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THE EFFECTS OF SELF-THREATS AND AFFIRMATIONS ON ROMANTIC  
RELATIONSHIP FUNCTIONING: THE MODERATING ROLES OF SELF-ESTEEM  
AND RELATIONSHIP-CONTINGENT SELF-ESTEEM

A Dissertation Presented

by

Jennifer Zangl

to

The Faculty of the Graduate College

of

The University of Vermont

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for the Degree of Doctor of Philosophy  
Specializing in Psychology

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## Abstract

Although romantic relationships are an important source of self-esteem, individuals vary in the degree to which romantic relationships determine their self-esteem. For individuals with relationship-contingent self-esteem (RCSE), self-esteem is based on the quality of perceived romantic relationship functioning. In contrast, global self-esteem is derived from a variety of domains, not specifically relationship quality. The present study investigated the moderating effects of RCSE and global self-esteem on the effects of relationship specific or relationship-unrelated threats and self-affirmations. Individuals with low global self-esteem react to threats by distancing themselves from their romantic partners. For those low in RCSE, this should occur only when the threats are relationship specific, whereas those low in global self-esteem distance themselves regardless of what type of threat they experience. Exposure to self-affirmations limits this defensive distancing in individuals with low global self-esteem. Prior studies examining the effects of induced self-threats and self-affirmations on perceived relationship functioning have been limited by reliance on college student samples, whose relationships are often shorter in duration than older adults. The current studies examined self-esteem and RCSE within the context of older participants in longer romantic relationships.

Specifically, Study 1 examined how self-threats and self-affirmations interacted with dispositional levels of RCSE and self-esteem to predict romantic relationship outcomes. Participants wrote about past experiences to induce self-affirmations or self-threats, which were either relational (i.e., about their current relationship) or non-relational (i.e., about their personal lives), and then completed measures of relationship functioning. Contrary to predictions, there were no significant interactions between either RCSE or self-esteem and the experimental conditions. There was a significant main effect for self-esteem, such that participants with low self-esteem reported less commitment, closeness, and satisfaction as compared to participants with high self-esteem. In Study 2, participants completed one of two writing prompts: a prompt to induce high RCSE, or a control prompt. Participants then wrote about past experiences to induce self-threats that were either relational or non-relational. Contrary to hypotheses, inducing high levels of RCSE and exposing participants to a relational self-threat did not result in decreased relationship commitment, closeness, or satisfaction. The results of both Study 1 and Study 2 are contrary to previous research; potential explanations for this discrepancy and implications are discussed.

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Self-esteem levels influence how individuals relate to others, especially within the context of romantic relationships (Murray, Holmes, Griffin, Bellavia, & Rose, 2001a; Murray, Holmes, MacDonald, & Ellsworth, 1998). Individuals with low self-esteem not only doubt themselves but also doubt their partner's love for them. Individuals with low self-esteem respond to self-threats and relationship-threats by distancing themselves from their romantic partners instead of using their partner's love as a source of support (Murray et al., 2001; Murray et al., 1998). Because individuals with low self-esteem pull away from their romantic partners in times of need, they are less satisfied with their relationships (Murray, Holmes, & Griffin, 2000; Murray et al., 2001).

Romantic relationships are often conceptualized as an important source of self-esteem (Murray, Griffin, Rose, & Bellavia, 2003b), but not everyone places equal importance on their romantic relationship in determining their personal value (Sanchez, Moss-Racusin, Phelan, & Crocker, 2011). Proponents of contingent self-esteem argue it is not the level of self-esteem that matters, but which specific domains an individual utilizes to derive self-esteem (Crocker & Wolfe, 2001). Some individuals are more likely to base their self-esteem and validation on their romantic relationships than others (Knee, Canevello, Bush, & Cook, 2008). Staking self-esteem on a specific domain (i.e., when self-esteem is contingent on a particular area of life) leads to more effort in that domain, but it can also be maladaptive (Crocker & Park, 2004). Consistent with this principle, individuals with relationship-contingent self-esteem feel more intense positive and negative emotions from everyday relationship experiences that can have drastic influences on their sense of self (Knee et al., 2008). Relationship-contingent self-esteem causes powerful reactions to minor relationship events, which decreases relationship



functioning (Knee et al., 2008; Sanchez et al., 2011).

I present two studies that examine the role of self-esteem and relationship-contingent self-esteem in romantic relationship functioning. The first study tested the combined influence of self-esteem, relationship-contingent self-esteem, and self-threats versus self-affirmations in predicting relationship functioning. The self-threats and self-affirmations were either relational or non-relational in nature. The second study involved experimentally manipulating relationship-contingent self-esteem in addition to the relational self-threats and affirmations from the first study to better assess its influence on relationship functioning.

The current studies examine three romantic relationship characteristics, commitment, satisfaction, and closeness, to broadly assess romantic functioning in a variety of romantic relationships. Commitment represents an individual's desire to maintain a romantic relationship and sustain psychological attachment to his or her partner over time (Rusbult, 1980). Satisfaction addresses how satisfied individuals are with their romantic partner and whether or not their romantic expectations are being met (Hendrick, 1988; Hendrick, Dicke, & Hendrick, 1998). Closeness can be thought of as the degree to which an individual incorporates the other into his or her sense of self, a fusion of the self and other (Aron, Aron, Tudor, & Nelson, 1991). Different individuals desire different levels of closeness in their relationships (Frost & Forrester, 2013) and having a completely overlapping sense of self with a romantic partner is not ideal for all relationships.

I will begin my review of the literature by discussing how low self-esteem can be detrimental to romantic relationships. Next, I will explore the concept of contingent self-

esteem and why relationship-contingent self-esteem can be more harmful to romantic relationships than low self-esteem. I will then examine the role of self-affirmations in ameliorating the negative effects of low self-esteem on romantic relationships. Finally, I will explain how relational self-affirmations, in particular, can lead to better romantic relationship outcomes for individuals with relationship-contingent self-esteem.

### **Self-Esteem and Romantic Relationships**

Self-esteem is defined as global judgments of self-worth (Rosenberg, 1965) and the terms self-esteem and self-worth are often used interchangeably. Although self-esteem encompasses both social and nonsocial aspects of the self, it is frequently studied within the context of interpersonal relationships. Murray and colleagues (2000) theorize that romantic relationships provide a unique perspective to study self-esteem because in “no other adult context is the possibility of another’s rejection more self-threatening and the possibility of acceptance more self-affirming” (p. 479). Low self-esteem has been shown to function as a dispositional insecurity that can be a considerable detriment to romantic relationships resulting in less love for one’s partner and less satisfaction with the relationship (Murray, et al., 2000; Murray et al., 2001). I will now explore how and why low self-esteem hinders romantic relationship functioning. I will discuss how individuals with low self-esteem anticipate rejection, discredit their partner’s love, respond to self-threats, compare themselves to their partners, and how this can result in a self-fulfilling prophecy of rejection within their romantic relationships. Additionally, I will examine how individuals with low versus high self-esteem differ within the context of romantic relationships.

Low self-esteem is detrimental to romantic relationships because it skews

perceptions and leads to self-protective behaviors that decrease romantic connection (Murray, et al., 2000; Murray et al., 2001). Individuals with low self-esteem expect rejection from their romantic partners, overreact to potential cues of rejection, feel that their partners are “out of their league”, and lack confidence in their partner’s love (Cameron, Stinson, Gaetz, & Balchen, 2010; Murray et al., 2005). Individuals with low self-esteem respond to self-threats, relationship conflicts, and their partner’s bad moods with cold behaviors that further alienate their partners (Murray, Bellavia, Rose, & Griffin, 2003a; Stinson, Cameron, Wood, Gaucher, & Holmes, 2009).

Individuals with high versus low self-esteem “live in very different social worlds” where individuals with low self-esteem feel social risk in everyday situations (Cameron et al., 2010, p. 519) and individuals with high self-esteem typically expect to be accepted (Leary, Tambor, Terdal, & Downs, 1995; Stinson et al., 2009). Individuals with low self-esteem expect rejection, pay attention to possible cues of rejection, overestimate the likelihood of rejection, and have a heightened need to belong as a result (Murray et al., 2000; Murray et al., 2003b; Stinson et al., 2009). This increased desire to belong can make individuals more attentive to cues of potential rejection and lead to overreactions to ambiguous cues of rejection (Leary et al., 1995; Murray et al., 2003a).

Cameron and colleagues (2010) found this perceptual bias in a study of romantic relationship initiation. Despite acceptance cues being held constant, individuals with low self-esteem underestimated acceptance from a potential romantic partner because they were so focused on avoiding rejection. However, when social risk (i.e., the potential for rejection) was removed, low self-esteem no longer influenced detection of acceptance cues (Cameron, et al., 2010). Individuals with low self-esteem expect rejection and,

subsequently, lose opportunities to connect with others because of their risk-averse outlook.

Conversely, individuals with high self-esteem expect acceptance, pay attention to possible cues of acceptance, and overestimate the likelihood of acceptance (Murray et al., 2000). Individuals with high self-esteem overestimate acceptance when faced with social risk in relationship initiation situations (Cameron, et al., 2010). Furthermore, individuals with high self-esteem notice more acceptance directed at themselves versus others and enter into social interactions expecting approval due to their high self-regard. Cameron and colleagues (2010) argue that high self-esteem provides a “psychological insurance policy” (p. 514) and that the confidence and positive feelings associated with high self-esteem give individuals the ability to risk rejection in their interactions with others. Thus, high self-esteem individuals are able to adopt a socially risky, but potentially rewarding orientation. Although both individuals with low and high self-esteem skew reality when anticipating acceptance versus rejection, the optimistic orientation adopted by high self-esteem individuals is viewed as adaptive (Cameron et al., 2010).

Murray and colleagues (1998) demonstrated that threatening an individual’s self-esteem can change how that individual feels about his or her relationship and that this effect depends on his or her level of self-esteem. Specifically, low self-esteem individuals react to self-threats by doubting their partner’s regard and lowering their perceptions of their partners. Conversely, high self-esteem individuals react to self-threats by becoming more confident in their partner’s regard and increasing their perceptions of their partners (Murray et al., 1998). These effects were found whether the self-threat was relational (e.g., recalling a time they disappointed their partner or their

partner disappointed them) or non-relational (e.g., false, negative feedback on an intelligence task), suggesting that self-threats do not have to directly implicate the relationship to hinder relationship outcomes for individuals with low self-esteem. Based on these findings, I do not expect individuals with low self-esteem to differentially respond to relational versus non-relational self-threats in the current project.

