, shy, and so forth (See Appendix M). Finally, the College Student Stress Scale was completed (Brugha, Bebbington, Tennant, & Hurry, 1985). This scale was designed to measure the stress level among college students, and asks students what has happened to them in the last three months. There are nine questions in this scale, and example items include: “Has a close friend or relative died in the last three months?”, “Have you had a major financial crisis in the last three months?”, and “Have you received a failing grade on a major paper, exam, or other assignment in the last three months?”. Participants were asked to indicate what has happened to them and when that event happened (See Appendix N).

RESULTS

In order to test the importance of self-expansion as a motivator for close relationships, several sets of analyses are presented. First are preliminary analyses to reduce the number of variables used to represent constructs used in hypothesis testing. Then, I examine correlations between perceived self-expansion opportunities and relationship attributes of intimacy and passion. Next, I examine differences in these correlations as a function of participant's personality (sensation-seeking, openness to experience, and extraversion) and recent stress level. Finally, I present additional exploratory analyses that might be of interest to future researchers.

Preliminary Analyses

The questionnaire included six different variables to represent relationship qualities: Rubin's (1973) Liking and Loving scales, Hatfield's (1986) Passionate Love Scale, Mathes' (1982) Romantic Feelings Scale, a modified Kansas (Marital) Satisfaction Scale (1992), and the Inclusion of the Other in the Self scale. An initial examination of scores on these measures revealed moderate to high intercorrelations among measures, so I used exploratory factor analysis to try to reduce the number of variables used to test critical hypotheses. A principal components analysis of these six measures as completed by people in romantic relationships suggested that they represented two underlying

dimensions. Table 1A reports the factor loadings associated with each measure after Promax rotation. The first, which had high loadings for the IOS, Rubin's Liking scale, and the modified Kansas Satisfaction scale, seemed to represent relationship "intimacy." The second, which had high loadings for the Rubin's Loving scale, the PLS, and Mathes' Feelings scale, seemed to represent a more obsessive love or "passion" for the partner. For all analyses of these subjects' data below, I computed separate "intimacy" and "passion" scores as the mean of subjects' standardized scores across the three scales loading on each factor.

I also conducted a principal components analysis of these measures as completed by participants who were not in a romantic relationship and who reported about a same-sex friendship (Note that these participants did not complete the PLS or Mathes's scale). Only one component that had high loadings for all four scales completed by these participants —Rubin's Liking Scale, Rubin's Loving Scale, the modified Kansas Satisfaction Scale, and the IOS (See Table 1B) was identified. However, for consistency across the two samples, we computed "intimacy" scores for these participants from the same three subscales used to assess intimacy in romantic couples (that is, ignoring the Loving scale). No "passion" score was obtained.

Table 1A.

Factor Loadings of Relationship Measures on Two Components for People in a Romantic Relationship

	Component	
	1	2
The IOS	0.901	*
KMS	0.789	*
Liking Scale	0.669	*
Loving Scale	*	0.909
PLS	*	0.757
Mathes' Scale	0.36	0.508

*Loadings smaller than .3 are excluded from the table.

Table 1B.

Factor Loadings of Relationship Measures for those Involved in a Friendship

	Component
	1
The IOS	0.764
KMS	0.685
Liking Scale	0.745
Loving Scale	0.781

Correlational Analysis: Tests of Hypothesis 1

The primary hypothesis motivating this research was that self-expansion is an essential source of motivation for establishing and maintaining successful relationships. I tested this in two ways. First, I correlated participants' opportunities for self-expansion in their relationship with feelings of intimacy and passion for their partners. As shown in Table 2, the results revealed that self-expansion opportunities are highly correlated with passion in romantic relationships ($r = .57, p < .01$), and with intimacy in both romantic relationships ($r = .62, p < .01$) and friendships ($r = .59, p < .01$), supporting my first hypothesis. Second, I correlated participants' "self" measures, including number and variety of self-dimensions reported (from "Who are you today?"), self-efficacy, and self-other confusion with participants' feelings of intimacy and passion for their partners. Of the twelve correlations (reported in Table 3), only one was significant: Self-efficacy showed a significant correlation with intimacy and only for friendship ($r = .38, p = .01$).

Table 2.

Correlations between Self-expansion Opportunities and Intimacy and Passion

	Friendship	Romantic Relationship	
	Intimacy	Intimacy	Passion
Self-expansion opportunities	0.59**	0.62**	0.57**
	N=80	N=83	

** $p < .01$

Table 3.

