Interpersonal Consequences of Seeking Self-Esteem

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This study examines the interactive effects of self-esteem, contingencies of self-worth, and ego threat on supportiveness and liking. Targets high or low in self-esteem and academic contingency receive failure test feedback or no evaluative feedback. Then, targets interact with another participant who discloses a personal problem; afterward, both participants complete questionnaires assessing targets' supportiveness and liking. High self-esteem, highly contingent targets feel less supportive and like partners less after interacting under threat than under no threat. Partners, in turn, perceive these targets to be less supportive and less likeable. Low self-esteem, highly contingent targets show the reverse pattern, although these findings do not reach statistical significance. Further analyses reveal that the interpersonal effects of ego threat were caused by threats in a specific domain of contingency (e.g., academics) rather than being a contingent person in general or having external or internal contingent self-worth. Implications for self-esteem and interpersonal processes are discussed.

Keywords: *self-esteem; contingencies of self-worth; ego threat; interpersonal relationships; person perception*

During the past few decades, psychologists and the public have viewed self-esteem as a solution to social problems, including high drop-out rates, teenage pregnancy, drug and alcohol abuse, eating disorders, and interpersonal aggression (e.g., Mecca, Smelser, & Vasconcellos, 1989). In popular culture, more than 2,000 self-help books, audiotapes, and childrearing manuals have been developed to enhance people's self-esteem, with the assumption that high self-esteem (HSE) leads to a more successful, satisfying life (Branden, 1994; Miller, 2001). In academia, thousands of journal articles have examined the correlates of self-esteem, reflecting the field's continual interest in this topic. However, little evidence shows that HSE actually causes people to experience more positive objective outcomes in life or that low self-esteem (LSE) causes social problems (see Baumeister, Campbell, Krueger, & Vohs, 2003, for a review). Consequently, researchers have recently adopted more complex views of self-esteem. In addition to level of self-esteem (i.e., whether it is high or low), more nuanced, multifaceted aspects of self-esteem have emerged, such as whether self-esteem is contingent or noncontingent (Deci & Ryan, 1995), stable or unstable (Kernis & Waschull, 1995), and the specific domains on which people base their self-esteem (i.e., contingencies of self-worth [CSWs]; Crocker & Wolfe, 2001). Although these perspectives agree that there is more to self-esteem than whether it is high or low, they differ in which aspects of self-esteem are thought to be particularly important. In the present study, we focus on CSWs, in addition to level of self-esteem, in predicting interpersonal supportiveness and liking following an academic ego threat.

Researchers differ as to whether contingent self-worth should be conceived of as a broad trait or a domain-specific phenomenon. Deci and Ryan (1995, 2000) and Kernis (2003) distinguish between people

Authors' Note: The research reported in this article was supported by a National Science Foundation Graduate Research Fellowship awarded to Lora Park and National Institute of Mental Health Grants R01 MH58869-01 and K02 MH01747-01 awarded to Jennifer Crocker. We gratefully acknowledge Sana Ashraf, Juliana Breines, Aaron Brink, and Jason Fountain for their assistance with data collection and thank members of the Contingencies of Self-Esteem Lab at the University of Michigan for their valuable feedback. We also thank Monique Fleming, Adam Grant, and Yu Niiya for helpful comments on an earlier draft of the article. Portions of this research were presented at meetings of the American Psychological Society in New Orleans, Louisiana (June 2002), and the Society for the Psychological Study of Social Issues in Toronto, Canada (June 2002). Correspondence concerning this article should be addressed to Lora E. Park, who is now at the Department of Psychology, University at Buffalo, State University of New York, Park Hall, Buffalo, NY 14260; e-mail: lorapark@buffalo.edu.

PSPB, Vol. 31 No. 11, November 2005 1587-1598
DOI: 10.1177/0146167205277206

with contingent self-esteem, who feel pressure to meet expectations or standards of value, and those with noncontingent or true self-esteem, whose self-esteem is rooted in unconditional self-acceptance. Although noncontingent self-esteem is associated with authenticity and intrinsic motivation (Ryan & Brown, 2003), contingent self-esteem is associated with feelings of conflict, guilt, pressure (Deci & Ryan, 1995), anxiety, poor coping following failure (Grolnick & Ryan, 1989), and unstable, fragile self-esteem (Kernis, 2003; Kernis & Paradise, 2002). In contrast, Crocker and Wolfe (2001) focus on the specific domains on which self-esteem is based. According to Crocker and Wolfe, people differ in their contingencies of self-worth (Crocker, Luhtanen, Cooper, & Bouvrette, 2003), and these contingencies create specific vulnerabilities to events (Crocker, Sommers, & Luhtanen, 2002). Because most people possess CSWs, the crucial issue according to Crocker and Wolfe is not whether a person has contingent or noncontingent self-esteem but, rather, what their CSWs are.

Between these two positions is the view that external CSWs are more vulnerable to threats than internal contingencies. According to Crocker et al. (2003), contingencies span a continuum from relatively external to internal. External contingencies (e.g., academic competence, others' approval) depend on external events, feedback, or others' validation, thus making people especially vulnerable to external threats. In contrast, internal contingencies (e.g., virtue, God's love) depend less on external events and more on the person's appraisal of himself or herself, thereby reducing one's vulnerability to threats. In the present study, we examine whether academically contingent self-worth, general contingent self-worth, or externally versus internally contingent self-worth best predicts how people with HSE versus LSE respond interpersonally to an academic ego threat.

Self-Esteem, CSWs, and Interpersonal Behavior

In a recent review of the literature, Baumeister et al. (2003) concluded that HSE does not cause people to have more positive social or interpersonal outcomes. Rather, research indicates that the likeability of HSE and LSE people depends on ego threat. For example, Heatherton and Vohs (2000) found that HSE people were no more likeable than LSE people in the absence of ego threat, but when their self-esteem was threatened, HSE people became more antagonistic and were liked less by others, whereas LSE people were liked more after threat than in the absence of threat. Follow-up studies revealed that differences in likeability were caused by differences in self-construal following threat; HSE people viewed themselves as more independent after an ego threat, focusing on their goals, traits, and accomplishments, whereas LSE people viewed themselves as more interdependent after a threat, focusing on their group memberships and interpersonal relationships (Vohs & Heatherton, 2001). These studies, however, focused exclusively on self-esteem level to the neglect of the specific domains on which self-esteem is based (i.e., their CSWs).

