

The Role of Self-affirmation and Self-expansion on State Self-esteem

Research Thesis

Presented in partial fulfillment of the requirements for graduation *with research distinction* in  
Psychology in the undergraduate college of Art and Sciences of The Ohio State University.

By

Mark A. Matthews

The Ohio State University

May 2015

Project Advisor: Dr. Amy B. Brunell, Department of Psychology

## **Abstract**

There is a wide variety of research that has examined the extent to which humans use others for self-enhancement. Previous work has shown that people can expand their sense of self by using close others to boost self-esteem. Additionally, self-affirmation theory is a large part of the human psychological immune system, holding the power to boost the self and potentially protect self-esteem. Recent research has found that when facing negative feedback, people have a tendency to inflate their views of significant others in terms of positive characteristics, possibly to make themselves feel better (Brown & Han, 2012). The present research involves a 2 (self-affirmation) x 2 (success vs. failure feedback) x 2 (friend vs. college student rating) factorial design. A significant three-way interaction revealed effects for state self-esteem, but not for partner ratings or task performance. Non-self-affirming participants who received failure feedback had higher self-esteem ratings versus non-self-affirming participants who received failure feedback and rated a college student.

## The Role of Self-affirmation and Self-expansion on State Self-esteem.

Early social psychological research speculated that humans tend to use self-enhancement methods in order to reestablish and/or protect self-esteem (James, 1915). Research by Allport (1943) suggests that these effects are egocentric. Essentially, when a person feels a threat to the ego (i.e. self-esteem threat), that person is likely to engage in a behavior to reduce the threat. To reduce or protect against threats to self-esteem, there are many strategies that a person might use; the focus of the present research concerns the strategies of self-affirmation and self-expansion.

### **Self-Affirmation:**

A wide variety of research has shown that humans will engage in self-affirming behavior in response to a negative ego-threat (Steele, 1998; Aronson et al, 1999; Sherman and Cohen, 2006). According to Sherman (2013), there are three basic uses of self-affirmation: to increase resources for coping with stress, to reduce bias (prejudice) in response to self-threat, and to decrease the impact of a threat to self-esteem. For instance, research by Steele (1975) showed that, in response to being viewed negatively (uncooperative in the community), participants were more likely to cooperate in community service tasks to self-affirm that they are a good, cooperative person. This effect was significant regardless of whether the negative feedback was relevant to cooperation (i.e., some participants were told they were bad drivers instead of uncooperative), showing that the purpose of helping was to reduce the impact of the negative feedback, regardless of its relevance to the threatened domain.

More recent research has shown the real world effects of self-affirmation in attitude change (Cohen, Aronson, & Sherman, 2000). In a series of three studies, participants were placed into either a self-affirmation condition or a control condition, asked to read counter-attitudinal articles, and then asked evaluative questions regarding the persuasiveness of the

article and the credibility of the author. The results showed that participants who self-affirmed rated the articles as more persuasive, and they gave more favorable ratings to authors who presented opposing opinions than participants who did not self-affirm. Cohen et al. (2000) concluded that participants were less defensive in terms of attitude change due to a reduced need to self-protect.

Further research supports that self-affirmation can be used as a protective measure against stress (Sherman & Hartson, 2011). For example, researchers measured norepinephrine and epinephrine levels (i.e., neurotransmitter markers of stress) of college students 14 days prior to an exam and also the day of the exam. Students who did not self-affirm showed increased epinephrine levels from the 14 day sample to the day of the exam; however, participants who self-affirmed did not show a significant increase in epinephrine levels (Sherman, Bunyan, et al., 2009). Additionally, the effect was greater for participants who had a more negative evaluation of college (considered most “psychologically vulnerable”).

Additional research supports that self-affirmation can be used as a protective measure against derogating others through stereotyping and prejudice (Fein & Spencer, 1997). For example, participants were randomly assigned to either a self-affirmation condition or a non-self-affirmation condition. Participants were then asked to read a biography and watch an interview for a potential job candidate who was implied to be either Jewish (a marginalized group) or Italian (control group). Last, participants were asked to rate the candidate’s personality. Participants who did not self-affirm engaged in prejudice, giving significantly less favorable ratings to the candidate when she was implied to be Jewish; however, participants who self-affirmed showed no significant differences in ratings of the candidate based on ethnicity.

