The Effects of Romantic Dissolution on Well-Being

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Abstract

Well-being, including happiness, is relatively stable. However, certain experiences such as divorce and death of a spouse can disrupt this stability. Recently, studies have shown that romantic relationships are important contributors to positive well-being. Romantic dissolution refers to the end of a romantic relationship (i.e., breaking up). Though research indicates that romantic dissolution can have a traumatic effect on negative well-being (e.g., depression), the effects of romantic dissolution on positive well-being remain unknown. This study investigated the effect of romantic dissolution on positive well-being and whether personality traits mediate this effect. Multiple measures of happiness, life satisfaction and positive and negative affect were administered to an undergraduate sample (N=446) via an online survey system. Approximately 80% of the sample had experienced a romantic dissolution. Measures of positive well-being were negatively correlated with estimates of grieving following a romantic dissolution. Negative affect and depression were positively correlated with grieving. The NEO-Personality Five Factor Inventory was used to assess personality.

Individuals with higher levels of neuroticism experienced more severe reactions to romantic dissolution. Those who experienced romantic dissolution also had an elevated mean on the depression scale in comparison to those who had not experienced romantic dissolution. Romantic dissolution significantly affected levels of happiness and positive well-being, but not over and above the effect of personality traits. Principal component analysis identified ways to refine the bereavement scale for the purposes of measuring romantic dissolution. Clinical implications and future directions are discussed.
The Effects of Romantic Dissolution on Well-Being

*Positive Psychology and Romantic Dissolution*

Positive psychology is an area of psychological research which complements the traditional study of psychological dysfunction by emphasizing healthy and productive functioning. Dr. Seligman made positive psychology a primary mandate when he was elected American Psychological Association president in 1996 (Authentic Happiness, 2006). An increasing literature dedicated to promoting well-being and positive trends in mental health has now been developed (Seligman, Steen, Park, & Peterson, 2005). Thus, in an effort to further the progress that was initiated by Seligman, it is important that factors which detract from happiness and well-being are studied in addition to those that contribute to it. This will aid in the effort to gain full insight on how to promote well-being in the face of life circumstances that could potentially compromise it.

Social relations are one of the primary contributors to well-being (Diener & Seligman, 2002). It is thought that social networks are a source of support and are correlated with greater levels of health and happiness (Helliwell & Putnam, 2004; Diener & Seligman, 2002). Romantic relationships are also important contributors to happiness (Demir, 2008; Diener & Seligman, 2002). Relationships are particularly important when considering well-being because well-being is thought to be relatively stable over time (Lu & Argyle, 1991; Lucas, Clark, Georgellis, & Diener, 2003). However, certain events involving relationships can disrupt this stability in well-being (e.g., the death of a spouse and divorce) (Lucas, 2007b). This suggests that romantic relationships are important contributors to well-being and that the end or the loss of such a relationship may be a factor that compromises the stability of well-being and happiness.
Romantic dissolution refers to the end or the loss of a romantic relationship (MacDonald & Leary, 2005). The fact that romantic dissolutions can be physically and emotionally devastating has been well established (Davis, Shaver, & Vernon, 2003). Personality accounts for 50 percent of the variance in happiness and romantic relationships, but with personality controlled for, romantic relationships still accounted for three percent of the variance (Demir, 2008). Personality may mediate the contribution of romantic relationships and romantic dissolution to happiness as well. This leads to the present investigation, which investigates the effect of romantic dissolution on well-being, both positive and negative, and whether romantic dissolutions have an effect on levels of positive and negative well-being.

**Evolutionary Basis**

The negative effects of romantic dissolution are well established (Davis et al., 2003). One theory that explains our reaction to romantic dissolution is the social pain theory (MacDonald & Leary, 2005). The social pain theory states that humans have developed an adaptive sensitivity to exclusion, and this sensitivity is manifested as pain in the face of rejection. In the past, separation or exclusion from a group was equivalent to death for social mammals, including humans. This brought about biological mechanisms in which humans developed a heightened awareness of perceived cues of exclusion. This has evolved into sensitivity to exclusion or rejection from desired groups or relationships in present day western society. Recently, functional MRI studies have identified the anterior cingulate cortex (ACC) as being the neurological center regulating the affective response to perceived exclusion (Eisenberger, Lieberman, & Williams, 2003). Interestingly, the ACC is also a component of the physical pain pathway. This
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Finding has lead researchers to suggest that there may be a social pain pathway that shares a common basis with the brain’s physical pain pathways (Eisenberger & Lieberman, 2004; Panksepp, 2003). Thus rejection or exclusion may elicit a real sense of pain or distress in an individual. Perhaps the lack of inhibition to the ACC or damage to the surrounding paths, a common feature of many neurological disorders, (Carlson, 2007) may elicit a decrease in one’s ability to regulate a reaction to a romantic dissolution or to an instance of perceived exclusion. This could potentially heighten the distress that some individuals feel. With the increasing evidence of an underlying neurological basis for social pain following the rejection experienced in a romantic dissolution, it is becoming increasingly important that romantic dissolutions be more closely studied in an effort to promote increased positive well-being.

**Romantic Dissolution**

Romantic dissolution is widely experienced by the general public with an estimated 85% of Americans experiencing at least one in their life (Perilloux & Buss, 2008). Romantic dissolutions have also been linked to negative well-being, (i.e., depression; Choo, Levine, & Hatfield, 1996; Davis et al., 2003; Feeney & Noller, 1990; Moore & Leung, 2002; Sbarra & Ferrer, 2006; Shaver & Brennan, 1992). The effect of romantic dissolution on positive well-being has not been investigated. Past literature has assessed the relation between romantic dissolution and attachment style, personality, coping patterns, reactions, sex differences and negative well-being (Choo et al., 1996; Davis et al., 2003; Feeney & Noller, 1990; Knee, 1998; Perilloux & Buss, 2008; Sbarra & Ferrer, 2006). However, the post relationship emotional experience and its effects on positive well-being remain understudied (Sbarra & Ferrer, 2006). Most research on well-
being in this area has focused on divorce and not on general romantic dissolution. Those studies that do assess negative well-being and romantic involvement outside of marriage tend to focus on adolescents and cases of depression (Monroe, Rohde, Seeley, & Lewinsohn, 1999). Furthermore, measures of happiness have not been incorporated with investigation of romantic dissolutions, further emphasizing psychology’s bias for negative reactions and illuminating the need for positive psychology research. Thus, it is imperative that the empirical effect of romantic dissolutions on happiness be evaluated.

One prominent theory in the study of relationships and their dissolution is attachment theory (Choo et al., 1996; Costa & McCrae, 1980; Davis et al., 2003; Feeney & Noller, 1990; Moore & Leung, 2002; Shiota, Keltner, & John, 2006). Attachment theory posits that there are three attachment styles and measures of attachment style are the most consistently used method of measurement concerning romantic relationships. The relationship between attachment style and well-being has been established, but is not as robust as the relationship between well-being and personality (Shaver & Brennan, 1992). Attachment style, however, is correlated with the five factor model of personality in predictable ways (Shaver & Brennan, 1992). For example, those with secure attachment styles are more likely to have high extraversion and low neuroticism and these traits are strongly associated with happiness. Thus, it may be possible to use personality traits to assess whether individual differences mediate the reaction to romantic dissolution and its effect on well-being.

