

# Relationship-Contingent Self-Esteem and the Ups and Downs of Romantic Relationships

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Relationship-contingent self-esteem (RCSE) emerges from perspectives on authenticity, need fulfillment, and relationship functioning and is an unhealthy form of self-esteem that depends on one's relationship. Four studies provided evidence of convergent, discriminant, incremental, and predictive validity for RCSE. Study 1 tested associations between RCSE and several conceptually related and unrelated constructs in multiple samples. In Study 2, the authors employed an event-contingent diary procedure to examine reports of self-esteem as a function of everyday relationship events. The association between event valence and changes in self-esteem became stronger with RCSE, and this interaction remained controlling for several parallel interactions by other constructs. Study 3 employed an interval-contingent diary procedure and found support for a mediation model in which the moderating role of RCSE largely occurred through momentary emotions, which in turn predicted momentary self-esteem. Study 4 sampled couples and found that partners who were both higher in RCSE felt more committed but not more satisfied or close.

*Keywords:* self-esteem, relationships, conflict, contingent

Being involved in a romantic relationship can sometimes be like riding the waves of the open sea. Partners can negotiate the steering of the boat, the height and direction of the sails, and how long they remain aboard, but rough waters may still affect one partner more than the other. Indeed, some partners seem devastated by a few small ripples, whereas others seem to remain relatively unscathed by a tidal wave. The degree to which one is affected by one's relationship may involve the tendency to depend on that relationship for personal validation. If one is tied to the bow of the ship, for example, even small ripples may feel like tidal waves. The degree to which one's sense of self is contingent on one's relationship may transform everyday undulations into seemingly more major crests and troughs.

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Research argues that the self can both influence and be influenced by one's close relationships (e.g., Aron & Aron, 1996; Drigotas, Rusbult, Wieselquist, & Whitton, 1999; Kelley, 1983; Murray, Holmes, & Griffin, 2000). For example, whereas one's knowledge, interests, and resources can influence those of one's partner and the nature of the relationship, the process of being in an interdependent close relationship also changes the self in important ways (e.g., Aron, Aron, Tudor, & Nelson, 1991). Indeed, the "interpersonal self" evolves from previous adaptations to interdependent situations (Rusbult, Kumashiro, Coolsen, & Kirchner, 2004). The present research examined one aspect of an interpersonal self: namely, the degree to which self-worth depends on one's relationship. We propose that the degree to which the self is contingent upon one's relationship, in part, determines how one is affected by relationship events and outcomes.

## CONTINGENT SELF-ESTEEM

Literature suggests that individuals vary in the degree to which their self-esteem is globally contingent upon outcomes (e.g., Deci & Ryan, 1995; Kernis, 2003). Other literature suggests that everyone's self-worth is contingent upon outcomes within a single domain (e.g., social acceptance; Leary & Baumeister, 2000). Finally, others emphasize the domain specificity of self-worth and study contingencies within a variety of domains (Crocker & Wolfe, 2001).

One approach to studying how, when, and why events affect the self centers on the notion of contingent self-esteem (Crocker & Wolfe, 2001). This body of literature, grounded in James's (1890) early notion of the self, argues that events within a particular

domain will affect the self primarily when one's self is invested in and "contingent" on outcomes in that domain (Crocker, Luhtanen, Cooper, & Bouvrette, 2003; Crocker & Park, 2004; Crocker & Wolfe, 2001). Success and failure in self-relevant domains result in increased intensity of affect and fluctuations in self-esteem, relative to outcomes that are not linked to self-worth (Crocker, Karpinski, Quinn, & Chase, 2003). Further, people can become preoccupied with the meaning of events in these self-contingent domains, because outcomes in these domains generalize to the worth and value of the whole person (Crocker & Park, 2004).

Contingent self-esteem has been examined in several domains, such as staking one's self-worth on academic performance, one's appearance, others' approval, and family love (Crocker & Wolfe, 2001). The majority of research thus far has been limited to contingent self-esteem in academics (see Crocker et al., 2003, for review). Contingent self-worth may also have important interpersonal ramifications (Park, Crocker, & Vohs, 2006). Although staking self-worth on others' approval and family love are interpersonal in nature, they do not capture the domain of romantic relationships. Few aspects of social life have as much potential to significantly affect one's self-esteem and well-being as the success or failure of romantic relationships. However, not everyone seems equally impacted by the progress and pitfalls of their romantic relationship. We believe that the degree to which one's self is contingent upon the relationship may help to explain who (and under what conditions one) will be most influenced by relationship events.

## RELATIONSHIP-CONTINGENT SELF-ESTEEM

*Relationship-contingent self-esteem* (RCSE) is an unhealthy form of self-esteem that depends on one's relationship and represents a particular kind of relationship investment. Several constructs describe ways in which one's self is implicated in one's relationship (e.g., Acitelli, Rogers, & Knee, 1999; Agnew, Van Lange, Rusbult, & Langston, 1998; Aron et al., 1991; Cross & Morris, 2003). RCSE involves more than merely having a relational identity (Cross & Morris, 2003), feeling invested in and committed to the relationship (Rusbult, 1983), or including the partner within the self (Aron & Aron, 1996). Although each of these notions reflects a manner in which the self is linked to one's romantic relationship, RCSE specifically involves having one's self-regard hooked on the nature, process, and outcome of one's relationship. In this way, to someone who is higher in RCSE, even minor negative relationship events can become significant because of their implications for self-worth. Existing perspectives on felt security (e.g., Fraley & Shaver, 2000), perceived partner regard (Murray, Holmes, & Collins, 2006), and rejection sensitivity (Downey & Feldman, 1996) also describe ways in which the self is affected by relationship events. For example, Murray et al.'s (2006) risk-regulation system emphasizes the importance of confidence in one's partner's regard as a regulator of whether an individual pursues self-protective relationship decisions that limit one's dependence or relationship-promotion decisions that increase one's dependence. Further, those lower in self-esteem are especially attuned to signs of rejection and partner disapproval, whereas those higher in self-esteem are more confident in their partner's positive regard for them and, thus, feel safer seeking more dependence. Whereas this (and other) perspectives place

heavy importance on the level of one's self-esteem, RCSE goes beyond the quantity of self-esteem and captures a particular quality or type of self-esteem, drawing from literatures on authenticity of self.

## How RCSE Advances Theories on Self-Esteem and Relationships

Contingent self-esteem goes beyond the mere amount of self-esteem and is also rooted in perspectives on authenticity of the self (Deci & Ryan, 1995, 2000; Kernis, 2003). Many theories on optimal self-esteem (and its origins) tend to focus on variants of what Deci and Ryan (2000) broadly characterized as basic psychological needs for autonomy, competence, and relatedness. Need for autonomy reflects the need to feel that one's behavior is personally endorsed and self-initiated (e.g., de Charms, 1968). Need for competence reflects the need to feel competent and effective at what one does (e.g., Bandura, 1977; White, 1959). Need for relatedness generally captures the literatures on attachment, belongingness, and intimacy as essential sources of self-esteem (e.g., Baumeister & Leary, 1995; Bowlby, 1973; Reis & Shaver, 1988). We believe that RCSE derives from all three of these sources of self-esteem being thwarted. When basic psychological needs for competence, autonomy, and relatedness are fulfilled over time, an authentic, noncontingent, optimal sense of self-esteem is promoted. When these basic psychological needs are thwarted over time, a defensive, contingent, suboptimal sense of self-esteem evolves.

RCSE reflects a lack of autonomy and personal endorsement of one's involvement in the relationship, just as being tied to the bow of a ship reflects a lack of being able to captain the ship, deciding where and how it sails. RCSE also reflects a lack of feeling competent in one's relationship. It is difficult to feel that one can captain a ship effectively when others are deciding its fate. Finally, RCSE reflects a lack of feeling genuinely validated, cared for, and understood by one's partner, and perhaps more importantly, a lack of authentically validating, caring for, and understanding one's partner. Indeed, the potential mutuality of this disingenuous intimacy and attachment to the relationship makes contingent self-esteem in the relational domain particularly theoretically important and unique. Thus, whereas RCSE integrates several theoretical perspectives on optimal self-esteem, it does so in a way that suggests both how the self can undermine one's relationship and, conversely, how one's relationship can further undermine one's self.

An autonomous self is thought to result when basic psychological needs for autonomy, competence, and relatedness are fulfilled and is thought to be the optimal alternative to a contingent self. This dialectic between autonomy and contingency carries over importantly into the relational domain. Indeed, the development of autonomous self-esteem practically requires that significant others support one's autonomy, promote one's sense of competence, and facilitate feelings of authentic relatedness. Relationship autonomy has been described as fully endorsing one's own involvement in the relationship, rather than feeling coerced, guilty, or not knowing why one is involved in the relationship (Knee, Lonsbary, Canevello, & Patrick, 2005). Further, relationship autonomy has been found to promote more understanding and less defensive cognitive, emotional, and behavioral responses to relationship conflict (Knee,

Patrick, Vietor, Nanayakkara, & Neighbors, 2002; Knee et al., 2005), as well as more adaptive couple behaviors and, in turn, better relational well-being (Blais, Sabourin, Boucher, & Vallerand, 1990). Other work has found that the more one's needs for autonomy, competence, and relatedness are fulfilled in one's romantic relationship, the more autonomously involved in the relationship one becomes, which, in turn, predicts higher relative satisfaction and commitment after having disagreements with one's partner (Patrick, Knee, Canevello, & Lonsbary, 2007).

Theoretically, RCSE derives from conditions that thwart basic needs for autonomy, competence, and relatedness. Most current theories on relationships seem to emphasize one or two of these basic psychological needs at the expense of the others. For example, attachment theory primarily concerns feelings of security and appropriate responsiveness of one's partner, emphasizing need for relatedness, rather than competence and personal endorsement of one's involvement in the relationship. Similarly, self-expansion theory (Aron & Aron, 1996) states that people are motivated to expand their resources, perspectives, and characteristics by including the other person within one's self, emphasizing feelings of relatedness (whether contingent or not). Self-expansion theory, to our knowledge, does not explicitly address needs for competence and autonomy, and thus does not distinguish between authentic, noncontingent overlap of selves versus stifling, contingent, coerced investment in the relationship, whereas the theoretical background of RCSE explicitly does. Finally, interdependence theory concerns the way in which self preferences get negotiated and altered in favor of relationship preferences and behaviors. According to this perspective, individuals are motivated to maximize personal and relational rewards within the context of relationship decisions and behaviors. As with attachment theory and self-expansion theory perspectives, interdependence is primarily focused on how one negotiates need for relatedness. Whereas interdependence theory implies that all forms of sacrifice and foregoing selfish interests in favor of the relationship promote closeness, the theoretical foundation of RCSE asserts that not all forms of interdependence are created equal. Autonomous, personally endorsed investment in the relationship is likely to be more optimal than coerced, obligatory contingent investment in the relationship.

RCSE should be related to a broad array of constructs from the self and relationships literatures, ranging from self- and relationship evaluations, relationship schemata, and satisfaction of needs within one's relationship.