Even in the absence of self-threats, individuals with low self-esteem underestimate the strength of their partner's love and have less positive perceptions of their partners, resulting in less relationship satisfaction and optimism for the relationship (Murray et al., 2001). Murray and colleagues (2000) further explored the associations between self-esteem, perceived regard from romantic partners, and relationship satisfaction. Married and dating individuals with high and low self-esteem alike wished that their partners saw them more positively than they saw themselves. Only those with high self-esteem accurately perceived their partner's positive regard. Conversely, individuals with low self-esteem underestimated their partner's positive regard and reported lower relationship satisfaction than individuals with high self-esteem. Both four and twelve-month follow-ups revealed an exacerbation of relationship conflict and dissatisfaction for those with low self-esteem, demonstrating how damaging a self-protective orientation (i.e., focus on avoiding rejection) is within romantic relationships (Murray et al. 2000). These results show that even in the absence of experimentally induced self-threats, individuals with low self-esteem still underestimate their partner's regard and have less satisfying romantic relationships than individuals with high self-esteem. However, experimentally induced self-threats exacerbate these preexisting differences between individuals with high and low self-esteem (Murray et al., 1998).

Based on these results, I predicted that individuals with low self-esteem, relative to individuals with high self-esteem, would report less satisfaction with their romantic relationship, as well as less closeness and commitment. Furthermore, I predicted that this difference between individuals with low versus high self-esteem would increase following self-threats.

Despite the great desire for acceptance and belonging, low self-esteem individuals prioritize feeling safe from rejection over the vulnerability associated with seeking and maintaining interpersonal connections (Baumeister & Leary, 1995). Murray, Holmes, and Collins (2006) developed a model of risk regulation to explain how and when individuals prioritize self-protection over relationship-connection. Murray and colleagues (2006) theorize that individuals make frequent, implicit decisions between prioritizing self-protection or relationship connection within their romantic relationships as a way of optimizing assurance. Assurance is conceptualized as a feeling of safety from rejection within one's relationship. Within this risk regulation system, feeling confidence in their partner's regard is thought to enable individuals to risk rejection and prioritize connectedness over self-protection (Murray et al., 2006). If individuals are focused on relationship connection and their relationship progresses, they will become increasingly dependent on their partners and expose themselves to more opportunities for rejection in the short term. In a relationship-focused orientation, relationships become more meaningful which makes rejection and breakups all the more painful. Therefore, those with low self-esteem will be less likely to risk dependence in situations when they feel that acceptance is not guaranteed because of their focus on protecting themselves from rejection. When acceptance is not assured, those with low self-esteem will distance

themselves psychologically and/or physically from their partners in a number of ways to reduce the impact of rejection (Murray et al., 2006).

Murray, Derrick, Leder, and Holmes (2008) utilized a series of experiments to test their risk regulation model and examine how individuals balance self-protection and relationship connection goals with romantic partners. The authors found that individuals with low self-esteem responded to relationship threats (i.e., describing a time when their partner hurt or disappointed them) by distancing themselves from their partners if they were able to exert executive control (i.e., not cognitively busy). Individuals with low self-esteem distanced themselves from their partners by lowering their opinions of their partners, focusing on self-protection goals over connecting with their partners, and reporting less closeness with their partners. Individuals with high self-esteem showed the opposite pattern, by drawing closer to their partners after relationship threats and overriding self-protection goals. When cognitive resources were depleted, those with low self-esteem behaved like those with higher self-regard and focused on connection goals over self-protection. These results show that the risk regulation processes enacted by those with low self-esteem require cognitive resources and executive control.

Relative to those with low self-esteem, high self-esteem individuals reported more chronic relationship connection goals over self-protection goals consistent with a relationship-focused orientation (Murray et al., 2008). Regardless of self-esteem levels, asking participants to recall an instance of relationship disappointment led to an increase in affiliative seeking goals as measured by an implicit word-sorting task. However, only high self-esteem individuals acted on this goal for connection by reporting a greater willingness to put themselves in social situations that pose interpersonal risk (Murray et

al., 2008). In sum, individuals with high and low self-esteem both want meaningful connections with others but the self-protective strategies adopted by those with low self-esteem can lead to a self-fulfilling prophecy of romantic rejection.

One reason low self esteem individuals are insecure about their partner's regard is the perception that the partner is "out of one's league" (Murray et al., 2005). Research with dating couples demonstrated that individuals with low self-esteem felt inferior to their romantic partners. It also shows that this dyadic discrepancy could be remedied by experimentally placing partners within psychological reach. In other words, putting a romantic partner in "one's league" shifted individuals with low self-esteem from a self-protective orientation to a relationship-focused orientation.

Murray and colleagues (2005) put the partners of low self-esteem individuals within reach by providing false feedback that the participants possessed personality traits that were desirable in a romantic partner or that their partners did not display enough considerate behavior. Low self-esteem participants reacted to either a new flaw in their partners or a new strength in themselves by reporting greater self-esteem as well as increased relational security and commitment. While prior work has shown that providing a boost to self-esteem can actually threaten those with low self-esteem (Murray et al., 1998), Murray and colleagues (2005) strengthened the self-esteem of insecure participants and confidence in their partner's regard by telling them that their personality traits were preferred by potential romantic partners in general. Furthermore, for those with low self-esteem, pointing out a flaw in one's romantic partner led to increased implicit feelings of felt security (i.e., participants were quicker to identify security or acceptance related words as self-relevant in a word categorization task). These



experimental inductions did not change how high self-esteem participants felt about themselves or their relationships.

These results show that assuring acceptance or putting a romantic partner in one's league can shift low self-esteem individuals from a self-protective to a relationship-focused orientation. Furthermore, high self-esteem individuals automatically demonstrate a relationship-focused orientation because they are secure in themselves and confident in their partner's regard (Murray et al., 2005). Based on these results, I predicted that individuals with high self-esteem would not be influenced by affirmations in the current study. I further predicted that individuals with low self-esteem would respond to relational and non-relational affirmations by reporting better relationship functioning.

Individuals with low self-esteem may unknowingly bring about the romantic rejection that they try to avoid. In a study in which married and cohabitating couples kept daily diaries of relationship events, individuals with low self-esteem reported feeling more hurt and rejected on days after their partners were in a negative mood or had a conflict with them (Murray et al., 2003a). Individuals with low self-esteem were especially attuned to their partner's negative behavior, more so than their partner's accepting behavior, and as a way of regulating interpersonal risk, tended to treat their partners in a hurtful and rejecting manner on days following feelings of vulnerability. By distancing themselves from their partners, individuals with low self-esteem may be attempting to decrease their vulnerability and their partner's ability to hurt them, but this defensive distancing will likely alienate their partners in the process. Furthermore, the romantic partners of those with low self-esteem reported seeing their partners as overly

needy and demanding on days after conflict. Conversely, individuals with high self-esteem had a higher threshold for detecting rejection and reported increased feelings of acceptance and connection on days following a conflict. Murray and colleagues (2003a) theorize that individuals with high self-esteem may utilize a relationship-connection orientation to compensate for the previous day's conflict. These findings point to a potential self-fulfilling prophecy of rejection for those with low self-esteem, where individuals with self-doubts act in a way that results in rejection (Murray et al., 2003a). Individuals with low self-esteem can bring about the rejection they attempt to avoid due to their self-protective orientation taking priority over relationship enhancement and connection. In line with this self-fulfilling prophecy of rejection, individuals with low self-esteem, and thus a hypersensitivity to romantic rejection, had partners that reported declines in relationship satisfaction over the course of a year (Murray et al., 2003b).

Stinson and colleagues (2009) found similar results, showing that individuals with low self-esteem anticipated more rejection than individuals with high self-esteem, displayed colder behavior, and were rejected in both correlational and experimental frameworks. Stinson and colleagues (2009) made rejection salient by either recording participants as they introduced themselves to a social group they were interested in joining or by recording their interactions with an attractive confederate of the opposite sex. Alternatively, anticipating acceptance led individuals to behave more warmly, which led to acceptance by research assistants observing the study. Participants with low self-esteem who anticipated rejection displayed warmer behavior (i.e., better eye contact and responsiveness in social interaction) after they learned that the confederate was anxious about rejection. By lessening the risk of rejection, Stinson and colleagues (2009)

were able to shift participants from a self-protective orientation focused on avoiding rejection to a relationship-focused orientation. These results show that when individuals doubt acceptance from others, they inhibit warm behavior as a way of defensively regulating rejection and social risk. In other words, when individuals do not expect acceptance due to low self-esteem, they will behave in a self-protective manner that diminishes relationship-enhancing behaviors (Stinson et al., 2009). This dissertation examines whether two types of self-affirmation manipulations (relational and non-relational) are sufficient to temporarily shift individuals with low self-esteem from a self-protective orientation to a relationship-focused orientation.

Because low self-esteem individuals prioritize self-protection over relationship connection, I hypothesized that low self-esteem individuals would report less romantic relationship satisfaction, closeness, and commitment than high self-esteem individuals. I further hypothesized that this difference would be exacerbated when low self-esteem individuals were exposed to a self-threat regardless of threat type (i.e., relational and non-relational threats). I will now discuss the concept of contingent self-esteem, domains of contingent self-esteem, relationship-contingent self-esteem, and why I hypothesized that relationship-contingent self-esteem would better predict relationship outcomes in the relational threat and affirmation conditions than self-esteem.

### **Contingent Self-Esteem**

Though low self-esteem has been consistently shown to predict relationship problems, I argue that individuals who base their self-esteem on their romantic relationships (i.e., high relationship-contingent self-esteem) would be more influenced by relational threats and affirmations. Previous research has shown that knowing which

domains a person derives self-esteem from can be more important than knowing if the general level of self-esteem is high or low (Crocker & Wolfe, 2001; Park, Sanchez, & Brynildsen, 2011).

William James (1890/1950) alluded to the concept of contingent self-esteem when he theorized that self-esteem is both stable and unstable. James (1890/1950) explained that an individual's self-esteem would rise and fall around a typical level of self-esteem based on positive and negative life events. The particular events that influence an individual's self-esteem are not universal because individuals may invest their self-esteem or become ego-involved in a variety of areas. The specific domains individuals base their self-esteem on are personal identities or abilities on which they have "staked their salvation" (James, 1890/1950, p. 310). Building on James' (1890/1950) theory, Crocker and Wolfe (2001) argue that positive and negative life events in domains of contingent self-esteem will increase and decrease state self-esteem around an individual's typical, trait level of self-esteem. These increases in self-esteem and the associated good feelings that come along with them are motivating, which leads to seeking success in contingent domains and attempting to avoid failure in self-important areas (Crocker & Wolfe, 2001).