Correlations between Self Measures with Intimacy and Passion

	Friendship	Romantic Relationship	
	Intimacy	Intimacy	Passion
Number of self-descriptors	0.24*	0.13	0.16
Variety of self-descriptors	0.17	0.08	0.22*
Self-other confusion	0.11	-0.14	-0.18
Self-efficacy	0.38*	0.19	0.17
	N=80	N=83	

* $p < .05$

There may be two possible explanations for the lack of significant correlations between participants' concepts and intimacy and passion toward their relationship partners. One possibility is that static measures of the self (as obtained cross-sectionally) are inadequate to capture the dynamic nature of self-expansion. To examine this, I correlated participants' reported self-expansion opportunities within their relationship with the four "self" measures used in this study. Although three of the eight possible correlations (reported in Table 4) were significant, they were only moderate in size (and one was opposite the expected direction). Another possibility is that these four measures do not consistently assess participants' experience of "self." To explore this, I examined intercorrelations among these four measures (see Table 5). As seen in Table 5, these measures showed almost no intercorrelation (except for the two derived from the same instrument).

Table 4.

Correlations between Self Measures and Self-expansion Opportunities

	Self-expansion opportunities	
	Friendship	Romantic Relationship
Number of self-descriptors	0.14	0.03
Variety of self-descriptors	0.04	0.28*
Self-other confusion	0.18	-0.29**
Self-efficacy	0.28*	0.00
	N=80	N=83

* $p < .05$ ** $p < .01$

Table 5.

Intercorrelations among Self Measures

	Number	Variety	Confusion	Self-efficacy
Number of self-descriptors		0.53**	-0.11	0.01
variety of category	0.53**		-0.18	-0.2
Self-other confusion	-0.11	-0.18		0.01
Self-efficacy	0.01	-0.2	0.01	

** $p < .01$

Moderator Analysis: Tests of Hypothesis 2

A novel hypothesis in this paper was that the importance of self-expansion as a motivation for involvement in relationships would depend on an individual's personality and circumstances (i.e., current stress level). Specifically, I predicted that people high in experience-seeking, high in openness, and under low stress would be motivated to seek self-expansion in their relationships. In contrast, I expected that people low in experience-seeking, low in openness, and under high stress would not be motivated to seek self-expansion because of their lack of interest in expansion and/or their inability to integrate new self-information. To test these hypotheses, a series of multiple regressions were performed following Aiken and West (1991). Separate regressions were performed to test the impact of each hypothesized moderator for intimacy for close friendships and romantic relationships and for passion for romantic partners. Each analysis included self-expansion opportunities, the hypothesized moderator, and a term representing the interaction of self-expansion opportunities with the hypothesized moderator. As shown in Table 6A, there was little evidence of moderation of the importance of self-expansion opportunities. None of the interaction terms achieved significance for predicting intimacy with friends, and only the interaction involving openness achieved significance for predicting intimacy for romantic partners. There was no evidence of moderation of the importance of self-expansion opportunities for experiences of passion. I conducted the follow-up analysis in order to determine the importance of openness for predicting intimacy for romantic partners. The results revealed that self-expansion opportunities were more strongly associated with intimacy for those "low" in openness than those "high" in openness (see Table 6B). This pattern directly contradicted hypothesis 2.

Notably, the patterns on the other moderators, though non-significant, also contradicted hypothesis 2.

Table 6A.

Betas for Interactions of Self-expansion Opportunities and Personality

Measures and Stress Level

	Friendship	Romantic Relationship	
	Intimacy (as DV)	Intimacy (as DV)	Passion (as DV)
Sensation-Seeking	0.03	0.02	-0.02
Openness	0.02	-0.4**	-0.23
Extraversion	0.16	-0.1	-0.07
Stress level	-0.04	0.1	0.02
	N=80	N=83	

** $p < .01$

Table 6B.

Relationship of Self-Expansion Opportunities with Intimacy and Passion for People High and Low on Moderators

	Friendship		Romantic Relationship			
	Intimacy (as DV)		Intimacy (as DV)		Passion (as DV)	
	High	Low	High	Low	High	Low
Sensation-Seeking	0.55	0.42	0.55	0.47	0.42	0.49
Openness	0.51	0.49	0.34**	0.72**	0.35	0.57
Extraversion	0.62	0.56	0.45	0.59	0.41	0.5
Stress level	0.41	0.55	0.66	0.42	0.47	0.42

** $p < .01$

Additional Analyses

Additional analyses to test for gender and relationship differences were also conducted. Although these results do not address particular study hypotheses, many studies show sex differences in relationship measures and they are reported here for archival purposes. Tables comparing men and women's scores on various measures for romantic relationships and friendships are in Appendix O. Appendix O also has a table comparing the means for various measures as a function of the type of relationship - romantic or friendship. Tables presenting study results separately for men and women are in Appendix P.

DISCUSSION

Self-expansion theory (1986) posits that there is a human motivation to expand the “self” through involvement with others and that this desire underlies the development of close relationships. Although prior research (Lewandowski & Aron, 2004) has shown that couples who engage in novel and arousing activities (which are presumed to be self-expanding) report greater passion toward their partners, whether these opportunities naturally *motivate* attraction, serving to pull people together, is still unclear. Whether it motivates friendship equally as well as romantic relationships is also unknown. Thus, my first hypothesis was that close relationships (including both romantic relationships and friendships) that provide opportunities for self-expansion would have greater attraction for the partners than relationships without those opportunities. My second hypothesis was that there would be individual differences in the importance of self-expansion opportunities to feelings of attraction for a relationship partner. In particular, I predicted that people who were high in “openness” or who “experience seeking” and people low in stress would be most attracted to relationships that provided self-expansion opportunities. Below, I review my findings related to these hypotheses and discuss their implications for self-expansion theory. Afterwards, I discuss the limitations of the findings and offer directions for further research.

