

CONFRONTING EGO THREATS WITH REAPPRAISAL VERSUS RUMINATION

A Thesis

by

RYAN CASKEY

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

May 2009

Major Subject: Psychology

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ABSTRACT

Confronting Ego Threats with Reappraisal versus Rumination. (May 2009)

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Two experiments compared the effects of two cognitive responses (i.e., rumination and cognitive reappraisal) individuals may adopt when confronted with a threat to self-regard. In Study 1, participants received negative feedback about their social skills and then rated the credibility of the source of the criticism. In Study 2, participants received negative feedback and then were given the opportunity to enhance the self on an unrelated task. Compared to reappraising the negative feedback, ruminating about the feedback led to poorer evaluations of the source of negative feedback and increased self-enhancement, respectively. These findings suggest that, compared to rumination, cognitive reappraisal helps to minimize defensive responses to ego threat.

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CHAPTER I

INTRODUCTION

People often respond to threats to self-regard by denying, deflating, or otherwise diminishing the implications of the threat. For example, when given negative feedback about their performance on a test, participants in one study claimed that performing well on the test was unimportant to them (Jussim, Coleman, & Nassau, 1989). Other studies have found that participants downplay the validity of tests on which they have performed poorly or seek information to discredit such tests (e.g., Frey, 1978, 1981; Pyszczynski, Greenberg, & Holt, 1985). Presumably, efforts to minimize the importance of a threat or to derogate its source help to sustain self-regard.

Another familiar response to threats to self-regard is to embrace positive views of self. For example, one study found that a public experience of failure caused participants to increase how favorably they viewed themselves (Greenberg & Pyszczynski, 1985). Likewise, participants in another study responded to negative feedback by increasing how favorably they viewed a valued in-group (Cadinu & Cerchioni, 2001). These findings suggest that inflating opinions of oneself and one's associates helps to sustain self-regard in the face of threat.

The present research tested the hypothesis that responses to ego threat are

This thesis follows the style of the *Journal of Personality and Social Psychology*.

influenced by how a person thinks about the threat. More precisely, the present work tested whether reappraising negative feedback about oneself reduces defensiveness, relative to ruminating about the emotions elicited by the feedback.

Cognitive reappraisal is an emotion regulation strategy that involves “changing a situation’s meaning in a way that alters its emotional impact” (Gross & Thompson, 2007, p. 14). To succeed at reappraisal, a person must generate and sustain “cool” thoughts that counteract the impact of a “hot” emotional event. Reappraisal has been shown to reduce the experience of emotion in response to emotional stimuli including disgusting film clips (Goldin, McRae, Ramel, & Gross, 2008) and aversive photographs (Ochsner, Bunge, Gross, & Gabrieli, 2002; Richards & Gross, 2000). In one study, for example, reappraising the meaning of photographs depicting people who had been severely injured helped to reduce the experience of negative emotion in response to the photographs (Richards & Gross, 2000, Study 2).

Another cognitive response to an emotional event is to think about the event and the emotions elicited by the event. This response has been dubbed rumination and refers to thoughts that focus one’s attention on emotional states and the causes and consequences of those states (Rusting & Nolen-Hoeksema, 1998). Unlike reappraising an emotional event, ruminating about an event tends to prolong and intensify emotional states. In one study, for example, participants were asked to recall an event that made them angry (Ray, Wilhelm, & Gross, 2008). Some participants were asked to think about the event and the emotions it aroused from their own point of view (i.e., ruminate) whereas others were asked to think about the event from the perspective of an “impartial

observer” (i.e., reappraise). Compared to ruminating about the angering event, reappraising the event from an impartial perspective was associated with lower self-reported anger and reduced heart rate. Thus, reappraisal helped individuals to down-regulate negative emotion relative to rumination.

