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Perceived Partner Responsiveness Minimizes Defensive Reactions to Failure

Peter A. Caprariello[1] and Harry T. Reis[1]

Abstract

Can thinking about responsive relationships increase openness to failure? Study 1 tested whether subliminally priming responsiveness would increase accessibility of words associated with a failed intelligence test. Compared to participants primed with acquaintances or nonsense letters, participants primed with responsive partners were quicker to recognize words associated with failure and did so more accurately, suggesting lesser defensiveness. Study 2 tested whether supraliminally priming responsiveness would decrease self-handicapping on a difficult and potentially embarrassing task. Compared to participants who thought about friends or acquaintances, participants who thought about responsive relationships claimed less external interference with their abilities. These findings indicate that relationships characterized by understanding and validation may promote nondefensive reactions to real or potential failure.

Keywords

perceived responsiveness, failure, defensiveness, self-handicapping, priming

> There is much to be said about failure. It is more interesting than success.
>
> Max Beerbohm, *Mainly on the Air*

Protecting the self from failure is a process in which people engage quickly, efficiently, and diversely because considering one's inability to meet desired goals or expectations is unpleasant (Fiske & Taylor, 2008). Reactions to failure take many forms and depend partly on the certainty of failure (Carver & Scheier, 2005). Disengagement often follows definite failure (Klinger, 1975), which may be problematic if the failed task is important to the attainment of future goals and requires persistence. When failure is probable but uncertain, strategies for reconstruing the event's meaning are more common (e.g., self-handicapping), which ironically may increase the likelihood of failure (McCrea & Hirt, 2001). We define strategies as defensive if they increase psychological distance between the self and failure (Tesser, 2000). Open, *nondefensive* reactions to failure are considered desirable because self-improvement often depends on learning from one's mistakes, and such learning typically benefits from open-minded consideration of reasons for failing (Sedikides & Strube, 1997).

Research from several traditions converges on the hypothesis that activating representations of certain positive relationship qualities may bolster the self-concept in ways that make failure more psychologically manageable, thus reducing defensiveness. For example, Baldwin and Holmes (1987) demonstrated that participants primed with acceptance were less likely to blame themselves after failure. Similarly, women primed to feel secure evaluated themselves less negatively after reading vignettes asking them to imagine an unexpected pregnancy (Pierce & Lydon, 1998).

Kumashiro and Sedikides (2005) demonstrated the effect of priming closeness in reducing defensiveness toward failure. In two studies, participants received false failure feedback after taking a putative intelligence test. Participants then were asked to indicate their interest in receiving information about which aspects of their intelligence were weakest, presumably to improve future performance. Participants who had earlier visualized close, positive relationships during a supraliminal priming task expressed greater interest in this diagnostic information. In comparison, participants who had visualized distant, positive or close, negative relationships were more likely to decline the information, presumably for self-protective reasons.

Relational priming has been linked to other aspects of self-regulation. For example, attachment theory posits that security can be fostered by activating mental representations of attachment figures, which in turn activates representations of the self

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as worthy of acceptance and thereby allows for progress toward nonattachment goals (Mikulincer & Shaver, 2007). Thus, security priming has been shown to attenuate cognitive biases associated with out-group bias (Mikulincer & Shaver, 2001) and promote nonegoistically motivated altruism (Mikulincer, Shaver, Gillath, & Nitzberg, 2005). Similarly, relational schema theories suggest that activating interpersonal schemas in which the self feels loved and accepted reduces the variability of self-evaluations (e.g., after failure; Baldwin, 1994). A similar process can reduce self-handicapping (Schimel, Arndt, Banko, & Cook, 2004) and promote adaptive reactions to chronic life stressors (Creswell et al., 2007).

Common to these studies is the idea that making accessible a reassuring relational construct (e.g., closeness; Kumashiro & Sedikides, 2005) lessens self-protective motives. Researchers have theorized that these effects reflect specific features of the relationships being primed (Baldwin, 1992). For example, activating feelings of security after a failed intelligence test may inhibit anxieties about acceptance that would otherwise be activated (''Failure is unacceptable because I need people to like me''), allowing nondefensive thoughts to be more salient (''I wonder what I did wrong''). We propose that perceived responsiveness to the self may be especially effective for dampening defensive responses to failure.

Perceived Responsiveness to the Self and Failure

Reis, Clark, and Holmes (2004) defined perceived responsiveness as ''a process by which individuals come to believe that relationship partners both attend to and react supportively to central, core defining features of the self'' (p. 203). Responsiveness contributes to intimacy (Laurenceau, Barrett, & Pietromonaco, 1998), a process by which partners respond to each other's self-disclosures and gradually become intimate (Reis & Shaver, 1988). When a person perceives that an interaction partner understands and values the self, he or she is more likely to feel open and supported and in turn is more likely to respond supportively to the partner's self-disclosure. This process, when enacted mutually and reciprocally, promotes intimacy (Reis & Patrick, 1996). The belief that another person understands and reacts supportively to one's innermost concerns and attributes typifies perceived responsiveness to the self.

