Self-enhancement of positive traits:

Examining the relationship and effects of self-esteem and cognitive load

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Abstract

According to previous research, individuals will use self-enhancement of positive traits when faced with a self-esteem threat and a cognitive load (Beer, Chester, & Hughes, 2013). In order to determine when, and the degrees to which, individuals self-enhance, self-esteem and cognitive load was manipulated by means of a false intelligence test, while self-enhancement was measured by a reflective survey. After running a 2 x 2 between-subjects ANOVA, results showed statistically significant results associated between both cognitive load and self-enhancement, and self-esteem and self-enhancement supporting the main effects hypothesis; however, the association between cognitive load, self-esteem, and self-enhancement was not supported. Researchers are interested by the effects self-enhancement has on how individuals respond to negativity, such as failure, loss, and complications (Dutton & Brown, 1997) and the degree to which self-enhancement motivates acceptance.

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Think back to the last time you failed a test or did not receive that job offer or promotion, and what your state of mind was like when hearing of this failure. Think back to how it affected the rest of your immediate actions. How did you accept this failure? Self-enhancement is the motivation behind, and how, people soften the blow of a failure, while protecting their self-esteem. There are two types of self-enhancement: approach-oriented self-enhancement, where a person will find positive ways of coming to terms with their failure, and avoidance-oriented self-enhancement, where a person will take the threat out of a failure – usually by placing blame, "the teacher did not prepare us for this test," (Lynch & O'Mara, 2015). For the purposes of my study, I was only focusing on approach-oriented self-enhancement.

In an article published in 2013, titled *Social threat and cognitive load magnify self-enhancement and attenuate self-deprecation,* Beer, Chester, and Hughes conducted three experiments to explore whether individuals use self-enhancement of positive traits or social comparison judgments while experiencing a cognitive load and a self-esteem threat. Researches tested how individuals compare themselves to others after being affected by only a self-esteem threat, but also a self-esteem threat and a cognitive load; and how a self-esteem threat and cognitive load would affect the way an individual thought of their future events compared to the future events of their peers. The results of these tests determined individuals would use social comparisons when they experienced a self-esteem threat, but would use self-enhancement of positive traits when experiencing a self-esteem threat and a cognitive load. This study stated future research should focus on the relationship between self-enhancement of positive traits and social comparison judgments, rather than the differences between the two; as well as study the

motivation behind why people use self-enhancement versus social comparisons under different circumstances (Beer, Chester, & Hughes, 2013).

I began to look specifically at self-esteem, and was interested in Dutton and Brown's *Global self-esteem and specific self-views as determinants of people's reactions to success and failure* (1997). The study differentiated between two types of self-esteem: global, or the way an individual predominantly feels about themself, and specific self-views, or one's views about specific skills or characteristic attributes they possess. In order to investigate global and specific self-esteem, Dutton and Brown conducted two experiments to see who people with high and low self-esteem react to success and failure. The experiments looked at how self-esteem is correlated to completing a task, like test taking, and measured the cognitive, emotional, and self-evaluation effects of success and failure. Researchers found individuals with high self-esteem did not take failure as personally as individuals with low self-esteem. Additionally, results showed cognitive reaction can be predicted by a person's specific self-view, but emotional reactions can be predicted by global self-esteem. Implications to be explored are why and how people have high versus low self-esteem and how individuals cope in real life situations according to their high or low self-esteem groups (Dutton & Brown, 1997).

I wanted to look specifically at cognitive reactions, and found Murphy, Groeger, and Greene's *Twenty years of load theory—Where are we now, and where should we go next?* (2016). The purpose of this research paper was to examine the existing research on load theory, to highlight what researchers have discovered in past studies, and to discuss implications of future research. The paper first defined selective attention and introduced the topic of load theory. Next it touched on findings from perceptual and cognitive load, individual differences research, and alternative load theories. Finally, the paper outlined the future of load theory.

Results implied load is not using real-world application of attention – where situations in using load are not correlated by realistic situations and behavior. For future experiments while using load, it would be implicative to understand how load influences distraction, how load is used in "real" scenarios, and the relationship between load, personality, and intelligence (Murphy, Groeger, & Greene 2016).