Though investigating the relationship between well-being and romantic dissolution is worthwhile, there is no established method of measuring romantic dissolution. However, the concept of romantic dissolution is conceptually similar to
bereavement, in that both events involve the loss of a loved one. One study used a bereavement scale, the Inventory of Complicated Grief, to measure reactions to romantic dissolution (Najib, Lorberbaum, Kose, Bohning, & George, 2004). The present study modified the Core Bereavement Items (Burnett, Middleton, Raphael, & Martinek, 1997) to measure an individual’s reaction to romantic dissolution. The Core Bereavement Items represent a more appropriate tool for assessing dissolution because it consists of 17 questions versus 19 on the Inventory of Complicated Grief (Prigerson, Maciejewski, Reynolds, Bierhals AJ, Newsom, Fasiczka et al., 1995). Additionally, the Core Bereavement Items required modification of only one item compared to several on the Inventory of Complicated Grief. Furthermore, Tomita and Kitamura (2002) stated the Inventory of Complicated Grief represented a better measure for pathological grief and the Core Bereavement Items a more comprehensive measure. Therefore, due to shorter length, reduced modification, and more comprehensive evaluation, the Core Bereavement Items may be a more suitable tool for assessing reaction to dissolution.

*Stability of Well-Being, Including Happiness*

Happiness is a subcomponent of subjective well-being (SWB) and both are considered stable traits. The stability of happiness and well-being may be partially explained by genetics. Research using monozygotic and dizygotic twins suggests that set points of happiness are, to some degree, heritable (Lykken & Tellegen, 1996). Lykken and Tellegen (1996) found, in a longitudinal study, that monozygotic twins happiness ratings were highly correlated ($r = .40$) in contrast to the low concordance of dizygotic twins ($r = .07$). The study suggested that genetic factors may determine up to 80% of the stability of happiness. The stable components of happiness are estimated to account for
34-38% of the variance in happiness (Lucas & Donnellan, 2007). Thus, while a large component of happiness is stable and that stability is largely inherited, a substantial component of an individual’s happiness is subject to change in response to external influences (Lucas, 2007a). While this may indicate that people suffering from the loss of a relationship may undergo a dramatic change in their levels of happiness, it also suggests that happiness can be enhanced. This underscores one of the goals of this study: to determine the effect of romantic dissolution well-being, including happiness, so that those who may undergo a negative change can take advantage of positive affect enhancing strategies, which have been shown to induce long-term improvements (Seligman et al., 2005). Happiness is considered to be a relatively stable trait which fluctuates about a set point in response to life events; this concept is known as the set point theory of happiness (Lucas, 2007b). For example, people who have experienced extremely negative events or extremely positive, such as debilitating injuries and winning the lottery, tend to show little variance in levels of happiness and well-being when compared to a control group (Brickman, Coates, & Janoff-Bulman, 1978). According to this theory, happiness and well-being may fluctuate in response to a life event, but will eventually return to a prior level known as the set point. However, recent findings have shown that permanent or long-term changes well-being can occur (Lucas, 2007b). According to Lucas (2007b) there are several life events which can induce a negative and possibly permanent change in well-being (i.e., divorce and bereavement). Lucas (2007b) did not investigate the effect of general romantic dissolution on well-being. Furthermore, Lucas (2007b) noted that there are considerable individual differences in the extent to which people adapt to life circumstances.
For the purposes of this investigation, happiness was defined as a positive affective trait that is relatively stable and partially heritable. It consists of an overall positive subjective evaluation and comprises the positive affective component of subjective well-being (Diener, 1984).

Subjective Well-Being

SWB is a broad category that comprises a number of different facets and has been established as the most global concept of positive outlook on life (Diener, 2006). Life satisfaction is an essential component for SWB and happiness is the affective component underlying SWB and life satisfaction (Diener et al., 1999). SWB can be further broken down into the facets of positive and negative well-being. The literature has shown positive and negative well-being to be partially independent, rather than polar opposites of a single continuum (Diener et al., 1999). These constructs are independent across large spans of time. But, such independence is debated with momentary fluctuations in happiness (Diener & Emmons, 1984; Diener et al., 1999). Positive affect consists of several subdivisions including happiness, joy, and contentment (Diener et al., 1999). Negative affect includes the experience of depression, sadness, stress and anxiety (Diener et al., 1999). These subdivisions all contribute to an overall dimension that attempts to capture people’s evaluations of their lives. For the purposes of this study several measures of well-being were incorporated assessing aspects of both positive (i.e., happiness) and negative well-being (i.e., depression). Therefore the impact of romantic dissolution on both positive and negative aspects of well-being was be assessed.

Personality and Attachment Style
Personality traits have been consistently linked with happiness and SWB (Costa & McCrae, 1980; Demir, 2008; Diener & Seligman, 2002; Hayes & Joseph, 2003; Hills & Argyle, 2001; Shaver & Brennan, 1992; Shiota et al., 2006). A widely accepted model of personality is the Big 5 factor model, which states that personality is comprised of five major factors: extraversion, neuroticism, openness to experience, agreeableness, and conscientiousness (Costa & McCrae, 1980; Hills & Argyle, 2001). Of these factors, extraversion and neuroticism have been the most strongly linked to happiness and SWB (Costa & McCrae, 1980; Hayes & Joseph, 2003; Hills & Argyle, 2001). Extraversion has a positive relationship with happiness and SWB (Costa & McCrae, 1980; Diener & Seligman, 2002; Hills & Argyle, 2001; Hayes & Joseph, 2003) and is a description of someone who is social, confident, energetic, and sensation seeking (Eysenck, 1986). Neuroticism has a negative relationship with happiness and SWB and is characterized by individuals who are more prone to experience negative emotions such as anxiety and depression (Costa & McCrae, 1980; Diener & Seligman, 2002; Hills & Argyle, 2001; Hayes & Joseph, 2003). These two variables are respectively the strongest positive and negative predictors of well-being; extraversion predicts predominant positive well-being and neuroticism predicts negative well-being (Lynn & Steel, 2006).