We suggest that interpersonal effects of ego threat depend on how much people's self-worth is contingent on the domain of threat. Specifically, after a threat, HSE people should become less likeable, and LSE people should become more likeable, but only when the threat is in a domain of contingency. Because HSE people typically possess positive and confident self-views (Baumeister, 1998; Campbell, 1990), after an ego threat, they are likely to refute the threat by focusing more on their strengths and downplaying their weaknesses (Dodgson & Wood, 1998). This should be true primarily when self-worth is invested in the domain of the threat. Thus, when HSE people's competencies are threatened in a contingent domain, they may attempt to refute the threat at the expense of their interpersonal relationships, leading them to be less attentive to others' needs, liking others less, and becoming less likeable. In other words, after a threat to a domain of contingency, HSE people should become preoccupied with disproving the threat and less concerned about others' needs, leading them to be less liked.

In contrast to HSE people, LSE people hold less positive and less certain self-views (Baumeister, 1993; Campbell, 1990). In response to competency ego threats, LSE people focus more on their relationships (Vohs & Heatherton, 2001). Again, this should be true primarily when self-worth is invested in the domain of the threat. Consequently, we predict that when LSE people receive a threat to a domain in which their self-esteem is invested, they may abandon direct attempts to repair their self-esteem and instead cope by becoming more interpersonally responsive and likeable.

Overview of Present Study

The present study examined the interpersonal consequences of an academic ego threat as a function of level of self-esteem and academically contingent self-worth. Extending Heatherton and Vohs's (2000) findings, we expected HSE participants who were highly contingent in the threatened domain (academics) to become less supportive and less likeable, whereas LSE highly contingent participants would become more supportive and likeable following a threat. Furthermore, we examined whether these effects were caused by having academically contingent self-worth, contingent self-worth in general, or externally versus internally contingent self-worth.

METHOD

Participants[1]

One hundred and sixty undergraduates (88 males and 72 females) participated for credit toward their introductory psychology class. In each experimental session, participants were paired with a same-sex unacquainted partner, producing a total of 80 dyads (44 male-male dyads and 36 female-female dyads). Participants ranged in age from 17 to 22 (M = 19.1, SD = 1.18). Seventy-two percent of the sample was White or European American, 16% was Asian or Pacific Islander, 2% was Hispanic or Latino, 4% was African American, and the remaining 6% identified themselves as Other.

Procedure

Participants were scheduled in pairs. Prior to arrival, one of the participants (target) was randomly assigned to be in the ego threat or no threat condition; the other participant was assigned the role of partner. On arriving at the laboratory, participants were informed that the purpose of the study was to examine how people's attitudes about the self and others influence cognition and communication. Participants were then taken to separate rooms where they completed a packet of pretest questionnaires. After completing these preliminary measures, target participants in the ego threat condition were given a Graduate Record Examination (GRE) test containing 15 analogies that had been shown in pilot testing to be very difficult items. Participants were told the following:

> This test contains questions from an actual GRE test that measures people's verbal ability. The GRE, like the SAT, is a diagnostic test that measures people's academic aptitude and is used by graduate schools in evaluating and admitting students. People who score high on these tests also tend to have higher GPAs and a higher probability of being accepted into graduate school programs and successful in the job market. The average Michigan student scores 11/15 questions correctly on this test. Please read the directions at the top of this page and record your answers on the bubble sheet provided. You will have 10 minutes to complete the test. After the 10 minutes, the experimenter will come back into the room and collect everything.

After 10 min, the experimenter collected the test materials, went to another room ostensibly to grade the test and returned a few minutes later with the target participant's answer sheet and score. Participants in the ego threat condition were always told that they scored a total of 8 out of 15 questions correct on the GRE test; they could see their incorrect answers marked in red on the answer sheet page, and they were also verbally informed by the experimenter of their below-average score, thus constituting the ego threat condition.

In contrast, target participants in the no threat condition completed the same set of analogies, but the task was not described as a verbal abilities test, and they did not receive any evaluative feedback. They were told the following:

> In this task, we are interested in the cognitive associations that people have about different words. In particular, we are interested in how people process verbal information in order to form judgments about word pairs. There are no right or wrong answers to these questions, so you do not need to spend too much time trying to find the "correct" answer. Please read the directions at the top of this page and record your answers on the bubble sheet provided. You will have 10 minutes to work on this task. After 10 minutes, the experimenter will come back into the room and collect everything.

Meanwhile, partners wrote an essay about a personal problem they were currently facing in their lives and were told that they would later discuss their problem with the other student. Next, the target participant and partner were brought into the same room, and the partner was instructed to disclose his or her personal problem to the target and discuss it for 10 min. After the interaction, participants returned to their separate rooms and completed an interpersonal perceptions and liking questionnaire. As a manipulation check, target participants completed a mood measure assessing how they had felt after they completed the GRE test or the word association task. Finally, all participants were debriefed, thanked, and given course credit.

Pretest Measures

Contingencies of Self-Worth Scale (CSWS). The CSWS (Crocker et al., 2003) was included to assess the domains on which participants based their self-worth. It assesses seven domains of contingency, ranging from external to internal: others' approval, appearance, competition, academics, family support, virtue, and God's love. Of particular interest were the academic contingency items; participants rated on a 7-point Likert-type scale (1 = *strongly disagree* and 7 = *strongly agree*) how much they agreed with statements such as "I feel better about myself when I know I'm doing well academically" and "My self-esteem gets a boost when I get a good grade on an exam or paper." Internal consistency of this subscale was .84.

Rosenberg Self-Esteem Inventory (RSEI). Trait self-esteem was assessed with the RSEI (Rosenberg, 1965), a 10-item measure of global self-esteem. Participants indicated on a 7-point Likert-type scale (1 = *strongly disagree* and 7 = *strongly agree*) how much they agreed with items such as "On the whole, I am satisfied with myself." The RSEI has

high internal consistency (in this sample, $\alpha = .73$), has high test-retest reliability, and has been demonstrated in numerous studies to be a valid measure of self-esteem (see Blascovich & Tomaka, 1991, for a summary).