### Self-Evaluation

RCSE represents an evaluation of self that is based on one's romantic relationship. Contingencies of self-worth (CSW) are generally associated with lower self-esteem and well-being, especially in the contingent domain (Crocker & Park, 2004). One reason for this is that negative events generally receive more attributional attention and have stronger impact on thoughts and feelings (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Also, when one succeeds in a contingent domain, the increase in self-esteem is smaller than the decline in self-esteem after failure (Crocker, Karpinski, et al., 2003). Thus, RCSE should be negatively associated with global self-esteem among people who are in romantic relationships.

Another construct that involves evaluating the self is self-consciousness, which reflects awareness of one's private thoughts and feelings, awareness of and concern for how others view and evaluate one's self, and discomfort and anxiety in social settings (Fenigstein, Scheier, & Buss, 1975). RCSE involves self-evaluation and awareness of others' evaluations. Contingent self-esteem is based on the notion that self-evaluation is stronger in the domain of contingency. Although RCSE is domain-specific, it may also be related to a tendency to evaluate oneself more generally, to expect evaluation by others, and consequently, increased social anxiety.

### Emotion

For the same reason that one would expect RCSE to be generally related to lower self-esteem, it should also be related to more negative emotion among people in romantic relationships. When the self is contingent upon outcomes, negative events have stronger and longer lasting impact than positive events because the declines are stronger than the increments (Crocker, Karpinski, et al., 2003). Thus, when one is higher in RCSE, one may generally experience more negative emotions than when one is lower in RCSE.

### Relationship Evaluation

One way to evaluate one's relationship is to consider the quality of the relationship. RCSE would make one especially attuned to information about the quality of the relationship, particularly if it were negative. RCSE may not overlap strongly with relationship quality, *per se*, because it concerns how relationship perceptions affect the self, rather than the quality of one's relationship at any particular time. When one is higher in RCSE, feelings of satisfaction, commitment, and closeness, and even feeling regard from one's partner, may bleed over more strongly to one's self-esteem. Although RCSE involves feeling that one is invested and committed to one's relationship, it is a particular kind of commitment that is less about feeling intentionally committed and authentically close and more about avoiding loss of self-regard that comes with a failed endeavor in a contingent domain.

### Relationship Schemata

RCSE involves basing one's self-regard on the perceived quality of one's relationship. One's self-regard thus may become very sensitive to signs of rejection. As Crocker and Park (2004) noted, people who base their self-esteem on others' regard and approval tend to have poor relationships and behave in ways that make those relationships worse over time. In the attachment literature, RCSE seems to most closely resemble anxious attachment in the form of preoccupation and obsession with one's relationship (Bartholomew & Horowitz, 1991; Simpson, Rholes, & Nelligan, 1992). Those higher in RCSE may have a "more is better" philosophy when it comes to closeness and reassurance from one's partner, which may include seeking evidence of security at the expense of actual security and healthy relationship functioning. Self-esteem contingencies also promote anxiety and tension within the contingent domain (Deci & Ryan, 2000). Together, these literatures suggest that RCSE may be similar to attachment anxiety in which

one is preoccupied and obsessed with one's relationship, craving the partner's reassurance and approval.

When one is higher in RCSE, one may be more likely to endorse obsessive, selfless love styles and have stronger reactions to love experiences. When self-esteem is contingent within a domain, people tend to pursue outcomes vigorously, sometimes to the exclusion of basic needs (Crocker & Park, 2004; Park et al., 2006). Thus, RCSE may promote the pursuit of relationship outcomes with unrestrained vigor and obsession.

### Need Satisfaction

Crocker and Park (2004) suggested that contingent self-esteem comes with several costs because one is driven to attain evidence of success in the domain. This is sometimes to the exclusion of other important self-sustaining needs, such as the psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 2000). When self-esteem is contingent, one loses the ability to pursue activities in that domain autonomously, driven by interest, authenticity, and openness to information. Instead, when self-esteem is "on-the-line," one experiences pressures to pursue only those activities that might satisfy the contingency (e.g., affirmative information).

Self-esteem contingencies also thwart feelings of competence (Crocker & Park, 2004). When self-esteem is contingent, mistakes, failures, and criticism are viewed as self-threats, rather than opportunities for growth and improvement. When self-worth is at stake, people may, in the short term, find ways to deny, ignore, or interpret events and information in self-enhancing or self-protecting ways. Over the long haul, these tendencies can interfere with appraisal of weaknesses and shortcomings and limit one's feelings of efficacy and competence (Crocker, Karpinski, et al., 2003). This pattern may promote feelings of incompetence and lower global self-esteem, as mentioned earlier. In a romantic relationship, RCSE could lead one to feel less competent and efficacious in one's relationship.

Finally, contingent self-esteem may thwart one's need for relatedness (Crocker & Park, 2004). This is because the pursuit of self-esteem can lead people to be less attuned to the needs and feelings of others. Development of empathy and genuine relatedness toward another may be hindered by an outcome-driven focus on the self. In the domain of relationships, this could ironically imply that hooking one's sense of self on one's relationship could backfire by limiting genuine relatedness and intimacy. Indeed, empathic accuracy is lower when one feels especially committed to preserving one's relationship (Simpson, Oriña, & Ickes, 2003).

Individuals also vary in how they are motivated to approach and interpret situations more generally (Deci & Ryan, 1985). These general causality orientations reflect tendencies to view situations as autonomous, controlling, and amotivating. Contingent self-worth is likely to be associated with less autonomous, more coercive motivation, related to feelings of pressure, stress and decreased well-being (Crocker, Karpinski, et al., 2003). Thus, RCSE may be related to more feelings of coercion and helplessness in one's relationship.

### OVERVIEW

The current research derived the construct of RCSE from theories on basic psychological needs (e.g., Deci & Ryan, 2000) and

CSW (e.g., Crocker & Park, 2004; Kernis, 2003) and tested convergent, discriminant, and predictive validity of RCSE with a variety of self- and relationship constructs. The theoretical contribution of RCSE stems from the notion that not all forms of investment, closeness, and relating to a romantic partner are equal. RCSE theoretically reflects a form of relatedness that does not evolve from authentic self-processes but, rather, from the thwarting of basic needs of feeling competent, autonomous, and genuinely valued by others.

Study 1 consisted of correlations between RCSE and various constructs assessed in a number of different samples. Study 2 examined predictive, discriminant, and incremental validity of RCSE by examining whether RCSE moderated individuals' reactions to positive and negative relationship events over a 14-day period, beyond the parallel moderation by attachment anxiety, general contingent self-worth, and inclusion of other in the self. Study 3 examined the potential for mediated moderation, such that the moderating role of RCSE might have occurred partly through emotional responses as a function of relationship events. Study 4 tested whether each partner's level of RCSE uniquely and interactively contributes to relationship quality, while also ruling out several alternative constructs.

### STUDY 1

In Study 1, we examined associations between RCSE and a variety of other conceptually related and unrelated constructs in the self and relationships literatures. Areas of assessment included more general self-esteem contingencies, self-evaluation constructs (i.e., trait self-esteem and self-consciousness), and relationship-evaluation constructs, such as satisfaction, commitment, and closeness. Relationship schemata were also assessed, including attachment dimensions and love styles. Finally, emotion and perceived satisfaction of basic psychological needs for autonomy, competence, and relatedness in one's relationship and more general orientations toward viewing situations as supportive of one's autonomy, controlling, and hopeless were included. Several variables were assessed for purposes of discriminant validity as well, including gender, number of previous relationships, and current relationship length.

We hypothesized that RCSE would be associated with other forms of self-worth contingencies, more negative forms of self-evaluation, and relationship schemata that emphasize immersion in and preoccupation with one's relationship. RCSE was also expected to relate to less satisfaction of psychological needs within one's relationship. No associations were hypothesized between RCSE and gender, number of previous relationships, or relationship length. Finally, RCSE was not expected to be strongly related to relationship quality because, as mentioned earlier, RCSE concerns the impact of relationship evaluations rather than the overall valence of them at any particular time. RCSE involves not merely feeling close to one's partner but, rather, specifically feeling that one's sense of self is on the line and depends on the quality of the relationship.

Several samples of data were gathered, with some constructs assessed in more than one sample and up to as many as five samples. For efficient presentation and discussion, we meta-analytically combined associations across samples, correcting for unreliability of measurement when possible. These data have not



been published elsewhere and were gathered by the authors (and associated colleagues) to provide convergent and discriminant validity for RCSE. Other constructs not germane to RCSE were included in some of these samples.

## Method

### Samples

Five samples that measured RCSE were included in analyses. Participants in all samples were in romantic relationships at the time of data collection. Table 1 provides descriptive statistics overall and by sample. Average sample size was 259 participants, with sample sizes ranging from 163 to 670, yielding a total of 1,661 observations overall. Across samples, the mean age was 22 years ( $SD = 4.97$ ), and average relationship length was approximately 2 years. Eighty percent of participants were female, perhaps because women are more likely to volunteer to participate in studies on relationships at this university.

### Meta-Analytic Technique

The estimates across samples were meta-analytically combined for parsimony and to most accurately estimate the effect size from all available data. Pearson's  $r$  was the effect-size index used in the meta-analytic estimates (Rosenthal & Rosnow, 1991). As  $r$  in the population increases, the distribution of  $r$ s sampled from the population becomes more skewed (Rosenthal, 1994). We corrected for this with Fisher's  $Z_r$  transformation. Each  $Z_r$  was then weighted by the inverse of the sampling-error variance, giving greater weight to more precise and reliable effects resulting from larger, more representative estimates of the population correlation (Hedges & Olkin, 1985). All estimates were corrected for attenuation due to measurement. The standard correction following Hunter and Schmidt (1990) was implemented:  $ES'_r = ES_r / (\sqrt{r_{xx}} \times \sqrt{r_{yy}})$ , where  $ES'_r$  is the adjusted effect  $r$ ,  $ES_r$  is the uncorrected effect  $r$ , and  $r_{xx}$  and  $r_{yy}$  are the reliability estimates for each variable in the correlation. A similar correction was applied to the inverse variance estimate.

## Measures

### Relationship-Contingent Self-Esteem

RCSE was assessed with an 11-item scale (Knee, Patrick, & Neighbors, 2001) based on both the general Contingent Self-Esteem Scale (Kernis & Goldman, 2006) and the Contingencies of

Self-Worth Scale (Crocker & Wolfe, 2001). Items are provided in the Appendix along with factor loadings derived from an exploratory factor analysis (in SAS syntax, priors = smc) followed by promax (oblique) rotation on a sample of 675 (with prior estimates based on the squared multiple correlation, as suggested in Reis & Judd, 2000). A single factor emerged with an eigenvalue of 4.57, with the next possible factor having an eigenvalue of .68. All loadings were greater than .50. Internal consistency (squared multiple correlation) was .90. The exploratory factor analysis was repeated on an additional sample of 356 with virtually identical results. Again, a single factor emerged (eigenvalue = 4.59), with the next possible factor having an eigenvalue of .67. All loadings were greater than .50, again with internal consistency of .90. We averaged items to form an index on which higher scores reflected stronger contingency. Two-week test-retest reliability was .78 in the second sample. Internal reliabilities in the five samples ranged from .88 to .89.