Why might activating perceptions of responsiveness reduce defensiveness? Activating representations of the self as valued and appreciated may lessen concerns about the self-relevance of failure. To the extent that failure implies global incompetence (Linville, 1985), being reminded of an understanding, validating partner may quell doubts about possible implications of any specific failure. Furthermore, recognizing the self as valued and respected may reduce concerns about perceived worth and diminished social value (Leary & Baumeister, 2000). Being reminded of a partner who likes and encourages one's true self may minimize self-esteem damage from failure without resorting to defensive self-esteem maintenance processes (Crocker & Park, 2004).

The Present Research

Two studies tested the general hypothesis that mental reminders of responsive relationships reduce defensive reactions to failure. These studies add to prior literature by highlighting the importance of responsiveness as a relationship quality that benefits the self (Canevello & Crocker, 2010) and by showing the benefits of perceived responsiveness on two measures of defensiveness that have not been studied heretofore. In the first study, participants were given false failure feedback about a putative intelligence test. Continued accessibility of words from the test, measured with response latencies and recognition accuracy, composed our measure of openness to failure. Enhanced recall for failed words suggests continued mental engagement with the failure experience (Fiske & Taylor, 2008), especially on highly self-relevant tasks (e.g., intelligence; Carver & Scheier, 2005). We therefore hypothesized that participants primed with names of responsive partners would more quickly and accurately recognize missed words compared to participants primed with names of acquaintances or with nonsense names. The second study tested whether priming names of responsive partners would attenuate tendencies to self-handicap when threatened by impending failure. Participants answered questions about a responsive partner, a familiar friend, an acquaintance, or a neutral object, before learning of a difficult mental arithmetic task. The degree to which participants claimed external circumstances as interfering with potential performance (self-handicapping) was our measure of defensiveness. Reduction in self-handicapping indicates that an individual can accept the possibility of probable but not certain failure (Rhodewalt & Vohs, 2005).

Study 1 included an acquaintance prime condition and Study 2 included acquaintance and familiar-friend prime conditions. If priming responsiveness more strongly predicts reductions in defensiveness than priming other relationships, a stronger case can be made for responsiveness reducing defensiveness rather than other components of closeness (e.g., familiarity or positivity). These designs also provide a relatively conservative test of the hypothesis, insofar as *any* social relationship may restore self-worth after feedback signaling relational devaluation (Park & Maner, 2009).

Study 1

Method

Participants and procedure. We recruited 83 participants (68 females) from a participant pool (M_{age} = 19.93 years, SD = 1.23) in exchange for course credit.

The task was described as a test of cognitive flexibility. Participants were seated in front of a computer running DirectRT software and proceeded through a series of self-guided tasks.

Name generation. Participants were first prompted for names of seven different people: a responsive partner (''He or she knows the real you,'' ''He or she is interested in what you are thinking and feeling,'' ''He or she esteems you, shortcomings and all''), an acquaintance (''An acquaintance who feels

neither particularly close nor particularly distant towards you,'' ''An acquaintance who neither likes nor dislikes you''), and five filler names (e.g., a friend from their hometown). Order was randomly generated for each participant. In the responsive and acquaintance conditions, the respective names were later used as primes.

Failure feedback. The ''cognitive flexibility test'' was actually a Remote Associates Test (RAT; Bowden & Jung-Beeman, 2003). For each trial, participants were shown three words and asked to generate a fourth word that, when combined with the stimulus words, would produce a common compound word or phrase (e.g., ''cottage,'' ''Swiss,'' and ''cake'' associate with the solution ''cheese''). Participants were told that the RAT was a validated measure of intelligence, future career success in several areas, and general analytic ability.

For each trial, participants were asked to respond within 30 s, or whenever they knew the correct response. If they did not respond within 30 s, the program prompted for a solution. Participants could continue thinking about problems until they derived a solution or proceeded without one. No feedback was given about correct or incorrect answers. On completion, all participants were told that they had scored in the 28th percentile of University of Rochester students.

RAT problems were classified as easy or difficult based on normative data (Bowden & Jung-Beeman, 2003). Order of presentation was block randomized: Six easy problems were presented first in random order, followed by six difficult problems in random order.

Subliminal priming. Priming took place in the context of a lexical decision task. A fixation point (xxxxxxxxxx) was displayed for 35 ms, following which the prime appeared for 35 ms. The prime was either the name of the responsive partner or acquaintance (exactly as entered by participants) or a nonsense string (*Sbfi Wnqsr*) resembling a name. Finally, ''xxxxxxxxxx'' reappeared for 35 ms as a backward mask to control for retinal afterimages. Primes were presented for six trials. On each trial, one of six real or nonsense words appeared on the screen.

Accessibility measurement. After the lexical decision task, 60 words (all 36 words from the RAT and 24 filler words) appeared in random order on the screen. Participants were instructed to indicate as quickly and accurately as possible whether or not a displayed word had appeared in the cognitive flexibility test. Filler words were matched with target words on length and usage frequency in the English language (Whitney, 1998). Response latencies were assessed by DirectRT.