Contingencies of self-esteem are thought to develop in response to socialization, cultural norms, and observational learning (Crocker & Wolfe, 2001). Crocker and Wolfe (2001) argue that contingencies of self-esteem are fairly stable across the lifespan, but are not impossible to change. Individuals may slowly revise their contingencies of self-esteem based on changing abilities or environments. The stability and overall level of self-esteem may depend on how difficult it is to succeed in a particular contingent

domain. For example, it may be easier to achieve God's love than approval from other people, because many religious beliefs include the notion that God's love is unconditional, whereas approval from other people requires doing something or having characteristics that merit approval (Crocker & Wolfe, 2001).

Crocker, Sommers, and Luhtanen (2002) tracked students for two months as they applied to graduate schools to examine the role of contingent self-esteem in affective reactions and state self-esteem levels. Participants who based their self-esteem on academic competence reacted to acceptances with higher levels of state self-esteem than did participants whose self-esteem was not contingent on academic competence. Additionally, the participants with academic competence-contingent self-esteem reacted to rejections with lower levels of state self-esteem than did participants without this contingency (Crocker et al., 2002). It is not surprising that daily affect was related to daily state self-esteem across participants, but this association was much stronger for participants whose self-esteem was contingent on academic competence. These findings demonstrate that self-esteem can be unstable due to contingencies of self-esteem and that contingent-relevant events increase the association between affect and state self-esteem levels (Crocker et al., 2002).

Developmental psychologist Harter (1986) also conceptualized self-esteem as domain specific. Harter theorized that children and adolescents' self-concepts and subsequent self-evaluations are based on self-concept domains that are relevant to the developmental period and important to the individual. Consistent with a contingent self-esteem framework, adolescents with low self-esteem evaluated themselves negatively in domains important to their self-concepts and adolescents with high self-esteem evaluated

themselves positively in domains important to their self-concepts (Harter, Whitesell, & Junkin, 1998). Furthermore, Harter, Waters, and Whitesell (1998) demonstrated that adolescents evaluate their level of self-esteem differently across different interpersonal relationships (i.e., parents, teachers, classmates of the same and different sex).

Crocker and Knight (2005) argue that contingencies of self-esteem can provide a source of motivation as well as increased psychological vulnerability. Individuals with contingent self-esteem are highly motivated to succeed in self-important domains because of the feelings of self-worth and validation that come with achieving a domain-related goal. For example, individuals with relationship-contingent self-esteem will judge themselves to be a person of worth if they are successful in their romantic relationships. Failure in a contingent domain is especially costly because it can lead to feelings of being unworthy or lacking value (Crocker, 2002; Crocker & Knight, 2005). Additionally, if individuals believe that success is not guaranteed in a contingent domain they may disengage from that domain as a means to defensively protect their self-esteem (Crocker, 2002; Crocker & Knight, 2005; Crocker & Park, 2004). Crocker and Knight (2005) claim that the amount of self-esteem a person has is less important than the specific domains used to derive self-esteem. In other words, it is more telling to know what a person believes they must be or do to become a person of worth than it is to know if they have high or low self-esteem in general. This dissertation tests the notion that relationship-contingent self-esteem can better predict relationship outcomes than general self-esteem levels when the relationship domain is threatened (i.e., a relational threat). Contingent domains are not all equal in the amount of motivation versus psychological vulnerability that they can create (Crocker & Knight, 2005). I will now examine the

notion that relationship-contingent self-esteem is a domain of contingent self-esteem that is particularly likely to cause vulnerabilities because it is fulfilled by other people (i.e., external to the self).

Research has shown that nearly everyone has contingencies of self-esteem (Crocker, Luhtanen, Cooper, & Bouvrette, 2003; Crocker & Wolfe, 2001), but there are major differences between individuals in the specific contingent domains that influence them. Crocker and colleagues (2003) identified seven domains that differ in the extent to which self-esteem is derived internally (i.e., from one's own values) or externally (i.e., from social approval). The domains, from most internal to most external were: God's love, virtue, family support, academic competence, competition, appearance, and others' approval. Two of the seven initial domains, family support and approval from others, focus on how contingent a person's self-esteem is on aspects of their interpersonal life. Knee and colleagues (2008) argue that romantic relationships are a special area of interpersonal well-being that are not captured within the original seven domains of self-esteem. Research shows that external contingent domains are negatively related to well-being (e.g., lower trait self-esteem and higher neuroticism) and that the internal contingent domains are positively related to well-being (Crocker et al., 2003; Sanchez & Crocker, 2005). Basing self-esteem on other people or superficial aspects of the self (i.e., external domains) makes individuals vulnerable to threats (Crocker et al., 2003), which often reduces self-esteem (Crocker et al., 2002; Crocker & Wolfe, 2001). In addition to these psychological detriments, basing self-esteem on external domains has been shown to lead to negative physical health consequences. Specifically, college freshmen with self-esteem contingent on their physical appearance reported increased alcohol

consumption, drug use, and unsafe sex (Crocker, 2002) relative to those who based their self-esteem on internal aspects of the self. Relationship-contingent self-esteem is theorized to fall on the external end of the contingency domains spectrum because the satisfaction of this contingency is reliant upon the individual's romantic partner (Knee et al., 2008). Consequently, health and well-being may be lower among those who stake their self-esteem on a romantic relationship. These results suggest that it is unhealthy to base your self-esteem on an external contingent domain, such as romantic relationships.

Crocker and Knight (2005) theorize that when an individual's self-esteem is contingent on others, interpersonal relationships can become a means of self-validation that are focused on meeting an individual's needs instead of reciprocal support and caring. Because relationship-contingent self-esteem is an external contingency that can negatively influence romantic relationships, it is conceptualized as an unhealthy form of contingent self-esteem (Knee et al., 2008). I will now discuss how relationship-contingent self-esteem can be damaging to romantic relationships.

### **Maladaptive Consequences of Relationship-Contingent Self-esteem**

Relationship-contingent self-esteem is defined as an unhealthy form of self-esteem that is reliant upon one's current romantic relationship (Knee et al., 2008). Individuals with high levels of relationship-contingent self-esteem base their sense of self on the functioning and success of their current romantic relationship. This contingent domain is deemed unhealthy or suboptimal because the satisfaction of relationship-contingent self-esteem is reliant upon sustained approval from other people (i.e., external) and cannot be satisfied entirely through personal efforts (Crocker et al., 2003; Knee et al., 2008).



Because individuals with relationship-contingent self-esteem base their personal validation on the functioning of their romantic relationships, even small relational events can have large and lasting impacts on their sense of self (Knee et al., 2008). Utilizing diary procedures, Knee and colleagues (2008) found that the association between positive and negative relationship events and state self-esteem was especially strong for those high in relationship-contingent self-esteem, with momentary emotional reactions to these events mediating this association. When a negative relationship event occurred in the diary study, participants with relationship-contingent self-esteem experienced more negative emotions, which resulted in lower state self-esteem (Knee et al., 2008). In general, individuals with relationship-contingent self-esteem had lower trait self-esteem. Additionally, when both partners reported high levels of relationship-contingent self-esteem, they also reported increased commitment, but not enhanced relationship satisfaction or closeness. Knee and colleagues (2008) theorize that individuals with relationship-contingent self-esteem are overly committed to their romantic relationships, even if they are not satisfying or particularly close, because their self-esteem depends on the relationship continuing. Individuals with low levels of relationship-contingent self-esteem were the least committed of all the pairings when their partners had high levels of relationship-contingent self-esteem. No other relevant constructs (e.g., attachment anxiety, rejection sensitivity, and approval-contingent self-esteem) replicated this partner interaction (Knee et al., 2008).

Based on the findings of the Knee and colleagues (2008) diary study, I predicted that individuals with relationship-contingent self-esteem would report more romantic commitment but not more satisfaction or closeness in the control condition. I predicted

that individuals with high levels of relationship-contingent self-esteem would report greater commitment than individuals with low levels of relationship-contingent self-esteem because prior research suggests that having self-esteem contingent on a particular domain increases commitment and effort toward that particular domain (Crocker & Knight, 2005; Knee et al., 2008). Additionally, staking self-esteem on a particular domain does not ensure satisfaction or success in that domain, so closeness and satisfaction should be unaffected by relationship-contingent self-esteem levels (Crocker & Knight, 2005; Knee et al., 2008).

Deriving self-esteem from external domains, such as romantic relationships, can lead to maladaptive self-regulation as well as interpersonal and intrapersonal costs (Park et al., 2011; Sanchez, Good, Kwang, & Saltzman, 2008; Sanchez & Kwang, 2007).

When success in a contingent domain is threatened, individuals with contingent self-esteem may defensively disengage from that particular domain (Crocker, 2002; Crocker & Knight, 2005; Crocker & Park, 2004). These results show that highly valuing romantic relationships does not always lead to better personal or relational outcomes, but can actually hinder personal and relational well-being. Based on these findings, I predicted that individuals with relationship-contingent self-esteem (either as a dispositional trait or experimentally induced) would report worse relationship functioning following relational threats relative to non-relational threats, as relational threats would compromise an important part of their self-image. Specifically, I predicted that individuals with relationship-contingent self-esteem would adopt a self-protective stance following a relational self-threat and report less relationship satisfaction, closeness, and commitment than individuals without relationship-contingent self-esteem.

The research on relationship-contingent self-esteem shows how staking your sense of self on your romantic relationship can negatively influence your well-being and romantic relationship outcomes. This dissertation examines the role of two different self-threats (recalling romantic rejection or a past failure) in hindering relationship outcomes. I explore how low self-esteem and relationship-contingent self-esteem influence differential responding to these self-threats. Furthermore, the current set of studies sought to find out whether or not individuals with relationship-contingent self-esteem and low general self-esteem respond with increased relationship functioning to self-affirmations. In the next section, I will discuss related research on the role of self-affirmations, particularly reframing past compliments from a romantic partner or writing about an important personal value, in undoing some of the ill effects seen in the romantic relationships of individuals with low self-esteem.

### **Self-Affirmations and Romantic Relationships**

Recent self-affirmation studies provide hopeful evidence that it may be possible to stop self-fulfilling prophecies of rejection within romantic relationships (Jaremka, Bunyan, Collins, & Sherman, 2011; Marigold, Holmes, & Ross, 2007; Marigold, Holmes, & Ross, 2010; Stinson, Logel, Sheperd & Zanna, 2011). One proposed remedy is the Abstract Reframing Intervention; this self-affirmation intervention entails reframing past compliments from one's partner in an abstract way (i.e., explaining why your partner complimented you and what it means to you and your relationship) (Marigold et al., 2007; Marigold et al., 2010). By reframing a concrete compliment into abstract terms, individuals with low self-esteem can fully appreciate the meaning and importance of the compliment and generalize their positive feelings,

creating a relationship resiliency. Without reframing compliments, individuals with low self-esteem tend to only generalize from negative interactions with their partners and act in a defensive and self-protective manner. Marigold and colleagues (2007) argue that individuals with low levels of self-esteem minimize the importance of positive events, such as compliments, as a way of protecting themselves from future rejection.