The five factor model of personality has been linked to attachment style and romantic relationships (Shaver & Brennan, 1992). Attachment style is often associated with adult romantic relationships and romantic dissolution (Choo et al., 1996; Hazan & Shaver, 1987; Feeney & Noller, 1990; Moore & Leung, 2002; Sbarra & Ferrer, 2006; Stackert & Bursik, 2003). Three styles are predominant in the literature: secure, anxious and ambivalent (Hazan & Shaver, 1987; Sbarra & Ferrer, 2006; Stackert & Bursik,
In some cases this may be separated into four distinct styles: secure, clingy, skittish and casual/uninterested (Choo et al., 1996; Moore & Leung, 2002). Hazan and Shaver (1987) argued that skittish and casual fell within the avoidant domain. Clingy is considered an adult version of anxious and ambivalent. Secure attachment style describes an individual who is comfortable with intimacy and dependence and who is not predominantly afraid of abandonment (Hazan & Shaver, 1992). Secure attachment style has a positive relationship with the personality trait extraversion and a negative relationship with neuroticism. Furthermore, secure attachment has an established connection with increased positive affect and well-being and reduced negative affect following a romantic dissolution. Avoidant attachment style characterizes someone who is uncomfortable with intimacy and has difficulty trusting others. The anxious and ambivalent group describes people who yearn for intimacy, often more than their romantic partners can give. They often worry about their partners not loving them and the possibility of romantic dissolution. Anxious and ambivalent people are more prone to intense love. This style is associated with increased negative reactions, such as major depressive disorder (Sbarra & Ferrer, 2006), to romantic dissolution and has also been linked to mania (Feeney & Noller, 1990). This information highlights the instability of relationships characterized by anxious attachment, which is further evidenced by this style posing the least enduring romantic relationships (Feeney & Noller, 1990). The literature suggests that anxious ambivalent individuals are more susceptible to repeating cycles of rumination and amplification of negative emotions. This may give rise to a grief complex, increased negative affect, decreased well-being, and an increased risk of psychopathologies (Sbarra & Ferrer, 2006). The three factor model (i.e., secure, anxious,
and avoidant) of adult attachment is related to the five factor model of personality and well-being in predictable ways (Shaver & Brennan, 1992). For example, individuals who were rated as being extraverted often reported a secure attachment style. Although, the four factor model (secure, clingy, skittish, and casual/uninterested) is also associated with well-being (Moore & Leung, 2002) its association with individual personality traits is not as well established in the literature.

Shaver and Brennan (1992) explored the relations between the five factor model of personality and attachment styles concerning romantic relationship outcomes. They found that the two models were related to each other in predictable ways. For example, secure individuals consistently had high scores of extraversion and low scores of neuroticism, which is associated with increased SWB. The anxious-ambivalent group scored high on neuroticism and low on extraversion. They also found that although personality accounted for much of the variance in romantic relationship outcomes, it was not as specific as attachment style concerning adult relations. The interconnection between these two models and the strength of the relations between personality and well-being suggest that personality may be a useful framework for analyzing the potential mediation of individual differences on the effect of romantic dissolution on well-being. Personality has predictable relations to both well-being and adult attachment styles and therefore may mediate individual effects on the relations between romantic dissolution and well-being.

**Negative Effects of Romantic Dissolution**

Anxious attachment style has been correlated with angry and hostile behaviors or ambivalent reactions following both romantic dissolution and bereavement (Davis et al.,
Furthermore, extreme reactions to romantic dissolution can result in homicide or suicide attempts. Davis et al., (2003) found that the amount of emotional involvement with the partner, along with an anxious or fearful attachment style, predicted more severe reactions to romantic dissolution. Anxiety was also associated with greater preoccupation and perseveration of loss, as well as chronic mourning. Anxious or avoidant groups were also more likely to use dysfunctional coping behaviors, (i.e., alcohol). Additionally, relationship anxiety predicted more cases of lost identity and an increased tendency to immediately seek a replacement. Thus, one might expect higher breakup rates for those with anxious attachment styles. Davis et al., (2003) provided evidence that relationship anxiety, highly associated with neuroticism (Shaver & Brennan, 1992), is a significant predictor of less enduring relationships and that, upon dissolution, an individual with anxious attachment style was more likely to experience negative reactions, which could prove to be dysfunctional.

Dysfunctional post-relationship emotional processes may stem from individuals getting stuck in a repetitive cycle of maladaptive cognitive-emotional processing (Sbarra & Ferrer, 2006). This cycle involves stages of emotional amplification, reversal, co-occurrence, and persistence. Individuals who adapted poorly to romantic dissolution were more likely to have amplification of sadness and show increased persistence of love, characterizing a failure to adapt or resolve the source of grief. Sbarra and Ferrer (2006) called attention to the need for more studies assessing the post-relationship adaptation as there is evidence that some individuals do not adapt to romantic dissolution as well as others. Some individuals may undergo significant changes in their SWB (Lucas, 2007b),
which may initiate a maladaptive cognitive cycle preventing resolution of the loss (Sbarra & Ferrer, 2006).

Romantic dissolution may lower levels of well-being (Torges, Stewart, and Nolen-Hoeksema 2008). This may be the result of increased experience of rumination, which is conceptually similar to perseveration of the loss (Davis et al., 2003), in that they both involve a failure to resolve the source of grief and accept the loss. This inhibits adaptation and prevents an individual from moving on and regaining previous levels of SWB and happiness. Although Torges et al., (2008) focused on bereavement they discussed the possibility of loss of any kind being able to initiate a cycle of rumination. This, in conjunction with the similarities between romantic dissolution and bereavement, makes it seem prudent to take this research into account when considering romantic dissolution and its effects on well-being.

*Bereavement and Romantic Dissolution*

Bereavement studies are often mentioned in research targeting romantic dissolution. At a basic level the two experiences involve the loss of a loved one, if to different degrees. Additional similarities include that both may involve rumination preventing resolution of the loss (Torges, Stewart, & Nolen-Hoeksema, 2008). Perseveration of the loss and ambivalence are also related to both experiences and tied to anxious love styles as well (Davis et al., 2003). Furthermore, it is possible that a cycle of maladaptive cognitive thought processes are set up after such a loss causing emotional persistence and amplification (Sbarra & Ferrer, 2006). These present a series of similarities mentioned in cases of both bereavement and romantic dissolution, which could possibly explain the difficulty some individuals have in adapting to the loss of a
the loved one.

Current Study

The present study seeks to further establish the relations between romantic dissolution and well-being. Past research has not established the effects of a romantic dissolution on positive well-being and there are relatively few studies assessing reactions to romantic dissolution in non-marital relationships. Individual differences may mediate such reactions; therefore, personality traits will be investigated. If personality does mediate such an effect then one of the predicted findings of this study will be that high scores of neuroticism will be positively correlated with reactions to romantic dissolution and negatively correlated with levels of positive well-being and happiness. High scores of extraversion are expected to be positively correlated with positive well-being and show a reversed relationship to negative well-being. Relationship characteristics will also be investigated.

It is thought that increased frequency of romantic dissolution will be correlated with reduced levels of positive well-being. Additionally, if relationship quality was rated as high then it is expected that scores of romantic dissolution will also be high. Furthermore, high scores of romantic dissolution are thought to predict low scores of positive affect and high scores of negative affect. Romantic dissolution shall be investigated to determine if it accounts for a unique portion of the variance contributing to well-being.