Funnel debriefing. After each session a debriefing procedure probed for awareness of the prime (Chartrand & Bargh, 1996). We first probed for general suspicion about the failure feedback and the fixation point flashes in which the primes were embedded. Participants were generally aware of the flashes, but no participant associated them with the name generation task or with RAT performance. Finally, participants viewed all seven names and were asked to indicate which, if any, had flashed on screen. There was no evidence that participants were aware of the primed names.

Results and Discussion

Performance check. On average, participants correctly solved 3.99 easy problems out of 6, which did not vary by condition, $F(2, 79) = 1.68$, *ns*. Participants correctly solved 0.27 difficult problems out of 6, significantly worse than the easy-problem average, $t(81) = 25.57$, $p < .01$. Difficult problems were clearly more challenging than easy problems.[1] Scores varied by condition, such that participants solved more difficult problems in the responsive condition ($M = 0.45$) than in the acquaintance ($M = 0.15$) and control ($M = 0.17$) conditions, $F(2, 79) = 3.25$, $p < .05$. However, because only two participants answered more than one difficult problem correctly and both of these correctly answered only two problems, we believe that this result is not meaningful.

Analytic strategy. We used two definitions of accessibility. First, accessibility was defined as reaction times in recognizing easy and difficult stimuli (Liberman, Forster, & Higgins, 2005). Reaction times were prescreened for outliers. According to Bargh and Chartrand (2000), response latencies quicker than 300 ms or greater than three standard deviations above the sample mean can be considered outliers. There were no responses quicker than 300 ms during any trial. Instances of overly slow trials were rare (1.8% of trials) and were evenly distributed between conditions, $\chi^2(2) = 0.33$, *ns*, and thus none were cut (Bargh & Chartrand, 2000). One participant was deleted for stereotyped responding. All reaction times were log transformed to control for skew (for simplicity, Figure 1a reports untransformed means). Second, accessibility was defined as accuracy in recognizing test words, based on signal detection theory (SDT; Green & Swets, 1966). If difficult words remain accessible after the test, then distinguishing easy words from difficult words should be relatively less effortful and accuracy should increase (Goschke & Kuhl, 1993).

Condition effects were analyzed with omnibus ANOVAs that were then decomposed with orthogonal contrasts. The first contrast, which most closely tests our hypothesis (the ''responsiveness contrast''), compared the responsive condition to the two control conditions, assigning weights of +2, –1, and –1 to the responsive, acquaintance, and neutral conditions, respectively. The second contrast (the ''acquaintance contrast'') compared the residual difference between the acquaintance and neutral conditions, assigning weights of 0, –1, and +1 to the responsive, acquaintance, and neutral conditions, respectively. All analyses modeled accessibility as a function of condition and within-person differences between easy–difficult problem categories.[2]

Reaction times. If participants primed with responsive partners were relatively more open to the correct solutions, then difficult words, which were overwhelmingly failed, should have been relatively more accessible. The omnibus test of this hypothesis yielded a significant interaction between difficulty

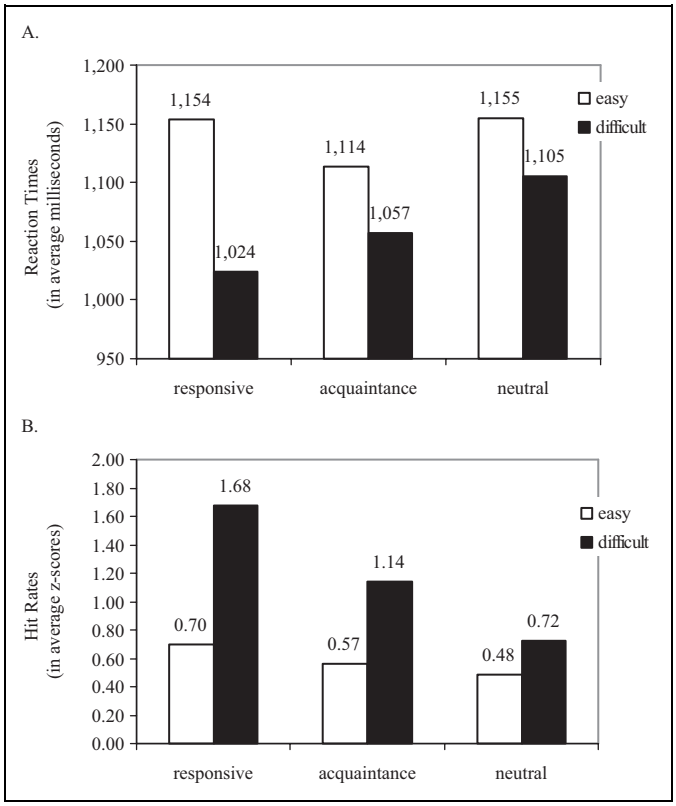

Figure 1. Reaction time (A) and hit rate differences (B) in recognizing target words

and condition, $F(2, 78) = 6.35$, $p < .01$. Subsequent orthogonal contrasts revealed a significant interaction, as hypothesized, between difficulty and the responsiveness contrast, $F(1, 79) = 6.63$, $\beta = .28$, $p < .01$ (see Figure 1a),[3] but no significant main effect or interaction with the acquaintance contrast, Fs < 1. Simple effects analyses showed that participants in the responsive condition were relatively quicker to respond to difficult words than to easy words, $F(1, 79) = 16.28$, $p < .01$, a difference that was not significant in the acquaintance condition, $F(1, 79) = 1.78$, *ns*, or the neutral condition, $F(1, 79) < 1.0$, *ns*.