### Measures of Other Contingencies

*Contingent self-esteem.* The Contingent Self-Esteem Scale (Kernis, 2003; Paradise & Kernis, 1999) measures general contingent self-esteem. It consists of 15 items that measure self-esteem contingencies in domains such as living up to expectations, successful performance, and acceptance from others. Each item was rated on a scale from 1 (*not at all like me*) to 5 (*very much like me*). Items were averaged such that higher scores reflected stronger contingencies. Internal reliabilities in these samples ranged from .83 to .85.

*CSW.* The Contingencies of Self-Worth Scale (Crocker, Luhtanen, et al., 2003) assesses the degree to which one's self-worth is contingent upon outcomes within the domains of others' approval, family support, appearance, competition, academic competence, virtue, and God's love. Each of the seven subscales consisted of five items rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale. Subscales were scored such that higher scores reflected stronger contingencies. Internal reliabilities for others' approval, family support, appearance, competition, academic competence, virtue, and God's love were .84, .82, .79, .85, .81, .80, and .96, respectively.

### Measures of Self-Evaluation

*Self-esteem.* The Rosenberg Self-Esteem Scale (Rosenberg, 1965) is a 10-item measure used to assess global self-esteem. Items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*) and were averaged (after reversal where appropriate) such that higher scores reflected higher self-esteem. Internal reliability ranged from .86 to .90.

*Self-consciousness.* Fenigstein et al.'s (1975) Self-Consciousness Scale measures two aspects of self-awareness: public self-awareness, or the awareness of the self from the perspective of others, and private self-awareness, or the awareness of the self from the perspective of the self. A third subscale, social anxiety, measures anxiety resulting from social self-awareness. The public, private, and social-anxiety subscales consist of 7, 10, and 6 items, respectively, rated from 0 (*extremely uncharacteristic*) to 4 (*extremely characteristic*). Items were averaged such that higher scores reflected higher self-consciousness and anxiety. In-

Table 1  
Descriptive Statistics Overall and by Sample

Sample	<i>N</i>	% Female	<i>M</i> Age	<i>M</i> relationship length (years)	<i>M</i> no. of previous relationships
1	204	82	23.1	3.6	1.9
2	163	75	24.5	3.3	1.9
3	670	80	20.9	0.7	1.9
4	358	82	23	3.0	2.0
5	266	81	22.6	2.7	1.4
Total	1,661	80	22.2	2.1	1.8

ternal reliabilities ranged from .75 to .78, .60 to .68, and .78 to .79 for the public, private, and social-anxiety scales, respectively.

### Emotion

Positive and negative emotion was assessed with the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), which consists of 10 positive and 10 negative adjectives. Participants rated the extent to which they endorsed each item on a scale from 1 (*very slightly or not at all*) to 5 (*extremely*). Internal reliabilities were .89 and .87 for positive emotion and .87 (in both samples) for negative emotion.

### Measures of Relationship Evaluation

**Commitment.** Rusbult's (1983) measure of relationship commitment taps the extent to which one's relationship is likely to endure. Five items were rated on a scale from 0 to 8 and were averaged such that higher scores indicated greater commitment. Internal reliability ranged from .89 to .92.

**Relationship satisfaction.** The Quality of Relationship Index was adapted from the Quality of Marriage Index (Norton, 1983). The Quality of Relationship Index consists of six items that assess the extent to which individuals are satisfied and happy with their relationships. Items were rated on a 1 (*very strong disagreement*) to 7 (*very strong agreement*) scale and averaged such that higher scores reflect more satisfaction. Internal reliability ranged from .86 to .94.

**Inclusion of other in the self.** Inclusion of other in the self was assessed with a popular pictorial instrument that taps aspects of feeling connected and behaving interdependently (Aron, Aron, & Smollan, 1992). The measure consists of a series of two circles (labeled *self* and *other*) that overlap to equally increasing degrees in seven stages. Participants selected the picture that best described their relationships, and their selection was translated into a score from 1 to 7, with a higher score reflecting more inclusion of other in self.

### Relationship Schemata

**Attachment dimensions.** Attachment was assessed using Brennan, Clark, and Shaver's (1998) Experiences in Close Relationships measure. This 36-item measure yields two subscales: Avoidance (or Discomfort with Closeness and Discomfort Depending on Others) and Anxiety (or Fear of Rejection and Abandonment). Items were rated on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores reflected more of that construct. Internal reliabilities for the avoidance and anxiety scales ranged from .90 to .93 and from .90 to .91, respectively.

**Love styles.** C. Hendrick and Hendrick's (1986) Love Attitudes Scale measures six love styles: eros (passionate), ludus (game playing), storge (friendship based), pragma (logical, "shopping list"), agape (all-giving, selfless), and mania (possessive, dependent). Each subscale included seven items that were rated on a 5-point scale. Internal reliabilities for eros, ludus, storge, pragma, agape, and mania were .71, .62, .66, .70, .63, and .78, respectively.

### Need Satisfaction

Relationship-specific need satisfaction was assessed using a measure developed by La Guardia, Ryan, Couchman, and Deci

(2000). The questionnaire begins with the stem, "When I am with \_\_\_\_\_ (my partner)." The autonomy, competence, and relatedness subscales each consist of three items rated on a 7-point scale with anchors of 1 (*not at all true*) and 7 (*very true*). Sample items include "I feel free to be who I am" (autonomy), "I feel very capable and effective" (competence), and "I feel a lot of closeness and intimacy" (relatedness). Items on each subscale were averaged such that higher scores reflected higher need satisfaction. Internal reliabilities ranged from .59 to .74, .68 to .79, and .75 to .82 for the autonomy, competence, and relatedness subscales, respectively.

**General causality orientations.** The General Causality Orientations Scale (Deci & Ryan, 1985) measures general orientations toward viewing situations as supportive of one's autonomy, controlling, and hopeless or amotivating. The revised General Causality Orientations Scale (Hodgins, Koestner, & Duncan, 1996; Ryan, 1989) consists of 17 vignettes and 51 items. Each vignette is followed by an autonomous response, a controlled response, and an impersonal response. Participants rated the extent to which each item accurately represented their reaction to the vignette on a scale from 1 (*very unlikely*) to 7 (*very likely*). Scores for each subscale were averaged over the 17 responses. Internal reliabilities for the autonomy, controlled, and impersonal orientation subscales ranged from .80 to .86, .72 to .77, and .78 to .81, respectively.

## Results and Discussion

Table 2 provides disattenuated effect-size estimates (Pearson  $r$ ; Lipsey & Wilson, 2001; Rosenthal & Rosnow, 1991), along with the number of samples and participants on which each estimate is based. In addition, 95% confidence intervals were calculated, along with significance tests of the overall effect estimate. The  $Q$  statistic is included as a test of heterogeneity. As shown, a small number of the effect sizes were significantly different across the samples. Of the associations that exhibited significant heterogeneity, only two produced a significant combined effect size when one of the individual samples had yielded a nonsignificant effect. Private self-consciousness was available in two samples with effect sizes of .10 and .32. Relationship satisfaction was only significant in one of four samples, but when all four samples were meta-analytically combined, the effect size was significant. These two associations should be viewed cautiously because of the underlying variation across samples.

### Other Domains of Contingent Self-Esteem

RCSE was correlated with general contingent self-esteem, suggesting that placing self-worth on the line in one's relationship goes along with placing one's self-worth on the line more generally. RCSE was also related to CSW in several domains. Specifically, RCSE was moderately related to basing self-worth on others' approval, family support, one's appearance, competition, and academic competence. These associations with similar constructs support the convergent validity of RCSE. Further, contingencies within a given domain are likely to be particularly useful in understanding thoughts, feelings, and behavior within that domain (Crocker & Wolfe, 2001).

### Self-Evaluation

First, RCSE was related to lower trait self-esteem. As Crocker and Park (2004) noted, contingent self-worth tends to have costs

Table 2  
*Disattenuated Effect Size Estimates for Meta-Analytically Combined Associations Between RCSE and Various Constructs*

Variable	k	N	r	95% CI	CIz	Q
Contingencies of self-esteem						
General contingent self-esteem	4	1,395	.61***	.55, .67	22.83	4.30*
Others' approval (CSWS)	1	248	.44***	—	—	—
Family support (CSWS)	1	248	.36***	—	—	—
Appearance (CSWS)	1	248	.39***	—	—	—
Competition (CSWS)	1	248	.28***	—	—	—
Academic competence (CSWS)	1	248	.24***	—	—	—
Virtue (CSWS)	1	248	.15*	—	—	—
God's love (CSWS)	1	248	-.04	—	—	—
Self-evaluation and awareness						
Trait self-esteem	5	1,661	-.38***	-.43, -.32	14.26	.49
Private self-consciousness	2	367	.26***	.12, .40	3.88	5.81*
Public self-consciousness	2	367	.43***	.31, .56	7.23	1.74
Social anxiety	2	367	.36***	.24, .49	6.06	.02
Emotion						
Positive emotion	2	624	-.05	-.14, .04	1.03	8.17**
Negative emotion	2	624	.27***	.18, .36	5.96	2.15
Relationship evaluation						
Satisfaction	5	1,661	.08**	.03, .14	2.94	10.16*
Inclusion of other in self <sup>a</sup>	4	991	.17***	.09, .24	4.51	1.16
Commitment	4	1,303	.15***	.09, .21	4.77	3.66
Relationship schema						
Anxious attachment	3	1,294	.52***	.46, .58	18.49	2.28
Avoidant attachment	3	1,294	-.10**	-.15, -.03	2.99	.09
Eros	1	670	.08*	—	—	—
Ludus	1	670	-.10**	—	—	—
Storge	1	670	-.00	—	—	—
Pragma	1	670	.02	—	—	—
Mania	1	670	.48****	—	—	—
Agape	1	670	.27****	—	—	—
Orientations/NS						
Autonomy orientation	2	367	.02	-.09, .14	.41	1.76
Controlled orientation	2	367	.30***	.18, .44	4.93	.09
Impersonal orientation	2	367	.43***	.31, .56	7.41	.00
Autonomy NS	5	1,661	-.18***	-.25, -.12	5.68	3.34
Competence NS	5	1,661	-.09**	-.15, -.03	3.07	.87
Relatedness NS	5	1,661	.03	-.04, .08	.60	6.83
Other variables						
Sex <sup>a</sup>	5	1,661	.04	-.01, .09	1.60	8.30
Relationship length <sup>a</sup>	5	1,661	.00	-.05, .04	.20	6.52
Number of previous relationships <sup>a</sup>	4	1,395	-.06*	-.11, -.01	2.29	.74
Age <sup>a</sup>	5	1,661	-.10***	-.15, -.05	4.94	4.94

Note. RCSE = relationship-contingent self-esteem; k = number of samples; N = total number of observations; r = correlation coefficient; 95% CI = 95% confidence interval for r; CIz = z test of the mean effect size; Q = test of heterogeneity; CSWS = Contingencies of Self-Worth scale; NS = need satisfaction. Estimates are disattenuated (corrected for reliability) except where noted otherwise.

<sup>a</sup> These estimates were not corrected for reliability because they were single item measures.