Individuals in the control condition with low self-esteem described compliments from their partners less positively, utilizing concrete terms and more past tense verbs than individuals with high self-esteem. Individuals with low self-esteem in the Abstract Reframing Intervention condition felt more positively about past compliments, showed improvements in state self-esteem, reported greater relational security, and valued their relationships more at two and three week follow-ups compared to those in the control condition with low self-esteem. Reframing past compliments from a romantic partner into abstract terms may make insecure individuals feel safer in their relationships and more likely to generalize from such compliments to the relationship as a whole (Marigold et al., 2007).

Marigold and colleagues (2010) utilized the same cognitive reframing intervention to prevent negative, self-protective behaviors in individuals with low self-esteem. Prompting participants with low self-esteem to write about previous compliments from their partner in an abstract way resulted in less defensive distancing (i.e., partner devaluation) and less negative behaviors over a two week follow-up, as reported by their partners. In sum, the Abstract Reframing Intervention is able to promote positive outcomes and help prevent negative relationship outcomes in individuals with low levels of self-esteem by using self-affirmation to move them from

self-protective motives to a relationship-focused orientation.

The risk-regulation model purports that individuals with low levels of self-esteem respond to relationship threats in a self-protective or avoidant manner, such as distancing themselves from their partner or devaluing their relationship (Murray et al., 2006). In line with this theory, Jaremka and colleagues (2011) found that only individuals with low self-esteem distanced themselves from their romantic relationships following a relational self-threat; this defensive distancing included derogating one's partner, reporting lower investment in the relationship, and predicting more future, self-initiated relationship destructive behavior. Similar to individuals with high self-esteem, individuals with low self-esteem who completed the self-affirmation activity of writing about a value of personal importance did not defensively react to the relationship threat (Jaremka et al., 2011). In a related study of self-affirmation and defensiveness, Stinson and colleagues (2011) asked participants to self-rate their level of relational security with their families, friends, and current or hypothetical, future romantic partners. Participants in the self-affirmation condition chose personally valued domains (e.g., academics and relationships) and wrote about how valuing those domains influenced their lives and self-images. Participants in the control condition wrote about domains that were self-ranked as not personally important. At four and eight week follow-ups, participants with low levels of relational security at the initial assessment reported increased relational security and demonstrated less tense social demeanor (assessed via two structured interviews). Additionally, social demeanor and relational security further improved between time two and time three, which may be the result of a positive feedback loop replacing the negative, self-fulfilling prophecy of rejection. Although it is unclear why the self-

affirmations positively influenced relational outcomes, Stinson and colleagues (2011) theorize that self-affirmation may bolster self-regulation capabilities.

These encouraging findings show that a brief self-affirmation, whether the affirmation relates to relationships or other domains, is capable of bringing about lasting change in relational security and social demeanor. Therefore, individual vulnerabilities that typically hinder relationships, such as low self-esteem and relationship-contingent self-esteem, may be overridden by positive experiences of affirmation (i.e., recalling a past success or romantic acceptance). I therefore predicted that following a self-affirmation (relational or non-relational), individuals with low self-esteem would report relationship satisfaction, closeness, and commitment similar to individuals with high self-esteem. Although I am not aware of any research on interventions for individuals with relationship-contingent self-esteem, I utilized the theory underlying contingent self-esteem to predict that the relational self-affirmation would lead to increases in relationship satisfaction, closeness, and commitment relative to individuals with relationship-contingent self-esteem in the control condition. I predicted that individuals with relationship-contingent self-esteem would respond to a relational self-affirmation with higher relationship satisfaction, closeness, and commitment than those with low relationship-contingent self-esteem. In other words, I expected individuals with relationship-contingent self-esteem to be more influenced by the relational self-affirmation than individuals with low relationship-contingent self-esteem. Additionally, I predicted that individuals with relationship-contingent self-esteem would be more influenced by the relational self-affirmation (i.e., recalling a past romantic acceptance) than the non-relational self-affirmation (i.e., recalling a past success).

## **Rationale for the Current Studies**

Research has shown that individuals with low self-esteem respond to self-threats by distancing themselves from their romantic partners (Murray et al., 2001; Murray et al., 1998). This dissertation extends this research by examining how individuals with relationship-contingent self-esteem react to self-threats. Though previous research has shown that individuals with low self-esteem will distance themselves from their romantic partners following self-threats that are both relational and non-relational in nature, the current dissertation examines whether individuals with relationship-contingent self-esteem are more influenced by relational self-threats than non-relational self-threats. Additionally, I examined how dispositional versus experimentally induced relationship-contingent self-esteem influences relationship outcomes in response to a relational self-threat.

This dissertation also extends the self-affirmation research that demonstrates how brief, self-affirming manipulations can result in better relationship outcomes (Jaremka et al., 2011; Stinson et al., 2011). Specifically, this dissertation examines the difference between relational versus non-relational affirmations in enhancing relationship outcomes. This dissertation tests whether the two types of affirmations equally affect individuals with relationship-contingent self-esteem. Lastly, this dissertation examines if relationship-contingent self-esteem is a better predictor of relationship outcomes following relational self-threats and self-affirmations. The results of these studies test if the relationship problems associated with low-self esteem and relationship-contingent self-esteem are remedied by self-affirmations and worsened by self-threats.

## Study 1

### Hypotheses

In the first study, participants were randomly assigned to one of five conditions: relational self-threat, non-relational self-threat, relational self-affirmation, non-relational self-affirmation, or a neutral control condition. In the control condition, I hypothesized that low self-esteem individuals would report less romantic relationship satisfaction, closeness, and commitment than high self-esteem individuals. I also hypothesized that this difference would increase when low self-esteem individuals were exposed to the self-threat conditions (either recalling a past failure or romantic rejection). I further hypothesized that the difference between low and high self-esteem individuals would disappear in both of the self-affirmation conditions.

I hypothesized that individuals with high levels of relationship-contingent self-esteem would report similar levels of relationship satisfaction and closeness but more commitment than individuals with low levels of relationship-contingent self-esteem in the control condition. I hypothesized that individuals with high relationship-contingent self-esteem who recalled past romantic rejection in the relational self-threat condition (but not past failure in the non-relational self-threat condition) would report less relationship satisfaction, closeness, and commitment than individuals with low levels of relationship-contingent self-esteem. I hypothesized that individuals with high levels of relationship-contingent self-esteem would report better romantic relationship outcomes than individuals with low levels of relationship-contingent self-esteem in the relational self-affirmation condition. I also hypothesized that dispositional levels of relationship-contingent self-esteem would better predict relationship outcomes than general self-



esteem levels in the relational self-threat and self-affirmation conditions.

## **Method**

**Participants.** Participants were recruited and compensated via Amazon's Mechanical Turk (MTurk), an online crowdsourcing marketplace. Only participants that were 18 years or older, in a romantic relationship, and living in the United States were eligible to participate in the current study. Utilizing Mechanical Turk has been shown to be an effective and reliable way to collect data from a wide variety of participants. Participants recruited through Mechanical Turk have been shown to pay as much attention as participants recruited through more traditional means (e.g., universities and internet forums) (Casler, Bickel, & Hackett, 2013; Paolacci, Chandler, & Ipeirotis, 2010), and participant effort questions included in the current study mirrored these results. Furthermore, participants recruited through Mechanical Turk are more representative of the population than participants recruited in-person via convenience samples (Berinsky, Huber, & Lenz, 2012; Buhrmester, Kwang, & Gosling, 2011).

I conducted an a priori power analysis with sample-size estimation software MMRPOWER. This power analysis was conducted utilizing effect sizes from prior research and following guidelines for estimating power for categorical moderators (Aguinis, 2004; Aguinis, Beaty, Boik, & Pierce, 2005; Aguinis, Boik, & Pierce, 2001; McClelland & Judd, 1993; West, Aiken, & Krull, 1996). This power analysis estimated that 80 participants would be required in each of the five conditions for a significant effect at the .05 level at 80% power.

A total of 405 adults (207 males and 198 females) in romantic relationships participated in this study. The age of participants ranged from 18-83 years old ( $M=34.62$ ,

$SD=11.07$ ). Participants described their romantic relationship status as married (43%), engaged to be married (11%), dating and living together (21%), and dating and living apart (25%). The length of the participants' romantic relationships ranged from 1 month to 47 years ( $M=7.55$ ,  $SD=8.60$ ). Participants described their sexual orientation as heterosexual (91%), homosexual (4.5%), bisexual (4%), and as other, not specified (.5%). Participants identified as White (70%), Asian (10%), Black (8.5%), Hispanic (5%), Pacific Islander (4%), Native American (2%), and as other, not specified (.5%).

### **Materials.**

***Self-esteem.*** Global self-esteem was measured via the 10-item Rosenberg Self-Esteem Scale (SES; Rosenberg, 1965). The widely utilized Rosenberg Self-Esteem Scale measures both positive and negative aspects of self-esteem, but it is unidimensional in nature (i.e., best explained by a one-factor solution)(Gray-Little, Williams, & Hancock, 1997). This scale has high test-retest reliability at two-weeks ( $r = .82-.88$ ; Blascovich & Tomaka, 1991; Rosenberg, 1986) and is internally consistent ( $\alpha = .91$ , current study).

Participants responded to 10 statements about their self-esteem (e.g. "I take a positive attitude toward myself." and "At times I think I am no good at all.", reverse coded) on a four-point Likert scale (with the anchors Strongly Agree, Agree, Disagree, and Strongly Disagree). After reverse scoring the negative aspects of self-esteem, I calculated the mean scores of global self-esteem, with higher scores indicating higher levels of self-esteem.

***Relationship-contingent self-esteem.*** The Relationship-Contingent Self-Esteem Scale (RCSE; Knee et al., 2008) was used to measure the degree to which participants base their self-esteem on their current romantic relationship functioning. This scale of

contingent self-esteem has demonstrated convergent and discriminant validity and predicts lowered self-esteem following a negative relationship event after controlling for related constructs. The Relationship-Contingent Self-Esteem Scale is internally consistent ( $\alpha = .88$ , current study) and has good test-retest reliability at two-weeks ( $r = .78$ ; Knee et al., 2008).

Participants responded to 11 items (e.g., “When my relationship is going well, I feel better about myself overall”) on a scale of one to five (with anchors 1 = “not at all like me”, 3 = “somewhat like me”, and 5 = “very much like me”). I calculated the mean of the 11 items, with high scores representing self-esteem highly contingent upon one’s romantic relationship.

***Commitment.*** Romantic relationship commitment was assessed with a 7-item measure of commitment derived from Rusbult, Martz, and Agnew’s (1998) model of relationship investment (Rusbult, Kumashiro, Kubacka, & Finkel, 2009). The Investment Model Scale is internally consistent ( $\alpha = .89-.90$ , current studies) and has been used to predict later relationship functioning and breakup (Rusbult et al., 1998).