Theoretical Implications

As stated above, my first hypothesis was that close relationships that provide opportunities for self-expansion would have greater attraction for the partners than relationships without those activities. This hypothesis was supported. My results revealed that perceived self-expansion opportunities were highly correlated with passion and intimacy in both romantic relationships and friendships. This supports a belief that opportunities for self-expansion are indeed a basis for maintaining close relationships although it could be that close relationships foster opportunities for self-expansion. This also revealed that opportunities for self-expansion were important not only in romantic relationships but also in friendships, although most previous research has been focused on the importance of self-expansion in romantic relationships. Note, however, that all participants reported about on-going relationships, and the role of self-expansion opportunities in the formation of relationships needs further exploration.

As an extension of the first hypothesis, I also expected that people who experience self-expansion within a relationship would report greater attraction for their partners than those who have not undergone expansion; in fact, opportunities that do not translate into experiences might actually yield dissatisfaction with a relationship. An ideal test of this hypothesis would explore the correlation between *changes* in participants' self-concept across time and *changes* in passion and intimacy for their relationship partners. Unfortunately, with cross-sectional data, I could only examine the *static* correlations between expansiveness of the self, as measured by the number and variety of self-descriptions (from the "Who are you today?"), self-partner confusion, and self-efficacy. Among friends, both number of self-descriptors and self-

efficacy were significantly positively correlated with intimacy; variety of self-descriptors and self-other confusion were also positively correlated with intimacy, though not significantly so. However, among romantic partners, none of the self measures significantly correlated with intimacy, and only one (variety of self-descriptors) was significantly correlated with passion. That self-expansion opportunities were more strongly related to intimacy and passion than the self measures may reflect the difficulty in using cross-sectional data to test longitudinal hypotheses. However, it is also important to consider that perceived opportunities for self-expansion are more important to a relationship than achieved levels of self-expansion.

Related to this, it should be noted that there was little evidence that people with the greatest perceived self-expansion opportunities actually experience more self-expansion. For example, although self-expansion opportunities were significantly correlated with self-efficacy for people in friendships, this correlation did not approach significance for people in romantic relationships; on the other hand self-expansion opportunities in romantic relationships were correlated with variety of self-descriptors. Perhaps these discrepancies reflect the inadequacy of any single measure of the “self.” Another interpretation is that the operation of the self (and the process of self-expansion) may be different in different categories of relationships. Supporting this, it is noteworthy that self-other confusion was negatively correlated with self-expansion opportunities for romantic relationships but positively in friendships (though the latter was not significant). Similarly, self-efficacy was negatively related to intimacy and passion among romantic partners but positively related to intimacy among friends. Perhaps romantic couples experience self-expansion as a merging of the selves, and

once completed, further opportunities for expansion are reduced and continued sense of self is dependent on the partners. But friends experience self-expansion not as a merging of selves but of merging access to resources and help that enhance efficacy without diminishing opportunities for expansion. This possibility should be explored in future research.

My second hypothesis was that the importance of self-expansion opportunities as a motive for relationships would depend on a person's personality and current situation (i.e., degree of stress). Specifically, I predicted that people high in openness or sensation-seeking and low in stress would be more motivated to seek self-expansion opportunities in their relationships and that there would be a stronger correlation between self-expansion and feelings of attraction (intimacy and passion) for these participants. This hypothesis was not supported. I found no evidence that experience seeking or stress affected the importance of self-expansion opportunities for intimacy in friendships or intimacy or passion in romantic relationships. Although I did find that the relationship of self-expansion opportunities to intimacy in romantic relationships varied according to the participants' "openness", the direction of this result was contrary to expectations. The association between self-expansion opportunities and intimacy was stronger for those low in "openness" than for those high in openness. One possible explanation for this result is that people high in openness may have many opportunities to experience self-expansion outside of their close relationships; thus, it is not a primary motive for developing and cultivating intimacy with others. But close relationships may be the only source of self-knowledge and expansion for people low in openness.

Limitations

Unlike prior research, this study explored the correlation of self-expansion opportunities with relationship qualities for both friendships and romantic relationships. It also addressed personality characteristics as a possible moderator of these associations. Multiple measures of constructs were also obtained. However, the study also has important limitations. The first limitation comes from the cross-sectional nature of my measures. Without longitudinal data, it is impossible to determine how (or if) self-expansion opportunities result in changes to the self, and how such changes affect relationship intimacy and passion. The cross-sectional and correlational nature of this data in fact allows for an interpretation that it is intimacy that accounts for the increased perception of self-expansion opportunities; that is, the high levels of self-expansion opportunities reported by participants might simply be a “halo” reflecting the generally positive views they have toward their partners. Longitudinal measurement could allow more precise conclusions regarding causal ordering of these measures.