If the current study demonstrates that a modified bereavement scale is a valid method for measuring romantic dissolution this may create an opportunity to further research in this field with an additional measurement tool. Since bereavement and
romantic dissolution are conceptually similar it will be interesting to determine if bereavement scales are able to assess reactions to romantic dissolution. Furthermore, the current study may demonstrate that well-being, especially the positive aspect, is compromised by the experience of romantic dissolution. If this is so, this study may be of clinical significance for targeting those prone to experiencing negative reactions to romantic dissolution, and in promoting positive affect increasing strategies, as discussed by Seligman et al., (2005) for those who have lower levels of well-being due to the effects of a traumatic romantic dissolution.

Methods

Participants

Four hundred and forty six undergraduate students (139 men and 307 women) from the University of British Columbia Okanagan participated. Of those, 353 students (79%) had experienced a romantic dissolution and were included in the data analyses. The ages of participants ranged from 17 to 47 years ($M = 20.2, SD = 3.7$). All participants gave full and informed consent before participating in the study. Participants were advised that they could discontinue the study at any time without fear of penalty.

Materials

Five questionnaires were administered to participants and measured positive affect, negative affect, personality, and reaction to romantic dissolution: the Oxford Happiness Questionnaire, Positive and Negative Affect Schedule, Center for Epidemiological Studies – Depression Scale, Neo-Personality Five Factor Inventory, and a modified version of the Core Bereavement Items.
The Oxford Happiness Questionnaire is an abbreviated version of the Oxford Happiness Inventory. The questionnaire is scored using a six point Likert scale anchored with 1 (Strongly disagree) and 6 (Strongly Agree) and contains 29 items, some of which are reverse scored. An example of an item from the questionnaire includes the statement “I feel that life is very rewarding”. This measure has shown to be effective for assessing SWB with good validity and reliability (Hills & Argyle, 2002).

The Positive and Negative Affect Schedule (PANAS) was developed by Watson, Clark, and Tellegen (1988) and consists of two ten-item mood scales; one reflecting positive mood states and the other negative mood states. Items consist of emotional adjectives such as excited or distressed. Participants are asked to indicate to what extent they experienced an emotion on a scale anchored with 1 (Very slightly or not at all) and 5 (Extremely). Watson et al., (1988) found the scale to have good internal consistency and temporal stability. It also has the advantage of being brief and easy to administer, while differentiating positive and negative affect.

The Center for Epidemiological Studies – Depression Scale (CESDS) is a valid tool for measuring depression in young adults (Radloff, 1991). The scale contains 20 items which participants are asked to rate as “rarely or none of the time (less than 1 day)”, “some or a little of the time (1-2 days)”, “occasionally or a moderate amount of the time (3-4 days)”, or “most or all of the time (5-7 days)” (Martens, Parker, Smarr, Hewitt, Ge, Slaughter, & Walker, 2006). Both Radloff (1991) and Marten et al., (2006) judged the scale to have good sensitivity and to be a reliable tool in assessing levels of depression.
The Neo-Personality Five Factor Inventory provides an abbreviated version of the original and also has an equivalent ability to measure the desired constructs (Buchanan, Johnson, & Goldberg, 2005). The reduced length is of considerable advantage (60 items compared to 240). It allows assessment of multiple constructs in one survey, yet maintains the reliability and validity of the data. Buchanan et al., (2005) generated the Five Factor Inventory specifically for use on the internet. The Five Factor Inventory used in this project is a modified version of Buchanan’s et al., (2005) version.

The modified Core Bereavement Items (CBI) was adapted from Burnett, Middleton, Raphael, and Martinek’s (1997) work. Burnett et al., (1997) administered a pool of descriptors of bereavement phenomenology, derived from the literature, to bereaved spouses, adults, children, and parents. Factor analysis produced seven subscales, three of which tapped frequent bereavement phenomena. These three subscales formed the CBI and consisted of 17 items in total, which provided reliable and valid coverage of bereavement phenomena. The first subscale measured “Images and Thoughts” and consisted of seven items with a Cronbach’s alpha of .74 (e.g., Do thoughts of ‘x’ (Referring to the deceased) come into your mind whether you wish it or not?). The second subscale measured “Acute Separation” and consisted of 5 items, such as “Do you find yourself missing ‘x’?” (Cronbach’s alpha = .77). The final subscale tapped into “Grief”, consisted of 5 items and had a Cronbach’s alpha of .86 (e.g., “Do reminders of ‘x’ such as photos, situations, music, places etc. cause you to feel longing for ‘x’?). All subscales were measured on a four-point scale. Participants indicated whether they identified with an item “A lot of the time”, “Quite a bit of the time”, “A little bit of the time”, or “Never”. Seven items had small modifications in the answer format. For
example, for item A1 the first option was “Continuously” (See appendix or refer to Burnett et al., 1997). In the present study participants were instructed that ‘x’ refers to the partner with whom they experienced a romantic dissolution. Only one item from “Images and Thoughts” specifically mentioned death. This item was modified for the current study. Originally the item read “Do you experience images of the events surrounding ‘x’s death?” This was modified to “Do you experience images of the events surrounding the breakup with ‘x’?”

One prior study (Najib et al., 2004) used the Inventory of Complicated Grief as a measure of reaction to romantic dissolution. Tomita and Kitamura (2002) identified the Inventory of Complicated Grief as a more appropriate measure of pathological grief and the CBI as a reliable measure of comprehensive grief phenomena. This combined with fewer items and modifications on the CBI suggest that it may be a more appropriate measure of dissolution than the previously used Inventory of Complicated Grief. Furthermore, the items appearing in the CBI show good face validity and appear to map onto the concept of romantic dissolution. Thus, the modified version of the CBI may assess the construct of romantic dissolution and provide a measure of an individual’s reaction to romantic dissolution.

Several additional measures were also included, which assessed the number of reported serious romantic relationships, the subjective quality ratings and commitment of the relationship that underwent the romantic dissolution, and present marital status. Demographics provided gender and age information.

Procedure
All questionnaires were administered online via SONA, a psychology experiment management system utilized by the University of British Columbia Okanagan. Students were registered on SONA and given a username and a password. Using the SONA system they were able to access and sign up for the study. A link from SONA transferred them to a Survey Monkey website, where the survey was hosted. Students enrolled in participating psychology classes were eligible to receive a 2 percent bonus towards their final grade in that class (Maximum of 4% bonus could be achieved in any one class). The survey also contained measures pertaining to two other Honours projects and a Master thesis project. Thus, the entire survey was estimated require approximately two hours to complete. Participants were able to access the study at any time and were notified that their participation was voluntary and their consent was informed.

Data Analysis

Ratings on the Oxford Happiness Questionnaire, CESDS, and the PANAS served as criterion variables. Measures of neuroticism and extraversion derived from the Neo-Personality Five Factor Model along with ratings on the CBI and relationship characteristics were used as predictor variables. Only neuroticism and extraversion were assessed because these personality traits have the strongest established links with well-being (Lucas, 2008).