Participants responded using a seven-point Likert scale to questions about their commitment level (e.g., “I want our relationship to last forever.”). I calculated the mean of the 7 commitment items, with higher scores indicating higher levels of commitment.

***Closeness.*** Relationship closeness was assessed via the single-item Inclusion of Other in the Self Scale (IOS; Aron, Aron, & Smollan, 1992). The Inclusion of Other in the Self Scale is a pictorial measure that depicts seven sets of overlapping circles (similar to Venn-diagrams) that vary in their degree of overlap. Participants read the instructions (“Please click on the picture that best describes your current relationship with your

romantic partner.”) and then selected one of the seven images to describe how close they are with their romantic partners.

The Inclusion of Other in the Self Scale shows convergent validity with Berscheid, Snyder, and Omoto’s (1989) Relationship Closeness Inventory (RCI; Aron et al., 1992). The Inclusion of Other in the Self Scale is preferred over the Relationship Closeness Inventory because it is applicable to many relationship types, it is much shorter in length, and it better captures the affective aspect of relationship closeness. Research on the Inclusion of Other in the Self Scale shows that the majority of participants interpret the images as a depiction of interconnectedness and that it is equally effective across a diverse range of participants and romantic relationship types. The Inclusion of Other in the Self Scale has good test-retest reliability at two weeks ( $r=.85$ ) and alternate form reliability. Additionally, this measure of closeness has been shown to predict romantic breakup at three months (Aron et al., 1992).

***Relationship satisfaction.*** Romantic relationship satisfaction was measured with the Relationship Assessment Scale (RAS; Hendrick, 1988). This measure of relationship satisfaction is applicable to wide range of relationship types and is consistent across ethnically diverse and age diverse participants. The Relationship Assessment Scale correlates highly ( $r = .80$ ) with the longer, marriage-focused Dyadic Adjustment Scale (DAS; Hendrick et al., 1998). The Relationship Assessment Scale is internally consistent ( $\alpha = .87-.89$ , current studies) and has good test-retest reliability at seven weeks ( $r = .85$ ). This scale successfully predicts future relationship dissolution (Hendrick, et al., 1998).

Participants responded to seven Likert-type statements that were designed to assess participants’ general feelings of their romantic relationship satisfaction (e.g., “How

good is your relationship compared to most?”). I calculated the mean scores of the seven items, with high scores indicating high levels of romantic relationship satisfaction.

### **Procedure**

Qualified participants completed the survey via Amazon Mechanical Turk and LimeSurvey. Participants provided demographic information and completed the two individual differences questionnaires, self-esteem, and relationship-contingent self-esteem, in counterbalanced order. Next, participants were randomly assigned to one of five experimental conditions: relational self-threat, non-relational self-threat, relational self-affirmation, non-relational self-affirmation, or control. The self-threat procedure was adapted from prior research (Ayduk, Mischel, & Downey, 2002; Molden, Lucas, Gardner, Dean, & Knowles, 2009). Participants in the relational self-threat condition responded to the following prompt: “Describe a time when you felt intensely rejected in your romantic relationship in three to five complete sentences.” Participants in the non-relational self-threat condition responded to the following prompt: “Describe a time when you felt intensely ashamed of a personal failure in three to five complete sentences.” Participants in the relational self-affirmation condition responded to the following prompt: “Describe a time when you felt intensely accepted in your romantic relationship in three to five complete sentences.” Participants in the non-relational self-affirmation condition responded to the following prompt: “Describe a time when you felt intensely proud of a personal accomplishment in three to five complete sentences.” Participants in the neutral, control condition responded to the following prompt: “Describe your morning routine in three to five sentences.” After completing the manipulation, participants completed the outcome questionnaires in the following order: commitment, closeness,

and satisfaction. Participants were thanked for their participation, presented with a debriefing statement, and compensated through Mechanical Turk after completing the survey.

## **Results**

**Preliminary Analyses.** Data was cleaned and screened following the guidelines in Tabachnick and Fidell (2013). I inspected the data for plausible ranges, means, and standard deviations. I found no issues with missing data, multicollinearity, skewness, kurtosis, linearity, heterogeneity of variance, independence of residuals, or multivariate outliers. I screened the data for univariate outliers by examining  $z$ -scores for each of the variables and found the following univariate outliers: one for relationship satisfaction ( $z=-4.10$ ) and two for commitment ( $z=-4.34$  and  $z=-3.61$ ). I left the three univariate outliers in the dataset because they were still connected to the distribution (i.e., not disconnected from the other data in histogram plots and numerically similar to the other scores) and analyzing the data with and without these outliers did not alter my results. Furthermore, a small number of outliers are expected in a moderately sized (e.g.,  $N=370$ ), normally distributed dataset and I did not exceed this number given my sample size (Ruan, Chen, Kerre, & Wets, 2005; Tabachnick & Fidell, 2013).

Next, I explored the bivariate correlations between the variables in this study for the participants in the control condition (see Table 1). I predicted that general self-esteem levels would have a positive association with relationship functioning in the control condition. I found support for this prediction; higher self-esteem was associated with more relationship satisfaction, closeness, and commitment in the control condition. For the control condition, I predicted that higher levels of relationship-contingent self-

esteem would be associated with higher levels of commitment, but not higher levels of closeness or satisfaction. I only found support for my commitment hypothesis; relationship-contingent self-esteem had a positive association with relationship satisfaction, closeness, and commitment in the control condition. Contrary to prior research (Knee et al., 2008), there was no significant relationship between relationship-contingent self-esteem and general self-esteem. I also found similar bivariate correlations between the variables for the total sample (see Table 2).

Self-esteem and relationship-contingent self-esteem were mean centered before examining their interactions with the experimental manipulations. To compare across conditions, I utilized dummy coding. I created four coding variables (see Table 3) because there are five experimental conditions (Jaccard & Turrisi, 2003). With this coding scheme, the values of the dummy coded variables represent the difference between one of the experimental conditions and the control group. Prior research on romantic relationships indicates that commitment, closeness, and satisfaction are distinct concepts (Aron et al., 1992; Hendrick, et al., 1998; Knee et al., 2008); therefore, I analyzed each of the three outcomes separately.

**Self-Esteem.** I conducted a series of two-step hierarchical multiple regressions for each of the relationship outcomes (commitment, closeness, and satisfaction) (see Table 4 for regression coefficients). In the first step, one of the three relationship outcomes was regressed on self-esteem and experimental conditions via four dummy coded variables. There was a significant main effect for self-esteem but not the four experimental condition variables, for commitment,  $F(5, 399) = 6.923, p = .001$ , closeness,  $F(5, 399) = 6.069, p = .001$ , and satisfaction,  $F(5, 399) = 8.412, p = .001$ . The

four interaction terms (cross products of self-esteem and the four dummy coded variables) were entered into the equation in the second step and did not explain additional variance in commitment,  $\Delta R^2 = .012$ ,  $\Delta F(4, 395) = 1.270$ ,  $p = .281$ , closeness,  $\Delta R^2 = .010$ ,  $\Delta F(4, 395) = 1.039$ ,  $p = .387$ , or satisfaction,  $\Delta R^2 = .007$ ,  $\Delta F(4, 395) = 0.767$ ,  $p = .547$ . Contrary to my predictions, the associations between self-esteem and relationship outcomes did not differ depending on the experimental condition.

The analysis just described examines whether any of the experimental conditions differed from the control condition. Although none of the conditions differed from the control condition, it is possible that the two self-threat conditions might differ from the two self-affirmation conditions. To test for a self-threat by self-esteem interaction, I conducted a series of two-step hierarchical multiple regressions for the three relationship outcomes. In the first step, one of the relationship outcomes was regressed on self-esteem and a single self-threat dummy coded variable (with the self-threat conditions coded as 1 and the self-affirmation conditions coded as 0). There was a significant main effect for self-esteem but not the self-threat manipulation, for commitment,  $F(2, 321) = 16.294$ ,  $p = .001$ , closeness,  $F(2, 321) = 13.630$ ,  $p = .001$ , and satisfaction,  $F(2, 321) = 19.444$ ,  $p = .001$ . The interaction term (cross product of self-esteem and the self-threat dummy coded variable) was entered into the equation in the second step and did not explain additional variance in commitment,  $\Delta R^2 = .001$ ,  $\Delta F(1, 320) = .142$ ,  $p = .707$ , closeness,  $\Delta R^2 = .001$ ,  $\Delta F(1, 320) = .282$ ,  $p = .596$ , or satisfaction,  $\Delta R^2 = .000$ ,  $\Delta F(1, 320) = 0.001$ ,  $p = .980$ . Contrary to predictions, these results show that there was no interaction between the self-threat conditions and self-esteem in explaining relationship outcomes. There is a significant, negative relationship with self-esteem and relationship



outcomes across the conditions in this study, but this relationship did not increase in the self-threat conditions or decrease in the self-affirmation conditions.

**Relationship-Contingent Self-Esteem.** Similar to my analysis of self-esteem, I examined relationship-contingent self-esteem with a series of two-step hierarchical multiple regressions for each of the relationship outcomes (commitment, closeness, and satisfaction) (see Table 5 for regression coefficients). In the first step, there was a significant main effect for relationship-contingent self-esteem but not the experimental conditions for commitment,  $F(5, 399) = 20.995, p = .001$ , closeness,  $F(5, 399) = 12.301, p = .001$ , and satisfaction,  $F(5, 399) = 7.228, p = .001$ . The four interaction terms were entered into the equation in the second step and did not explain additional variance in commitment,  $\Delta R^2 = .011, \Delta F(4, 395) = 1.341, p = .254$ , closeness,  $\Delta R^2 = .003, \Delta F(4, 395) = .350, p = .844$ , or satisfaction,  $\Delta R^2 = .009, \Delta F(4, 395) = 0.949, p = .436$ . Contrary to my hypotheses, there were no relational self-threat or self-affirmation interactions with relationship-contingent self-esteem. I did not find that participants with high levels of relationship-contingent self-esteem were more influenced by the relational self-threat and self-affirmation manipulations than participants without relationship-contingent self-esteem. Lastly, controlling for participant age and romantic relationship length did not alter any of the results from Study 1 and there were no relationship-contingent self-esteem by self-esteem interactions.