Participants also completed a demographic questionnaire assessing age, gender, race, and grade point average, as well as two filler questionnaires intended to disguise the true purpose of the study. The filler questionnaires were the Protestant Ethic Scale (Mirels & Garrett, 1971), which measures the extent to which individuals endorse hard work, self-discipline, and personal responsibility for their outcomes, and the Moral Conservatism Scale (Wald, Owen, & Hill, 1988), which measures the extent to which individuals endorse conservative values.

Posttest Measures

Interpersonal perceptions scale. After the interaction, participants completed either the target's version of the questionnaire or the partner's version of the questionnaire. Target participants rated on 7-point Likert-type scales (1 = *not at all* and 7 = *very much*) how much their behavior toward their partner was the following: supportive, compassionate, preoccupied (reverse scored), not empathic (reverse scored), helpful, giving advice, listening, bored (reverse scored), not invested in the other person's problem (reverse scored), relating to the other person's feelings, relating to the other person's problem, not caring (reverse scored), understanding, sympathetic, interested, focused, not concerned (reverse scored), and interrupting (reverse scored). Partners rated targets on the same dimensions. A supportiveness index was computed by averaging the 18 items after reverse scoring; Cronbach's alpha was .74 for targets' self-ratings and .94 for partners' ratings of targets. In addition, participants indicated how much they liked the other person, how much they wanted to interact with him or her again, and how much they wanted to disclose a personal problem to him or her in the future. These 3 items were averaged to create an index of liking. Cronbach's alphas were .79 for targets' liking of partners and .87 for partners' liking of targets.

Mood scale. Finally, as a manipulation check, all target participants were asked to think back to when they had completed their respective tasks (i.e., GRE test for ego threat participants and word associations task for no threat participants) and fill out a mood scale assessing how they had felt immediately after they completed the task (for ego threat participants, immediately after they received feedback on the GRE test). Participants were asked to rate on a 7-point Likert-type scale (1 = *not at all* and 7 = *very much*) how much they had felt hostility (e.g., angry, mad, annoyed, and irritated; $\alpha = .86$), dysphoria (e.g., unhappy, sad, fearful, blue, and hopeless; $\alpha = .81$), and positive affect (e.g., friendly, agreeable, and energetic; $\alpha = .69$).[2]

RESULTS

Analysis Plan

We first assessed the effectiveness of the ego threat manipulation. Next, we conducted a series of multiple regression analyses examining targets' self-rated supportiveness and liking of partners and then partners' ratings of targets' supportiveness and likeability.[3] In these analyses, ego threat was dummy coded as –1 versus 1 (no threat versus ego threat condition, respectively), and self-esteem and academic contingency scores were centered to reduce multicollinearity. Finally, we examined whether these effects were caused by contingent self-worth in general, externally contingent self-worth, or internally contingent self-worth.

Table 1 presents the means, standard deviations, and zero-order correlations for targets' self-esteem, academic contingency, and targets' and partners' scores on the dependent measures. Table 2 shows means, standard deviations, and post hoc comparisons for groups based on participants' self-esteem and academic contingency based on median splits. HSE high academically contingent participants based their self-esteem most on family support and least on God's love, with the other contingencies falling in between. Comparing between groups, HSE high academically contingent participants were more contingent on family support and appearance than were LSE low academically contingent participants and were more contingent on external domains overall than were HSE low academically contingent participants. Besides these differences, HSE high academically contingent participants did not differ significantly from the other groups in any other contingency.

Manipulation Check

Multiple regression analyses with ego threat as the independent variable and hostility, dysphoria, and positive affect as the dependent variables were conducted to examine the effectiveness of the ego threat manipulation. Participants in the ego threat condition felt more hostile ($\beta = .37$, $p < .01$), more dysphoric ($\beta = .37$, $p < .01$), and less positive affect ($\beta = -.26$, $p < .05$) than participants in the no threat condition. Ego threat did not interact with self-esteem or contingency to predict hostility ($ps > .42$), dysphoria ($ps > .29$), or positive affect ($ps > .88$). Beyond the significant effect of ego threat, the only main effect was self-esteem predicting dysphoric mood ($\beta = -.35$, $p < .01$).

Next, we conducted a series of multiple regression analyses with ego threat, academic contingency, self-esteem, and their interactions simultaneously entered to

TABLE 1: Means, Standard Deviations, and Correlations Among Targets' Self-Esteem, Academic Contingency of Self-Worth (CSW), and Dependent Measures

	1. Self-Esteem	*2. Academic CSW*	*3. Targets' Self-Rated Supportiveness*	*4. Targets' Liking of Partners*	*5. Partners' Ratings of Targets' Supportiveness*	*6. Partners' Liking of Targets*
M	5.37	5.40	5.18	5.09	5.12	4.94
SD	0.85	0.77	0.77	1.04	0.95	1.14
n	80	80	80	80	80	80
1.	—	—	—	—	—	—
2.	–.28	—	—	—	—	—
3.	–.00	.09	—	—	—	—
4.	–.04	–.05	.42**	—	—	—
5.	–.10	.11	.39**	.06	—	—
6.	.06	.06	.25*	.23*	.64**	—

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

predict targets' self-ratings and partners' ratings, respectively. To examine whether alternative conceptualizations of contingent self-esteem could explain our effects, we conducted a series of analyses examining general contingency, external contingency, and internal contingency. First, we computed centered scores for general contingency, external contingency, and internal contingency, respectively, and then used these measures in place of the academic contingency score.[4] We also computed a pure academic contingency score by partialling out the other contingencies from the academic contingency score and used this revised academic contingency score to examine the unique effect of academic contingency on our dependent variables.

Targets' Self-Ratings

Supportiveness. Regression analysis with supportiveness as the dependent variable revealed a significant main effect of threat ($\beta = -.22$, $p < .04$), an Academic Contingency × Self-Esteem interaction ($\beta = -.33$, $p < .01$), an Academic Contingency × Threat interaction ($\beta = -.21$, $p < .07$), and a Self-Esteem × Threat interaction ($\beta = -.39$, $p < .01$) qualified by a significant Academic Contingency × Self-Esteem × Threat interaction ($\beta = -.35$, $p < .01$).