The present research extended these findings to show that self-affirmation not only boosts the self following stressful situations, but also protects the self from direct self-esteem threats (e.g., negative performance feedback). If this is the case, then self-affirmation should reduce the need to use self-expansion following self-esteem threat—a clear indication that the affirmation is truly protecting self-esteem.

### **Inclusion of Others in the Self:**

Following research on the self (James, 1915), people tend to incorporate significant others, friends, family, and others (teams/groups) into a person's self-concept. For example, the self-expansion model (Aron & Aron, 1996) is founded upon the idea of inclusion of others in the self. Essentially, people adopt others' self-concepts into their own self-concept to expand the self (Aron, Aron, & Smollan, 1992; Aron et al., 1991). Because people treat those who they incorporate into their sense of self as a part of their actual self, they are likely to view their opinions, strengths, and values as their own (Aron et al., 1991). Thus people can inflate their self-views by inflating their views of close-others.

One result of this process is use of the self-enhancement strategy of *basking in the reflected glory* of others, such as when students identify with sports teams (Cialdini et al., 1976). More specifically, students more often identified with their school's football team using the pronoun "we" when the team won and "they" when the team lost. Further research supports the notion that one not only uses sports teams to expand the self, but one also uses close individuals in whom the person is emotionally invested (Anderson & Chen, 2002). Expansion of this research has shown that a person must be significantly connected to an individual to use them for self-enhancement; however, the significance can be as minimal as being affiliated with the same organization (Gramzow & Gaertner, 2005).

More recent research by Brown and Han (2012) showed that participants are likely to use significant others (in this case a romantic partner) to increase self-esteem following negative feedback on a performance task. In a series of two studies, participants were given a version of the Remote Associates Test and were told that it was a measure of creative intelligence. They were then randomly assigned to either a success or failure condition. Those in the success condition were told that they scored within the top 87% of students at their university, and those in the failure condition were told that they scored within the bottom 23% of students at their university. Following the false-feedback, participants were asked to evaluate themselves, their significant other or most recent significant other, and (in study 2) most other people in terms of positive characteristics and values. Their findings indicated an overall effect showing that participants tend to increase the positivity of their views of their romantic partners in response to receiving negative feedback. Brown and Han (2012) concluded that evaluating their romantic partners more favorably restored one's own self-esteem through association. Further, their findings indicated that only those who had a lower global self-esteem tended to inflate their views of their partners to a greater extent, whereas those with a higher global self-esteem did not significantly inflate views of their partners. Brown and Han suggest that those with a low global self-esteem use the partner to self-enhance because it is a form of indirect self-enhancement, whereas those with a high global self-esteem have better resources and tend to use direct forms of enhancement.

### **The Present Research**

The present research extended Brown and Han's (2011) research on using close others to self-enhance. I sought to answer four main questions. First, I sought to extend Brown and Han's findings by using close friends instead of romantic partners. This will allow for the examination

of whether the effect is limited to romantic relationships or if the effect is applicable to other close relationships. Second, Brown and Han (2011) never assessed whether rating of the close other affected state self-esteem. Thus, because using a close other is thought to increase self-esteem, I assessed state self-esteem following the ratings of a target (i.e., close friend or typical college student) to see if those who had the ability to enhance have a higher state self-esteem. Third, a person should be able to interchange self-enhancement/protection strategies (Tesser, 2001). Thus I incorporated a self-affirmation condition prior to the negative feedback to assess whether or not participants who have the opportunity to self-affirm (protect self-esteem) will use the close-other enhancement. And fourth, because the participants were given feedback on an intelligence task, I assessed whether or not the aforementioned self-enhancement/protection strategies (close-other enhancement and self-affirmation) would impact performance on a GRE practice test after receiving negative feedback. Previous research (Schmeichel, Baumeister, & Vohs, 2003) has shown that participants will perform worse on intelligence based tasks after completing an analytical task prior to the intelligence task. For example, participants were first randomly assigned to either task that required attention or a control task. Following the task, participants were given 13 items from a GRE analytical section and evaluated for performance. Participants in the attention-dependent task performed worse and completed less GRE items, suggesting that ego depletion diminished intellectual ability on the second task (also known as the two-task paradigm). Our study examined the interaction between self-affirmation, self-enhancement, and performance feedback on the first task to see if either of these factors increased persistence, allowing for reduced ego-depletion and better performance on the second task. This question has not been examined in ego depletion research.