## **Discussion**

The first study examined the interaction between the experimental conditions and the participants' dispositional levels of self-esteem and relationship-contingent self-esteem. The association between relationship-contingent self-esteem and self-esteem was

not significant and this is surprising given the prior research demonstrating a strong, negative association (Knee et al., 2008). As predicted, participants in the control condition with high relationship-contingent self-esteem reported high levels of commitment. This result is consistent with the idea that individuals invest heavily in contingent domains (Crocker et al., 2002; Crocker & Wolfe, 2001; James, 1890/1950) and prior research (Knee et al., 2008). Contrary to predictions, participants with relationship-contingent self-esteem also reported more relationship satisfaction and closeness than participants with lower levels of relationship-contingent self-esteem. These results show that individuals who base their self-esteem on their romantic relationships feel more positively about their relationships than individuals without relationship-contingent self-esteem.

Participants with low self-esteem in the control condition reported worse relationship outcomes than participants with high self-esteem, which is in line with a wealth of prior research demonstrating that individuals with low self-esteem have less healthy and satisfying romantic relationships (Murray et al., 2001; Murray et al., 1998). I did not find the expected interactions for self-threats and self-affirmations with self-esteem and relationship-contingent self-esteem. I examined the participants' responses to the writing prompts and found that participants followed the instructions regarding the content and length for the prompts. Furthermore, participants selected the correct answers (e.g., "select very much like me" or "please select option 5 for this question") for the three participant effort questions 96% of the time. Consequently, I do not believe that the issue with the self-threat or self-affirmation manipulations is a result of participant inattentiveness. It is also important to note that I chose writing about past rejection as the

relational self-threat manipulation because reliving past rejection has been shown to temporarily decrease self-esteem levels more than imagined rejection, ostracism, and the threat of future rejection (Blackhart, Nelson, Knowles, & Baumeister, 2009). Despite the lack of significant interactions, the current study provides important information about self-esteem and relationship-contingent self-esteem within the context of adult romantic relationships.

The first study investigated how romantic relationship responses to self-threats and self-affirmations are influenced by dispositional relationship-contingent self-esteem and self-esteem. The second study examined how experimentally inducing high levels of relationship-contingent self-esteem influences responses to self-threats. Taken together, Study 1 and Study 2 show the relative influence of dispositional versus experimentally induced relationship-contingent self-esteem in responding to self-threats.

## **Study 2**

### **Hypotheses**

The second study employed a 2 x 2 experimental design. Participants were randomly assigned to relationship-contingent self-esteem (high versus control) and self-threat (relational versus non-relational) conditions. I hypothesized that inducing high levels of relationship-contingent self-esteem and exposing participants to a relational self-threat would result in less relationship satisfaction, closeness, and commitment than participants in the other three groups (high relationship-contingent self-esteem and non-relational self-threat, control and relational self-threat, and control and non-relational self-threat).

## Method

**Participants.** Similar to the first study, participants were recruited and compensated through Amazon's Mechanical Turk. Only participants that were 18 years or older, in a romantic relationship, and living in the United States were eligible to participate. Participants from the first study were not eligible to participate in this study. A total of 160 adults (69 males and 91 females) in romantic relationships participated in this study. The age of participants ranged from 20-74 years old ( $M=35.93$ ,  $SD=11.66$ ). Participants described their romantic relationship status as married (44%), engaged to be married (14%), dating and living together (16.5%), and dating and living apart (25.5%). The length of the participants' romantic relationships ranged from 1 month to 39 years ( $M=7.58$ ,  $SD=8.08$ ). Participants described their sexual orientation as heterosexual (86.5%), homosexual (3.5%), and bisexual (10%). Participants identified as White (69.4%), Asian (18.8%), Black (6.9%), Hispanic (2.5%), Pacific Islander (.6%), Native American (1.2%), and as other, not specified (.6%).

**Procedure.** Qualified participants completed the survey via Amazon Mechanical Turk and LimeSurvey. Participants were randomly assigned to one of two conditions: high relationship-contingent self-esteem or control. In the high relationship-contingent self-esteem condition, participants listed two reasons why they would feel worse if they did not have a significant other and two reasons why they feel better because they have a significant other. In the control condition, participants listed two reasons why they would feel worse after receiving a bad review from their boss and two reasons why they would feel better after receiving a positive review from their boss. This procedure to induce high levels of relationship-contingent self-esteem was adapted from Sanchez and Kwang

(2007) and tested in a pilot study. Next, participants were randomly assigned to one of two self-threat conditions, relational and non-relational, identical to the self-threat conditions in the first study. After completing both manipulations, participants completed the outcome questionnaires in the following order: commitment, closeness, and satisfaction. Participants were thanked for their participation, presented with a debriefing statement, and compensated through Mechanical Turk after completing the survey.

**Pilot Study.** Prior to data collection, I conducted a pilot study to ensure that the relationship-contingent self-esteem manipulation would temporarily increase levels of relationship-contingent self-esteem. I recruited a sample of 50 participants via Reddit.com and Facebook.com to participate in this pilot study. Adults living in the United States and currently in a romantic relationship were eligible to participate. Participants were randomly assigned to one of two conditions, high relationship-contingent self-esteem and a control. After completing the high relationship-contingent self-esteem or control writing prompts, participants completed the Relationship-Contingent Self-Esteem Scale. There was a significant difference in the relationship-contingent self-esteem scores for participants in the high relationship-contingent self-esteem ( $M=3.99$ ,  $SD=.83$ ) versus control ( $M=3.32$ ,  $SD=.82$ ) conditions;  $t(48)= 2.511$ ,  $p=.017$ . This pilot study demonstrated that the high relationship-contingent self-esteem manipulation is effective at increasing levels of relationship-contingent self-esteem.

## **Results**

Prior to analysis, data was cleaned and screened following the guidelines in Tabachnick and Fidell (2013). I inspected the data for plausible ranges, means, and

standard deviations. I found no issues with missing data, multicollinearity, skewness, kurtosis, linearity, heterogeneity of variance, or outliers. I conducted a 2 x 2 between-subjects Analysis of Variance (ANOVA) of self-threat (relational/non-relational) and manipulated relationship-contingent self-esteem (high/control) conditions separately for each of the relationship outcomes (commitment, closeness, and satisfaction).

A 2 x 2 between-subjects ANOVA of self-threat and relationship-contingent self-esteem conditions was conducted on relationship commitment. The main effect of relationship-contingent self-esteem on commitment was not significant,  $F(1, 156) = 1.690$ ,  $p = .196$ , thus commitment did not differ on average for participants in the high relationship-contingent self-esteem ( $M = 6.12$ ,  $SD=1.17$ ) or control conditions ( $M = 5.87$ ,  $SD=1.30$ ). The main effect of self-threat on commitment was not significant,  $F(1, 156) = .060$ ,  $p = .806$ , thus commitment did not differ on average for participants in the relational self-threat ( $M = 5.97$ ,  $SD=1.24$ ) or non-relational self-threat conditions ( $M = 6.02$ ,  $SD=1.33$ ). The self-threat x relationship-contingent self-esteem interaction was not significant,  $F(1, 156) = .656$ ,  $p = .419$ .

A 2 x 2 between-subjects ANOVA of self-threat and relationship-contingent self-esteem conditions was conducted on relationship closeness. The main effect of relationship-contingent self-esteem on closeness was not significant,  $F(1, 156) = 1.73$ ,  $p = .191$ , thus closeness did not differ on average for participants in the high relationship-contingent self-esteem ( $M = 5.16$ ,  $SD=1.55$ ) or control conditions ( $M = 5.23$ ,  $SD=1.46$ ). The main effect of self-threat on closeness was not significant,  $F(1, 156) = .069$ ,  $p = .793$ , thus closeness did not differ on average for participants in the relational self-threat

( $M = 5.35, SD=1.45$ ) or non-relational self-threat conditions ( $M = 5.04, SD=1.54$ ). The self-threat x relationship-contingent self-esteem interaction was not significant,  $F(1, 156) = .135, p = .713$ .

A 2 x 2 between-subjects ANOVA of self-threat and relationship-contingent self-esteem conditions was conducted on relationship satisfaction. The main effect of relationship-contingent self-esteem on relationship satisfaction was not significant,  $F(1, 156) = .750, p = .388$ , thus relationship satisfaction did not differ on average for participants in the high relationship-contingent self-esteem ( $M = 4.12, SD=.76$ ) or control conditions ( $M = 4.01, SD=.85$ ). The main effect of self-threat on relationship satisfaction was not significant,  $F(1, 156) = .028, p = .867$ , thus relationship satisfaction did not differ on average for participants in the relational self-threat ( $M = 4.05, SD=.84$ ) or non-relational self-threat conditions ( $M = 4.07, SD=.77$ ). The self-threat x relationship-contingent self-esteem interaction was not significant,  $F(1, 156) = .656, p = .419$ .

The four experimental groups reported nearly identical levels of relationship commitment, closeness, and satisfaction. Similar to Study 1, controlling for participant age or relationship length did not change the results of this study. In sum, inducing high levels of relationship-contingent self-esteem and exposing participants to a relational self-threat did not result in the predicted decreased relationship functioning.

## **Discussion**

I designed the second study to examine how experimentally inducing high levels of relationship-contingent self-esteem and exposing participants to self-threats influenced romantic relationship functioning. I predicted that participants with

experimentally induced relationship-contingent self-esteem who were also exposed to a relational self-threat would report worse relationship outcomes because research has shown that threatening a contingent domain often leads to defensive distancing from that specific domain (Crocker, 2002; Crocker & Knight, 2005; Crocker & Park, 2004). Contrary to predictions, manipulating relationship-contingent self-esteem and self-threats did not influence romantic relationship outcomes. The pilot study indicated that the relationship-contingent self-esteem manipulation is effective at temporarily increasing levels of relationship-contingent self-esteem. Participants in this study completed the writing prompts and the participant effort questions satisfactorily. Specifically, the participants followed the instructions regarding the content and length for the writing prompts and selected the correct answers 99.5% of the time for the participant effort questions. Consequently, I do not believe that these null results are due to participant inattention or carelessness.

Because both studies utilized the same relational and non-relational self-threats, the limitations regarding this manipulation from the first study are also applicable to these results. In line with this reasoning, I argue that future research on experimentally induced relationship-contingent self-esteem should utilize a different self-threat manipulation or compare the relative influence of a number of self-threat paradigms. Future relational self-threat manipulations could entail instructing participants to focus on their emotions as they recall a prior romantic rejection (Ayduk et al., 2002), asking participants to imagine themselves in a vivid vignette about romantic rejection (Blackhart et al., 2009), subliminally priming participants with rejection words (Gerber & Wheeler, 2009), or providing false feedback to participants about the likelihood of being alone later



in life (Blackhart et al., 2009). These self-threat manipulations may provide a more provocative emotional response and be more self-threatening than simply instructing participants to recall past rejection (Ayduk et al., 2002). In sum, a follow-up study utilizing a different relational self-threat is necessary to determine if individuals with experimentally induced relationship-contingent self-esteem lower their perceptions of their romantic relationships following a domain related threat.