Figure 1 shows the expected values for targets' self-rated supportiveness at 1 *SD* above and 1 *SD* below the mean of self-esteem and academic contingency in the threat and no threat conditions. Next, we examined the simple effects of self-esteem separately in the threat and no threat conditions at 1 *SD* above and 1 *SD* below the mean of academic contingency, as recommended by Aiken and West (1991). Both analyses showed, as expected, that self-esteem negatively predicted targets' self-rated supportiveness in the ego threat condition but only among highly contingent participants ($\beta = -.85$, $p < .001$). Self-esteem was nonsignificantly positively related to self-rated supportiveness among less contingent targets in the threat ($\beta = .12$, *ns*) and no threat ($\beta = .31$, $p < .10$) conditions and significantly positively related to supportiveness among highly contingent targets in the no threat condition ($\beta = .53$, $p < .001$).

Next, we replaced academic CSW scores with general contingency, external contingency, internal contingency, and then academic CSW with the other contingencies partialled out in the analysis. The strong, negative effect of self-esteem on supportiveness among highly contingent participants in the ego threat condition was only marginally significant with general contingency in the analysis ($\beta = -.38$, $p < .10$); the effect was significant but smaller with external contingencies ($\beta = -.49$, $p < .05$), was nonsignificant with internal contingencies ($\beta = -.26$, $p > .10$), and remained very strong when we examined the effect of academic CSW with other contingencies partialled out ($\beta = -.79$, $p < .001$). These results confirm that higher self-esteem is related to less supportiveness following an academic ego threat but only for highly contingent participants and most noticeably among those who are contingent on academics.

Targets' liking of partners. Next, we examined targets' liking for their partners. Multiple regression analyses revealed a significant Academic Contingency × Self-Esteem × Threat interaction ($\beta = -.31$, $p < .02$). No other main effects or interactions were significant. Figure 2 shows the expected values for targets' liking of partners at 1 *SD* above and 1 *SD* below the mean of self-esteem and academic contingency in the threat and no threat conditions. Computing the simple effect of self-esteem in the threat and no threat conditions at 1 *SD* above and 1 *SD* below the mean of academic CSW, we found that among highly contingent participants who received an ego threat, higher self-esteem was associated with decreased liking for partners ($\beta = -.59$, $p < .05$). Self-esteem was not significantly related to liking for partners

TABLE 2: Means, Standard Deviations, and Post Hoc Comparisons Among Self-Esteem and Academic Contingency of Self-Worth (CSW) Groups

Self-Esteem	*Academic CSW*	*Group* n	*God's Love* M	SD	*Virtue* M	SD	*Family Support* M	SD	*Others' Approval* M	SD	*Physical Appearance* M	SD	*Competition* M	SD	*General Contingency*[a] M	SD	*External Contingency*[b] M	SD	*Internal Contingency*[c] M	SD
High	High	16	3.94_{a1}	1.64	5.58_{a2}	0.83	6.23_{a3}	0.65	5.08_{ab12}	1.00	4.46_{ab12}	0.84	5.08_{ac12}	0.54	5.06_{abc1}	0.16	4.88_{acd1}	0.19	5.25_{a1}	0.25
High	Low	20	4.60_{a14}	1.14	4.93_{a12}	1.05	6.08_{ab3}	0.57	4.33_{a1}	1.01	3.55_{a4}	1.25	4.48_{ab1}	1.18	4.66_{ab1}	0.14	4.12_{b2}	0.17	5.21_{a3}	0.22
Low	High	24	4.33_{a1}	1.80	5.46_{a12}	1.42	6.14_{a3}	0.96	5.17_{b1}	0.97	4.94_{b1}	1.09	5.46_{c1}	1.42	5.25_{c1}	0.13	5.19_{ac1}	0.15	5.31_{a1}	0.20
Low	Low	20	3.79_{a1}	1.83	4.95_{a23}	0.78	5.33_{b3}	1.25	4.75_{ab123}	0.98	4.53_{b123}	0.80	4.95_{b12}	0.78	4.58_{ab1}	0.15	4.51_{bd1}	0.17	4.69_{a1}	0.23
Total		80	4.19	1.63	5.23	1.10	5.95	0.96	4.84	1.03	4.39	1.14	5.23	1.10	4.90	0.69	4.69	0.85	5.91	1.00

NOTE: Within columns, means not showing a common letter subscript differ at $p < .05$ or more according to the Bonferroni method. Within rows, means not showing a common numerical subscript differ at $p < .05$ or more according to the Bonferroni method.

a. General contingency = all CSW subscales but Academic CSW.

b. External contingency = Others' Approval, Appearance, and Competition CSW subscales.

c. Internal contingency = Virtue, God's Love, and Family Support CSW subscales.

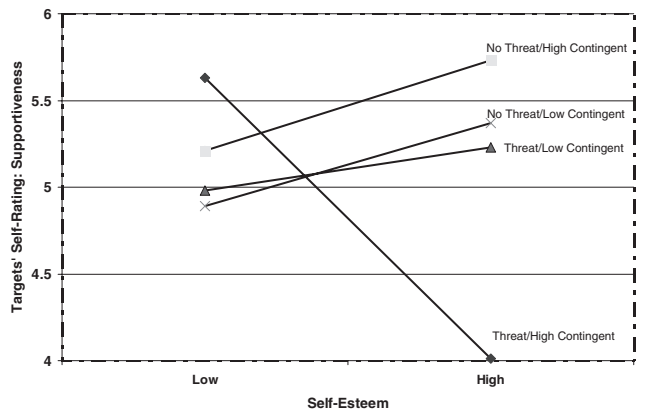

Figure 1 Expected value of targets' self-rated supportiveness as a function of academic contingency and self-esteem (ego threat and no threat conditions).
NOTE: Means are plotted at 1 *SD* above and 1 *SD* below the mean for academic contingency and level of self-esteem.