## **Hypothesis**

1. Participants would rate friends higher than average college students when faced with negative feedback compared to those who received positive feedback.
2. In the failure condition, participants who self-affirmed would not enhance the ratings of friends as opposed to participants who did not self-affirm.
3. In the failure condition, I expected self-affirmation to buffer state self-esteem.
4. In the failure condition, those who did not self-affirm would experience a boost in state self-esteem after evaluating a friend rather than the average college student.
5. In the failure condition, those who self affirmed would perform better on a GRE task than those who did not self-affirm.
6. In the failure condition, those who did not self-affirm would perform better on a GRE task after rating a friend rather than after rating the average college student.

## **Method**

### *Participants*

The participants consisted of 172 undergraduate Introductory Psychology students and undergraduate students from upper level courses at the Ohio State University Mansfield campus. Participants were 59.7% female and 40.3% of participants male. The average age of the participants was 19.93 ( $SD = 5.21$ ). Participants took part in the study for either partial fulfillment of a research requirement or for extra credit. The design was a 2x2x2 factorial design. We could not reach the optimal level of participants ( $N = 400$ ) due to a lack of available participants on our campus.

### *Materials and Procedure*

Each participant reported to the lab alone. The study was portrayed as a measure of personality and performance. After completing an informed consent form, the participant was given the self-affirmation manipulation frequently used in self-affirmation research (Cohen, Aronson, & Steele, 2000). The manipulation was introduced as a measure of personal characteristics and values. In the affirmation condition, participants were given a sheet and asked to rank 11 characteristics in order of importance to them (i.e. relationships with family, creativity, etc.). These participants were then asked to write about a time when they experienced their top-ranked characteristic playing an important role in their lives. In the non-self-affirmation condition, participants were given the same sheet and asked again to rank their top 11 characteristics (same characteristics). However, these participants were asked to write about their ninth ranked characteristic—a control measure that does not induce self-affirmation. In both conditions, participants were given as much time as they needed to complete the assessment.

Following the affirmation manipulation, participants were given a version of the Remote Associates Test (RAT) and a “social sensitivity test” (a bogus test) used in prior research (Brown & Han, 2012). Following Brown and Han, participants were told that these tests measure creative intelligence. However, taking the test was simply used as a method for providing false feedback to participants. In the success condition, participants were given an easy version of the RAT and, following completion, were told that they scored in the top 87<sup>th</sup> percentile of students who have taken the test in the past. In the failure condition, participants were given a more difficult version of the RAT and, following completion, were told that they scored in the bottom 23<sup>rd</sup> percentile of students who have taken the test in the past. In both conditions, participants were given seven minutes to complete the tests (Brown & Han, 2012).

Following the false feedback, participants were given an evaluation of positive characteristics (e.g., honest, kind) for either a close same-sex friend or an average college student. The evaluation of another person uses a five-point Likert scale (1 = very low, 3 = neutral, 5 = very high). Ratings were summed across the twelve items; internal reliability was adequate ( $\alpha = .81$ ,  $M = 43.43$ ,  $SD = 6.50$ ). Participants were also asked to complete a state self-esteem measure (“right now I feel good about myself”), which was taken from a 5 point Likert (1 = not at all, 3 = somewhat, 5 = extremely) state self-esteem scale (Heatherton & Polivy, 1991). The mean for this scale was 3.55 ( $SD = .90$ ). Following the other evaluation (in all conditions) participants were given 10 minutes to complete a series of analytical puzzles (GRE practice questions; Finkel et al., 2006), which were used as a performance measure ( $M$  problems solved = 7.44,  $SD = 2.21$ ;  $M$  problems solved correctly = 3.88,  $SD = 2.05$ ). All participants were told their scores after; however, they were told that the scores could not be compared to other students as the test is new.