Data Analyses were completed in multiple phases. The initial phase consisted of examining variables of interest to ensure they met the statistical assumptions for the appropriate analyses. Additionally, descriptive statistics and correlation matrices were generated to assess trends in the data prior to tests of linear regression and factor analyses.
Data Cleaning

Data were collected from 477 participants. Of these 31 were incomplete. The computer software was designed so that participant’s had to finish a questionnaire before moving onto the next one. Thus, participants may have stopped doing the questionnaire or a software glitch may have occurred resulting in only partial test completion. Incomplete questionnaires represented only 6.5% of the entire data set. Since complete data sets were required these cases were deleted resulting in a sample size of 446 participants.

Tests for outliers included converting the measures to standardized $z$ scores and examining boxplots. Extreme outliers were changed to be one unit above the next highest score in the data set. This helped to reduce the impact of these values on the normal distribution (Field, 2005). Mahalanobis distance was used to test for multivariate outliers and no such cases were found. Tests for linearity, homoscedasticity, and multicollinearity were satisfactory.

Descriptive statistics were used to conduct skewness analyses to assess the normality of variables of interest. The distributions from the Oxford Happiness Questionnaire were within an acceptable range given the large sample size (Skewness = -.34, Kurtosis = -.24). The CESDS distribution was also within an acceptable range (Skewness = .57, Kurtosis = .62). The positive PANAS was in acceptable ranges of skewness and kurtosis and, as such, met the assumptions of normality (Skewness = -.29, Kurtosis = -.32). The negative PANAS did not appear to meet assumptions for normality (Skewness = .64, Kurtosis = -.32). A logarithmic transformation improved the distribution (Skewness = .06, Kurtosis = -.72). The CBI was significantly skewed.
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(Skewness = 1.27, Kurtosis, 1.04). A logarithmic transformation reduced the skew significantly, while maintaining the directionality of the scores (Skewness = .63, Kurtosis = -.40). Neuroticism fell within acceptable ranges of skewness and kurtosis (Skewness = .06, Kurtosis = -.33). Extraversion was distributed in a negatively skewed manner, but was within acceptable ranges (Skewness = -.40, Kurtosis = .06). When appropriate data analyses were performed on the transformed data.

Results

Bivariate correlations (Shown in Table 1) between the criterion variables (Oxford Happiness Questionnaire, CESDS, positive PANAS, and the negative PANAS) indicated that the four measures were correlated, but not redundant (i.e., correlations were less than .90; Tabachnick & Fidell, 2001). Furthermore, these correlations were in the expected direction; the Oxford Happiness Questionnaire and the positive PANAS were positively correlated with each other and negatively correlated with the CESDS and the negative PANAS. The CESDS and Negative PANAS were negatively correlated with each other.

Pearson correlations were assessed between the criterion variables and the predictor variables (CBI, sex, number of serious relationships, current relationship status and the quality, length, and subjective commitment ratings for the relationship which underwent dissolution). The CBI was significantly correlated with neuroticism and the length and quality of the relationship which underwent dissolution. CBI scores were negatively correlated with ratings of whether the relationship was committed or not. Commitment was rated as either being committed or not, with not committed being entered as 2. Thus, correlations showed that scores on the CBI tended to increase if the relationship was perceived as committed. The Oxford Happiness Questionnaire was
highly correlated with extraversion and negatively correlated with neuroticism, relationship length, and participant age. The positive PANAS was positively correlated with extraversion and negatively correlated with neuroticism. It was also slightly negatively correlated with the length of the relationship. The negative PANAS was negatively correlated with extraversion and positively correlated with neuroticism. The CESDS was positively correlated with number of serious relationships and neuroticism and negatively correlated with extraversion.

Table 1

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<tr>
<td>3. Positive PANAS **-.16 **.71</td>
<td></td>
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<td>4. Negative PANAS **.35 **-.57 **-.34</td>
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<tr>
<td>5. CESDS **.37 **-.38 **-.26 **.55</td>
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<tr>
<td>6. Extraversion **-.07 **.75 **.61 **-.40 **-.18</td>
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<tr>
<td>7. Neuroticism **.32 **-.69 **-.53 **.65 **.53 **-.49</td>
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<tr>
<td>8. Length (months) **.19 **-.15 *-.12 0.04 0.03 -0.08 0.10</td>
<td></td>
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<tr>
<td>9. Number 0.05 0.01 -0.04 *-.11 **.16 0.03 0.01 **.14</td>
<td></td>
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<tr>
<td>10. Quality **.29 0.05 0.03 0.03 -0.02 0.08 0.03 **.18 0.09</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11. Commitment **-.16 0.04 -0.02 -0.08 -0.07 0.01 -0.07 **-.24 **-.22 **-.41</td>
<td></td>
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</tr>
<tr>
<td>12. Age -0.08 **-.13 -0.09 -0.03 -0.07 **-.14 0.02 **.31 **.13 -0.04 -0.10</td>
<td></td>
<td></td>
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<tr>
<td>13. Sex -0.01 0.05 -0.03 0.00 0.03 0.02 **.20 **.17 -0.05 -0.08 -0.05 0.00</td>
<td></td>
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</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Linear regression analyses were completed for all of the criterion variables and scores on the CBI scale. A significant proportion of the variance ($R^2 = 0.05$) was accounted for in the Oxford Happiness Questionnaire ($F (1, 350) = 22.64$) by CBI scores. The CBI accounted for 3% of the variance ($R^2 = 0.03$) in the positive PANAS scale and was statistically significant ($F (1, 350) = 11.92$). The negative PANAS scale also had a significant amount of variance ($R^2 = 0.12$) explained by the CBI scores ($F (1, 350) = 48.96$). The CESDS also had a significant proportion of the variance explained by the CBI ($R^2 = 0.13$, $F (1, 350) = 51.03$).

Table 2

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Criteria</th>
<th>$\beta$</th>
<th>$p$</th>
<th>$R$ Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBI</td>
<td>Oxford Happiness Questionnaire</td>
<td>**-0.24</td>
<td>&lt;.001</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Positive PANAS</td>
<td>-*0.16</td>
<td>0.002</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>Negative PANAS</td>
<td>**0.35</td>
<td>&lt;.001</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>CESDS</td>
<td>**0.37</td>
<td>&lt;.001</td>
<td>0.13</td>
</tr>
</tbody>
</table>