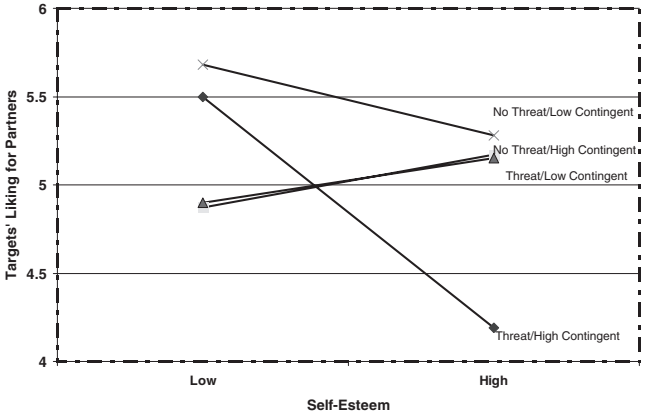

Figure 2 Expected value of targets' liking of partners as a function of academic contingency and self-esteem (ego threat and no threat conditions).
NOTE: Means are plotted at 1 *SD* above and 1 *SD* below the mean for academic contingency and level of self-esteem.

among less contingent targets in the threat (β = .11) or no threat (β = –.23) conditions or among highly contingent targets in the no threat condition (β = .18).

When academic CSW scores were replaced with general contingency, external contingency, and internal contingency, the simple effect of self-esteem among highly contingent, threatened targets was not significant (βs = –.32, –.30, and –.30, respectively). When academic CSW with the other contingencies partialled out was used in this analysis, the strong, negative effect of self-esteem on liking for partners among highly contingent targets in the ego threat condition remained significant (β = –.65, $p <$ .05). Thus, higher self-esteem predicted decreased liking of partners following threat, but again, this was only for targets who were academically contingent and not generally, externally, or internally contingent.

Partners' Ratings

Next, we analyzed partners' ratings of targets as a function of targets' self-esteem, academic contingency, and threat condition.

Supportiveness. Multiple regression analyses of partners' ratings of targets' supportiveness showed that the Academic Contingency × Self-Esteem × Threat interaction was not significant (β = –.11, $p <$ .38), so we excluded this term and reran the analysis. The trimmed model revealed significant interactions of Academic Contingency × Self-Esteem (β = –.27, $p <$ .03), Academic Contingency × Threat (β = –.30, $p <$ .02), and Self-Esteem × Threat (β = –.27, $p <$ .03). Because we were specifically interested in how partners perceived targets as a function of target's self-esteem and contingency in the threat and no threat conditions, in Figure 3, we plotted the effect of self-esteem on partners' judgments of targets' supportiveness in the threat and no threat conditions at 1 *SD* above and below the mean for self-esteem and academic contingency. We then computed the simple effect of self-esteem in the threat and no threat conditions among high and low academically contingent participants. For highly academically contingent targets in the threat condition, higher self-esteem was negatively related to partners' perceptions of targets' supportiveness (β = –.72, $p <$ .01); the simple effect of self-esteem was nonsignificant for low contingent threatened targets (β = .03), for highly contingent targets in the no threat condition (β = .00), and for low contingent targets under no threat (β = .38, *ns*).

Furthermore, the simple effect of self-esteem among highly contingent threatened targets was not significant when academic CSW scores were replaced with general contingencies (β = –.34) or internal contingencies (β = –.18). The simple effect of self-esteem under ego threat was significant but weaker when academic CSW was replaced with external contingencies in the analysis (β = –.48, $p <$ .05) but remained highly significant when academic CSW with other contingencies partialled out was used in the analysis (β = –.74, $p <$ .05). Thus, higher self-esteem among targets predicted decreased perceptions of supportiveness but only among highly contingent threatened targets, and this effect was again caused specifically by the academic CSW.

Partners' liking of targets. Multiple regression analysis of partners' liking of targets indicated that the three-way interaction was not significant (β = –.19, $p <$ .16), so we excluded this term and reran the analysis, which revealed a marginally significant Academic Contingency × Self-Esteem interaction (β = –.20, $p <$ .08). In the threat condition, there was a significant Academic Contingency × Self-Esteem interaction (β = –.41, $p <$ .03). This effect was not significant under no threat. The simple

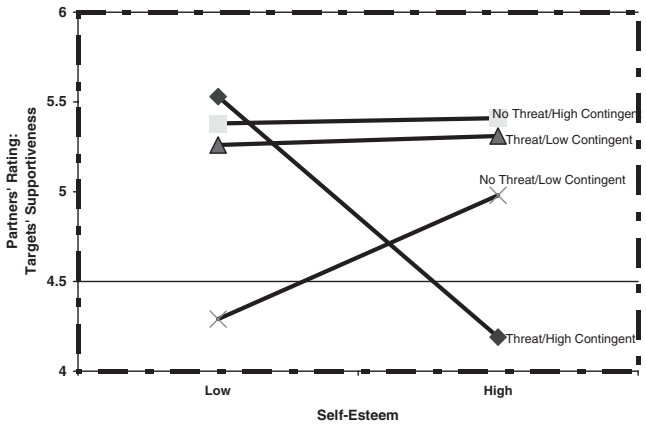

Figure 3 Expected value of partners' ratings of targets' supportiveness as a function of targets' academic contingency and self-esteem (ego threat and no threat conditions).
NOTE: Means are plotted at 1 *SD* above and 1 *SD* below the mean for academic contingency and level of self-esteem.