Following the analytical assessment, participants (in all conditions) were escorted by the experimenter to a computer and asked to fill out a series of personality inventories that are not analyzed in the present thesis. Finally, participants were probed for suspicion, debriefed, thanked, and granted credit for participation.

## Results

There were no effects due to sex, age, or race. Initially, a 2 (Self-affirmation condition) x 2 (feedback) x 2 (Friend vs Student ratings) ANOVA was computed on ratings of the target. This analysis revealed a main effect for positive ratings,  $F(1, 162) = 52.847$ ,  $p < .001$ . Higher ratings were given to friends ( $M = 46.42$ ,  $SD = 6.54$ ) than to students ( $M = 40.10$ ,  $SD = 4.76$ ). No other

main effects nor interactions were significant. This did not support our initial hypothesis of ratings ( $H_1$  and  $H_2$ ).

Next, a 2 (self-affirmation condition) x 2 (feedback) x 2 (friend vs student ratings) ANOVA was performed on the state self-esteem measure. This analysis revealed a significant main effect of success versus failure on state self-esteem,  $F(1,162) = 3.09, p = .049$ . Overall, those in the success condition ( $M = 3.69, SD = .87$ ) rated higher for state self-esteem than those in the failure condition ( $M = 3.42, SD = .90$ ), supporting the failure feedback as a self-esteem threat. There were no other significant main effects.

However, this main effect was qualified by a significant three-way interaction on state self-esteem,  $F(1, 162) = 6.29, p = .01$ . Following success, participants reported higher self-esteem when they did not self-affirm and rated a student ( $M = 3.86, SD = .91$ ) versus rating a friend ( $M = 3.47, SD = .90$ ). However, those who self-affirmed reported higher self-esteem after rating a friend ( $M = 3.77, SD = .68$ ) versus a student ( $M = 3.58, SD = .96$ ). In the failure condition, participants who did not self-affirm reported higher self-esteem after rating a friend ( $M = 3.63, SD = .76$ ) than a student ( $M = 3.25, SD = .97$ ). Self-affirming participants reported higher self-esteem after rating a student ( $M = 3.52, SD = .93$ ) than a friend ( $M = 3.25, SD = .97$ ). See Figure 1.

A test of the simple effects showed that those who did not self-affirm, received success feedback and rated a college student had significantly higher self-esteem than those in the other condition,  $F(1,164) = 3.162, p < .08$ . Additionally, in the failure x no self-affirmation x friend condition there was a notable trend,  $F(1,164) = 2.39, p = .12$ . Although these results did not support self-affirmation as a means to buffer state self-esteem ( $H_3$ ), they do support our

hypothesis that participants who did not self-affirm, failed, and rated a friend would experience a boost in state self-esteem (H<sub>4</sub>).

A 2 (Self-affirmation condition) x 2 (feedback) x 2 (Friend vs Student ratings) ANOVA on GRE items answered correctly did not show any significant effects or interactions, highest  $F(1,164) = 1.23, p = .27$ . Additionally, a 2 (Self-affirmation condition) x 2 (feedback) x 2 (Friend vs Student ratings) ANOVA on GRE completed did not show any significant effects or interactions, highest  $F(1,164) = 1.23, p = .27$ . These results did not support our hypothesis of increased performance (H<sub>5</sub> and H<sub>6</sub>).

### **Discussion**

The results did not support our initial hypotheses that participants would rate friends higher following failure rather than following success. However, unlike the Brown and Han (2012) study, I analyzed data for all participants and not just those with low global self-esteem. This supports the findings that that only participants with a low global self-esteem will use a self-expansion to self-enhance. A follow-up study should test for both global self-esteem and state self-esteem to examine the differences between low global self-esteem and high global self-esteem participants. I speculate that the partner ratings will replicate Brown and Han's (2012) findings that those with low global self-esteem will rate friends higher following failure, but they will not do so when they have the chance to self-affirm prior to the failure feedback. Additionally, I used a between subjects design, whereas Brown and Han (2012) used a within-subject design. It is possible that the comparison ratings were inflated in the within subjects design due to making a direct comparison.