Accuracy. SDT (Green & Swets, 1966) models sensitivity to signals that vary systematically, in this study filler words (i.e., noise), easy target words, or difficult target words. Every participant was assigned two "hit rates," representing different sensitivities to easy and difficult target words. Participants were also assigned "false alarm rates," which independently represent sensitivity to filler words. All hit and false alarm rates were standardized. A person's overall sensitivity to target and filler words (indexed by *d'*, in SDT terminology) is represented cumulatively, as the sum of a person's standardized hit and false alarm rates. According to this logic, the difference in hit rates between easy and difficult target words represents the ability to discriminate between these two specific signals (MacMillan & Creelman, 2005). According to our hypothesis, this difference should vary as a function of experimental condition. We therefore regressed relative differences in hit rates onto condition.

The omnibus test yielded a significant interaction between difficulty and condition, $F(2, 77) = 4.98$, $p < .03$. Contrast analyses that decomposed this interaction revealed a statistically significant interaction between difficulty and the responsiveness contrast, $F(1, 78) = 4.58$, $\beta = .23$, $p < .04$ (see Figure 1b),[4] but no significant main effect or interaction with the acquaintance contrast, Fs < 1. Simple effects analyses revealed that participants primed with responsive partners more accurately recognized difficult words over easy words, $F(1, 78) = 12.26$, $p < .01$, relative to participants in the other conditions. For participants in the acquaintance condition the effect was only marginally significant, $F(1, 78) = 3.26$, $p < .08$, and for participants in the neutral condition the effect disappeared, $F(1, 78) < 1.0$, *ns*.

Study 2

Study 1 showed that participants primed with the names of responsive partners more quickly and more accurately recognized difficult words compared to easy words. For participants in both control conditions, these differences were not significantly different. These results suggest that priming mental representations of responsive partners facilitates openness to failure information.

Study 2 examined the effect of priming responsiveness on defensive reactions to the *future possibility* of failure, using self-handicapping as an indicator of defensiveness. Self-handicapping is theorized to protect self-esteem from the implications of failure on threatening achievement tasks. Self-handicappers may place obstacles in their path, or not fully commit to a task for risk of failing, to preserve self-esteem (McCrea, 2008). Alternatively, citing external factors contributing to failure helps distance the self from responsibility for failure (Feick & Rhodewalt, 1997).

Study 2 included four priming conditions—names of responsive partners, familiar friends, acquaintances, and organizational tools (e.g., calendar). Introducing a familiar friend prime helps address the alternative explanation that this effect is driven by familiarity instead of responsiveness. Responsive friends, after all, are likely to be familiar and positively regarded, both known bases for friendship (Davis & Todd, 1985).

We used a difficult and potentially embarrassing mental subtraction task, similar to the Trier Social Stress Task (Kirschbaum, Pirke, & Hellhammer, 1993). Because we did not explicitly manipulate failure, we anticipated that participants would vary in their appraisal of the task as a potential failure situation and therefore measured individual perceptions of threat.

Because self-handicapping occurs primarily under conditions of threat, and because we did not explicitly manipulate failure in Study 2, we predicted that perceived threat would moderate the relationship between priming condition and self-handicapping: that is, the effect of primed responsiveness on self-handicapping would be stronger to the extent that participants described the task as threatening.

Method

Participants and procedure. In exchange for course credit, 135 participants (96 females) were recruited through a participant pool (M_{age} = 20.1 years, SD = 1.9).

Supraliminal priming. Participants were told that we were interested in their thoughts and feelings about relationships and were randomly assigned to think of someone who best fulfilled the criteria of a responsive partner, acquaintance (see Study 1 prompts), or familiar friend ("He or she thinks positively of you but would not consider you to be particularly close," "It is generally nice to run into or hang out with this person"). They were then asked to spend 15 min answering three sets of questions: (a) "What does this relationship personally mean to you? How does this person fit into your life?" (b) "How does this relationship make you feel? If possible, use specific examples," and (c) "Imagine this person sitting next to you at this very moment. What might you talk about? What's the first thing you'd want to ask him or her, if anything?" Participants in the control condition were asked similar questions about an organizational tool, altered to apply to a nonsocial object (e.g., "How does your organizational tool make you feel productive?").