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

for trait self-esteem, in part, because over time, the declines in self-worth following negative events are larger than the increases in self-worth following positive events. Self-consciousness also reflects a tendency to evaluate oneself and to feel concerned about being evaluated by others. RCSE was associated with all three forms of self-consciousness. Those higher in RCSE tend to more frequently reflect on and be aware of their private thoughts and feelings, as well as feel more aware of and concerned about how they are evaluated by others. Finally, those higher in RCSE also tend to feel more anxious in social situations, presumably because of the potential for negative self-evaluations. Thus, RCSE clearly overlaps with a tendency to feel concerned about how one is

evaluated both privately and publicly. Turning to emotion, RCSE was associated with negative emotion, consistent with its association with trait self-esteem.

### Relationship Evaluation

When self-worth is on the line, negative evaluations of one's relationship are equivalent to negative evaluations of oneself. Thus, RCSE could be associated with either more negative or more positive evaluations of the relationship at any given time. RCSE was associated with generally feeling more satisfied, more close, and more committed to one's relationship but not to the degree that

it could be confused with these constructs. RCSE involves hooking one's self-worth on the relationship in an ego-involved manner and is not based on including the partner in one's self or merely feeling close and connected in a cognitively interdependent manner.

### *Relationship Schema*

As hypothesized, RCSE was correlated positively with love styles that emphasize immersion in and preoccupation with one's relationship. Specifically, positive associations were observed between RCSE and attachment anxiety and manic attitudes toward love (mania). Further, positive associations emerged between RCSE and a selfless attitude toward love (agape). Relationship schemata that did not involve immersion or obsession were either weakly or nonsignificantly related to RCSE.

### *Need Fulfillment and Orientations*

RCSE was correlated with a tendency to view situations as controlling (controlled orientation) and also related to a tendency to view situations as hopeless and amotivating (impersonal orientation). RCSE was not significantly related to a tendency to view situations as supporting one's autonomy. When one's self-esteem depends on one's relationship, one tends to feel more controlled and helpless in a variety of situations. This would be expected to carry over to fulfillment of needs in one's relationship as well. Indeed, RCSE was significantly associated with feeling less autonomous within one's relationship and less competent in one's relationship. RCSE was not significantly associated with feelings of relatedness, presumably because, for those higher in RCSE, feeling related may be offset by feeling controlled and helpless.

### *Other Variables and Additional Analyses*

Several additional variables were expected to be weakly related or unrelated to RCSE. Specifically, RCSE was not significantly related to sex or length of relationship. Further, RCSE was related to having had fewer previous relationships and to being younger in age.

We conducted further analyses to clarify the associations observed. First, because of the inverse association between RCSE and trait self-esteem, we recomputed all effect estimates after partialling trait self-esteem. All associations that were reported remained significant when we controlled for trait self-esteem. Thus, the associations between RCSE and various constructs are not simply due to overlap with amount of self-esteem. Second, we tested the degree of overlap with the CSW scale and the Others' Approval subscale, in particular (because this subscale was most highly correlated with RCSE). The CSW was included in one of the samples in Study 1. We reanalyzed the RCSE correlations from that sample while partialling CSW and then while partialling the Others' Approval subscale. Before partialling, there were nine significant correlations between RCSE and other constructs. After partialling CSW, six of these nine remained significant. Those that fell below significance after controlling for CSW were relationship satisfaction, commitment, competence fulfillment, and age. After partialling the Others' Approval subscale, five of the original nine remained significant. Those that fell below significance when we controlled for the Others' Approval subscale were the same as

those that fell below significance when we controlled for CSW, with the exception that commitment remained, whereas autonomy fulfillment did not. Last, we recomputed the associations in Table 2, controlling for attachment anxiety where possible. Attachment anxiety was included in three samples. Before partialling, there were 20 significant correlations between RCSE and other constructs. After partialling attachment anxiety, 17 of these 20 remained significant. Those that fell below significance when we controlled for conceptual overlap with attachment anxiety were trait self-esteem, negative emotion, and autonomy orientation. Thus, despite considerable conceptual overlap with RCSE, most of the correlations between RCSE and other constructs remained significant when we controlled for trait self-esteem, CSW, the Others' Approval subscale, and attachment anxiety.

It was possible that a moderate amount of RCSE would be beneficial, with extreme levels in either direction being associated with poorer relationship outcomes. Note that this would question the detrimental side of contingent self-worth more generally, which has been debated elsewhere (Crocker & Park, 2004). To test this notion, we computed the quadratic term of RCSE ( $RCSE \times RCSE$ ) and recomputed associations between the RCSE product and all self and relationship variables, controlling for the linear component of RCSE. No consistent associations emerged for the quadratic component. Thus, there is no evidence thus far that moderate levels of RCSE are particularly beneficial.

In sum, these findings, aggregated over several samples, provide evidence of convergent validity in that RCSE was significantly related to constructs that share its conceptual content. Specifically, those higher in RCSE tended to also be higher in other domains of contingent self-esteem, self-consciousness, social anxiety, attachment anxiety, manic and selfless love styles, general romantic beliefs, and negative affect and tended to view situations as controlling and hopeless. Further, those higher in RCSE also tended to be lower in trait self-esteem (and all other associations with RCSE remained controlling for trait self-esteem). Finally, evidence of discriminant validity emerged in that several conceptually unrelated variables were related moderately (such that they were clearly not the same construct) or nonsignificantly, including relationship satisfaction, closeness, commitment, love styles that do not involve preoccupation or obsession, age and sex of participant, and length of relationship.

## STUDY 2

The primary feature of RCSE is that one's self-esteem is rooted in one's relationship such that events that impact the relationship more strongly impact one's self. As suggested by the associations observed in Study 1, the "investment" captured by RCSE is not tantamount to merely liking one's relationship, feeling close to one's partner, or feeling committed to preserving the relationship per se. Rather, RCSE is thought to reflect an ego-involved investment of self whereby one feels at the mercy of the relationship. In this way, RCSE should moderate the extent to which events that impact the relationship also impact the self. Study 2 was designed to examine (a) whether RCSE would moderate the degree to which one's self-esteem would fluctuate with relationship events over a 14-day period and (b) whether this moderation would remain controlling for the parallel moderation of attachment anxiety, general CSW, and inclusion of other in the self. A diary recording



procedure was employed in which participants recorded every positive and negative relationship event over a 14-day period, along with reports of their momentary self-esteem.

We made the following hypotheses:

- H1. Self-esteem would generally fluctuate with the valence of relationship events as they were recorded. However, this association would be moderated by RCSE such that it would become stronger with higher (relative to lower) RCSE.
- H2a. The interaction described in H1 would remain after we controlled for the parallel interaction between event valence and attachment anxiety.
- H2b. The interaction described in H1 would remain after we controlled for the parallel interaction between event valence and general CSW.
- H2c. The interaction described in H1 would remain after we controlled for the parallel interaction between event valence and inclusion of other in the self.

## Method

### *Participants*

We recruited 217 students in heterosexual romantic relationships of at least 1 month at the University of Houston, Texas. Students received extra credit for participation. Nineteen participants dropped out of the study before returning any diary records; thus, 198 participants completed diary records for the study. The average age was 21 years ( $SD = 3.93$ ), and 82% were female. The sample was ethnically diverse, with 30% Caucasian, 27% Hispanic, 21% Asian, 18% African American, and 4% who chose "other." Average relationship length was approximately 2 years ( $SD = 4.5$ ).

### *Procedure*

Participants completed an initial questionnaire packet that contained demographic and relationship background questions, RCSE, self-esteem, and current mood as primary measures and attachment anxiety, other CSW, and inclusion of other in the self for purposes of testing incremental validity. Measures were ordered according to a Latin square design. Upon completing the initial packet, participants attended an information session where they returned the questionnaire packet and received instructions on how to complete the diary records. The diary record and training procedures were designed according to the recommendations of Reis and Gable (2000).

On each diary record, participants recorded their perceptions of positive and negative relationship events that occurred throughout the day for 14 days. Participants picked up blank records and returned completed records every 3 days. They reported on all predefined events that occurred. Positive and negative events were defined in advance for participants, and numerous specific examples were provided. For example, "Partner said something that made me feel loved," "Partner showed an interest in the events of my day," and "Partner helped me out with something important"

were examples of positive events. "You and your partner had an argument," "Partner criticized you," and "Partner put his/her needs, wants, or interests above your own" were examples of negative events. The order in which positive and negative events were recorded was counterbalanced with each report. Participants were encouraged to note on the record when no event occurred on a given day.

### *Baseline Measures*

RCSE, self-esteem, attachment anxiety, CSW (Crocker, Luhtanen, et al., 2003), and inclusion of other in the self were each measured using the same scales described in Study 1. For general CSW, an overall score was computed by averaging items across subscales such that higher scores reflected stronger contingency.

### *Diary Record Measures*

Each diary record included the date and time of the event, how long the event lasted, and the time the record was completed. Participants wrote about the relationship event in a brief open-ended fashion to clarify and make salient their memory of the event. Each diary record then included measures of event valence in the form of a classification of the type of positive or negative event that occurred, as well as the degree to which the event was viewed as positive or negative (the participant's own perception). Results were the same regardless of whether we used the objective classification or the participant's own perception of the event in analyses. The more objective form of event valence is reported below. Finally, participants reported momentary self-esteem on a subset of five items from the Rosenberg (1965) self-esteem scale used in Study 1. Items were preceded with "Right now." Internal reliability of self-esteem was .88.

## Results and Discussion

### *Preliminary Analyses*

Participants recorded 3,019 events over the 14-day period, with an average of 13.9 events per person. It is important to note that RCSE did not predict the number of events recorded. Further, it was not associated with the number of positive or negative relationship events.

Table 3 provides means, standard deviations, internal reliabilities, and correlations between baseline variables. At baseline, RCSE was significantly correlated with lower self-esteem and higher attachment anxiety, as in Study 1.

### *Hypothesis 1*

Hypothesis 1 was that participants' level of self-esteem would generally fluctuate with the valence of relationship events as they were recorded and that this would be stronger among those higher in RCSE. For this analysis, the structure of the data was such that Level 1 variables were relationship events and were nested within Level 2 person variables. Accordingly, a multilevel modeling approach using the PROC MIXED routine in SAS was employed (Littell, Milliken, Stroup, & Wolfinger, 1996; Singer, 1998). Coefficients were derived from a random-coefficients model using restricted maximum-likelihood estimation. This technique is con-

Table 3  
Means and Zero-Order Correlations Between Baseline Variables in Study 2

Baseline measure	<i>M</i>	<i>SD</i>	Cronbach's $\alpha$	1	2	3	4
1. RCSE	3.32	0.83	.90	—			
2. Self-esteem	4.23	0.73	.87	-.29***	—		
3. Attachment anxiety	2.76	1.11	.90	.26***	-.56***	—	
4. CSWS	4.93	0.67	.88	.35***	.03	.02	—
5. IOS	4.77	1.67	—	.14*	.15*	-.40***	-.05

Note. RCSE = Relationship-contingent self-esteem; CSWS = contingent self-worth across other domains; IOS = inclusion of other in the self.  
\*  $p < .05$ . \*\*\*  $p < .001$ .

ceptually similar to a “slopes as outcomes” approach in which intercepts and slopes are estimated for each individual in a Level 1 model. Coefficients from the Level 1 model are then incorporated into the Level 2 model.