My results showed a significant three-way interaction on state self-esteem. In the failure condition, participants had the highest state self-esteem when they did not affirm and rated a friend. This supports Brown and Han's (2012) speculation that using self-expansion (thinking about friends following failure) can contribute to higher self-esteem. However, there is also the potential that participants may have made a downward social comparison ("I failed on this task, but I am better than my friends") as a defense mechanism to boost self-esteem (See Festinger, 1954; Pyszczynski et al., 1985). Additional research has shown that making a downward social comparison is induced following failure (Gibbons et al., 2002). I speculate that this effect might be driven by both enhancement mechanisms. Overall, however, it is possible that rating friends reminded participants that they have significant relationships following failure, inflating self-esteem. This is the most parsimonious explanation.

Because those with a low global self-esteem tend to use indirect forms of enhancement (i.e. self-expansion) (See Brown & Han 2012; Brown, Collins, & Schmidt, 1988), I believe that these participants are more likely to use self-expansion to boost state self-esteem following the failure feedback. However, because participants with a high global self-esteem tend to use more self-focused forms of enhancement, I believe that these participants are more likely to make a downward social comparisons to boost state self-esteem following the failure feedback.

Conversely, in the success condition, participants had the highest state self-esteem when they did not affirm and rated a college student rather than a friend. The most likely explanation for this is that participants' state self-esteems are higher through direct association to the success scores. It is possible when participants rate their friends following success, they engage in upward social comparisons (my friends are great) and feel worse about themselves than when comparing with college students (in which they have just been told they have performed better

than the average). This follows previous research on upward comparisons showing that when people make upward social comparisons, they tend to suffer a deflation to self-esteem (Wheeler & Miyake, 2002). However, it is also likely that participants increased their self-esteem through a downward social comparison of college students, simply because they are comparing themselves to the group in which they have been informed they have performed better than.

Another potential limitation is that I did not have participants rate themselves on positive characteristics. I did not have the participants rate themselves because Brown and Han (2012) did not find any significant effects due to self-ratings. Also, I was looking at people using others to self-enhance, and thus was concerned with the friend ratings or college ratings; however, the results suggest that I may be witnessing a social comparison in addition to a self-expansion process. To accurately measure social comparison, a future study should compare ratings of both the self, a close friend, and the average college student.

The results on performance show no evidence that success on a previous task or either a self-protective or self-enhancing task increases performance. Moreover, the results show no evidence for success on a previous task to replenish ego depletion (Schmeichel, Baumeister, & Vohs, 2003), even though positive affect has been shown to restore depletion (Tice, Baumeister, Shmueli, & Muraven, 2007).

Future research can examine personality variables, such as narcissism. I would predict that those who score higher on narcissism would be more likely to benefit from the self-affirmation measures in terms of self-protection. However, I would also expect more narcissistic participants to make a downward social comparison following failure to feel better about themselves. Thus I would expect to see the opposite trend in the failure condition with a higher self-esteem following the rating of a college student.

The present study supported the hypothesis that people can increase state self-esteem simply by evaluating others following failure. Further research should examine these effects amongst those with low global self-esteem versus those with high global self-esteem.