Failure situation. In a seemingly unrelated second study that followed immediately, participants were told that they would be videotaped performing a "subtraction race"—counting backward aloud from the value 1,978 by intervals of a two-digit number to be drawn from a hat. They would have 2 min to do so as quickly and as accurately as possible. To enhance credibility and to maximize experimental realism, participants stood in front of a video camera for approximately 10 s while the experimenter fiddled with controls.

Self-handicapping. Participants were asked to check which of a list of 14 circumstances, taken from Strube (1986), were likely to impair their performance in the subtraction race (e.g., *hangover*, *sickness*, *relationship problems*). The total number of checked items indexed self-handicapping.

Perceived threat. One item measured appraisals of the subtraction race as threatening ("How threatening do you perceive the task?") using a 7-point scale (1 = *not at all threatening* to 7 = *very threatening*).

Manipulation checks. One item gauged expectations of success ("How well do you expect to do?") using a 7-point scale (1 = *not very well* to 7 = *very well*).

Two judges coded responses to the priming questions on dimensions of perceived responsiveness and positive affect. Questions were coded on 3-point scales, with 0 indicating no evidence of responsiveness or positive affect and 2 indicating clear evidence. Judges were reliable (responsiveness r = .83, positive affect r = .81) and were averaged between coders. Because both codes were highly correlated (r = .88), they were summed for analyses.

Results and Discussion

Manipulation checks. In the responsive prime condition, participants wrote about best or close friends (29.7%), friends (21.6%), mothers (13.5%), romantic partners (13.5%), assorted family members (13.5%), and other relationships (8.2%), known for an average of 9.75 years (SD = 8.14). In the familiar prime condition, participants wrote about friends (79.3%), roommates (6.9%), and other relationships (20.7%), known for an average of 2.29 years (SD = 3.15). Acquaintances were known for an average of 1.59 years (SD = 2.21). Conditions differed significantly in length of acquaintanceship, $F(2, 93) = 23.49$, $p < .01$. Partners were known significantly longer in the responsive condition than in the other two conditions, $t(93) = 6.83$, $p < .01$, whereas the familiar friend and acquaintance conditions did not differ significantly, $t(79) < 1.0$, *ns*. In the control condition, participants primarily wrote about daily planners (51.4%), PDAs or cell phones (13.5%), and other assorted organizational tools (e.g., calendars; 35.1%).

Objective ratings of responsiveness mapped significantly onto priming condition ($M_{responsive}$ = 1.82, $M_{familiar}$ = 0.98, $M_{acquaintance}$ = 0.39), $F(2, 93) = 102.61$, $p < .01$. Post hoc tests revealed that all three conditions differed significantly from one another (all ps < .01). Although participants had known familiar friends and acquaintances for about as long, familiar friends were perceived to be more responsive than acquaintances.

Condition did not significantly influence expectations of success or perceived threat, $F(3, 131) = 1.16$, *ns*, and $F(3, 131) < 1.0$, *ns*, respectively. One-sample t tests confirmed that participants expected to do worse than the scale midpoint (M = 2.96), $t(134) = -8.35$, $p < .01$, but felt no more threatened (M = 4.11), $t(134) < 1.0$, *ns*. Sex did not interact with priming condition in any analysis—all subsequent analyses collapsed across sex.

Self-handicapping. As in Study 1, we tested our hypothesis with an omnibus ANOVA, which was then decomposed using orthogonal contrasts. The primary contrast (the "responsiveness contrast") compared the responsive condition to the three control conditions, assigning weights of +3 to the responsive condition and –1 to the positive, acquaintance, and neutral conditions. Two additional orthogonal contrasts examined residual differences among the three control conditions ("familiarity contrast": 0, +2, –1, –1; and "acquaintance contrast": 0, 0, –1, +1, for the responsive, familiar, acquaintance, and object conditions, respectively). Self-reported threat (centered) was also included in the models.

The omnibus test yielded a main effect of threat, $F(1, 127) = 4.17$, $p < .05$, no main effect of condition, $F(3, 127) < 1.0$, *ns*, and an interaction of threat and condition on self-handicapping, $F(3, 127) = 2.63$, $p < .05$. Contrast analyses revealed that these results were qualified by the predicted interaction between threat and the responsiveness contrast, $F(1, 127) = 7.37$, $p < .01$, whereas neither the familiarity nor acquaintance contrasts interacted significantly with threat, $Fs < 1.2$, *ns*. Simple slope tests, shown in Figure 2, confirmed that the effect of threat on self-handicapping was nonsignificant but negative in the responsive condition, $B = -.26$, $F(1, 127) = 1.72$, *ns*, marginally significant and positive in the familiar condition, $B = .41$, $F(1, 127) = 3.18$, $p < .08$, significant and positive in the acquaintance condition, $B = .53$, $F(1, 127) = 4.51$, $p < .04$, and nonsignificant