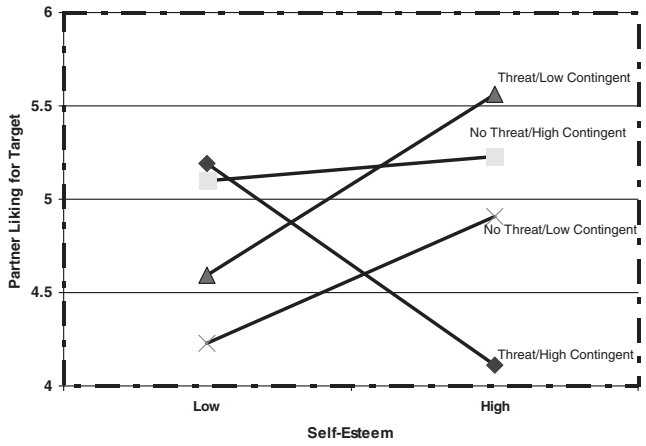

Figure 4 Expected value of partners' liking of targets as a function of targets' academic contingency and self-esteem (ego threat and no threat conditions).
NOTE: Means are plotted at 1 *SD* above and 1 *SD* below the mean for academic contingency and level of self-esteem.

effect of targets' self-esteem on partners' liking for targets was negative for highly contingent targets ($\beta = -.47$, $p < .10$) and positive for low contingent targets ($\beta = .39$, $p < .10$). The simple effect of self-esteem was not significant in the no threat condition either for both highly contingent ($\beta = .05$) and low contingent ($\beta = .33$) targets. Figure 4 illustrates these effects.

The simple effect of targets' self-esteem on partners' liking for targets among highly contingent threatened targets was not significant when academic CSW scores were replaced in the analysis with general contingency ($\beta = -.00$), internal contingencies ($\beta = .21$), or external contingencies ($\beta = -.20$) and remained marginally significant when academic CSW with other contingencies partialled out was used in the analysis ($\beta = -.47$, $p < .10$). Thus, higher self-esteem among targets was marginally related to partners liking targets less only among highly contingent threatened targets, and this effect was caused specifically by the academic contingency.

In sum, although the three-way interactions did not reach significance, the pattern of partners' ratings of targets' supportiveness and likeability was consistent with targets' self-ratings and targets' liking for their partners. Specifically, higher self-esteem among targets was associated with decreased perceived target supportiveness and partner liking of targets but only under threat and only for high academically contingent participants.

DISCUSSION

The results of this study show that the interactive effects of self-esteem and ego threat on supportiveness and likeability depend on how contingent targets are in the threatened domain. Among targets who received an academic threat and had contingent self-worth in the academic domain, higher self-esteem targets rated themselves as less supportive, liked their partners less, and were rated as less supportive and less likeable by their partners than lower self-esteem targets. This negative effect of self-esteem on supportiveness and liking was not observed and in some cases reversed for targets who were less contingent in the academic domain or targets who were not threatened. The effects of ego threat in a contingent domain on targets' supportiveness and liking as a function of self-esteem were not significant when we replaced the academic contingency with general contingency or internal contingencies and were sometimes significant but not as strong or consistent when external contingencies were used in the analyses. Taken together, these findings suggest that it is specifically being contingent in the academic domain that interacts with ego threat in the academic domain and not more general versions of contingent self-worth.[5] Supporting this claim, we also found that when the other contingencies were partialled out from the academic contingency score, the effects of academic contingency remained highly significant.

Taken together, these results advance our understanding of the conditions under which self-esteem and ego threat affect interpersonal processes. First, although Heatherton and Vohs (2000) examined only level of self-esteem, the present study extended this work by investigating the interaction between self-esteem and CSWs under ego threat. Consistent with Heatherton and Vohs's (2000) research, we found that HSE targets became less supportive and less likeable under ego threat but that this was true only of targets who were highly contingent in the domain of the threat. Also consistent with Heatherton and Vohs, we found that in the absence of threat, HSE participants judged themselves

to be more supportive than LSE participants regardless of their level of contingency; however, these effects did not extend to partners' ratings of targets' supportiveness or partners' liking for targets, suggesting that this effect may be caused by a bias in self-perception rather than any observable differences in behavior. Our results did not consistently replicate Heatherton and Vohs's (2000) finding that LSE targets are more likeable following ego threat than in the absence of ego threat, although the effects were in the expected direction.

The inconsistencies between our results and those of Heatherton and Vohs (2000) may be attributable to differences in our methods. Although aspects of our study are similar to Heatherton and Vohs's (2000), it also differs in several important ways. The present study used a less structured, more realistic social support dyadic interaction than the structured interview format used by Heatherton and Vohs (2000). Although error variance may have been reduced with a structured format, we think the less structured situation we created provides a better sense of how people actually perceive themselves and others in the context of spontaneous supportive interactions. Also, although Heatherton and Vohs (2000) focused primarily on partners' liking of targets, the present study examined both targets' and partners' liking of each other.

One striking finding of the present study is the apparently high degree of self-awareness shown by the HSE highly contingent targets under threat. Specifically, the parallel findings for targets and partners regarding targets' supportiveness and liking suggest that targets were aware of their lack of empathy and support for partners who were discussing their personal problems. This suggests that the level of distress or disruption created by ego threat in a contingent domain is sufficiently strong to break through any illusions these participants might have about their supportiveness.

Implications for Self-Esteem

This study advances our understanding of the role of specific contingencies, general contingency, and external versus internal CSWs in response to ego threats. We found strong support for our hypothesis that ego threats interact with self-esteem and specific CSWs to shape interpersonal outcomes. Indeed, none of the effects of academic contingency were found for general contingency or internal contingencies, and the effects with external contingencies were not as strong or consistent across the dependent measures. These findings suggest that when predicting responses to ego threats, the important distinction between people is not whether they have contingent self-worth or not but, rather, whether their self-worth is contingent in the particular domain of the threat. We have found that nearly all college students are contingent in at least one of the domains assessed by the CSWS (Crocker et al., 2003). Thus, in contrast to Kernis (2003) and Deci and Ryan (1995), we think that it is more useful to identify people's specific beliefs about what they need to be or do to have worth than it is to distinguish people with contingent self-esteem from those with noncontingent self-esteem.

Furthermore, the results of the present study do not appear to be caused by having external rather than internal CSWs. The pattern of results for external contingencies was similar to those found with the academic contingency but not as strong or consistent. Furthermore, when we partialled out all other contingencies from the academic contingency, the interactive effects of ego threat, self-esteem, and contingency remained significant. For internal contingencies, we did not find any significant effects for targets' or partners' ratings as a function of being highly contingent and receiving an ego threat or no threat. In fact, most of the action was among the low contingency group; among low internally contingent participants under ego threat, higher self-esteem predicted less self-rated supportiveness, whereas under no threat, it predicted greater supportiveness and liking of partners. Future research is needed to determine whether threats to internal domains, such as virtue, lead to interpersonal outcomes similar to those observed in the present study.