Prior to running this experiment, I conducted a pilot study to ensure that my manipulation did increase levels of relationship-contingent self-esteem relative to the negative control condition. I did not assess relationship-contingent self-esteem scores before and after the manipulation in the current study because I was concerned about demand characteristics influencing the post manipulation scores. Due to issues with the self-threat manipulation, it is difficult to evaluate the effect of the relationship contingent self-esteem manipulation. To address this limitation, future research could employ both pre- and post-manipulation assessments of relationship-contingent self-esteem. In order to limit the effects of demand characteristics, the relationship-contingent self-esteem scale questions could be mixed in with a variety of dissimilar filler items. Alternatively, researchers could administer the pre-manipulation measurement of relationship-contingent self-esteem several days before the manipulation as the scale has good test-retest reliability at two weeks ( $r = .78$ ; Knee et al., 2008). Participants in the current study were older and in longer relationships compared to participants from previous research on relationship-contingent self-esteem (Knee et al., 2008). It is important to explore whether inducing relationship-contingent self-esteem in participants of different age groups and relationship lengths alters its effects on romantic relationship functioning. If the

construct of relationship-contingent self-esteem has a different meaning based on participants' age or relationship length, younger participants in newer romantic relationships may be more adversely influenced by exposure to relationship threats after inducing high levels of relationship-contingent self-esteem.

### **General Discussion**

This dissertation examined how relationship-contingent self-esteem and self-esteem influence romantic relationships. Most importantly, this dissertation clarifies how relationship-contingent self-esteem and self-esteem influence adults in long-term, committed relationships, a population that is not often studied within the self-esteem and romantic relationship literature. I will now explore why I did not find some of the expected relationships among constructs (e.g., self-esteem and relationship-contingent self-esteem) and the lack of interactions between these constructs and the self-threat and self-affirmation manipulations. Specifically, I will examine how the age of the participants in the current studies may have influenced their responses. I will also discuss sampling issues that limit the generalizability of romantic relationship literature in general.

I did not find a significant self-esteem by self-threat interaction in Study 1. To better understand this finding, I examined the literature demonstrating that low self-esteem individuals respond to self-threats (relational and non-relational) by reporting worse relationship outcomes and distancing themselves emotionally from their romantic partners. Although there are numerous studies demonstrating the efficacy of experimentally manipulating self-threats in temporarily reducing relationship functioning in individuals with low self-esteem, none of the studies included older participants

involved in long-term relationships. Participants in these studies were an average of 21 years of age and in romantic relationships for less than 2 years in duration (Murray et al., 1998; Murray, Bellavia, Feeney, Holmes, & Rose, 2001a; Murray, Rose, Bellavia, Holmes, & Kusche, 2002; Murray et al., 2005). Participants in the current studies reported a mean age of 34.9 years ( $SD=11.23$ ) and an average relationship length of 7.6 years. There are many longitudinal studies examining the role of self-esteem in relationship functioning with older, married participants (Murray et al., 2000; Murray et al., 2001b; Murray et al., 2003a; Murray et al., 2003b), but none of these studies experimentally manipulated self-threats. Taken together, the daily diary studies demonstrate that married individuals with low self-esteem underestimate their partner's love, overreact to relationship conflict, have lower perceptions of their partners, and have decreased relationship functioning as a result.

Because the results from the current studies are inconsistent with prior research, it is important to determine if participant age or romantic relationship length influence susceptibility to self-threats. Research has shown that self-esteem is more stable (i.e., there are less daily fluctuations in self-esteem) in older individuals (Meier, Orth, Denissen, & Kühnel, 2011), which could make older individuals less susceptible to the negative effects of self-threats. In addition to a more stable sense of self, research also demonstrates that individuals feel more secure in their relationships as they age. In other words, high school students report the lowest security, college students are in the middle, and married individuals report the highest security (Kobak & Hazan, 1991). The level of security an individual feels in their relationship is likely to influence their responses to self-threats, with secure individuals being the least influenced by the self-threats (Murray

et al., 2006).

Furman and Wehner (1994) created a four-step developmental model of romantic relationships to explain differences across the lifespan. Romantic relationships in early adolescence are limited to simple social exchanges and they are followed by casual, short-term partnerships in mid-adolescence. Late adolescence is marked by stable romantic relationships and adulthood is associated with committed relationships, where partners are able to fulfill each other's emotional needs and there is a high degree of interdependence (Furman & Wehner, 1994). Adults in committed relationships are likely to be more financially and socially dependent on their partners than adolescents, which could reduce the influence of self-threats on their romantic relationships. These substantial developmental differences in romantic relationships highlight the need to examine relationship constructs in samples besides college students. Future research should test a number of possible self-threats in a pool of participants who are diverse in age and relationship length to see which types of threats influence relationship outcomes and if self-threats function differentially in older versus younger participants or shorter versus longer relationships.

In Study 1, the self-affirmations did not bolster participants with low self-esteem enough to result in better relationship outcomes. This result contradicts previous research on self-affirmations within romantic relationships. It is important to note that participants in these studies were an average of 19 years of age and in romantic relationships for less than 1.5 years in duration (Jaremka et al., 2011; Marigold et al., 2007; Marigold et al., 2010; Stinson et al., 2011). Similar to my recommendations for the self-threat manipulations, I propose that future research examines a variety of self-affirmations to

see if they are equally effective across different age groups, relationship lengths, and relationship types. Two possible self-affirmations that have been shown to increase relationship functioning in low self-esteem individuals are the Abstract Reframing Intervention (i.e., reframing past compliments from a partner into abstract terms) and writing about a value of personal importance (Jaremka et al., 2011; Marigold et al., 2007; Marigold et al., 2010). Although this paradigm has not been used to negate the ill effects of low self-esteem on relationships, subliminally priming relational security words (e.g., love and support) has been shown to reduce negative reactions toward out-group members (Mikulincer & Shaver, 2001) and may reduce defensive distancing within romantic relationships (Murray et al., 2008; Murray et al., 2006). It is vital that future studies explore various ways of remedying the relationship problems experienced by individuals with low self-esteem.

Though there is a wealth of research on contingent self-esteem in general, there is a scarcity of research on the construct of relationship-contingent self-esteem. I did not find that relational self-threats resulted in worse relationship outcomes for individuals with high relationship-contingent self-esteem. These results are at odds with the literature on contingent self-esteem demonstrating that threatening a contingent domain leads to defensive distancing as a means of self-protection (Crocker, 2002; Crocker & Knight, 2005; Crocker & Park, 2004). In a similar vein, I did not find that relational self-affirmations boosted relationship outcomes for individuals with high relationship-contingent self-esteem, which conflicts with prior research showing that success within a contingent domain results in better outcomes than success in a non-contingent domain (Crocker et al., 2002). I had expected that relationship-contingent self-esteem would

better predict outcomes in the relational domain, but I found that general self-esteem levels were similarly predictive of romantic relationship outcomes. This result is inconsistent with prior research showing that knowing which domains a person bases their self-esteem on is more important than knowing the general level of self-esteem in predicting well-being (Crocker & Wolfe, 2001; Park et al., 2011).

Prior research on relationship-contingent self-esteem has only examined the construct in a younger population of individuals in late adolescence or early adulthood. For example, Knee and colleagues (2008) assessed relationship-contingent self-esteem in a series of five studies with participants reporting a mean age of 22 years ( $SD=4.97$ ) and an average relationship length of 2.5 years. This narrow sampling is problematic because self-esteem is typically less contingent as the individual matures (Meier et al., 2011). Consistent with this notion and Knee and colleagues' (2008) findings ( $r=-.11, p=.001$ ), there was a small, negative association between age and relationship-contingent self-esteem in the current study ( $r=-.12, p=.02$ ). However, despite this negative correlation with age and the fact that participants in Study 1 were older than those in the studies conducted by Knee and colleagues (2008), participants in Study 1 reported slightly higher than average relationship-contingent self-esteem scores ( $M=3.32, SD=.83$  versus  $M=3.61, SD=.82$ , in the current study).

Although Knee and colleagues (2008) found a moderate to large negative association between relationship-contingent self-esteem and general self-esteem (Study 2,  $r=-.29, p=.001$ ; Study 3,  $r=-.57, p=.001$ ), I did not find this association in Study 1 ( $r=-.05, p=.268$ ). The construct of relationship-contingent self-esteem is theorized to be unhealthy (Knee et al., 2008) and is expected to lower self-esteem because it relies on

external sources of self-esteem (Crocker et al., 2003; Sanchez & Crocker, 2005), which are often unstable (Crocker et al., 2002; Crocker & Wolfe, 2001). Perhaps the relationship stability associated with a longer or more interdependent relationships (e.g., married or living together) changes the typically negative consequences of being high in relationship-contingent self-esteem. Therefore, it is important to explore the meaning of relationship-contingent self-esteem across the lifespan and different relationship types to find out if basing your self-esteem on your romantic relationship is equally unhealthy for all developmental periods or if it is the most damaging in late adolescence and early adulthood. It is also crucial to examine how relationship length and type influences the effects of relationship-contingent self-esteem and its association with general self-esteem.

The disparity in the results from the current studies and previous research conducted on younger individuals in shorter romantic relationships highlights the issue with an overreliance on college students as research participants. This deficiency in social psychological research is still a major problem despite being highlighted numerous times over the course of several decades (Henry, 2008; Hooghe, Stolle, Mahéo, & Vissers, 2010; Peterson, 2001; Sears, 1986). Sears (1986) argues that college students differ substantially from nonstudents because college students have less stable peer relationships (i.e., changing peer groups and high social mobility), greater cognitive abilities, more egocentric bias, an increased tendency to comply with authority, and attitudes that are not integrated into their personalities. Because college students are more receptive to experimental stimuli and have a more malleable sense of self, Sears (1986) theorizes that the reliance on college students as research participants could result in systematic biases in the literature. In his meta-analysis of social science research,

Peterson (2001) found that the effect sizes for college students compared to nonstudent participants differed drastically in magnitude and even directionality for a wide variety of research topics.

My review of the relationship literature demonstrates the lack of research in populations beyond college students for many topics such as relationship-contingent self-esteem (Knee et al., 2008) and self-affirmations (Jaremka et al., 2011; Marigold et al., 2007; Marigold et al., 2010; Stinson et al., 2011). There are studies that examine romantic relationships and self-threats in both college students and older populations, but these constructs are often studied in two methodologically distinct manners (i.e., college students undergo experimental manipulations and married participants report daily fluctuations in their feelings and romantic relationships) (Murray et al., 1998; Murray et al., 2000; Murray et al., 2001b; Murray et al., 2003a; Murray et al., 2003b). It is important to replicate relationship findings in older populations as the context and meaning of romantic relationships can change dramatically from adolescence into later adulthood (Collins, 2003). Older participants may be less influenced by these experimental manipulations because they feel more secure in their romantic relationships (Furman & Wehner, 1994; Kobak & Hazan, 1991) and more stable in their sense of self (Meier et al., 2011; Sears, 1986). If older participants in longer relationships are less susceptible to self-threat and self-affirmation manipulations, it may be that a publication bias has prevented these null effects from reaching publication.