A second limitation of this study arises from the limited nature of the samples. This study was conducted in one Midwestern university, and the majority of participants were Caucasians. Therefore, the present findings may not generalize to those from other ethnic backgrounds. For example, it is quite possible that the impact of self-expansion opportunities on self could be very different in non-Western cultures that hold other views of the self. Expanding an individualistic self-concept, for instance, seems more straightforward than expanding a collectivistic self-concept, which is already dependent on others.

Future Research

Based on the findings of the current study, some suggestions can be made for future research. First of all, future research should examine self-expansion as a motive for forming relationships. The present study provided the evidence that there is a strong correlation between perceived self-expansion opportunities and intimacy and passion in both romantic relationships and friendships. However, whether initial attraction is a result of self-expansion is still unclear. This is an area that additional research would be able to clarify.

Second, future research should examine the association of self-expansion and relationship stability in a longitudinal design so the necessity of self-expansion for relationships could be examined more clearly. As repeatedly stated in this paper, Aron and Aron (1986) claim that people enter and maintain a relationship because they want to expand their sense of selves, and this is the main purpose for becoming involved in relationships. If this is true, (particularly if they were anticipated) the absence of self-expansion opportunities could affect relationship stability. In other words, couples who have many opportunities for self-expansion might be more likely to stay together, while couples who do not experience self-expansion may be more likely to break up.

Third, efforts could be made to examine differences in self-expansion processes between friendships and romantic relationships. The relationship between various self-measures and self-expansion opportunities and attraction were examined in the current study. Our results suggest that there are differences in these correlations between those in friendships and those in romantic relationships. Although these differences seem to make sense, they have not been incorporated in self-expansion theory.

Lastly, future researchers should also examine cultural differences in self-expansion within relationships. According to Aron and Aron (1996), “including others in the self” is well-known and the most basic process when people expand their sense of selves. Some past research indicates that people from collectivistic cultures tend to build more connections with others, compared to people from individualistic cultures (Li, 2002). Thus, it would be interesting to look at cultural differences in self-expansion and examine whether people from collectivistic cultures are more or less motivated to seek self-expansion than people from individualistic cultures. This is particularly relevant as self-expansion theory originates with Eastern philosophy (Aron & Aron, 1986).

Conclusion

The primary purpose of this study was to determine whether opportunities for self-expansion would motivate attraction for others. There are three contributions in the current study. First, though I could not determine causal direction of self-expansion opportunities and attraction, the results revealed that perceived opportunities for self-expansion are strongly correlated with passion and intimacy. Second, I found that self-expansion opportunities also correlate with intimacy in friendship. In past studies, Aron and Aron (1986) claimed that self-expansion is tied to passionate love in romantic relationships. Although people report more opportunities for self-expansion with romantic partners, my results revealed that self-expansion was just as correlated with intimacy in friendships as romantic relationships. Finally, the results showed that, though not in ways I predicted, self-expansion depends on individual characteristics.

Hopefully, this study will help our understanding of close relationships.

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APPENDIX A

Background Items

1. What is your sex? Male Female
2. How old are you? _____ years
3. Which of the following best describes your sexual orientation?
 - A. Heterosexual
 - B. Homosexual
 - C. Bisexual
4. What is your racial/ethnic background?
 - A. Caucasian
 - B. African-American
 - C. Asian-American
 - D. Hispanic-American
 - E. Native American
 - F. Other(including non-US citizen)/multi-racial
5. Which of the following best describes your current relationship status?
 - A. Single and living separately from my partner
 - B. Co-habiting with my partner
 - C. Married
6. Is your romantic partner male or female?
 - A. Male
 - B. Female
7. What is your romantic partner's first name? _____
8. How long have you been romantically involved with this person? _____ months

◆◆◆◆◆◆◆◆◆◆**StopHere**◆◆◆◆◆◆◆◆◆◆

Do not turn to the next page until you are told to do so.

APPENDIX C

Self-Other Rating Scales

Below are two columns of traits. Use a 7-point scale (where 1 = *not at all* and 7 = *very much*) to indicate how much the traits in Column #1 describe YOU. Use the same scale to indicate how much each of the traits in Column #2 describe YOUR PARTNER.

SELF-RATINGS

1 = *not at all*, 7 = *very like me*

PARTNER-RATINGS

1 = *not at all*, 7 = *very like my partner*

Sincere _____

Honest _____

Understanding _____

Lonely _____

Truthful _____

Trustworthy _____

Intelligent _____

Imaginative _____

Thoughtful _____

Emotional _____

Reliable _____

Friendly _____

Kind _____

Daydreamer _____

Happy _____

Considerate _____

Humorous _____

Warm _____

Cheerful _____

Responsible _____

Broadminded _____

Courteous _____

Pleasant _____

Polite _____

Helpful _____

Quite _____

Enthusiastic _____

Clever _____

Forgiving _____

Serious _____

Obedient _____

Sentimental _____

Systematic _____

Proud _____

Bold _____

Perfectionist _____

Sociable _____

Shy _____

Thrift _____

Boastful _____

APPENDIX D

Self-Other Memory Scale

*Write a **S** next to each trait below that you previously rated yourself on. Write a **P** next to each trait that you rated you partner on. Leave blank any trait that were not in the previous list.*

DO NOT LOOK BACK AT YOUR PRIOR RATINGS TO COMPLETE THIS TASK.