Taken together, these findings support our contention that the importance of self-esteem lies not only in whether it is high or low but also in what people believe they need to be or do to have worth and value (Crocker & Park, 2003, 2004; Crocker & Wolfe, 2001). These findings also raise the possibility that previous studies demonstrating the interactive effects of level of self-esteem and ego threat are obtained only when the ego threat impinges on a CSW. Indeed, as Crocker and Wolfe (2001) noted, most studies of the effects of ego threat manipulate threat in such domains as academics or others' approval, in which most college students are highly contingent. Thus, effects attributed to level of self-esteem may in fact often be caused by the interaction of level and contingency of self-esteem.

Potential Costs of CSWs for Relationships

The results of this study suggest that for HSE people, basing self-esteem on academics incurs interpersonal costs. We found that the more contingent HSE people were in a threatened domain (e.g., academics), the less supportive they felt toward another person's personal problems. Partners, in turn, perceived that targets did not care about their problems, which not surprisingly led them to like targets less and express less desire to interact with them again or disclose a personal problem to them in the future. Although this was a one-time inter-

action between strangers, with time and with repeated encounters, HSE people with contingent self-worth may seek first and foremost to repair their damaged self-esteem after an ego threat, leading them to be less attentive to others' needs, like others less, and become less likeable as a result. Along these lines, Paulhus (1998) found that people high in trait self-enhancement were initially rated positively by others but with time were viewed as highly self-promoting and less likeable. Along these lines, we propose that being highly contingent may be an interpersonal vulnerability for HSE people because threats to domains of contingency lead to negative interpersonal interactions that in the long run may interfere with their ability to form and sustain close, mutually supportive relationships with others.

Although the present study did not demonstrate the costs of contingent self-worth for the relationships of LSE people, other research suggests that the strategies LSE people use to deal with ego threats may undermine their relationships, especially in the context of close relationships or for longer periods of time. For example, Murray, Holmes, MacDonald, and Ellsworth (1998) found that after a self-threat, LSE people expressed less confidence in their partners' love and regard, distanced themselves from their partners, and devalued their romantic relationships. These findings are consistent with research showing that LSE people possess chronically accessible interpersonal schemas that link failure to rejection, making them highly contingent on others' acceptance (Baldwin & Sinclair, 1996; Murray, Bellavia, Feeney, Holmes, & Rose, 2001; Sommer & Baumeister, 2002). Although Murray et al. (2001) did not measure CSWs, they suggest that LSE people's negative interpersonal responses to self-threats may impede the formation and maintenance of close, mutually caring relationships with others. Accordingly, future research could examine the effects of ego threats and specific CSWs on a variety of close relationship outcomes.

Limitations and Future Directions

Several limitations of this research deserve mention. First, although we found that HSE highly academically contingent participants under threat became less supportive and less likeable after an ego threat, we did not identify exactly what these participants did that communicated to their partners that they were unsupportive or less likeable. Future studies could examine such questions by videotaping the interactions and having judges code for content (e.g., whether targets spent more time talking about themselves versus their partner's problem) and verbal and nonverbal behaviors (e.g., number of times targets interrupted partners). Second, because the present study relied on a one-time interaction between strangers, the generalizability of these findings to other types of relationships, such as friends and romantic partners, is unclear. Further research is needed to examine whether the effects observed in this study replicate among those who are in existing relationships and whether the desire to protect and maintain contingent self-worth comes at the expense of cultivating close, mutually caring relationships with others throughout time. Finally, this study did not examine why HSE high academically contingent participants became less supportive after an ego threat. HSE high academic contingency participants could have become less supportive because they became defensive and focused on self-enhancement, or they could have been miserable and withdrawn, which made them less supportive or likeable. Although we did not directly assess these possibilities, we think it is more likely that HSE high academically contingent people became less supportive because they were focused on disproving the threat and enhancing self-esteem; along these lines, previous research has shown that after an ego threat, HSE people tend to dismiss the validity of the negative feedback (Brockner, Derr, & Laing, 1987), devalue the importance of the domain in which they did poorly (Brown, Dutton, & Cook, 2001), and attribute the negative outcome to external or temporary causes (see Blaine & Crocker, 1993; Kernis & Waschull, 1995)—anything to deflect the threat away from the self. Thus, HSE high academically contingent people may be especially motivated to prove their worth after a threat, and having the goal to validate the self could be a potential mediator of the interpersonal effects we observed. A task for future research, then, is to pinpoint the underlying processes that lead to these and other interpersonal outcomes.

CONCLUSION

This study shows that the effects of self-esteem on interpersonal perceptions and liking occur most potently among those who have HSE and are highly contingent in a specific domain and are threatened in that domain and are not simply due to being generally contingent, externally contingent, or internally contingent. We hope that the results of this study will encourage researchers to go beyond examining trait levels of self-esteem to explore the more complex interactive effects of CSWs, self-esteem, and ego threat on interpersonal perceptions and other outcomes.

NOTES

1. Six target participants' (and their partners') data were discarded because the targets were suspicious of the GRE test feedback. Specifically, a total of two high self-esteem (HSE) high-contingency targets, two low self-esteem (LSE) high-contingency targets, one HSE low-

contingency target, and one LSE low-contingency target did not believe the GRE test feedback.

2. One participant did not complete the mood questionnaire; however, the participant completed all other questionnaires, and so the data were retained for subsequent analyses.

3. Regression analyses controlling for demographic variables of gender and ethnicity showed the same pattern of results.

4. Scores for general contingency were computed by averaging together contingency of self-worth (CSW) items across all domains, excluding the academic domain. To compute scores for external and internal contingencies, a factor analysis was first conducted on all subscale scores of the Contingencies of Self-Worth Scale (including the Academic Contingency subscale) to determine the factor structure of the subscales. Results of principal axis factoring with oblimin rotation showed two factors corresponding to the predicted external versus internal dimension, accounting for 62.6% of the variance. Subscale loadings on Factor 1 were the external contingency subscales of Appearance (.83), Others' Approval (.63), Competition (.57), and Academic Contingency (.64), with all cross-loadings less than .05. Loadings on Factor 2 were the internal contingency subscales of Family Support (.90), God's Love (.53), and Virtue (.70). Although the family support CSW typically loads on both external and internal factors (see Crocker, Luhtanen, Cooper, & Bouvrette, 2003), we treated the family support CSW in this study as internal given the factor loadings. Scores for external contingencies were then calculated by averaging together all the items for the above-named subscales (excluding academic contingency), and the same was done for calculating internal contingencies.