Another relevant study compared the consequences of adopting a cool reappraisal focus versus a hot emotional focus while pondering a distressing life event that had negative implications for the self. Ayduk and colleagues (2002) asked participants to recall an experience in which they had been rejected, excluded, or abandoned. Participants assigned to a “hot-focus” or rumination condition were instructed to focus on the feelings elicited by the experience, whereas participants assigned to a “cool-focus” or reappraisal condition were instructed to focus on the non-emotional or objective aspects of the experience. Once again, participants who ruminated on the rejection experience reported more anger compared to participants who reappraised the rejection experience by focusing on its non-emotional aspects.

Although asking participants to remember past events is a common method of emotion induction in the literature (e.g., Ayduk et al., 2002; Ray et al., 2008), previous studies have found that the negative valence of emotional events tends to fade over time (e.g., Schrauf & Hoffman, 2007). The relative impact of rumination versus reappraisal on emotional states and related responses would therefore be even more convincing if an emotional state could be produced by ongoing events rather than events replicated from memory. Presumably, creating an emotion-provoking situation in real-time and then encouraging participants to ruminate about or reappraise the situation would provide a

more rigorous test of the possible differences between the two cognitive responses to the event than would memory-based emotion elicitation. The current studies attempted to meet this challenge by delivering negative feedback to participants on an important aspect of their lives—their social skills—and then asking them to ruminate or to reappraise.

By introducing an ego threat to participants in this way, we hoped to create an immediate, self-relevant, and emotionally-charged situation similar to the ones created in previous research on threats to self-regard (e.g., Baumeister, Heatherton, & Tice, 1993; Greenberg & Pyszczynski, 1985). Furthermore, we hoped to trigger ego defense processes. Whereas most previous research comparing reappraisal versus rumination has focused on subjective emotional experiences and physiological reactivity, the present research focused on responses that could reflect a tendency to engage in ego defense. Threats to self-regard mainly elicit reflexive, defensive responses that are thought to stem from the motivation to view oneself positively (Baumeister, 1998; Steele, 1988). As discussed earlier, these defensive responses include derogation of the source of the threat and compensatory efforts to boost one's self or self-esteem (e.g., Pyszczynski et al., 1985; Greenberg & Pyszczynski, 1985).

We reasoned that ego-defensive responding would differ after reappraising versus ruminating about negative feedback. Given that rumination intensifies negative emotions whereas reappraisal reduces negative emotions, we predicted that reappraisers would be less likely to engage in ego defense compared to ruminators. Encouraging individuals to ruminate about negative feedback should prolong the negative emotional

response to the feedback and increase the need for cognitive defense mechanisms to counter the ego threat. In contrast, encouraging individuals to reappraise the negative feedback should reduce the negative emotional response and reduce the need for further ego defense. As a result, ruminators should be more defensive than reappraisers. . We measured ego defense in two ways. In Experiment 1, we asked participants to rate the validity of the test on which the negative feedback was based (similar to Frey, 1978, and Pyszczynski et al., 1985). In Experiment 2, we used an indirect measure of defensive self-enhancement known as the Over-Claiming Questionnaire (Paulhus, Harms, Bruce, & Lysy, 2003).

CHAPTER II

EXPERIMENT 1

Participants in Experiment 1 completed a test purporting to measure their social abilities. Shortly after completing the test, participants were informed that their responses suggested a lack of maturity, a tendency toward egotism or selfishness, and a poor outlook for future relationships. This negative feedback was intended to induce a threat to self-regard, consistent with past work using similar feedback about social abilities (see Nummenmaa & Niemi, 2004). After reading the feedback, participants were encouraged to express their thoughts concerning the negative evaluation (*reappraisal condition*) or to express their feelings concerning the negative evaluation (*rumination condition*). Last, participants were asked to rate the validity of the social abilities test.

We predicted that cognitive reappraisal would effectively dispel the ego threat posed by the negative feedback. Therefore, participants in the reappraisal condition should rate the test as a more valid measure of social skills compared to participants in the rumination condition, who would rate the test as less valid in an effort to dismiss the negative feedback (e.g., Frey, 1978; Pyszczynski et al., 1985).