Lonely _____

Intelligent _____

Sincere _____

Thoughtful _____

Warm _____

Happy _____

Humorous _____

Bold _____

Reliable _____

Sociable _____

Kind _____

Serious _____

Polite _____

Sentimental _____

Boastful _____

Helpful _____

Thrifty _____

Broadminded _____

Forgiving _____

Daydreamer _____

Cheerful _____

Friendly _____

Truthful _____

Enthusiastic _____

Trustworthy _____

Shy _____

Honest _____

Obedient _____

Understanding _____

Perfectionistic _____

Courteous _____

Responsible _____

Clever _____

Considerate _____

Quiet _____

Proud _____

Pleasant _____

Systematic _____

Imaginative _____

Emotional _____

APPENDIX E

Efficacy Scale

Please carefully read the following questions and choose the answer that best reflects your current feelings.

1. When I make plans, I am certain I can make them work.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

2. One of my problems is that I cannot get down to work when I should.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

3. If I can't do a job the first time, I keep trying until I can.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

4. When I set important goals for myself, I rarely achieve them.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

5. I give up on things before completing them.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

6. I avoid facing difficulties.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

7. If something looks too complicated, I will not even bother to try it.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

8. When I have something unpleasant to do, I stick to it until I finish it.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

9. When I decide to do something, I go right to work on it.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

10. When trying to learn something new, I soon give up if I am not initially successful.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

11. When unexpected problems occur, I don't handle them well.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

12. I avoid trying to learn new things when they look too difficult for me.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

13. Failure just makes me try harder.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

14. I feel insecure about my ability to do things.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

15. I am a self-reliant person.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

16. I give up easily.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

17. I do not seem capable of dealing with most problems that come up in life.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

18. It is difficult for me to make new friends.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

19. If I see someone I would like to meet, I go to that person instead of waiting for him or her to come to me.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

20. If I meet someone interesting who is hard to make friends with, I'll soon stop trying to make friends with that person.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

21. When I am trying to make friends with someone who seems uninterested at first, I don't give up easily.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

22. I do not handle myself well in social gatherings.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

23. I have acquired my friends through my personal abilities at making friends.

1	2	3	4	5	6	7
Strongly Disagree			Somewhat Agree			Strongly Agree

APPENDIX F

Self-expansion Opportunity Scale

Please answer each question below according to the way you personally feel about your romantic partner, using the following scale. Place your answer in the space to the right of each item.

Not at all 1---2---3---4---5---6---7 A great deal

1. How much does being with your partner result in your having new experiences?

2. When you are with your partner, do you feel a greater awareness of things because of him/her? _____
3. How much does your partner increase your ability to accomplish new things?

4. How much does being with your partner make you more appealing to potential future mates? _____
5. How much does your partner help to expand your sense of the kind of person you are? _____
6. How much do you see your partner as a way to expand your own capabilities?

7. Do you often learn new things about your partner? _____

8. How much does your partner provide a source of exciting experiences? _____
9. How much do your partner's strengths as a person (skills, abilities, etc.)
compensate for some of your own weaknesses as a person? _____
10. How much do you feel that you have a larger perspective on things because of
your partner? _____
11. How much has being with your partner resulted in your learning new things?

12. How much has knowing your partner made you a better person? _____
13. How much does being with your partner increase the respect other people have
for you? _____
14. How much does your partner increase your knowledge? _____

APPENDIX G

Liking and Loving Scales

Liking Scale

Please think of your romantic partner whenever you see the “_____” in the following items.

1. When I am with _____, we almost always are in the same mood.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

2. I think that _____ is unusually well-adjusted.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

3. I would highly recommend _____ for a responsible job.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

4. In my opinion, _____ is an exceptionally mature person.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

5. I have great confidence in ____'s good judgment.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

6. Most people would react favorably to ____ after a brief acquaintance.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

7. I think that ____ and I are quite similar to one another.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

8. I would vote for ____ in a class or group election.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

9. I think that ____ is one of those people who quickly wins respect.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

10. I feel that ____ is an extremely intelligent person.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

11. ____ is one of the most likeable people I know.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

12. ____ is the sort of person who I myself would like to be.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

13. It seems to me that it is very easy for ____ to gain admiration.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

Loving Scale

14. If ____ were feeling bad, my first duty would be to cheer him/her up.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

15. I feel that I can confide in ____ about virtually everything.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

16. I find it easy to ignore ____'s faults.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

17. I would do almost anything for ____.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

18. I feel very possessive toward ____.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

19. If I could never be with ____, I would feel miserable.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

20. If I were lonely, my first thought would be to seek ____ out.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

21. One of my primary concerns is ____'s welfare.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

22. I would forgive ____ for practically anything.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

23. I feel responsible for ____'s well-being.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

24. When I am with ____, I spend a good deal of time just looking at him/her.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

25. I would greatly enjoy being confided in by ____.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

26. It would be hard for me to get along without ____.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

APPENDIX H

Passionate Love Scale

Each of the statements below contains a _____. Read each statement to yourself, inserting your romantic partner's name in the blank.