To examine both general associations and moderation by RCSE for H1, we computed two separate equations. The first equation examined event valence (in which a lower valence reflected a negative event) and RCSE as predictors of event-level self-esteem, controlling for baseline self-esteem to remove its overlap from RCSE. (Results were the same when baseline self-esteem was not controlled). The second equation included these terms along with the cross-level interaction of Valence  $\times$  RCSE. The general associations model thus included the four fixed effects of an intercept and slopes for baseline self-esteem, valence, and RCSE and two random effects for the intercept and slope of event valence.<sup>1</sup>

In support of H1, event valence was significantly associated with event-level self-esteem when we controlled for baseline self-esteem,  $F(1, 2819) = 356.92, p < .001, pr = -.34$ , such that negative (relative to positive) events were associated with lower event-level self-esteem. It is important to note that this general association was significantly moderated by RCSE,  $F(1, 2818) = 70.99, p < .001, pr = -.16$ . Figure 1 provides event-level self-

esteem scores as a function of event valence and RCSE, derived according to simple slopes (Cohen, Cohen, West, & Aiken, 2003). Tests of simple slopes revealed that event valence was significantly associated with fluctuations in self-esteem among those higher in RCSE,  $F(1, 1423) = 243.28, p < .001, pr = -.38$  and among those lower in RCSE,  $F(1, 1395) = 195.28, p < .001, pr = -.35$ , with the significant interaction reflecting that the latter association was significantly weaker in magnitude.<sup>2</sup>

### Hypotheses 2a, 2b, and 2c

Hypotheses 2a, 2b, and 2c were tested simultaneously for parsimony. (Results were the same when they were tested individually.) Hypotheses 2a–2c focused on the incremental validity of the Event Valence  $\times$  RCSE interaction beyond the conceptually related constructs of attachment anxiety, general CSW, and inclusion of other in the self. The analyses employed for H1 were repeated, with the addition of the three related constructs as both main effects and products with event valence. Thus, this analysis tested whether the Event Valence  $\times$  RCSE interaction remained, controlling for the parallel Event Valence  $\times$  Attachment Anxiety, Event Valence  $\times$  General CSW, and Event Valence  $\times$  Inclusion of Other in the Self interactions simultaneously. Results indicated that the Event Valence  $\times$  RCSE interaction remained significant,  $F(1, 2750) = 43.02, p < .001, pr = -.12$ , controlling for the parallel interactions of Event Valence  $\times$  Attachment Anxiety,  $F(1, 2750) = 35.99, p < .001, pr = -.11$ ; Event Valence  $\times$  CSW,  $F(1, 2750) = 5.31, p < .05, pr = .04$ ; and Event Valence  $\times$  Inclusion

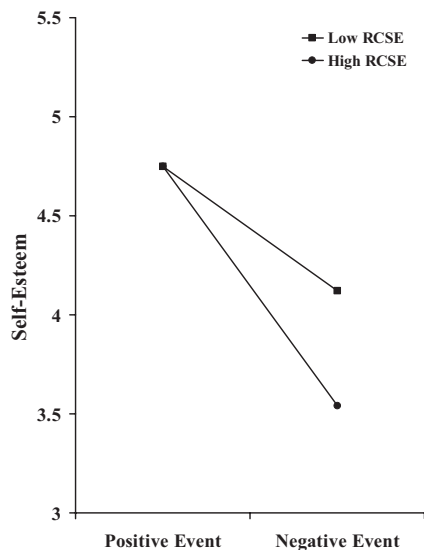


Figure 1. Event-level self-esteem as a function of positive and negative relationship events and relationship-contingent self-esteem (RCSE) in Study 2.

<sup>1</sup> Grand mean centering was employed, although centering, rather than not centering, provides the same results, with the exception of the coefficient for the product term, which was not significant and was not reported anyway. The default degrees of freedom were reported. PROC MIXED has several options for calculating degrees of freedom. For further details on how SAS computes degrees of freedom, see Littell, Milliken, Stroup, and Wolfinger (1996) and Singer (1998). SAS provides both *ts* and *Fs* by default. We arbitrarily and consistently report *Fs*. SAS further provides unstandardized coefficients, so we chose to report partial correlations (*pr*) as the index of effect size throughout, because the range and magnitude of correlations are easily understood by most readers. Partial correlations were calculated as the square root of  $F/(F + df_{error})$ . Readers not familiar with PROC MIXED are encouraged to read Singer (1998) for further explanation of the range of options and sample syntax and analysis of hierarchical data structures.

<sup>2</sup> We found no evidence that sex of participant further moderated the RCSE  $\times$  Valence effect. The potential three-way interaction was not significant.

of Other in the Self,  $F < 1$ . We also controlled for the parallel interaction by the Others' Approval subscale of the CSW (because this was the subscale most highly correlated with RCSE) and found that the Event Valence  $\times$  RCSE interaction remained significant,  $F(1, 2923) = 28.65, p < .001, \beta = -.10$ , beyond the marginal Event Valence  $\times$  Others' Approval term,  $F(1, 2923) = 3.28, p = .07, \beta = -.03$ . Thus, results supported the incremental validity of the Event Valence  $\times$  RCSE interaction beyond the parallel interactions with several other conceptually related constructs.<sup>3</sup>

These findings suggested that relationship events were particularly associated with changes in momentary self-esteem when one was also higher in RCSE. However, the underlying mechanism remained unclear. When self-esteem is contingent and one's ego is on the line, events and outcomes relevant to that domain come to drive one's emotions reflexively rather than reflectively (Deci & Ryan, 1991). Thus, when relevant negative events occur, RCSE may predict relatively immediate fluctuations in emotions, which in turn predict fluctuations in evaluations of the self. Those lower in RCSE may instead view the same negative relational events for what they are, with more reflective emotional responses that do not carry over to fluctuations in self-regard. This is what we tested in Study 3.

### STUDY 3

Theories on optimal self-regulation, particularly Deci and Ryan's (1985, 2000) self-determination theory, argue that when self-esteem is contingent and one's ego is on the line, events and outcomes relevant to that domain come to drive one's emotions reflexively rather than reflectively (Deci & Ryan, 1991). Study 3 tested the potential for the moderating role of RCSE to be mediated by fluctuation in emotion as a function of relationship events. When the self is contingent, one's emotions and behaviors are experienced reflexively in response to events and outcomes in the contingent domain. For example, when one is tied to the bow of the ship, the relatively small waves will be reflexively experienced as terrifying, whereas when one is at the helm, one is able to take a more reflective perspective on those same waves and interpret them for what they are. Indeed, when the self is contingent, events and outcomes are directly tied to one's emotions, and the self is further evaluated in terms of being "good" or "bad." Thus, when relevant negative events occur, RCSE may predict relatively immediate fluctuations in emotions, which in turn predict fluctuations in evaluations of the self. We modified the design slightly from an event-contingent design to an interval-contingent design by having participants record the most extreme positive and negative relationship event that happened twice daily. This procedural change limited the possibility that some participants would record more severe events than others, leaving less room for participants to define the severity of the particular events themselves. Along with the events, participants recorded their momentary self-esteem and emotion.<sup>4</sup>

We tested whether RCSE moderates how relationship events predict one's self-esteem through the role of emotions. When one is higher in RCSE, relationship events should be linked to stronger, more immediate emotional reactions, which may in turn predict one's momentary self-esteem. When one's self is contingent, emotions related to events and outcomes are experienced reflexively rather than reflectively, and these events carry over to affect feelings that the self is good or bad (Deci & Ryan, 1991). We

tested this potential mediating process in terms of mediated moderation (Baron & Kenny, 1986; Muller, Judd, & Yzerbyt, 2005).

We made the following hypotheses:

- H1. Self-esteem would generally fluctuate with the valence of relationship events as they were recorded. However, this association would be moderated by RCSE such that it would become stronger with higher (relative to lower) RCSE.
- H2. The moderation in H1 would be partly mediated by its impact on emotion. Specifically, the interaction in H1 would be mediated by the parallel interaction between RCSE and relationship events in predicting emotion. Thus, one reason that relationship events are more strongly associated with changes in self-esteem among those higher in RCSE may be because of how those events differentially impact one's emotions, which in turn can differentially impact one's self-esteem.

## Method

### Participants

We recruited 94 participants who had been in heterosexual romantic relationships for at least 1 month. Participants were recruited from the University of Houston and were given extra credit for participation. The average age was 23 years ( $SD = 7.33$ ), and 83% were female. Average relationship length was 4.3 years ( $SD = 6.62$ ). The sample was ethnically diverse, with 31% Caucasian, 26% Hispanic, 20% African American, 16% Asian, and 7% who chose "other."

### Procedure

Participants completed an initial questionnaire packet that contained demographic questions, RCSE, self-esteem, current emotion, and other measures intended for other purposes. Measures were ordered according to a Latin square design. Upon completing the initial packet, participants attended an information session where they returned the questionnaire packet and were instructed on how to complete the diary records. As in Study 2, the diary record and training procedures were designed according to the recommendations of Reis and Gable (2000).

On each diary record, participants recorded their perceptions of the most positive and negative relationship event that occurred each day, twice per day. Participants were told that a relationship event could be anything that occurred in relation to their romantic partner or relationship, such as a specific event that occurred, a

<sup>3</sup> Relationship length (in both its measured form and a logarithmic transformation) did not further moderate the Valence  $\times$  RCSE interaction in Studies 2 and 3 when added to the equation.

<sup>4</sup> Relationship satisfaction was also examined as an additional potential mediator of the RCSE  $\times$  Valence interaction. Although RCSE  $\times$  Valence did significantly predict relationship satisfaction (the potential mediator), relationship satisfaction did not, in turn, significantly predict self-esteem. An anonymous reviewer felt that the rationale for relationship satisfaction as a mediator was not compelling, so we mention these results here, rather than in the text.

social interaction, or thoughts or feelings experienced (with or without one's partner). Participants were told to rely on their own perceptions of whether the event was positive or negative. To ensure that the data were based on individual perceptions of events rather than on a predetermined notion of what positive and negative events should be or which specific events should be recorded, we had participants define events themselves.

Participants recorded the most positive and negative relationship event that occurred during the morning hours (i.e., from the time they awoke until 2:00 p.m.) and the afternoon/evening hours (i.e., from 2:00 p.m. until they went to bed). The order in which positive and negative events were recorded was counterbalanced with each report. If no event had occurred since the last recording, participants were encouraged to note this on the record. Records were returned in 3-day intervals.

### Baseline Measures

#### RCSE

RCSE was measured using the scale described in Study 1.

#### Self-Esteem

Self-esteem was measured by Rosenberg's Self-Esteem Scale (Rosenberg, 1965), described in Study 1.

#### Current Emotion

Current emotion was assessed with an abbreviated version of the Multiple Affect Adjective Checklist (Zuckerman & Lubin, 1965). The shortened Multiple Affect Adjective Checklist consisted of 32 adjectives with eight items each tapping anxiety, depression, hostility, and positivity. Participants rated each adjective on a scale from 1 (*not at all*) to 7 (*very much*). The subscales were highly correlated and were averaged (after reversing positivity), with higher scores reflecting more negative emotion. (Results were the same, in opposite directions, when negative and positive subscales were examined separately throughout the analyses below.)