Method

Participants and Design. One hundred one undergraduate students (36 males) participated in exchange for credit toward a course requirement. Participants reported

individually to a laboratory experiment described as a study of interests and intellect, and they were randomly assigned between the reappraisal or rumination conditions.

Procedure. Upon arrival to the lab, participants were told that the experiment concerned the relationship between personal interests and social skills. As part of the cover story, participants were informed they would complete a computer-based measure of lifestyle interests and personal preferences that had been shown to predict people's social abilities. The so-called "MacMillan Lifestyles Questionnaire" asked participants twenty multiple-choice questions about their interest in a variety of topics. For example, one question asked "What would you rather do on a Friday night? A) Go to the movie theater; B) Go to a party; C) Relax at home; D) Go on a date," and another asked "Which of these characteristics do you find most important in a friendship? A) Understanding; B) Loyalty; C) Similarity; D) Compassion." Upon completing the questionnaire, participants were told they would have the opportunity to view the results of the test. They all chose to do so. Participants were informed that although they may not agree with the results, that was not relevant to the experiment because the questionnaire had already been established as a reliable predictor of social abilities. Rather, participants were told the experiment concerned how people respond to computer-based evaluations.

After receiving evaluative feedback about their responses (described below), participants in the reappraisal condition were instructed to focus on and express their thoughts about the evaluation by completing twenty sentence stems that began, "I think the evaluation _____". Participants assigned to the rumination condition were asked to

focus on and express their emotional responses to the evaluation by completing twenty sentence stems that began “The evaluation makes me feel _____.”

All participants were presented identical negative feedback. The feedback read, in part, “Your responses indicate that you lack important social and emotional abilities for someone your age. You probably have a few close friends at this stage in your life, but if you fail to change your lifestyle preferences, you are likely to have difficulty maintaining those friendships and forming new relationships in the future. The lack of maturity shown in your responses indicates that you are likely to experience emotional distress and even depression when you encounter failure or other hardships that are inevitable in life.”

After reading the feedback, participants completed the sentence stems by either reappraising or ruminating about the feedback. Next, participants rated their emotional state by indicating the extent to which they were feeling *fed up*, *gloomy*, *grouchy*, *jittery*, *nervous*, and *sad* (i.e., the negative valence items from the Brief Mood Introspection Survey; Mayer & Gaschke, 1988) using scales from 1 = *definitely do not feel* to 7 = *definitely do feel*. Higher scores reflected a more negative emotional state ($\alpha = .79$). Last, participants rated how well the MacMillan Lifestyles Questionnaire assessed social abilities on a scale from 1 (*not at all*) to 7 (*very well*).

Results

The primary hypothesis of Experiment 1 was that, compared to rumination, reappraisal reduces defensive responding to negative feedback about the self. Our measure of defensive responding was participants’ evaluation of the validity of the

MacMillan Lifestyles Questionnaire. As predicted, participants in the rumination condition ($M = 2.92$, $SD = 1.59$) rated the bogus social skills test to be a poorer measure of social abilities compared to participants in the reappraisal condition ($M = 3.59$, $SD = 1.56$), $t(99) = 2.13$, $p = .036$. Thus, ruminators derogated the source of negative feedback to a greater degree than did reappraisers.

We also assessed participants' emotional states immediately after they had ruminated about or reappraised the negative feedback. Participants in the rumination condition reported a more negative emotional state ($M = 16.32$, $SD = 6.66$) than did participants in the reappraisal condition ($M = 14.08$, $SD = 5.66$), $t(99) = 1.82$, $p = .07$, consistent with previous research (e.g., Ray et al., 2008).