1. I would feel deep despair if _____ left me.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

2. Sometimes I feel I can't control my thoughts; they are obsessively on _____.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

3. I feel happy when I am doing something to make _____ happy.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

4. I would rather be with _____ than everyone else.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

5. I'd get jealous if I thought _____ were falling in love with someone else.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

6. I yearn to know all about _____.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

7. I want _____ - physically, emotionally, mentally.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

8. I have an endless appetite for affection from _____.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

9. For me, _____ is the perfect romantic partner.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

10. I sense my body responding when _____ touches me.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

11. _____ always seems to be on my mind.

1	2	3	4	5	6	7	8	9
Completely Disagree				Moderately Agree				Completely Agree

12. I want _____ to know me- my thoughts, my fears, and my hopes.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

13. I eagerly look for signs indicating _____'s desire for me.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

14. I possess a powerful attraction for _____.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

15. I get extremely depressed when things don't go right in my relationship with _____.

1	2	3	4	5	6	7	8	9
Completely				Moderately				Completely
Disagree				Agree				Agree

APPENDIX I

Mathes' Romantic Feeling Scale

Now, try to picture your romantic partner in your mind. Then, place an "X" by any feelings you get while thinking about them.

- | | |
|---|--|
| <input type="checkbox"/> 1. As if each day is special | <input type="checkbox"/> 19. Oneness and harmony with her or him |
| <input type="checkbox"/> 2. That life is worthwhile | <input type="checkbox"/> 20. In love with everything |
| <input type="checkbox"/> 3. Happy about everything | <input type="checkbox"/> 21. A tingling in my spine |
| <input type="checkbox"/> 4. As if I were swinging very high | <input type="checkbox"/> 22. Breathless |
| <input type="checkbox"/> 5. That he or she is perfect | <input type="checkbox"/> 23. Longing for her or him |
| <input type="checkbox"/> 6. Positive toward everyone | <input type="checkbox"/> 24. Tingly |
| <input type="checkbox"/> 7. High | <input type="checkbox"/> 25. Light |
| <input type="checkbox"/> 8. Energetic | <input type="checkbox"/> 26. Carefree |
| <input type="checkbox"/> 9. In tune with my body | <input type="checkbox"/> 27. Like jumping up and down |
| <input type="checkbox"/> 10. Wow! | <input type="checkbox"/> 28. As if I didn't have a care in the world |
| <input type="checkbox"/> 11. Delirious | <input type="checkbox"/> 29. Generous |
| <input type="checkbox"/> 12. Like counting the minutes until I see her or him | <input type="checkbox"/> 30. Playful |
| <input type="checkbox"/> 13. As if we lived in our own special world | <input type="checkbox"/> 31. Fulfilled |
| <input type="checkbox"/> 14. Able to accomplish any goal | <input type="checkbox"/> 32. Radiating |
| <input type="checkbox"/> 15. Spontaneous | <input type="checkbox"/> 33. Beaming |
| <input type="checkbox"/> 16. Extreme joy | <input type="checkbox"/> 34. Accepting |
| <input type="checkbox"/> 17. That he or she is the most beautiful person in the world | <input type="checkbox"/> 35. Preoccupied with thoughts of her or him |
| <input type="checkbox"/> 18. Totally involved in him or her | <input type="checkbox"/> 36. Good will toward the world |

- ___ 37. Complete
- ___ 38. Thrills of anticipation
- ___ 39. Off in the clouds
- ___ 40. Constant euphoria
- ___ 41. Floating
- ___ 42. A kind of pressure of burning in my genitals
- ___ 43. Able to conquer all
- ___ 44. Full
- ___ 45. Overwhelmed by my feelings
- ___ 46. Like acting crazy
- ___ 47. As if the whole world were coming up roses
- ___ 48. Light and airy
- ___ 49. Purposeful
- ___ 50. An increased heart beat
- ___ 51. Flushed
- ___ 52. Unrestrained
- ___ 53. Oneness
- ___ 54. Loyalty
- ___ 55. Self-actualizing
- ___ 56. Exuberance
- ___ 57. Ecstasy
- ___ 58. Vigorous
- ___ 59. Bursting with happiness
- ___ 60. Whole
- ___ 61. Like a blind man who has suddenly gained his sight
- ___ 62. That everything is good
- ___ 63. An increased metabolism
- ___ 64. Fantastic
- ___ 65. Dazed
- ___ 66. Like singing
- ___ 67. As if a rainbow were shining just for me
- ___ 68. Like blossoming
- ___ 69. Awake
- ___ 70. Sunny
- ___ 71. All aglow
- ___ 72. Heightened sensory awareness
- ___ 73. Like exploding
- ___ 74. About to burst with happiness
- ___ 75. A big rush inside me
- ___ 76. Like screaming for joy.