** $p < .001$
* $p < .003$

Multiple and hierarchical regression analyses were performed to elaborate on the contribution of CBI and other predictors to the criterion variables, as well as to determine if neuroticism and relationship characteristics accounted for variance in the CBI scores (Table 3). Multiple regression analysis was used to assess if relationship status, commitment, length, quality, as well as the number of serious relationships account for any of the variance in CBI scores. The quality of the relationship which underwent dissolution and neuroticism predicted a significant proportion of the variance in CBI.
scores ($R^2 = .19, F (2, 349) = 41.99, p < .001$). Relationship quality ($\beta = .30$) alone accounted for 9% of the variance with neuroticism ($\beta = .31$) excluded from the analysis. A step-wise regression assessed the contributions of extraversion, neuroticism, and CBI scores on the Oxford Happiness Questionnaire. The model accounted for a significant portion of the variance ($R^2 = .71, F (3, 348) = 280.94, p < .001$). However, with a bonferroni correction CBI scores were not a significant contributor ($p = 0.02$) with personality traits included. Extraversion, neuroticism, CBI scores, and relationship length were entered into a step-wise regression for the positive PANAS. Extraversion and neuroticism were significant predictors ($F (3, 348) = 95.69, p < .001$). A significant proportion of the variance ($R^2 = .45$) was accounted for by extraversion ($\beta = .50$) and neuroticism ($\beta = -.26$), but CBI scores and relationship length were not significant contributors. Another step-wise regression was also conducted for neuroticism, extraversion, and the CBI scale as predictors of scores on the negative PANAS. All of the predictors were significant contributors, even with a bonferroni correction applied ($F (3, 348) = 102.36, p < .001$), and accounted for a considerable amount of the variance in the negative PANAS ($R^2 = .47$). However, neuroticism ($\beta = .61$) and CBI scores ($\beta = .16$) alone accounted for 45.9% of the variance. Step-wise regression was applied to the CESDS scale with neuroticism, extraversion, CBI scores, and the number of serious relationships used as predictors. A significant amount of the variance was accounted for ($R^2 = .34$). Only the CBI and neuroticism were significant predictors with a bonferroni correction. With extraversion and number of serious relationships removed from the step-wise analysis CBI ($\beta = .20$) and neuroticism ($\beta = .48$) accounted for 33% of the variance in CESDS scores ($F (2, 349) = 85.92, p < .001$).
Table 3

**Standard Multiple Regression Results with Personality Traits, CBI, Relationship Characteristics and the Oxford Happiness Questionnaire, CESDS, and the Positive and Negative PANAS**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Predictors</th>
<th>$\beta$</th>
<th>$p$</th>
<th>Zero-order correlation</th>
<th>$sr^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBI</td>
<td>Neuroticism</td>
<td>0.31</td>
<td>*&lt;.001</td>
<td>0.32</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>Relationship Quality</td>
<td>0.28</td>
<td>*&lt;.001</td>
<td>0.29</td>
<td>0.24</td>
</tr>
<tr>
<td>$\alpha = .025$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oxford Happiness Questionnaire</strong></td>
<td>Extraversion</td>
<td>0.54</td>
<td>*&lt;.001</td>
<td>0.75</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>Neuroticism</td>
<td>0.40</td>
<td>*&lt;.001</td>
<td>-0.70</td>
<td>0.003</td>
</tr>
<tr>
<td>$\alpha = .017$</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Positive PANAS</strong></td>
<td>Extraversion</td>
<td>0.48</td>
<td>*&lt;.001</td>
<td>0.63</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Neuroticism</td>
<td>0.28</td>
<td>*&lt;.001</td>
<td>-0.53</td>
<td>0.04</td>
</tr>
<tr>
<td>$\alpha = .017$</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Negative PANAS</strong></td>
<td>Neuroticism</td>
<td>0.53</td>
<td>*&lt;.001</td>
<td>0.65</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>CBI</td>
<td>0.17</td>
<td>*&lt;.001</td>
<td>0.35</td>
<td>0.05</td>
</tr>
<tr>
<td>$\alpha = .017$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CESDS</strong></td>
<td>Neuroticism</td>
<td>0.47</td>
<td>*&lt;.001</td>
<td>0.54</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>CBI</td>
<td>0.21</td>
<td>*&lt;.001</td>
<td>0.37</td>
<td>0.03</td>
</tr>
<tr>
<td>$\alpha = .017$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extraversion</td>
<td>0.01</td>
<td>0.79</td>
<td>-0.25</td>
<td>0.01</td>
</tr>
</tbody>
</table>
A one-way ANOVA was performed to assess if there was a difference between participants who reported experiencing a romantic dissolution and those who had not. The ANOVA indicated that there was only a significant difference on the CESDS scores between the groups (F (1, 442) = 4.1, \( p = .04 \)). The Oxford Happiness Questionnaire, positive, and negative PANAS scores did not show significant differences between those who had experienced a romantic dissolution and those who had not. Descriptive analysis confirmed that people who had experienced a romantic dissolution had a slightly higher mean (\( M = 41.19 \)) on the CESDS scale than those who had not experienced a romantic dissolution (\( M = 39.75 \)). However, 11 participants who had experienced a romantic dissolution scored 55 or higher on the CESDS (Maximum score of 80) and only two participants who had not experienced a romantic dissolution scored similarly.

A principal component analysis was conducted upon CBI items. Items 5, 10, and 12 showed high Pearson inter-item correlations and were removed from the sample sequentially until the determinant requirement was met. The remaining 14 items satisfied the requirements for the determinant test of multicollinearity. Kaiser-Meyer-Olkin test of sampling-adequacy was .96 supporting a factor analysis for the data. Three components were extracted as defined by the scree plot. Component one had an eigenvalue of 8.69 and accounted for 62.06% of the variance. Component two had an eigenvalue of .91 and accounted for 6.50% of the variance. Component three had an eigenvalue of .82 and accounted for 5.87% of the variance. The cumulative variance accounted for by these three components totaled 74.43%. Direct Oblimin rotation was supported by the component correlation matrix which showed that variables are interrelated (Table 4). The
pattern matrix supported the formation of 3 components. Component one consisted of items 4, 6, 7, 8, 9, 11, and 13. Component two contained items one and two. Component three contained items 3, 14, 15, 16, and 17. Component three was negatively correlated with the other components and was strongly correlated with Component 1 ($r = -.69$). The 14 item CBI produced nearly identical results as the 17 item CBI. The contributions of neuroticism and relationship quality were nearly identical for the reduced CBI scale ($R^2 = .19$, $F (2, 349) = 40.44, p < .001$). The amount of variance in the Oxford Happiness Questionnaire accounted for was unchanged ($R^2 = .71$, $F (3, 348) = 280.22, p < .001$). Output for the Positive PANAS was identical. The Negative PANAS had a slightly reduced F value, but accounted for equal amount of variance ($F (3, 348) = 101.36, p < .001$). The F value was also reduced for the analysis on the CESDS, but again identical proportions of variance were accounted for ($F (3, 348) = 56.96, p < .001$). Results are reported for the 14 item CBI scale in Table 5.
Table 4

Component Correlation Matrix

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>.35</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-.69</td>
<td>-.37</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Table 5