Discussion

The results from Experiment 1 indicated that, relative to ruminating about one's emotional response to negative feedback, reappraising the feedback resulted in reduced defensiveness. Participants who reappraised the negative feedback did not derogate the social abilities test as forcefully as did participants who ruminated. Further, participants in the rumination condition reported a more negative emotional state, consistent with evidence that rumination prolongs or exacerbates emotional states relative to reappraisal (e.g., Ray et al., 2008).

The results from Experiment 1 suggested that cognitive reappraisal reduces ego defensiveness. The literature on ego defense has revealed several strategies for defending the self from threat, and theorists have suggested that indirect or implicit measures may be more indicative of or sensitive to defensive processes than explicit

measures (e.g., Greenwald and Banaji, 1995). Given that we used a direct, explicit measure of ego defense in Experiment 1, we sought to replicate the finding using a more indirect measure of ego defense in Experiment 2.

CHAPTER III

EXPERIMENT 2

Participants in Experiment 2 received the same negative feedback about their social skills as did participants in Experiment 1. Rather than evaluating the validity of the source of the negative feedback, however, participants in Experiment 2 completed a second task that was (ostensibly) unrelated to the social skills test. More precisely, after receiving negative feedback, participants completed the Over-Claiming Questionnaire (OCQ), a reliable and objective measure of implicit self-enhancement tendencies (Paulhus et al., 2003). The OCQ allowed participants the opportunity to claim knowledge they cannot possess for the sake of appearing intelligent. Following Experiment 1, we predicted that ruminating about negative feedback would lead to more self-enhancing over-claiming, relative to reappraising negative feedback

Method

Participants and Design. Seventy-nine undergraduate students (23 males) participated in exchange for credit toward a course requirement. Participants reported individually to a laboratory experiment described as a study of interests and intellect, and they were randomly assigned between the rumination and reappraisal conditions.

Procedure. The procedure for Experiment 2 was identical to the procedure for Experiment 1, with the exception of the dependent measure and the timing of the mood measure. After ruminating about or reappraising negative feedback about their social skills, participants completed the Over-Claiming Questionnaire (OCQ; Paulus et al.,

2003). The OCQ asked participants to rate how familiar they were with various names and events using a scale from 0 (*not familiar at all*) to 6 (*completely familiar*). The list included real items (e.g., Mae West, pork-barreling) as well as “foil” or fake items that do not actually exist (e.g., Bulldog Graziano, plates of parallax). The idea is that participants may seek to inflate or enhance their self-view by claiming knowledge they cannot possibly have for the sake of appearing intelligent (Paulhus et al., 2003). After the OCQ, participants completed a state measure of mood (the same negative mood items used in Experiment 1), and were debriefed regarding the true purpose of the experiment, thanked, and dismissed.

Results

The primary hypothesis was that, relative to participants who reappraised the negative feedback, participants who ruminated about their emotional response to the negative feedback would self-enhance to a greater degree. They did. The main dependent variable was self-enhancing response bias on the Over-Claiming Questionnaire. We computed response bias by summing the proportion of actual items plus foil items with which participants claimed familiarity (see Paulus et al., 2003, for detailed scoring instructions). Participants in the rumination condition showed a more pronounced self-enhancement bias ($M = 0.98$, $SD = 0.44$) than did participants in the reappraisal condition ($M = 0.79$, $SD = 0.27$), $t(69) = 2.35$, $p = .02$.

The Over-Claiming Questionnaire also furnishes an accuracy score, computed by subtracting the proportion of familiar actual items minus familiar foil items. Here, rumination and reappraisal participants were equivalent, $t(69) = .94$, $p = .35$. Thus,

ruminating about one's emotional response to negative feedback increased the tendency to claim knowledge of non-existent people, concepts, and events but did not influence accuracy in recognizing real people, concepts, and events.

Last, we tested for between-group differences in participants' emotional states after completing the OCQ. Responses to the negative mood items ($\alpha = .80$) revealed that participants in the rumination condition reported feeling more negative ($M = 16.87, SD = 13.05$) than those in the reappraisal condition ($M = 13.05, SD = 5.55$), $t(69) = 2.50, p = .02$. Thus, ruminators still reported more negative mood than did reappraisers even when mood was measured after participants completed the Over-Claiming Questionnaire.