### Diary Record Measures

Each diary record included the date and time of the event, how long the event lasted, and the time the record was completed. Participants wrote about the relationship event in a brief open-ended fashion to clarify and make salient their memory of the event. Each diary record then included measures of momentary self-esteem and emotion. These current measures differed from the baseline measures described above only in that the instructions emphasized that participants rate how they currently feel. Internal reliabilities of self-esteem and emotion were .93 and .96, respectively.

## Results and Discussion

### Preliminary Analyses

Table 4 provides means, standard deviations, internal reliabilities, and correlations between baseline variables. At baseline, RCSE was significantly correlated with lower self-esteem and more negative emotion, as in Study 1. It should also be noted that the moderate correlation between negative emotion and self-

Table 4  
*Means and Zero-Order Correlations Between Baseline Variables in Study 3*

Baseline measure	<i>M</i>	<i>SD</i>	Cronbach's $\alpha$	1	2
1. RCSE	3.30	0.87	.90	—	
2. Self-esteem	4.10	0.73	.88	-.57***	—
3. Negative emotion	2.22	0.95	.95	.38***	-.44***

Note. RCSE = relationship-contingent self-esteem.  
\*\*\*  $p < .001$ .

esteem ( $r = -.44$ ) indicates that these constructs are not so redundant that potential mediation would be due to substantial statistical overlap.

### Hypothesis 1

Hypothesis 1 was that participants' level of self-esteem would generally fluctuate with the valence of relationship events as they were recorded and that this would be stronger among those higher in RCSE. For this analysis, the structure of the data was such that Level 1 variables were relationship events and were nested within Level 2 person variables, as in Study 2. Accordingly, we employed a multilevel modeling approach using the PROC MIXED routine in SAS (Littell et al., 1996; Singer, 1998).

To examine both general associations and moderation by RCSE for H1, we computed two separate equations. The first equation examined event valence (in which a higher valence reflected a negative event) and RCSE as predictors of event-level self-esteem. The second equation included these terms along with the cross-level interaction of Valence  $\times$  RCSE. Baseline self-esteem was included in each model, removing its overlap with RCSE. (Results were the same without controlling for baseline self-esteem.) The general associations model thus included the four fixed effects of an intercept and slopes for baseline self-esteem, valence, and RCSE and two random effects for the intercept and slope of event valence.

In support of H1, event valence was significantly associated with event-level self-esteem when we controlled for baseline self-esteem,  $F(1, 2743) = 6.40, p = .01, pr = -.05$ , such that negative (relative to positive) events were associated with lower event-level self-esteem. It is important to note that this general association was significantly moderated by RCSE,  $F(1, 2742) = 14.36, p < .001, pr = -.07$ . Figure 2 provides event-level self-esteem scores as a function of event valence and RCSE, derived according to simple slopes (Cohen et al., 2003). Tests of simple slopes revealed that event valence was significantly associated with changes in self-esteem among those higher in RCSE,  $F(1, 2546) = 18.02, p < .001, pr = -.08$ , but not significantly among those lower in RCSE ( $p > .49$ ).<sup>5</sup>

### Hypotheses 2 and 3: Mediated Moderation

Hypothesis 2 concerned mediated moderation and was tested according to the criteria of Muller et al. (2005). Figure 3 displays

<sup>5</sup> We again found no evidence that sex of participant further moderated the RCSE  $\times$  Valence effect. The potential three-way interaction was not significant.



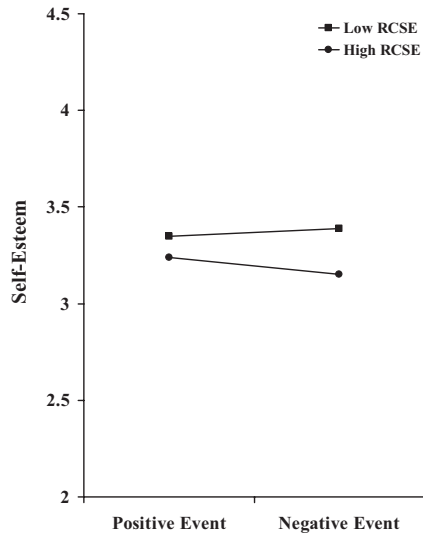


Figure 2. Event-level self-esteem as a function of positive and negative relationship events and relationship-contingent self-esteem (RCSE) in Study 3.

the conceptual mediated moderation model that tested Hypothesis 2. Mediated moderation involves examining potential underlying mechanisms of an observed interaction, in this case the RCSE  $\times$  Valence interaction predicting event-level self-esteem. According to Muller et al. (2005), mediated moderation requires (a) a significant association between the predictor (valence) and the mediator (emotion) and a significant interaction between the mediator (emotion) and the moderator (RCSE) on the criterion (self-esteem), (b) a significant interaction between the predictor (valence) and the moderator (RCSE) on the mediator (emotion) and a main effect of the mediator (emotion) on the criterion (self-esteem), or both a and b.

Following Muller et al. (2005), variables were centered at their sample mean, and event valence values were contrast coded (i.e., +1 = positive event, -1 = negative event). We employed three models to test emotion as a mediator of the RCSE  $\times$  Valence interaction in predicting self-esteem. Model 1 included baseline self-esteem, event valence, RCSE, and the RCSE  $\times$  Valence product predicting event-level self-esteem. Because of the multi-level data structure, Model 1 included the four fixed effects of an intercept and slopes for baseline self-esteem, valence, and RCSE and two random effects for the intercept and slope of event valence.

Model 2 included baseline emotion, valence, RCSE, and the RCSE  $\times$  Valence product predicting event-level emotion, with the four fixed effects of an intercept and slopes for baseline emotion, RCSE, and valence and two random effects of the intercept and slope of valence. Model 3 included baseline self-esteem, baseline emotion, valence, RCSE, and event-level emotion, followed by RCSE  $\times$  Valence and RCSE  $\times$  Emotion. Model 3 thus included six fixed effects of the intercept and slopes for baseline self-esteem, baseline emotion, RCSE, valence, and emotion and the three random effects of the intercept and slopes for valence and emotion.

Table 5 provides the parameter estimates from each of the three models described above. In Model 1, with self-esteem as the

criterion, a significant RCSE  $\times$  Valence interaction emerged in predicting self-esteem. The direction of this interaction is provided in Figure 4. The association between negative events and lower self-esteem was stronger among those higher (relative to lower) in RCSE. In Model 2, a significant RCSE  $\times$  Valence interaction showed that the association between negative events and negative emotion was stronger among those higher (relative to lower) in RCSE. Finally, in Model 3, the RCSE  $\times$  Emotion interaction significantly predicted self-esteem, whereas the RCSE  $\times$  Valence interaction was no longer significant. Thus, emotion received strong support as a mediator of the RCSE  $\times$  Valence interaction in predicting changes in self-esteem.

We also tested the degree to which there was support for the reverse causal pathway—namely, that momentary self-esteem might be the mediator and momentary emotion might be the outcome. Accordingly, we reversed the mediated moderation analysis such that momentary self-esteem became the mediator and momentary emotion became the outcome. No significant evidence emerged for self-esteem as the mediator—specifically, the RCSE  $\times$  Valence interaction remained equally strong in predicting emotion with and without self-esteem included. Thus, there was no evidence that the causal pathway is reversed, although one cannot be certain given the nonexperimental design.

In summary, RCSE moderated the extent to which the valence of events predicted momentary self-esteem (H1). Emotion received support as a mediator of the RCSE  $\times$  Valence interaction. The RCSE  $\times$  Valence interaction predicted emotion, which in turn predicted event-level self-esteem (H2). When it comes to how these relationship events predict fluctuations in self-esteem, it is how the events relate to one's emotions that matters for one's sense of self. Thus far, we have studied individuals in romantic relationships and have seen evidence that RCSE moderates the way in which relationship events predict self-outcomes. Turning to the study of couples would allow tests of the relational properties of RCSE such that both partners' levels of RCSE may uniquely predict relationship outcomes. We examined this possibility in Study 4.

## STUDY 4

Study 4 was designed to examine whether the RCSE levels of both partners are uniquely relevant to relationship quality and what it means to have a partner who is higher in RCSE. Self-esteem contingencies tend to produce narrow, self-focused regulation of behavior that serves to bolster evaluations of self in the contingent domain, possibly to the exclusion of one's own basic psychological needs and those of one's partner (Crocker & Park, 2004; Deci & Ryan, 2000). Although results of Study 1 suggested that RCSE

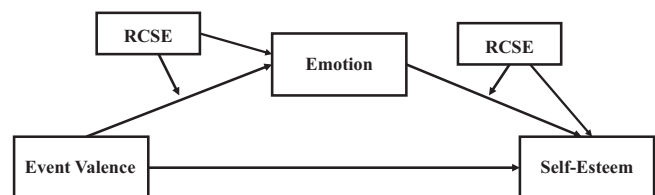


Figure 3. Model illustrating mediated moderation in Study 3. RCSE = relationship-contingent self-esteem.

Table 5  
Results From Mediated Moderation Analyses for Study 3

Predictors	Model 1 (criterion self-esteem)			Model 2 (criterion emotion)			Model 3 (criterion self-esteem)		
	<i>F</i>	<i>df</i>	<i>pr</i>	<i>F</i>	<i>df</i>	<i>pr</i>	<i>F</i>	<i>df</i>	<i>pr</i>
Baseline self-esteem	3.89 <sup>†</sup>	86	.21				2.06	85	.15
Baseline emotion				8.80**	86	.30	.01	85	.01
Valence	2.89**	2,546	.03	.04	2,547	-.00	1.08	2,544	.02
RCSE	.02	86	-.02	21.78****	86	-.45	1.24	85	-.02
Emotion							1.46	2,544	-.12
RCSE × Valence	13.44****	2,546	-.07	22.56****	2,547	.09	.82	2,544	.02
RCSE × Emotion							5.50*	2,544	-.05

Note. RCSE = relationship-contingent self-esteem. Sobel's  $Z = 2.10, p < .05$ .  
<sup>†</sup>  $p < .08$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*\*  $p < .001$ .

is not simply feeling close to one's partner and not simply feeling committed to the relationship, it was not clear from Studies 1–3 whether RCSE played a significant role in the relationship between both partners. The way in which RCSE moderated perception of relationship events was clearly a self or intrapersonal process. In Study 4, we were interested specifically in interpersonal processes, that is, whether one's own RCSE carries over to predict one's partner's feelings as well. Would two partners who are higher in RCSE each feel particularly committed to the relationship? Would these partners also feel more satisfied and close? If partners differ in their level of RCSE, could this predict both partners' feelings of commitment, or would it only predict the feelings of the partner who is higher in RCSE? Is RCSE merely a self construct that only affects one's own perception of relationship events and one's own feelings, or does each partner's level of RCSE play a role in predicting the partner's feelings and outcomes, as well, translating it into a construct with unique relational properties?