## References

- Allport, G. W. (1943). The ego in contemporary psychology. *Psychological Review*, *50*, 451-478.
- Andersen, S. M., & Chen, S. (2002). The relational self: An interpersonal social-cognitive theory. *Psychological Review*, *109*, 619-645.
- Aron, A., & Aron, E. N. (1996). Self and self expansion in relationships. In G. J. O. Fletcher and J. Fitness (Eds.), *Knowledge structures in close relationships: A social psychological approach* (pp. 325-344). Mahway, NJ: Lawrence Erlbaum Associates.
- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, *63*, 596–612.
- Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology*, *60*, 241–253.
- Aronson, J., Cohen, G., Nail, P. & Harmon-Jones, R. (1999). Self-affirmation theory: An update and appraisal. *Cognitive dissonance: Progress on a pivotal theory in social psychology*. Science conference series. Eddie (Ed); Mills, Judson (Ed). (pp. 127-147). Washington, DC, US: American Psychological Association, xviii, 411 pp.
- Brown, J.D., Collins, R.L., & Schmidt, G.W. (1988) Self-esteem and direct versus indirect forms of self-enhancement. *Journal of Personality and Social Psychology*, *55*, 445-453.
- Cohen, G. L., Aronson, J., & Steele, C. M. (2000). When beliefs yield to evidence: Reducing biased evaluation by affirming the self. *Personality and Social Psychology Bulletin*, *26*, 1151–1164.
- Fein, S., & Spencer, S.J. (1997). Prejudice as self-image maintenance: affirming the self through derogating others. *Journal of Personality and Social Psychology*, *73*, 31-44.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*, 117–140.

- Finkel, E.J., Dalton, A.N., Campbell, W.K., Brunell, A.B., Scarbeck, S.J., & Chartrand, T.L. (2006). High-maintenance interaction: Inefficient social coordination impairs self-regulation. *Journal of Personality and Social Psychology, 91*, 456-475.
- Gibbons, F. X., Lane, D. J., Gerrard, M., ReisBergan, M., Lautrup, C. L., & Pexa, N. (2002). Comparison level preferences after performance: Is downward comparison theory still useful? *Journal of Personality and Social Psychology, 83*, 865–880.
- Gramzow, R.H. & Gaertner, L. (2005). Self-esteem and favoritism toward novel in-groups: The self as an evaluative base. *Journal of Personality and Social Psychology, 88*, 801-815.
- Heatheron, T.F. & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology, 60*, 895-910.
- Ilies, R., De Pater, I. E., & Judge, T. A. (2007). Differential affective reactions to negative and positive feedback, and the role of self-esteem. *Journal of Managerial Psychology, 22*, 590-609.
- James, W. (1915). *Psychology, briefer course*. New York: Holt.
- Kluger, A.N., Lewinsohn, S. & Aiello, J.R. (1994). The influence of feedback on mood: Linear effects on pleasantness and curvilinear effects on arousal. *Organizational Behavior and Human Decision Processes, 60*, 276-99.
- Pyszczynski, T., Greenberg, J., & LaPrelle, J. (1985). Social comparison after success and failure: biased search for information consistent with self-servicing conclusion. *Journal of Experimental Social Psychology, 21*, 195–211.
- Schmeichel, B.J., Baumeister, R.F., & Vohs, K.D. (2003). Intellectual performance and ego depletion: Role of the self in logical reasoning and other information processing. *Journal of Personality and Social Psychology, 85*, 33-46.

- Sherman, D. K., Bunyan, D. P., Creswell, J. D., & Jaremka, L. M. (2009). Psychological vulnerability and stress: The effects of self-affirmation on sympathetic nervous system responses to naturalistic stressors. *Health Psychology, 28*, 554–562.
- Sherman, D. K., & Hartson, K.A. (2011). Reconciling self-protection with self-improvement: Self-affirmation theory. In M.D. Alicke., & C. Sedikides, (Eds.), *Handbook of Self-Enhancement and Self-Protection* (128-151). New York, NY: Guilford Publications.
- Steele, C. M. (1975). Name-calling and compliance. *Journal of Personality and Social Psychology, 31*, 361-369.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology, 21*, 261-302. New York, NY: Academic Press.
- Tesser, A. (2001). On the plasticity of self-defense. *Current Directions in Psychological Science, 10*, 66-69.
- Tice, D. M., Baumeister, R. F., Shmueli, D. & Muraven, M. (2007). Restoring the self: Positive affect helps improve self-regulation following ego depletion. *Journal of Experimental Social Psychology, 43*, 379-384.
- Wheeler, L., & Miyake, K. (2002). Social comparison in everyday life. *Journal of Personality and Social Psychology, 62*, 760–773.

Figure 1. State self-esteem by condition.