*Standard Multiple Regression Results with Abbreviated CBI Scale, Personality Traits, Relationship Characteristics and the Oxford Happiness Questionnaire, CESDS, and the Positive and Negative PANAS*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Predictors</th>
<th>$\beta$</th>
<th>$p$</th>
<th>Zero-order correlation</th>
<th>$sr^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbreviated CBI</td>
<td>Neuroticism</td>
<td>0.31</td>
<td>*&lt;.001</td>
<td>0.32</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Relationship Quality</td>
<td>0.29</td>
<td>*&lt;.001</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>$\alpha = .025$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxford Happiness Questionnaire</td>
<td>Extraversion</td>
<td>0.54</td>
<td>*&lt;.001</td>
<td>0.75</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>Neuroticism</td>
<td>-0.40</td>
<td>*&lt;.001</td>
<td>-0.70</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>$\alpha = .017$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CBI</td>
<td>-0.07</td>
<td>0.03</td>
<td>-0.24</td>
<td>0.002</td>
</tr>
<tr>
<td>Positive PANAS</td>
<td>Extraversion</td>
<td>0.49</td>
<td>*&lt;.001</td>
<td>0.63</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Neuroticism</td>
<td>-0.26</td>
<td>*&lt;.001</td>
<td>-0.53</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>$\alpha = .017$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CBI</td>
<td>-0.04</td>
<td>0.3</td>
<td>-0.16</td>
<td>0.03</td>
</tr>
<tr>
<td>Negative PANAS</td>
<td>Neuroticism</td>
<td>0.55</td>
<td>*&lt;.001</td>
<td>0.66</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>CBI</td>
<td>0.16</td>
<td>*&lt;.001</td>
<td>0.34</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>$\alpha = .017$</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Extraversion</td>
<td>-0.12</td>
<td>0.008</td>
<td>-0.42</td>
<td>0.01</td>
</tr>
<tr>
<td>CESDS</td>
<td>Neuroticism</td>
<td>0.49</td>
<td>*&lt;.001</td>
<td>0.54</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>CBI</td>
<td>0.2</td>
<td>*&lt;.001</td>
<td>0.35</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>$\alpha = .017$</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extraversion</td>
<td>0.01</td>
<td>0.79</td>
<td>-0.25</td>
<td>0.05</td>
</tr>
</tbody>
</table>

* Significant at the .01 level
Discussion

The present study assessed the effects of romantic dissolution on levels of positive and negative well-being, as mediated by personality traits. Romantic dissolution affected levels of positive and negative well-being. However, its effects on positive well-being were not beyond the contribution of personality traits. Romantic dissolution was associated with depression. The Core Bereavement Items was used to measure romantic dissolution. Principal Component Analysis was used to identify three components and reduce the number of total items.

Dissolution and Well-Being

Dissolution was associated with higher scores on the negative PANAS scale. This is in agreement with the literature, which shows that romantic dissolution has a negative impact on well-being (Davis et al., 2003; Sbarra & Ferrer, 2006). However, it was interesting to note that, without controlling for time, dissolution scores accounted for 3% of the variance in the positive PANAS. Furthermore, it accounted for 5% of the variance in the Oxford Happiness Questionnaire. The fact that time since the dissolution was not measured is important because this effect was not eliminated despite the high likelihood that many of the incidences of dissolution could have occurred in the distant past. This suggests that romantic dissolution does have an enduring effect on both positive and negative well-being. However, the effect may not be as disrupting to the stability of well-being as that of a marital dissolution or bereavement (Lucas, 2007b), although a subset of people may be more sensitive to such an occurrence.

Dissolutions scores did not contribute to the variance explained in positive well-being beyond the personality traits extraversion and neuroticism. Extraversion and neuroticism have the most robust established associations with well-being to date (Lynn & Steel, 2006) and accounted for such a large proportion of the variance that dissolution did not add any additional information to the structure of positive well-being. Dissolution and neuroticism, however, significantly influenced negative well-being, and dissolution
contributed more explained variance than did extraversion. This supports the literature which suggests that dissolution has a large influence on levels of negative well-being (Davis et al., 2003). Although, dissolution contributed more to explaining the construct of negative well-being it is important to note that there was an effect on positive well-being as well. This suggests that people may suffer reduced levels of happiness and positive well-being for some period of time following a romantic dissolution. Refinement of dissolution measures and measurement of time since the dissolution may help to establish the true strength of such effects and to establish the extent of whether these effects decay over time and at what rate.

*The Core Bereavement Items and Dissolution*

The CBI scale correlated with other measures in expected ways. High scores on the CBI scale correlated positively with measures of depression and negative well-being and correlated negatively with measures of happiness and positive well-being. The CBI was also correlated with relationship characteristics such as relationship quality and commitment and the length of the relationship. These factors suggest that the CBI was indeed measuring individual’s reactions to dissolution as it correlated in expected ways with measures of depression and negative well-being as suggested by the literature (Davis et al., 2003). Furthermore, principal component analysis identified three components, perseveration, rumination and depressive indicators, which are associated with severe reactions to romantic dissolution (Davis et al., 2003). The fact that the CBI correlated in expected ways with other measures along with the component breakdown, suggest that it was an adequate measure of romantic dissolution.

*Disso lution and Personality*

Neuroticism significantly contributed to the variance in dissolution scores. Extraversion did not add any explanatory power to the model. This affirms the findings in the literature that neuroticism is associated with an increased affinity for negative emotions (Costa & McCrae, 1980). Neuroticism is associated with insecure attachment
style which is a predictor of increased negative reaction to romantic dissolution (Shaver & Brennan, 1992). Extraversion is highly associated with secure attachment style, which is predictive of lower reactions to romantic dissolution. The findings in the current study showed that there was not a significant correlation between extraversion and scores on the CBI. This suggests that high levels of extraversion do not eliminate the negative feelings associated with romantic dissolution. It is possible and consistent with the literature that extraversion may serve to protect or buffer an individual from the effects of romantic dissolution by reducing the impact on levels of depression and negative well-being.

**Dissolution and Relationship Characteristics**

The length, commitment, and quality of the romantic relationship which underwent dissolution were assessed. In addition the number of serious relationships an individual reported was also analyzed. All of these variables except for the number of relationships were significantly correlated with the CBI (Table 1). Additionally, length of the relationship was positively correlated with scores on the Oxford Happiness Questionnaire and the positive PANAS scale. There are many possible explanations for this, including that more satisfaction may be derived from long-term relationships. The number of relationships was positively correlated with the scores on the CESDS. This indicates that people with a greater number of relationships may have slightly elevated levels of depression. This may be because of a maladaptive cycle these individuals become entrapped in (Sbarra & Ferrer, 2006) and carry into subsequent relationships. Such a cycle may prevent resolution of the loss and elevate levels of depression. None of these variables had an effect on the variance in scores of well-being as indicated by multiple regression analyses. Relationship quality, however, accounted for 9% of the variance in scores on the CBI. In conjunction with neuroticism these variables explained 19% of the variance in dissolution. This infers that there are additional variables
contributing to an individual’s experience of dissolution beyond those accounted for in the current study.