Discussion

The results from Experiment 2 provided further evidence that reappraisal reduces defensiveness, relative to rumination. Participants who reappraised the negative feedback were less likely to feign knowledge on the subsequent Over-Claiming Questionnaire. Participants who ruminated also reported a more negative emotional state at the end of the experiment, hinting that their defensive strategy did not alleviate the discomfort of being exposed to ego threat.

Experiment 2 suggested that differences in reactions to ego threat as a result of reappraisal or rumination can also be measured indirectly, using a measure of defensiveness that is ostensibly unrelated to the ego threat. Furthermore, although participants in the rumination condition self-enhanced presumably in an effort to feel better, they ended up reporting a more negative mood. The findings suggest that

although indirect self-enhancement may appear to make one more positive about themselves when taken at face value (i.e. reports of being more knowledgeable), it may not improve emotional comfort level.

CHAPTER IV

CONCLUSION

The present research examined the relative effects of cognitive reappraisal and rumination in response to threats to self-regard. In Experiment 1, participants who were induced to reappraise negative feedback about the self subsequently derogated the source of the negative feedback less forcefully than did participants who ruminated about the negative feedback. In Experiment 2, reappraisers reacted to ego threat with less self-enhancement relative to ruminators. These findings suggest that cognitive reappraisal enabled participants to reduce the threat inherent in negative feedback and prevent it from becoming strong enough to induce ego defensiveness.

Participants' subjective emotional states supported this interpretation. In Experiment 1, ruminators reported more negative mood than did reappraisers. In Experiment 2, ruminators again reported more negative mood than did reappraisers, though mood was measured after participants had completed the Over-Claiming Questionnaire. These findings attest to the relative benefits of reappraisal versus rumination in reducing negative emotional states (see also Gross & Thompson, 2007; Ray et al., 2008)

The present investigation differs from past research on rumination and reappraisal in that a more direct method was used to induce negative emotions. Whereas previous research has tended to induce negative emotion by asking participants to recall past events or to passively view visual stimuli, the current study induced ego threat by

informing participants they lacked social skills that contribute to a successful, happy life. This sort of feedback is more aligned with what people might encounter in their social relationships on a daily basis. Furthermore, the present research demonstrated the effects of rumination and reappraisal on ego-defensive responses, whereas previous work has tended to focus on subjective emotional experience or physiological arousal. The current findings, in combination with findings from past work, suggest that one's cognitive response to emotional events can have a profound impact on that individual's experience, ranging from physiological responses to defense of his or her self-concept.

One of the key benefits of cognitive reappraisal is to allow individuals to cope with uncomfortable situations. Similarly, ego defense mechanisms help individuals to cope with threats to self-regard. We found that instructing participants to engage in cognitive reappraisal reduced ego defense, which supports the idea that ego defense and cognitive reappraisal sometimes serve the same purpose. Although both ego defense and reappraisal may relieve emotional discomfort, the present research did not address potential psychological by-products of their use. In other words, how might the use of ego defense strategies or cognitive reappraisal impact the way an individual thinks about him or herself?

Future research may search for a better understanding of how individual differences in the tendency to reappraise versus ruminate about emotional events are maintained. Why are some people more likely to ruminate about ego threats or other negative experiences, whereas others reappraise them? What effects do these strategies have on people's daily decision-making and psychological well-being? Furthermore,

future work may seek to compare these two competing cognitive responses to emotional events in other social psychological domains. For example, does reappraisal reduce defensive responses that naturally arise from thoughts of death (Greenberg et al, 1992), or does rumination enhance defensive responses to the thought of death? The avenues for psychological development that are a direct result of emotion regulation are numerous, and future research may begin to unravel the superior approach to dealing with uncomfortable situations.

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