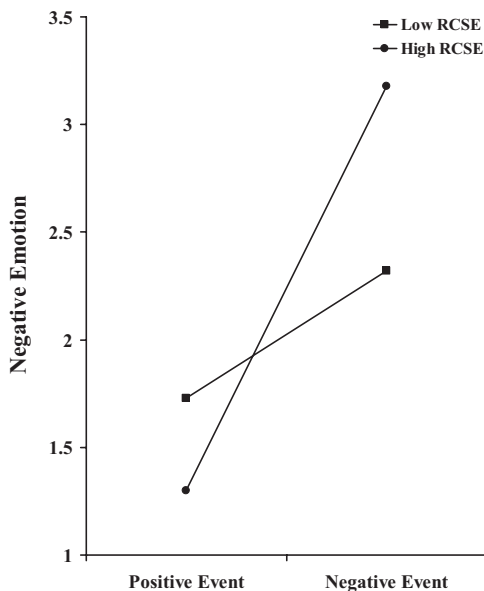


Figure 4. Event-level negative emotion as a function of positive and negative relationship events and relationship-contingent self-esteem (RCSE) in Study 3. Higher scores reflect more negative emotion.

The potential for partners to have a reciprocal influence on each other is a defining characteristic of close relationships (Kelley & Thibaut, 1978). In Study 4, data were gathered from both partners in romantic couples, allowing for simultaneous estimation of the role of both partners' RCSE in relationship functioning. The actor-partner interdependence model (APIM; Kashy & Kenny, 2000) allows for the capacity to directly model the mutual influence that may occur between individuals in a dyadic relationship (Campbell & Kashy, 2002). In APIM, an actor effect occurs when one's level of RCSE predicts one's own score on the criterion (i.e., commitment), whereas a partner effect occurs when one's partner's level of RCSE predicts one's own score on the criterion. Further, actor and partner effects can interact such that (for example) the extent to which the partner's level of RCSE predicts one's own outcomes uniquely depends on one's own level of RCSE. Thus, APIM allows for tests of interactions that investigate whether certain combinations of both partners' scores are especially predictive of relationship outcomes. It is these questions we turned to in Study 4. It is important to note that we also tested whether potential actor and partner effects would remain controlling for contingent self-worth, rejection sensitivity, and attachment anxiety, potentially providing further evidence of discriminant and incremental validity.

Method

Participants

Participants were 66 heterosexual romantic couples dating for at least 1 month. They were recruited from psychology courses at the University of Houston and were given extra credit for participation. One couple contributed invalid data; thus, 65 couples were retained for analyses. The average age was slightly over 24 years ( $SD = 7.16$ ). The sample was ethnically diverse, with 36.36% Caucasian, 21.97% Hispanic, 22.73% Asian, 9.09% African American, and 9.85% who chose "other." Relationship length ranged from 1 month to slightly over 18 years, with an average relationship length of approximately 2.5 years ( $SD = 2.80$  years).

Procedure

Each member of the couple completed a questionnaire packet that contained demographic questions, RCSE, relationship com-

mitment, relationship satisfaction, inclusion of other in the self, attachment anxiety, CSW (including the others' approval subscale), rejection sensitivity, and measures intended for other purposes. Measures were ordered according to a Latin square design. Participants returned questionnaire packets upon arrival to a laboratory session.

### Measures

We measured RCSE, attachment anxiety, CSW, and inclusion of other in the self using the scales described in Study 1. With regard to the CSW, of particular interest in this study was the subscale of contingencies of others' approval because this subscale earlier appeared to be most highly correlated with RCSE, as an anonymous reviewer noted. Internal reliability of RCSE was .91 for both women and men, and for the others' approval subscale of the CSW, it was .82 and .80 for women and men, respectively.

### Relationship Commitment

General relationship commitment was assessed with the 7-item commitment component of the Investment Model Scale (Rusbult, Martz, & Agnew, 1998). Items were rated on a scale from 0 (*do not agree at all*) to 8 (*agree completely*) and were averaged (after reversal where appropriate) such that higher scores reflected higher relationship commitment. Internal reliability was .83 and .87 for women and men, respectively.

### Relationship Satisfaction

Relationship satisfaction was assessed with the 7-item Relationship Assessment Scale (S. S. Hendrick, 1988). Items were rated on a scale of 1 (*very unsatisfied*) to 5 (*very satisfied*). Responses were averaged such that higher scores indicated more relationship sat-

isfaction. Internal reliability was .90 and .78 for women and men, respectively.

### Rejection Sensitivity

General rejection sensitivity was assessed with the Rejection Sensitivity Questionnaire (Downey & Feldman, 1996). Participants read 18 hypothetical situations in which rejection by a significant other was possible. For example, participants were presented with the following situation: "You ask your boyfriend/girlfriend to come home to meet your parents." Following each situation, participants were asked to rate (a) how much anxiety or concern they felt about the outcome, from 1 (*very unconcerned*) to 6 (*very concerned*), and (b) to what extent they expected acceptance, from 1 (*very unlikely*) to 6 (*very likely*). Higher scores indicated greater anxiety/concern and greater feelings of acceptance, respectively. We calculated rejection sensitivity for each of the 18 situations by reverse scoring expectancy of acceptance (to acquire expectancy of rejection) and multiplying the reverse scores by the score for degree of anxiety or concern. We calculated the average of the rejection-sensitivity scores for the 18 situations such that higher scores indicated greater rejection sensitivity across situations. Internal reliability was .90 and .85 for women and men, respectively.

## Results and Discussion

Table 6 provides means, standard deviations, and internal reliabilities along with correlations between variables in Study 4, for men and women separately. As shown, RCSE was significantly correlated with feeling more committed in participants of both genders. Among women, RCSE was also significantly correlated with feeling more satisfied, having higher contingent self-worth

Table 6  
Means, Standard Deviations, Alphas, and Correlations in Study 4 for Women and Men

Variable	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6
1. RCSE									
Women	3.33	.89	.91	—					
Men	3.41	.86	.91	—					
2. Commitment									
Women	7.17	1.14	.83	.27*	—				
Men	7.27	1.20	.87	.27*	—				
3. Satisfaction									
Women	4.16	.74	.90	.32**	.71***	—			
Men	4.37	.56	.78	.07	.39**	—			
4. Closeness									
Women	5.08	1.50		.23	.46***	.39**	—		
Men	5.16	1.67		.29*	.44***	.47**	—		
5. Attachment anxiety									
Women	2.70	.97	.86	.29***	-.30*	-.41***	-.06	—	
Men	2.51	.97	.89	.12**	-.16	-.48***	-.06	—	
6. Rejection sensitivity									
Women	9.07	4.19	.90	.04	-.16	-.33**	-.03	.45***	—
Men	8.23	3.10	.85	.15	-.02	-.12	.18	.39**	—
7. Others' approval									
Women	3.78	1.19	.82	.53***	.06	-.02	.22	.36***	.26*
Men	3.46	1.30	.80	.18	-.07	-.10	-.06	.11	.12

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

with regard to others' approval, and having higher attachment anxiety. Among men, RCSE was significantly correlated with feeling closer. Finally, further addressing discriminant validity, RCSE was not significantly correlated with rejection sensitivity for either gender.

### Analytic Strategy

The data structure was nested because we assessed both members of each romantic couple. We used APIM (Campbell & Kashy, 2002; Kashy & Kenny, 2000) to model the nonindependence and to test whether one's partner's RCSE uniquely predicted one's own level of commitment. An actor effect meant that one's own level of RCSE predicted one's own level of commitment. A partner effect meant that one's partner's level of RCSE predicted one's own level of commitment. An Actor  $\times$  Partner interaction meant that the strength of the actor effect (or partner effect) uniquely depended on the level of the other effect. We estimated coefficients using the PROC MIXED routine in SAS with restricted maximum likelihood estimation. Actor and partner effects were estimated in an initial step, followed by potential Actor  $\times$  Partner interactions. PROC MIXED estimates coefficients for a single criterion at a time, and thus, commitment, relationship satisfaction, and closeness were examined separately.

### Actor and Partner Tests

The first set of equations included the terms for actor and partner RCSE without the Actor  $\times$  Partner interaction term. One's own RCSE was generally associated with higher levels of one's own relationship commitment,  $F(1, 126) = 10.09, p < .01, pr = .27$ ; relationship satisfaction,  $F(1, 119) = 6.61, p < .05, pr = .23$ ; and closeness,  $F(1, 121) = 9.77, p < .01, pr = .27$ . One's partner's RCSE was not significantly associated with any of the three relationship outcomes in this set of equations (all  $F_s < 1$ ).

The second set of equations added the Actor  $\times$  Partner RCSE interaction term. A significant Actor  $\times$  Partner RCSE interaction emerged predicting commitment,  $F(1, 62) = 9.21, p < .01, pr = .36$ . Figure 5 depicts one's own relationship commitment as a function of one's own and one's partner's RCSE, derived according to simple slopes. Tests of simple slopes revealed that, among those higher in RCSE, one's partner's RCSE was positively (but nonsignificantly) associated with one's own relationship commitment,  $F(1, 62) = 3.47, p = .07, pr = .23$ . However, among those lower in RCSE, one's partner's RCSE was negatively associated with one's own relationship commitment,  $F(1, 62) = 5.57, p < .05, pr = -.28$ . Stated differently, those with a partner who was higher in RCSE felt more committed if they too were higher in RCSE, but they felt much less committed to a high RCSE partner when they themselves were lower in RCSE. Thus, when one's levels of RCSE are similarly high to those of one's partner, one feels relatively more committed. When one partner is high and the other is low in RCSE, each individual feels less committed to the relationship.<sup>6</sup>

Turning to closeness and relationship satisfaction as outcomes, the Actor  $\times$  Partner RCSE interaction was not significant in either analysis ( $F_s < 1$ ). Thus, although one feels more committed when both oneself and one's partner are higher in RCSE, one does not feel more close or satisfied under those same circumstances. As we

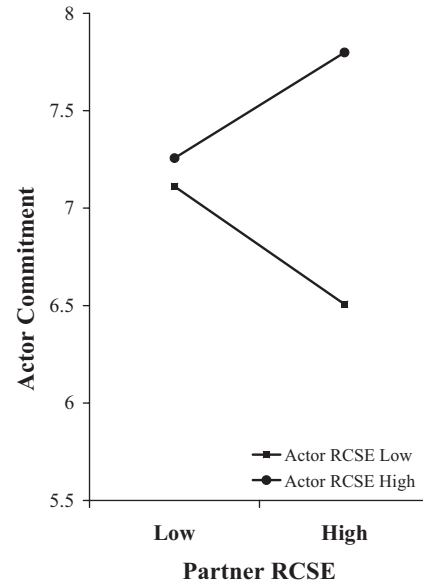


Figure 5. Commitment as a function of actor relationship-contingent self-esteem and partner relationship-contingent self-esteem (RCSE) in Study 4.

suggested earlier, although one's own RCSE may reflect a particular feeling of commitment to the relationship and does predict more satisfaction and closeness, these depend uniquely on the partner's level of RCSE. It appears that one feels more committed when he or she shares the partner's high level of RCSE. Further, one feels especially less committed when he or she does not share the partner's high level of RCSE. Although a high level of RCSE in both partners predicts a higher level of commitment, it does not suggest that they are more satisfied or that they feel close in the traditional sense. Rather, it reflects that they feel bound to each other and committed to the future of the relationship, regardless of whether they like that relationship or whether they actually feel close to their partner.