It is typically much more difficult and expensive to recruit a diverse sample, but researchers in the field of advertising argue that one potential solution is the recruitment of non-traditional working undergraduate students (Jones & Sonner, 2001). Jones and



Sonner (2001) demonstrated that utilizing a sample of adult, non-traditional college students produced results very similar to a random sample from the general population. Similarly, political scientist researchers (Kam, Wilking, & Zechmeister, 2007) have demonstrated that recruiting campus staff produced similar results compared to a random sampling of the local population and the campus staff participants had a much higher response rate. I utilized Amazon's Mechanical Turk marketplace in the current studies because research has shown that Mechanical Turk participants are more diverse and representative of the general population than participants recruited in-person via traditional means (Berinsky et al., 2012; Buhrmester et al., 2011).

### **Caveats and Future Directions**

One major limitation to the current studies is that I was not able to collect data from both individuals within the romantic relationship. Prior research demonstrates that how relationship-contingent self-esteem influences relationships differs depending on the interaction between both partners' levels of the construct (Knee et al., 2008). Specifically, romantic partners reported the highest relationship commitment levels if both partners were high in relationship-contingent self-esteem. Conversely, romantic partners reported the lowest relationship commitment if one partner was high and the other was low in relationship-contingent self-esteem (Knee et al., 2008). It may be that this mismatch between partners is even more detrimental for a longer, more invested (e.g., married) romantic relationship. It may also be the case that married individuals or individuals in longer romantic relationships are more likely to have similar levels of relationship-contingent self-esteem with respect to their partners. In other words, an individual's level of relationship-contingent self-esteem may shape their partner's level

of relationship-contingent self-esteem over time resulting in converging levels in long-term relationships.

Another limitation to the current studies is the effectiveness of the experimental manipulations of self-threats and self-affirmations. Although prior research on college students has demonstrated the effectiveness of similar self-threat manipulations in reducing the relationship functioning of low self-esteem individuals (Murray et al., 1998; Murray et al., 2001a; Murray, et al., 2002; Murray et al., 2005), the relational and non-relational self-threats in the current studies did not influence the participants' perceptions of their relationships. Perhaps the manipulations in current studies did not feel "real" enough to participants to influence their affective state and romantic relationships outcomes. Research has shown that recalling the emotions and physical sensations (i.e., "hot" cues) of an instance of rejection results in anger and hostility while focusing on "cool" cues (i.e., recalling what the situation looked like and how it would look in a photograph) did not (Ayduk et al., 2002). It is possible that participants in the current studies focused on detailing the event accurately and did not relive how the event made them feel.

To address these two limitations, a future study could involve couples coming into the lab to discuss a relationship conflict (relational threat) or how they support one another (relational affirmation). The couples would complete relationship outcome measures before and after the discussion and their interactions would be recorded and coded. This proposed study would show how live relationship threats and affirmations influence individuals and how this interacts with individual differences in relationship-contingent self-esteem and self-esteem.

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Table 1

*Study 1 Intercorrelations, Means, and Standard Deviations for the Control Condition*

|                 | 1     | 2     | 3     | 4     | 5    |
|-----------------|-------|-------|-------|-------|------|
| 1. Self-Esteem  | -     |       |       |       |      |
| 2. RCSE         | .06   | -     |       |       |      |
| 3. Commitment   | .27** | .46** | -     |       |      |
| 4. Closeness    | .24** | .46** | .60** | -     |      |
| 5. Satisfaction | .20*  | .20*  | .63** | .45** | -    |
| <i>M</i>        | 3.06  | 3.56  | 6.01  | 5.02  | 4.04 |
| <i>SD</i>       | .61   | .89   | 1.17  | 1.57  | .78  |

*Note.* RCSE stands for Relationship-Contingent Self-Esteem.

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

Table 2

*Study 1 Intercorrelations, Means, and Standard Deviations for the Total Sample*

|                 | 1     | 2     | 3     | 4     | 5    |
|-----------------|-------|-------|-------|-------|------|
| 1. Self-Esteem  | -     |       |       |       |      |
| 2. RCSE         | -0.05 | -     |       |       |      |
| 3. Commitment   | .27** | .45** | -     |       |      |
| 4. Closeness    | .24** | .35** | .57** | -     |      |
| 5. Satisfaction | .30** | .28** | .66** | .60** | -    |
| <i>M</i>        | 3.09  | 3.61  | 6.05  | 5.31  | 4.13 |
| <i>SD</i>       | 0.59  | 0.82  | 1.15  | 1.55  | 0.73 |

*Note.* RCSE stands for Relationship-Contingent Self-Esteem.

\*\*  $p < .001$ .

Table 3

*Study 1 Dummy Coded Variables*

| Experimental Conditions | Dummy Coded Variables |   |   |   |
|-------------------------|-----------------------|---|---|---|
|                         | 1                     | 2 | 3 | 4 |
| 1. Romantic Rejection   | 1                     | 0 | 0 | 0 |
| 2. Personal Failure     | 0                     | 1 | 0 | 0 |
| 3. Romantic Acceptance  | 0                     | 0 | 1 | 0 |
| 4. Personal Success     | 0                     | 0 | 0 | 1 |



Table 4

*Study 1 Regression Coefficients for Comparisons of Experimental Conditions with the Control Condition for Self-Esteem*

| Relationship Outcome     | Commitment |     |         |        |     |         | Closeness |     |         |        |     |         | Satisfaction |     |         |        |     |         |
|--------------------------|------------|-----|---------|--------|-----|---------|-----------|-----|---------|--------|-----|---------|--------------|-----|---------|--------|-----|---------|
|                          | Step 1     |     |         | Step 2 |     |         | Step 1    |     |         | Step 2 |     |         | Step 1       |     |         | Step 2 |     |         |
|                          | B          | SE  | $\beta$ | B      | SE  | $\beta$ | B         | SE  | $\beta$ | B      | SE  | $\beta$ | B            | SE  | $\beta$ | B      | SE  | $\beta$ |
| Self-Esteem (SE)         | .52        | .09 | .27*    | .33    | .21 | .17*    | .63       | .13 | .24*    | .33    | .2  | .17*    | .36          | .06 | .30*    | .25    | .13 | .21*    |
| Romantic Rejection (RR)  | .1         | .17 | .04     | .09    | .18 | .03     | .5        | .24 | .12     | .37    | .24 | .1      | .12          | .11 | .06     | .11    | .11 | .06     |
| Personal Failure (PF)    | .13        | .17 | .04     | .11    | .18 | .04     | .4        | .24 | .1      | .34    | .24 | .1      | .07          | .11 | .04     | .07    | .11 | .04     |
| Romantic Acceptance (RA) | -.13       | .17 | -.05    | -.13   | .17 | -.05    | .19       | .24 | .05     | .19    | .24 | .05     | .08          | .11 | .05     | .08    | .11 | .05     |
| Personal Success (PS)    | .06        | .17 | .02     | .07    | .17 | .02     | .27       | .24 | .07     | .28    | .24 | .07     | .16          | .11 | .09     | .16    | .11 | .09     |
| SE X RR                  |            |     |         | .53    | .32 | .11     |           |     |         | .6     | .43 | .1      |              |     | .3      | .2     | .18 |         |
| SE X PF                  |            |     |         | -.04   | .29 | -.01    |           |     |         | .24    | .4  | .04     |              |     | .01     | .18    | .17 |         |
| SE X RA                  |            |     |         | .37    | .28 | .1      |           |     |         | .38    | .37 | .1      |              |     | .14     | .17    | .17 |         |
| SE X PS                  |            |     |         | .14    | .29 | .03     |           |     |         | .06    | .4  | .01     |              |     | .14     | .19    | .18 |         |

\*  $p < .05$

Table 5

*Study 1 Regression Coefficients for Comparisons of Experimental Conditions with the Control Condition for RCSE*

| Relationship Outcome     | Commitment |     |         |        |      |         | Closeness |     |         |        |     |         | Satisfaction |     |         |        |     |         |
|--------------------------|------------|-----|---------|--------|------|---------|-----------|-----|---------|--------|-----|---------|--------------|-----|---------|--------|-----|---------|
|                          | Step 1     |     |         | Step 2 |      |         | Step 1    |     |         | Step 2 |     |         | Step 1       |     |         | Step 2 |     |         |
|                          | B          | SE  | $\beta$ | B      | SE   | $\beta$ | B         | SE  | $\beta$ | B      | SE  | $\beta$ | B            | SE  | $\beta$ | B      | SE  | $\beta$ |
| RCSE                     | .63        | .06 | .45*    | .61    | .13  | .43*    | .66       | .09 | .35*    | .81    | .18 | .43*    | .24          | .04 | .28*    | .21    | .08 | .19*    |
| Romantic Rejection (RR)  | .05        | .16 | .02     | .03    | .16  | .01     | .44       | .23 | .11     | .44    | .23 | .11     | .11          | .11 | .06     | .1     | .11 | .06     |
| Personal Failure (PF)    | .1         | .16 | .03     | .09    | .16  | .03     | .37       | .23 | .1      | .36    | .23 | .09     | .05          | .11 | .03     | .05    | .11 | .03     |
| Romantic Acceptance (RA) | -.11       | .16 | -.04    | -.1    | .16  | -.04    | .22       | .23 | .06     | .21    | .23 | .06     | .09          | .11 | .05     | .11    | .11 | .06     |
| Personal Success (PS)    | .03        | .16 | .01     | .03    | .16  | .01     | .24       | .23 | .06     | .24    | .23 | .06     | .16          | .11 | .09     | .17    | .11 | .09     |
| RCSE X RR                |            |     |         | .02    | .02  | .05     |           |     |         | -.02   | .03 | -.04    |              |     | .01     |        | .01 | .08     |
| RCSE X PF                |            |     |         | -.03   | -.08 | -.08    |           |     |         | -.03   | .03 | -.06    |              |     | .01     |        | .01 | .08     |
| RCSE X RA                |            |     |         | .1     | .03  | .03     |           |     |         | -.01   | .03 | -.02    |              |     | .02     |        | .01 | .09     |
| RCSE X PS                |            |     |         | .01    | .03  | .03     |           |     |         | -.02   | .02 | -.06    |              |     | .01     |        | .01 | .01     |

Note. RCSE stands for Relationship-Contingent Self-Esteem.

\*  $p < .05$