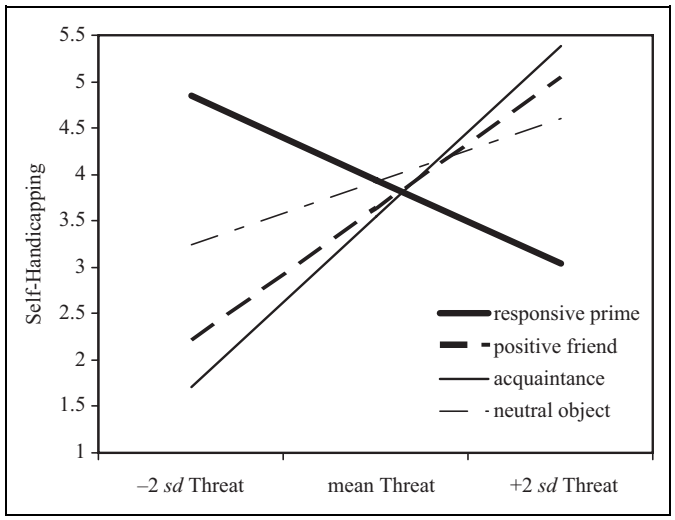

Figure 2. Self-handicapping scores

but positive in the object condition, $B = .20$, $F(1, 127) = 1.32$, *ns*. In other words, in the familiar and acquaintance conditions, the more threatened participants felt, the more they self-handicapped. Participants primed with responsive partners were not likely to self-handicap when feeling similar levels of threat. The pattern of results was the same when we controlled for the expectation of success.

In sum, threat did not increase self-handicapping among participants who wrote about responsive partners. In contrast, participants in the acquaintance and familiar friend conditions showed a tendency to self-handicap more when feeling threatened. There was no significant effect of threat on self-handicapping in the object condition, contrary to our hypothesis. Nevertheless, the zero-order correlation between threat and self-handicapping in this condition was positive ($r = .14$), suggesting a weak tendency to self-handicap when threatened.

General Discussion

Across two studies, perceived responsiveness reduced defensiveness toward failure. Study 1 subliminally primed responsiveness, administered failure feedback on a supposed intelligence test, and measured sustained engagement in the failed test. Participants who had been primed with responsive partners more quickly and accurately distinguished difficult words (associated with failure) from easy words, compared to participants primed with acquaintances or controls. Study 2 primed responsiveness supraliminally, introduced a difficult and potentially embarrassing task, and measured self-handicapping prior to beginning. Unlike participants primed with friends and acquaintances, participants primed with responsive relationships tended to self-handicap less when threatened, indicating less defensive anticipation of the task.

In both studies priming relationships characterized by responsiveness reduced defensiveness whereas priming relationships characterized by other qualities (e.g., familiarity or positivity) did not. Both studies indicate that feeling understood and validated by partners may be a key attribute of close relationships that opens the self to information about shortcomings (Kumashiro & Sedikides, 2005), encourages movement toward the ideal self (Drigotas, Rusbult, Wieselquist, & Whitton, 1999), and supports progress toward personal goals (Feeney, 2007). Thus, the present studies highlight perceived responsiveness as a central attribute of relationships supporting personal growth (Gable & Reis, 2006).

Does the effect of responsiveness depend on what defensive strategy is employed? Converging findings from our two studies suggest that responsive relationships attenuated two strategies. This extends previous research by demonstrating the effect of responsive relationships on failure for both certain and potential failure. In contrast, prior research has shown effects of relational priming only in situations in which failure is explicit and certain (Kumashiro & Sedikides, 2005). Why might this distinction matter? Considered in the context of goal-directed behavior, failure can take two forms: explicit, unambiguous feedback signaling a lack of progress toward important goals, or subjective, personal feedback in response to potential failure (often in the form of changes in affect; Chartrand, Cheng, Dalton, & Tesser, in press). Explicit failure feedback typically results in task disengagement (Carver & Scheier, 2005), which is problematic if the failed task is important for attaining future goals (e.g., intelligence). Subjective failure feedback is more open to reconstrual and tends to yield defensive strategies for self-protection (Rhodewalt & Vohs, 2005). Thus, it is important to demonstrate that the effects of responsive priming hold for diverse and implicit kinds of defensive strategies.

Limitations

We examined defensive responses to threat imposed by artificial laboratory tasks and not by naturalistic tasks with greater self-relevance. Although in both studies we attempted to maximize experimental realism, the context was a laboratory experiment with unfamiliar tasks. Capturing these effects outside a laboratory would help generalize our findings. In addition, our experimental paradigms did not examine actual responsive interactions. Maisel, Gable, and Strachman (2008) identified sets of behaviors that typify feeling understood and validated in supportive interactions, but the effect of these behaviors on reducing defensiveness to failure remains to be established. Finally, our theoretical model specifies perceived responsiveness as a central attribute in reducing defensiveness to failure, but more research is needed to identify the mechanisms and processes by which responsiveness influences goal-related cognitions and self-regulation. Inducing positive, other-directed emotions may be one mechanism by which responsive relationships reduce defensiveness (Crocker, Niiya, & Mischkowski, 2008).