### Discriminant Validity

We further tested whether the constructs of attachment anxiety, contingent self-worth with regard to others (because this was the subscale most highly correlated with RCSE), and rejection sensitivity would reveal the same Actor  $\times$  Partner interaction as RCSE in predicting commitment. We repeated the APIM analyses above, replacing RCSE with each of the competing constructs. The Actor  $\times$  Partner interaction for rejection sensitivity did not significantly predict commitment, satisfaction, or closeness ( $F_s < 1$ ). Similarly, the Actor  $\times$  Partner interaction for contingent self-worth with regard to others' approval did not significantly predict commitment, satisfaction, or closeness ( $F_s < 1$ ). Finally, the Actor  $\times$  Partner interaction for attachment anxiety did not significantly predict commitment, satisfaction, or closeness ( $F_s < 1$ ). Thus, the way in which actor and partner RCSE interact in pre-

<sup>6</sup> As before, sex of participant did not further moderate the Actor  $\times$  Partner RCSE interaction predicting commitment in Study 4.



dicting commitment was not duplicated by attachment anxiety, contingent self-worth with regard to others' approval, or rejection sensitivity.

## GENERAL DISCUSSION

Having one's self-regard tied to one's romantic relationship may, on the surface, seem like a natural progression if one wants to guarantee relationship success. However, the growing literatures on authenticity of self (e.g., Kernis, 2003), basic psychological needs (e.g., Deci & Ryan, 2000), and the detriments of contingent self-esteem (e.g., Crocker & Park, 2004) suggest otherwise, as do the present findings. RCSE emerges from these theoretical perspectives as an unhealthy attachment and investment of self in one's romantic relationship. In contrast to a healthy, self-determined relationship investment that supports feelings of autonomy, competence, and relatedness, RCSE likely derives in part from the thwarting of these basic psychological needs. Indeed, the benefits of a self-determined orientation for romantic relationship functioning and well-being are considerable (Knee et al., 2002, 2005; Patrick et al., 2007). In contrast to the benefits of noncontingent self-esteem, when self-worth is contingent within a particular domain, success or failure in that domain, or even cues that might imply success or failure, can result in intense affect and extreme fluctuations in self-esteem that carry over to evaluations of self as "good" or "bad" (Crocker & Wolfe, 2001; Deci & Ryan, 1991). Several important points emerged from the present studies.

First, RCSE is not the same as feeling committed to one's relationship, feeling close to one's partner, or feeling satisfied with one's relationship. Not all forms of interdependence are created equal. Conceptually, the unique aspect of RCSE is that one's self-regard is directly invested in one's romantic relationship, such that events that affect the relationship directly affect the "goodness" or "badness" of the self. Those higher in RCSE can feel more or less close, satisfied, or committed, depending on what is happening in the relationship at any particular moment.

Second, RCSE was strongly associated with obsessive immersion or preoccupation with one's romantic relationship, as suggested by the constructs of attachment anxiety and endorsement of a manic love style. These constructs are conceptually related to the enhanced emotional ups and downs that those higher in RCSE experience as events occur in their relationships. RCSE is related to a stronger tendency to evaluate oneself and be concerned about how others evaluate oneself. RCSE was also related to self-esteem contingencies in other domains. As Crocker and Wolfe (2001) noted, it is the contingencies within a particular domain that best predict perceptions and reactions within that domain.

A third point is that there were no significant gender differences in RCSE. Thus, RCSE does not capitalize on the notion that relationships generally tend to be more important to women's sense of self than to that of men (e.g., Acitelli et al., 1999; Cross & Morris, 2003). RCSE does not seem to capture importance *per se* but, rather, the contingent aspect of self-regard. One can feel that a relationship is important for a variety of reasons, only some of which reflect one's ego being on the line with regard to the relationship's outcome. This argument parallels that of Crocker and Wolfe (2001) concerning the difference between self-esteem contingencies in other domains and perceived importance in those domains.

A fourth point concerns the possibility that a moderate level of RCSE is beneficial, whereas extreme levels are detrimental. Not only is this notion inconsistent with the theoretical literatures on both contingent self-worth (Crocker & Park, 2004) and basic psychological needs (Deci & Ryan, 2000) but it was also easily tested with data. When all associations between RCSE and relationship variables provided in Table 1 were recomputed with the quadratic component of RCSE (controlling for the linear component), no consistent associations emerged for the quadratic component. Thus, there seems to be no evidence thus far that moderate levels of RCSE are particularly beneficial.

In Study 2, RCSE moderated the degree to which state self-esteem fluctuated with relationship events. Specifically, negative (relative to positive) relationship events predicted self-esteem particularly when a participant was higher in RCSE. It is important to note that Study 2 also examined the incremental validity of RCSE beyond attachment anxiety, general contingent self-worth, and inclusion of other in the self. The moderating role of RCSE in the association between relationship events and changes in self-esteem remained beyond the parallel moderators mentioned above, supporting the incremental validity of RCSE beyond these conceptually related constructs.

Study 3 explored a potential mediator of the moderating role of RCSE. Support was found for emotion as a mediator in the form of mediated moderation. When negative relationship events occur, people higher in RCSE tend to experience more negative emotion, which in turn predicts event-level self-esteem. Among those higher in RCSE, when relationship events are accompanied by strong emotions, they are also accompanied by fluctuations in self-esteem.

Although it is tempting to conclude that RCSE causes one's self-esteem and emotions to fluctuate more strongly, that conclusion cannot be drawn from a nonexperimental design. However, the repeated measurements in Studies 2 and 3 emphasize within-person processes over time. Whereas Study 1 examined between-person associations, Studies 2 and 3 examined within-person perceptions and feelings and how these processes were moderated by RCSE at the between-person level. Multilevel designs of this type afford considerable statistical power to test underlying paths and mechanisms for between-person associations (albeit within the limitations of a nonexperimental design).

Finally, Study 4 involved gathering data from couples to examine the extent to which RCSE has unique relational properties in predicting relationship quality. Results showed that one partner's feelings of commitment depended uniquely on both partners' levels of RCSE. Although two partners higher in RCSE were more committed, this did not reflect stronger feelings of satisfaction or closeness. In fact, those who felt the least committed were lower in RCSE and had a partner who was high in RCSE. This Actor  $\times$  Partner interaction was not replicated by attachment anxiety, contingencies about others' approval, or rejection sensitivity. Thus, whereas Studies 1 through 3 focused primarily on self processes, Study 4 provided evidence that the RCSE levels of both partners are uniquely predictive of commitment, even though feeling committed *per se* does not reflect feeling more satisfied or close. These results seem consistent with our claim that, although RCSE reflects a commitment to one's partner and the relationship, the relational process that takes place is not one that promotes satisfaction or a genuine sense of closeness. Further, this sense of commitment

without feeling satisfied or close is not duplicated by a number of other relationship constructs.

Some may wonder why people higher in RCSE were more affected by relationship events, instead of denying or reinterpreting the events defensively and appearing to be less affected. Indeed, plenty of research has shown that people often interpret events in a self-enhancing or self-protecting manner that can serve to bolster or maintain self-esteem as well as satisfaction with themselves and their relationships (e.g., Murray et al., 2000; Taylor & Brown, 1988). Crocker and Wolfe (2001) noted that when events are relatively unambiguous, they may impact self-esteem more strongly than when they can be denied or defended against. In Study 3, participants recorded the most significant events that had already happened, and the mere fact of recording them implied that they had some impact in terms of general positivity or negativity, as defined by participants. It is possible that if one were to ask participants about future events, which may or may not happen, different results could emerge, because future events may be easier to deny or defend against.

The present research is not without limitations. First, the studies employed nonexperimental designs, preventing strong causal inferences. For example, we cannot say for sure that emotional responses precede momentary self-esteem in the causal chain tested in Study 3. Similarly, RCSE may to some extent derive from having tumultuous interactions, rather than from merely causing one's responses to such interactions. Further, although we suggest in Study 3 that high RCSE shared between partners precedes greater feelings of commitment, the reverse is also possible—namely, that making a commitment (if not an authentic, self-motivated commitment guided by one's basic psychological needs) could be a precursor to RCSE. Another limitation is that these studies relied exclusively on self-report of RCSE, self-esteem, and emotions. Relying on a self-report measure of RCSE assumes that people are aware that their self-esteem is contingent upon their relationship. Although this seems reasonable, it does not preclude the possibility that esteem contingencies operate at multiple levels, and people may have awareness of only some of these. Priming RCSE may provide further insight into more implicit CSW. It should also be noted that some of the interactions with RCSE, although statistically significant, were relatively small in magnitude and were detectable because of the powerful hierarchical designs that maximized the power of repeated measurements. RCSE is clearly only one moderating factor in the relationship processes examined here. These findings generalize only to populations similar to the samples studied here, and although we would not necessarily expect culture, relationship length, or social class to consistently moderate these findings in meaningful ways, this cannot be convincingly established without further research.

Despite these limitations, we also discovered that RCSE captures dyadic processes such that when one's own self-esteem is highly contingent on the relationship, it interacts with the partner's level of RCSE in predicting one's feelings of commitment. Indeed, Park et al. (2006) have suggested that contingent self-worth can have interpersonal consequences because the pursuit of self-validation is in many ways antithetical to the pursuit of healthy, interdependent relationships with others and stems from the thwarting of basic psychological needs for autonomy, competence, and authentic relatedness (Deci & Ryan, 2000). Indeed, we observed that when both partners were higher in RCSE, they felt

more committed but not more satisfied or close. Returning to the opening analogy, when one is tied to the bow of the ship, even small ripples can feel like tidal waves. However, if both partners feel seasick at the same small ripples, they may embrace each other out of shared desperation. That, of course, does not imply a happy, satisfying boat ride, but it does make both partners cling to each other for fear of what the expansive, deep, dark waters may hold for them.

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Appendix

Items on the Relationship-Contingent Self-Esteem Scale

Items ( <i>N</i> = 675)	Factor loading	<i>M</i>	<i>SD</i>
I feel better about myself when it seems like my partner and I are getting along.	.74	3.70	1.15
I feel better about myself when it seems like my partner and I are emotionally connected.	.73	3.67	1.13
An important measure of my self-worth is how successful my relationship is.	.72	2.73	1.18
My feelings of self-worth are based on how well things are going in my relationship.	.70	2.51	1.15
When my relationship is going well, I feel better about myself overall.	.65	3.81	1.11
If my relationship were to end tomorrow, I would not let it affect how I feel about myself. (r)	.61	3.29	1.33
My self-worth is unaffected when things go wrong in my relationship. (r)	.60	3.14	1.23
When my partner and I fight, I feel bad about myself in general.	.60	2.74	1.16
When my relationship is going bad, my feelings of self-worth remain unaffected. (r)	.59	3.11	1.21
I feel better about myself when others tell me that my partner and I have a good relationship.	.57	3.46	1.28
When my partner criticizes me or seems disappointed in me, it makes me feel really bad.	.53	3.44	1.23

Note. (r) = reverse-scored item. Items are rated on a scale from 1 to 5, with anchors of 1 (*not at all like me*), 3 (*somewhat like me*), and 5 (*very much like me*).

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