5. Because of space constraints, we did not report results of our analyses with individual CSWs. This information may be obtained from the authors. Overall, the Others' Approval subscale contingency showed results that were most similar to the academic contingency. Given the lab situation we created (i.e., experimenter graded the participant's test), participants may have wanted to gain the experimenter's approval. Thus, for high-approval contingent participants, failing on the academic test may have threatened their desire for approval from the experimenter, thus leading to interpersonal effects similar to those found with the academic contingency.

REFERENCES

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Baldwin, M. W., & Sinclair, L. (1996). Self-esteem and if-then contingencies of interpersonal acceptance. *Journal of Personality and Social Psychology, 71*, 1130-1141.

Baumeister, R. F. (1993). *Self-esteem: The puzzle of low self-regard*. New York: Plenum.

Baumeister, R. F. (1998). The self. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., Vol. 2, pp. 680-740). New York: McGraw-Hill.

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, 4*, 1-44.

Blaine, B., & Crocker, J. (1993). Self-esteem and self-serving biases in reactions to positive and negative events: An integrative review. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 55-85). Hillsdale, NJ: Lawrence Erlbaum.

Blascovich, J., & Tomaka, J. (1991). Measures of self-esteem. In J. P. Robinson, P. R. Shaver, & L. S. Wrightman (Eds.), *Measures of personality and social psychological attitudes* (pp. 115-160). San Diego, CA: Academic Press.

Branden, N. (1994). *The six pillars of self-esteem*. New York: Bantam.

Brockner, J., Derr, W. R., & Laing, W. N. (1987). Self-esteem and reactions to negative feedback: Toward greater generalizability. *Journal of Research in Personality, 21*, 318-333.

Brown, J. D., Dutton, K. A., & Cook, K. E. (2001). From the top down: Self-esteem and self-evaluation. *Cognition and Emotion, 15*, 615-631.

Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology, 59*, 538-549.

Crocker, J., Luhtanen, R., Cooper, M. L., & Bouvrette, S. A. (2003). Contingencies of self-worth in college students: Measurement and theory. *Journal of Personality and Social Psychology, 85*, 894-908.

Crocker, J., & Park, L. E. (2003). Seeking self-esteem: Construction, maintenance, and protection of self-worth. In M. Leary & J. Tangney (Eds.), *Handbook of self and identity* (pp. 291-313). New York: Guilford.

Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin, 130*, 392-414.

Crocker, J., Sommers, S. R., & Luhtanen, R. K. (2002). Hopes dashed and dreams fulfilled: Contingencies of self-worth and admissions to graduate school. *Personality and Social Psychology Bulletin, 28*, 1275-1286.

Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. *Psychological Review, 108*, 593-623.

Deci, E. L., & Ryan, R. M. (1995). Human autonomy: The basis for true self-esteem. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 31-49). New York: Plenum.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268.

Dodgson, P. G., & Wood, J. V. (1998). Self-esteem and the cognitive accessibility of strengths and weaknesses after failure. *Journal of Personality and Social Psychology, 75*, 178-197.

Grolnick, W. S., & Ryan, R. M. (1989). Parent styles associated with children's self-regulation and competence in school. *Journal of Educational Psychology, 81*, 143-154.

Heatherton, T. F., & Vohs, K. D. (2000). Interpersonal evaluations following threat to self. *Journal of Personality and Social Psychology, 78*, 725-736.

Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry, 14*, 1-26.

Kernis, M. H., & Paradise, A. W. (2002). Distinguishing between secure and fragile forms of high self-esteem. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 339-360). Rochester, NY: University of Rochester Press.

Kernis, M. H., & Waschull, S. B. (1995). The interactive roles of stability and level of self-esteem: Research and theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 27, pp. 93-141). San Diego, CA: Academic Press.

Mecca, A. M., Smelser, N. J., & Vasconcellos, J. (1989). *The social importance of self-esteem*. Berkeley: University of California Press.

Miller, P. J. (2001, April). *Self-esteem as folk theory: A comparison of ethnographic interviews*. Paper presented at the Society for Research in Child Development, Minneapolis, MN.

Mirels, H., & Garrett, J. (1971). The Protestant ethic as a personality variable. *Journal of Consulting and Clinical Psychology, 36*, 40-44.

Murray, S. L., Bellavia, G., Feeney, B., Holmes, J. G., & Rose, P. (2001). The contingencies of interpersonal acceptance: When romantic relationships function as a self-affirmational resource. *Motivation and Emotion, 25*, 163-189.

Murray, S. L., Holmes, J. G., MacDonald, G., & Ellsworth, P. C. (1998). Through the looking glass darkly? When self-doubts turn into relationship insecurities. *Journal of Personality and Social Psychology, 75*, 1459-1480.

Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology, 74*, 1197-1208.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Ryan, R. M., & Brown, K. W. (2003). Why we don't need self-esteem: Basic needs, mindfulness, and the authentic self. *Psychological Inquiry, 14*, 71-76.

Sommer, K. L., & Baumeister, R. F. (2002). Self-evaluation, persistence, and performance following implicit rejection: The role of trait self-esteem. *Personality and Social Psychology Bulletin*, *28*, 926-938.

Vohs, K. D., & Heatherton, T. F. (2001). Self-esteem and threats to self: Implications for self-construals and interpersonal perceptions. *Journal of Personality and Social Psychology*, *81*, 1103-1118.

Wald, K. E., Owen, D. E., & Hill, S. S., Jr. (1988). Churches as political communities. *American Political Science Review*, *82*, 531-548.

Received June 6, 2004
Revision accepted March 21, 2005