Conclusion

By identifying a key component of close, positive relationships that enables them to be used as resources, these two studies add to a growing literature documenting the role of close

relationships in reducing defensiveness toward failure. Learning from one's mistakes requires attention to failure, a process facilitated by activating mental representations of persons perceived to be responsive to the self.

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Notes

1. Because of a problem with DirectRT the order in which individual problems were presented was not recorded. Thus, performance scores reflect the total number of correct solutions in each category (e.g., if the solution "ice" appeared in a block of easy problems, we assumed a correct response to the specific trial "cream/skate/water" even if we could not verify).
2. The ideal test would model accessibility as a function of condition and *actual* performance (rather than easy–difficult category). For example, many participants incorrectly solved a few easy problems, and we would therefore expect enhanced accessibility for those problems. However, because we did not know the actual order of problems (see Note 1), we could not conduct this test. Instead, we tested the hypothesis that accessibility would be generally enhanced for difficult over easy words and that this accessibility difference would differ by condition. This represents a conservative test of our hypothesis, in that greater accessibility of missed easy words would work against predictions. This strategy assumes that participants recognized that their performance was worse on later than earlier problems—an assumption supported by performance results, reported above. Furthermore, participants spent more time contemplating difficult problems ($M = 22.06$ s) than easy problems ($M = 9.28$ s). There was also a clear trend to continue thinking about difficult problems after the 30-s limit had expired but before proceeding to the next trial: Although the longest duration of thinking about easy problems was 1.67 min, there were 21 instances exceeding this interval during the difficult problems (maximum = 4.02 min). Thus, we believe that participants were generally aware of their poorer performance on difficult problems (for a similar manipulation of failure, see Park, Crocker, & Kiefer, 2007).
3. Removing outliers did not change the pattern of any reported results, $F(1, 79) = 9.19$, $p < .003$.
4. Including false alarm rates in the model revealed a similar result, $F(1, 78) = 4.58$, $\beta = .23$, $p < .04$.

References

Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, *112*, 461-484.

Baldwin, M. W. (1994). Primed relational schemas as a source of self-evaluative reactions. *Journal of Social and Clinical Psychology*, *13*, 380-403.

Baldwin, M. W., & Holmes, J. G. (1987). Salient private audiences and awareness of the self. *Journal of Personality and Social Psychology*, *53*, 1087-1098.

Bargh, J. A., & Chartrand, T. L. (2000). The mind in the middle: A practical guide to priming and automaticity research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 253-285). Cambridge, UK: Cambridge University Press.

Bowden, E. M., & Jung-Beeman, M. J. (2003). Normative data for 144 compound remote associate problems. *Behavior Research Methods*, *Instruments, & Computers, 35*, 634-639.

Canevello, A., & Crocker, J. (2010). Creating good relationships: Responsiveness, relationship quality, and interpersonal goals. *Journal of Personality and Social Psychology*, *99*, 78-106.

Carver, C. S., & Scheier, M. F. (2005). Engagement, disengagement, coping, and catastrophe. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 527-547). New York, NY: Guilford.

Chartrand, T. L., & Bargh, J. A. (1996). Automatic activation of impression formation and memorization goals: Nonconscious goal priming reproduces effects of explicit task instructions. *Journal of Personality and Social Psychology*, *71*, 464-478.

Chartrand, T. L., Cheng, C. M., Dalton, A. N., & Tesser, A. (in press). Consequences of failure at nonconscious goals for self-enhancement. *Social Cognition*.

Creswell, J. D., Lam, S., Stanton, A. L., Taylor, S. E., Bower, J. E., & Sherman, D. K. (2007). Does self-affirmation, cognitive processing, or discovery of meaning explain cancer-related health benefits of expressive writing? *Personality and Social Psychology Bulletin*, *33*, 238-251.

Crocker, J., Niiya, Y., & Mischkowski, D. (2008). Why does writing about important values reduce defensiveness? Self-affirmation and the role of positive other-directed feelings. *Psychological Science*, *19*, 740-747.

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

Davis, K., & Todd, M. (1985). Assessing friendship: Prototypes, paradigm cases, and relationship description. In S. W. Duck & D. Perlman (Eds.), *Understanding personal relationships: An interdisciplinary approach* (pp. 17-38). London, UK: Sage.

Drigotas, S. M., Rusbult, C. E., Wieselquist, J., & Whitton, S. W. (1999). Close partner as sculptor of the ideal self: Behavioral affirmation and the Michelangelo phenomenon. *Journal of Personality and Social Psychology*, *77*, 293-323.

Feeney, B. C. (2007). The dependency paradox in close relationships: Accepting dependence promotes independence. *Journal of Personality and Social Psychology*, *92*, 268-285.

Feick, D. L., & Rhodewalt, F. (1997). The double-edged sword of self-handicapping: Augmenting success and discounting failure. *Motivation and Emotion*, *21*, 145-161.

Fiske, S. T., & Taylor, S. E. (2008). *Social cognition: From brains to culture*. New York, NY: McGraw-Hill.