**Principal Component Analysis**

Principal component analysis identifies smaller groups of variables that are uncorrelated and referred to as components (Grimm & Yarnold, 1995). Although principal component analysis is not a true factor analysis, in that it examines the common variance as opposed to item specific variance, it is still a useful tool for revealing the internal structure of the data in a way that maximizes the amount of variance explained. The principal component analysis eliminated three variables providing an abbreviated form, which accounted for nearly identical amounts of variance in the variables of interest. This abbreviated scale provides a more concise measurement of dissolution and is an important step in developing a scale which is specific to romantic dissolution. Furthermore, the analysis identified three components which could be hypothetically categorized by the labels of rumination, perseveration, and depressive indicators. These three labels are supported by the literature which identifies perseveration of the loss (Davis et al., 2003), rumination (Torges et al., 2008), and depression (Davis et al., 2003) as key factors influencing a severe reaction to romantic dissolution. The hypothesized scale of romantic dissolution is presented in Appendix B.

**Application**

This research has implications for theoretical advancement and also in clinical settings. The literature has shown that adolescents are more likely to experience their first episode of major depression following a romantic dissolution (Monroe et al., 1999). This study identified participants with high levels of neuroticism as being more predisposed to higher scores of dissolution, according to the CBI, and having higher levels of depression. Taking this into account, neuroticism may serve as a screening factor for clinical interventions in adolescents. Professionals in the field should consider giving individuals with high levels of neuroticism extra attention following a romantic
dissolution. Furthermore, since romantic dissolution was associated with positive well-being the inclusion of positive affect increasing strategies may increase the efficacy of treatment programs when dealing with depression following a romantic dissolution.

Theoretical advancements included identifying the effect of romantic dissolution on levels of positive well-being. Dissolution had an effect on positive well-being. This effect may be stronger than these findings report because it may have decayed over time. An additional possibility is this effect may be especially prominent for certain individuals, particularly those with high levels of neuroticism and an insecure attachment style (Choo et al., 1996; Costa & McCrae, 1980; Davis et al., 2003; Feeney & Noller, 1999; Shaver & Brennan, 1992), but the effect may be obscured by a majority of people experiencing a reduction in the impact of dissolution on well-being. Thus, the impact of romantic dissolution may be greater for certain individuals.

The abbreviation of the CBI for the purposes of measuring dissolution was another theoretical advancement. Abbreviating the CBI has several implications. Primarily, it presents researchers with a more advanced tool for measuring dissolution. It also, however, raises the question of whether a bereavement scale is adequate for measuring dissolution. Certainly bereavement and romantic are conceptually similar, but dissolution may be a related yet independent construct. The components identified by principal component analysis are similar to phenomena contributing to the experience of bereavement (Torges et al., 2008). There may be additional factors that are not assessed by the modified bereavement scale that are unique to the construct of romantic dissolution. Thus, the CBI presents a tool for measuring dissolution, but more importantly provides a base upon which to develop more advanced and specific measurement tools to assess the impact of dissolution upon individuals.

**Future Directions and Limitations**

This study indicates that further assessment of the effects of romantic dissolution on positive well-being is warranted. Several improvements would increase the ability to
isolate and assess these effects. The most important addition would be to measure time since the romantic dissolution to gain insight to potential decay effects. Ideally, measurements of well-being before and after the romantic dissolution would provide the best insight to changes in an individual’s well-being. However, it may not be feasible to operate a longitudinal study, especially when one is interested in a phenomenon that may or may not occur over that period of time. Inclusion of an attachment style questionnaire may also improve the empirical analysis since attachment style is more specifically related to romantic relationships than personality traits are (Shaver & Brennan, 1992). The associations of personality and well-being imply that personality is important to assess as well. Thus, future research should utilize the abbreviated form of the CBI as a measure of romantic dissolution. Such studies should measure time since the dissolution, relationship quality, personality, attachment style, and other relationship characteristics justified by the literature. Attempts to refine the construct of romantic dissolution are also suggested to facilitate accurate assessment of the effects of romantic dissolution on well-being.
References


Appendix A

The Modified Core Bereavement Items
MODIFIED CORE BEREAVEMENT ITEMS (CBI)
(Burnett et al., 1997)

Images and thoughts

1. Do you experience images of the events surrounding the breakup with `x'?
2. Do thoughts of `x' come into your mind whether you wish it or not?
3. Do thoughts of `x' make you feel distressed?
4. Do you think about `x`?
5. Do images of `x' make you feel distressed?*
6. Do you find yourself preoccupied with images or memories of `x'?
7. Do you find yourself thinking of reunion with `x`?

Acute separation

8. Do you find yourself missing `x`?
9. Are you reminded by familiar objects (photos, possessions, rooms etc.) of `x`? 
10. Do you find yourself pining for or yearning for `x`?*
11. Do you find yourself looking for `x` in familiar places?
12. Do you feel distress or pain if for any reason you are confronted with the reality that `x` is not present/not coming back?*

Grief

13. Do reminders of `x' such as photos, situations, music, places, etc. cause you to feel longing for `x`?
14. Do reminders of `x' such as photos, situations, music, places, etc. cause you to feel loneliness?
15. Do reminders of `x' such as photos, situations, music, places, etc. cause you to cry about `x`?
16. Do reminders of `x' such as photos, situations, music, places, etc. cause you to feel sadness?
17. Do reminders of `x' such as photos, situations, music, places, etc. cause you to feel loss of enjoyment?

Questions B8-12 and C13-17 were rated on a four point scale where the options were, `A lot of the time □, Quite a bit of the time □, A little bit of the time □, Never` □. For Questions A1, A2, A4 and A6, the first option was `Continuously` □. For questions A3, A5, and A7 the first option was `Always` □. The latter three options were the same for all questions.

*Underlined questions represent items removed following principal component analysis.
Appendix B

Hypothesized Scale of Romantic Dissolution Formed on the Basis of Principal Component Analysis on the Modified Core Bereavement Items
Hypothesized Scale of Romantic Dissolution
(Modified from Core Bereavement Items Using Principal Component Analysis)

A. Rumination

1. Do you experience images of the events surrounding the breakup with 'x'?
2. Do thoughts of 'x' come into your mind whether you wish it or not?
3. Do you think about 'x'?

B. Perseveration

4. Do you find yourself preoccupied with images or memories of 'x'?
5. Do you find yourself thinking of reunion with 'x'?
6. Do you find yourself missing 'x'?
7. Are you reminded by familiar objects (photos, possessions, rooms etc.) of 'x'?
8. Do you find yourself looking for 'x' in familiar places?
9. Do reminders of 'x' such as photos, situations, music, places, etc. cause you to feel longing for 'x'?

C. Depressive Indicators

10. Do thoughts of 'x' make you feel distressed?
11. Do reminders of 'x' such as photos, situations, music, places, etc. cause you to feel loneliness?
12. Do reminders of 'x' such as photos, situations, music, places, etc. cause you to cry about 'x'?
13. Do reminders of 'x' such as photos, situations, music, places, etc. cause you to feel sadness?
14. Do reminders of 'x' such as photos, situations, music, places, etc. cause you to feel loss of enjoyment?

Questions B8-9 and C11-17 were rated on a four point scale where the options were, 'A lot of the time □, Quite a bit of the time □, A little bit of the time □, Never’ □. For Questions A1, A2, A3, and B4 the first option was 'Continuously' □. For item B5 the first option was ‘Always’ □. The latter three options were the same for all the questions.