APPENDIX J

Kansas Marital Satisfaction Scale

1. How satisfied are you with your current romantic relationship?
Not at all satisfied 1---2---3---4---5---6---7 Very Satisfied

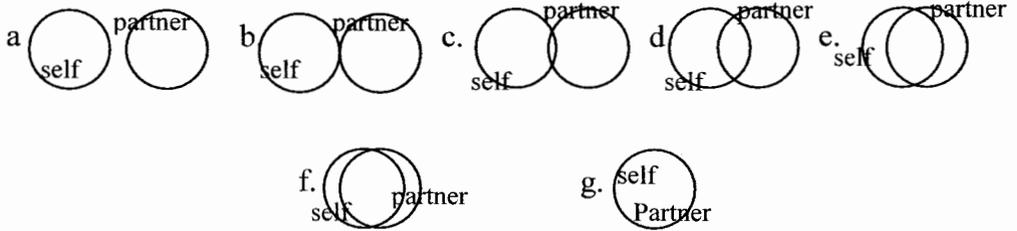
2. How satisfied are you with your current romantic partner?
Not at all satisfied 1---2---3---4---5---6---7 Very Satisfied

3. How satisfied are you with your romantic relationship with your current partner?
Not at all satisfied 1---2---3---4---5---6---7 Very Satisfied

APPENDIX K

IOS Scale

Which of the following pairs of circles best describes you and your romantic partner:



APPENDIX L

Sensation-Seeking Scale

For each of the listed pairs of items, circle the one that *best* describes you.

1. A. I dislike all body odors.
B. I like some of the earthy body smells.

2. A. I like to explore a strange city or section of town by myself, even if it means getting lost.
B. I prefer a guide when I am in a place I don't know well.

3. A. I have tried marijuana or would like to.
B. I would never smoke marijuana.

4. A. I would not like to try any drug which might produce strange and dangerous effects on me.
B. I would like to try some of the drugs that produce hallucinations.

5. A. I like to try new foods that I have never tasted before.
B. I order the dishes with which I am familiar, so as to avoid disappointment and unpleasantness.

6. A. I would like to take off on a trip with no pre-planned or definite routes, or timetable.
B. When I go on a trip I like to plan my route and timetable fairly carefully.

7. A. I prefer the "down-to-earth" kinds of people as friends.
B. I would like to make friends in some of the "far-out" groups like artists or "punks".

8. A. I would like to meet some persons who are homosexual (men or women).
B. I stay away from anyone I suspect of being gay or lesbian.

9. A. The essence of good art is in its clarity, symmetry of form and harmony of colors.
B. I often find beauty in the “clashing” colors and irregular forms of modern painting.
10. A. People should dress according to some standards of taste, neatness, and style.
B. People should dress in individual ways even if the effects are sometimes strange.

APPENDIX M

Five Factor Inventory

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

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

I see myself as someone who . . .

- ___ 1. Is talkative
- ___ 2. Is original, comes up with new ideas
- ___ 3. Is reserved
- ___ 4. Is curious about many different things
- ___ 5. Is full of energy
- ___ 6. Is ingenious, a deep thinker
- ___ 7. Generates a lot of enthusiasm
- ___ 8. Has an active imagination
- ___ 9. Tends to be quiet
- ___ 10. Is inventive
- ___ 11. Has an assertive personality
- ___ 12. Values artistic, aesthetic experiences
- ___ 13. Is sometimes shy, inhibited

- ___ 14. Is outgoing, sociable
- ___ 15. Likes to reflect, play with ideas
- ___ 16. Has few artistic interests
- ___ 17. Is sophisticated in art, music, or literature

APPENDIX N

Stress Scale

Please indicate whether any of the following have happened to you since you in the last three months (12 weeks), and if so, how long ago.

1. Have you suffered a serious illness, injury, or an assault in the last three months (12 weeks)?
 - a. Yes, _____ weeks ago
 - b. No

2. Have any of your close friends or relatives suffered a serious illness, injury, or an assault in the last three months (12 weeks)?
 - a. Yes, _____ weeks ago
 - b. No

3. Has a close friend or relative died in the last three months (12 weeks)?
 - a. Yes, _____ weeks ago
 - b. No

4. Have you ended an exclusive dating relationship in the last three months (12 weeks)?
 - a. Yes, _____ weeks ago
 - b. No

5. Have you had a serious problem with a close friend, neighbor, or relative in the last three months (12 weeks)?
 - a. Yes, _____ weeks ago
 - b. No

6. Have you had a major financial crisis in the last three months (12 weeks)?
 - a. Yes, _____ weeks ago
 - b. No

7. Have you had problems with the police and/or a court appearance in the last three months (12 weeks)?

- a. Yes, _____ weeks ago
- b. No

8. Have you had something you valued lost or stolen in the last three months (12 weeks)?

- a. Yes, _____ weeks ago
- b. No

9. Have you received a failing grade on a major paper, exam, or other assignment in the last three months (12 weeks)?

- a. Yes, _____ weeks ago
- b.. No

APPENDIX O

Relationship Differences

Table O1.