Gable, S. L., & Reis, H. T. (2006). Intimacy and the self: An iterative model of the self and close relationships. In P. Noller & J. A. Feeney (Eds.), *Close relationships: Functions, forms, and processes* (pp. 211-225). New York, NY: Psychology Press.

Goschke, T., & Kuhl, J. (1993). Representations of intentions: Persisting activation in memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 19*, 1211-1226.

Green, D. M., & Swets, J. A. (1966). *Signal detection theory and psychophysics*. New York, NY: John Wiley.

Kirschbaum, C., Pirke, K. M., & Hellhammer, D. H. (1993). The Trier social stress test: A tool for investigating psychobiological stress responses in a laboratory setting. *Neuropsychobiology*, *28*, 76-81.

Klinger, E. (1975). Consequences of commitment to and disengagement from incentives. *Psychological Review*, *112*, 219-227.

Kumashiro, M., & Sedikides, C. (2005). Taking on board liability-focused information: Close positive relationships as a self-bolstering resource. *Psychological Science*, *16*, 732-739.

Laurenceau, J., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology*, *74*, 1238-1251.

Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. Vol. 32, pp. 1-62). San Diego, CA: Academic Press.

Liberman, N., Forster, J., & Higgins, E. T. (2005). Completed vs. interrupted priming: Reduced accessibility from post-fulfillment inhibition. *Journal of Experimental Social Psychology*, *43*, 258-264.

Linville, P. W. (1985). Self-complexity and affective extremity: Don't put all of your eggs in one cognitive basket. *Social Cognition*, *3*, 94-120.

MacMillan, N. A., & Creelman, C. D. (2005). *Detection theory: A user's guide*. 2nd ed.Mahwah, NJ: Lawrence Erlbaum.

Maisel, N. C., Gable, S. L., & Strachman, A. (2008). Responsive behaviors in good times and in bad. *Personal Relationships*, *15*, 317-338.

McCrea, S. M. (2008). Self-handicapping, excuse-making, and counterfactual thinking: Consequences for self-esteem and future motivation. *Journal of Personality and Social Psychology*, *95*, 274-292.

McCrea, S. M., & Hirt, E. R. (2001). The role of ability judgments in self-handicapping. *Personality and Social Psychology Bulletin*, *27*, 1378-1389.

Mikulincer, M., & Shaver, P. R. (2001). Attachment theory and intergroup bias: Evidence that priming the secure base schema attenuates negative reactions to out-groups. *Journal of Personality and Social Psychology*, *81*, 97-115.

Mikulincer, M., & Shaver, P. R. (2007). Boosting attachment security to promote mental health, prosocial values, and inter-group tolerance. *Psychological Inquiry*, *18*, 139-156.

Mikulincer, M., Shaver, P. R., Gillath, O., & Nitzberg, R. E. (2005). Attachment, caregiving, and altruism: Boosting attachment security increases compassion and helping. *Journal of Personality and Social Psychology*, *89*, 817-839.

Park, L. E., Crocker, J., Kiefer, A. K. (2007). Contingencies of self-worth, academic failure, and goal pursuit. *Personality and Social Psychology Bulletin, 33*, 1503-1517.

Park, L. E., & Maner, J. K. (2009). Does self-threat promote social connection? The role of self-esteem and contingencies of self-worth. *Journal of Personality and Social Psychology*, *96*, 203-217.

Pierce, T., & Lydon, J. (1998). Priming relational schemas: Effects of contextually activated and chronically accessible interpersonal expectations on responses to a stressful event. *Journal of Personality and Social Psychology*, *75*, 1441-1448.

Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). Perceived partner responsiveness as an organizing construct in the study of intimacy and closeness. In D. J. Mashek & A. P. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 201-225). Mahwah, NJ: Lawrence Erlbaum.

Reis, H. T., & Patrick, B. C. (1996). Attachment and intimacy: Component processes. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 523-563). New York, NY: Guilford.

Reis, H. T., & Shaver, P. R. (1988). Intimacy as an interpersonal process. In S. Duck (Ed.), *Handbook of personal relationships* (pp. 367-389). Chichester, UK: Wiley.

Rhodewalt, R., & Vohs, K. D. (2005). Defensive strategies, motivation, and the self: A self-regulatory process view. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 527-547). New York, NY: Guilford.

Schimel, J., Arndt, J., Banko, K. M., & Cook, A. (2004). Not all self-affirmations were created equal: The cognitive and social benefits of affirming the intrinsic vs. extrinsic self. *Social Cognition*, *22*, 75-99.

Sedikides, C., & Strube, M. J. (1997). Self-evaluation: To thine own self be good, to thine own self be sure, to thine own self be true, and to thine own self be better. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. Vol. 29, pp. 209-269). San Diego, CA: Academic Press.

Strube, M. J. (1986). An analysis of the self-handicapping scale. *Basic and Applied Social Psychology*, *7*, 211-224.

Tesser, A. (2000). On the confluence of self-esteem maintenance mechanisms. *Personality and Social Psychology Review*, *4*, 290-299.

Whitney, P. (1998). *The psychology of language*. New York, NY: Houghton Mifflin.

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