Means of Gender Differences for Friendship

	Men	Women	t
Intimacy			-0.674
The IOS	3.81	4.184	-1.089
Liking Scale	6.582	6.622	-0.148
KMS	5.865	5.921	-0.316
Passion			
Loving Scale	4.78	5.923	-3.497**
Self-expansion opportunities	4.799	4.902	-0.505
Number of self-descriptors	11.366	14.027	-2.087*
Variety of category	4.628	4.676	-0.105
Self-other confusion	0.132	0.16	-0.6
Self-efficacy	4.848	4.909	-0.385
Sensation-Seeking	5.238	5.053	0.388
Extraversion	3.208	3.762	-2.995**
Openness to Experience	3.809	3.711	0.672
Stress	2.209	2.237	-0.076

* $p < .05$ ** $p < .01$

Table O2.

Means of Gender Differences for Romantic Relationship

	Men	Women	t
Intimacy			-2.219
The IOS	4.839	5.275	-1.343
Liking Scale	6.815	7.42	-2.184
KMS	6.075	6.444	-1.805
Passion			0.869
Loving Scale	7.322	6.618	2.512*
PLS	5.319	5.379	-0.302
Mathes' Scale	32.156	32.647	-0.12
Self-expansion opportunities	5.163	5.346	-8.14
Number of self-descriptors	11.613	13.44	-1.582
Variety of category	3.867	4.66	-2.163
Self-other confusion	0.165	0.154	0.182
Self-efficacy	5.302	5.063	1.604
Sensation-Seeking	5.033	4.681	0.689
Extraversion	3.645	3.645	-0.003
Openness to Experience	3.736	3.682	0.494
Stress	1.438	1.824	-1.334

* $p < .05$

Table O3.

Comparison of Means for Romantic Relationships and Friendships

	Friendship	Romantic Relationship	t
Intimacy			-0.02
The IOS	3.988	5.11	4.808**
Liking Scale	6.601	7.187	3.073**
KMS	5.892	6.305	3.088**
Passion			
Loving Scale	5.323	6.889	7.011**
Self-expansion opportunities	4.847	5.275	2.866**
Number of self-descriptors	12.628	12.741	0.131
Variety of category	4.65	4.363	-0.992
Self-other confusion	0.145	0.158	0.342
Self-efficacy	4.876	5.155	2.605*
Sensation-Seeking	5.15	4.818	-0.966
Extraversion	3.468	3.645	1.454
Openness to Experience	3.763	3.703	-0.667
Stress	2.222	1.675	-2.405

* $p < .05$ ** $p < .01$

APPENDIX P

Gender Differences

Table P1.

*Correlations between Self-expansion Opportunities and Intimacy and Passion
for Men*

	Friendship Intimacy	Romantic Relationship	
		Intimacy	Passion
Self-expansion opportunities	0.58**	0.68**	0.78**

** $p < .01$

Table P2.

*Correlations between Self-expansion Opportunities and Intimacy and Passion
for Women*

	Friendship Intimacy	Romantic Relationship	
		Intimacy	Passion
Self-expansion opportunities	0.65**	0.57**	0.42**

** $p < .01$

Table P3.

Correlations between Self Measures with Intimacy and Passion for Men

	Friendship	Romantic Relationship	
	Intimacy	Intimacy	Passion
Number of self-descriptors	0.23	0.07	0.02
Variety of self-descriptors	0.07	-0.16	0.15
Self-other confusion	0.04	-0.18	-0.18
Self-efficacy	0.41**	0.15	-0.03

** $p < .01$

Table P4.

Correlations between Self Measures with Intimacy and Passion for Women

	Friendship	Romantic Relationship	
	Intimacy	Intimacy	Passion
Number of self-descriptors	0.21	0.09	0.26
Variety of self-descriptors	0.26	0.16	0.34*
Self-other confusion	0.16	-0.12	-0.19
Self-efficacy	0.35*	0.18	0.19

* $p < .05$

Table P5.

Correlations between Self Measures and Self-expansion Opportunities for Men

	Self-expansion opportunities	
	Friendship	Romantic Relationship
Number of self-descriptors	0.15	0.26
Variety of self-descriptors	0.01	0.29
Self-other confusion	0.02	-0.33
Self-efficacy	0.26	-0.01

Table P6.

Correlations between Self Measures and Self-expansion Opportunities for Women

	Self-expansion opportunities	
	Friendship	Romantic Relationship
Number of self-descriptors	0.12	-0.13
Variety of self-descriptors	0.08	0.26
Self-other confusion	0.44**	-0.26
Self-efficacy	0.32	0.04

** $p < .01$