Finally, I wanted to look at how individuals self-enhance, by studying the 2015 Lynch and O'Mara, *Do autonomous individuals strive for self positivity? Examining the role of autonomy in the expression of self-enhancement*. Lynch and O'Mara conducted two experiments: one, to explore the degree to which autonomous individuals, or independent individuals, use self-enhancement, and two, if this use is positively or negatively associated with psychological well-being. In the first experiment, researchers tested the correlations between defensiveness, favorable construals, positivity embracement, self-affirming reflections, autonomy, and controlledness. In the second, researchers tested the correlation between satisfaction with life, subjective well-being, vitality, depression, and perceived stress. Results indicated autonomous individuals use both approach-oriented and avoidance-oriented self-enhancement for positive psychological well-being strategies. Further research is suggested to duplicate and extend this study for eastern cultures to continue the understanding of self-enhancement strategies (Lynch & O'Mara, 2015).

The purpose of this study is to explore when, and the degrees to which, individuals use self-enhancement of positive traits by manipulating cognitive load and self-esteem. I predicted individuals who experienced a high cognitive load would use self-enhancement of positive traits to protect their self worth, more so than those who experienced a low cognitive load, regardless of self-esteem threat. Those who experienced a self-esteem threat would use self-enhancement of

positive traits, more than those who experienced no self-esteem threat, regardless of cognitive load. Finally, I predicted there will be a cognitive load x self-esteem interaction, such that participants who experienced a high cognitive load and a self-esteem threat would be much more likely to use self-enhancement of positive traits than participants who experienced a low cognitive load and no self-esteem threat.

Methods

Participants

There were 56 participants in this study. Participants were current undergraduates at a Midwestern University (or family and friends at least 18 years of age). Participants were recruited through a Facebook post on the recruiter's personal page. Participants were assigned to complete a modified Beer, Chester, and Hughes 2013 *Social threat and cognitive load magnified self-enhancement and attenuate self-deprecation* experiment for the recruiter's class credit.

Design

This study used a between-groups design approach, with one dependent variable and two independent variables, in order to test self-enhancement of positive traits. The dependent variable tested was self-enhancement, a positive way to protect an individual's self-esteem from failure. The independent variables tested were cognitive load, or the amount of effort used on the working memory, and self-esteem threat, or a threat to one's self-perceived worth. There were four total conditions: manipulation of the independent variables was low cognitive load, high cognitive load, no self-esteem threat, and self-esteem threat.

Materials and Procedure

Participants were randomly assigned to one of two quizzes, accessed online through Qualtrics. Each survey asked five questions. The low cognitive load quiz generated questions from television show *Are You Smarter Than A 5th Grader*. The questions were in subjects: government, history, geometry, science, and grammar. The high cognitive load quiz generated questions from previous Advanced Placement tests. The questions were in subjects: calculus, history, science, and art.

After the quiz, participants were shown a randomly assigned, fake results screen. The results screen either showed a positive quiz score answering four of five questions correct, resulting in no self-esteem threat, or a negative quiz score answering two of the five questions correct, resulting in a self-esteem threat.

Next, participants were asked to complete an 11 question reflective survey based on reactions to the quiz. Participants were asked questions like, "I feel I gave my best effort to answering all of the questions asked," and "my education has prepared me to answer these college entry exam questions." All questions asked were asked to see how people use self-enhancement of positive traits. The surveys were measured and coded by responses from a five-point Likert Scale, indicating agreement with the statements. (1) The participant strongly agreed to the statement; (2) the participant agreed to the statement; (3) the participant neither agreed nor disagreed to the statement; (4) the participant disagreed to the statement; (5) the participant strongly disagreed to the statement. Participants were debriefed at the end of the survey.

Results

A 2 (cognitive load: low vs. high) x 2 (self-esteem: no threat vs. threat) between-subjects ANOVA was conducted to test whether or not cognitive load affects self-enhancement of positive traits depending on the self-esteem of the participant (no threat or threat) (see Table 1).

First, a main effect was predicted individuals who experienced a high cognitive load would use self-enhancement of positive traits to protect their self worth, more so than those who experienced a low cognitive load, regardless of self-esteem threat. It was revealed that those who experienced a high cognitive load ($M = 2.72$, $SE = .093$) used self-enhancement of positive traits more so than those who experienced a low cognitive load ($M = 2.39$, $SE = .084$), $F\ (1, 51) = 6.92$, $p = .011$. This is a statistically significant outcome, resulting in the rejection of the null hypothesis (see Table 2).

Second, a main effect was predicted those who experienced a self-esteem threat would use self-enhancement of positive traits, more than those who experienced no self-esteem threat, regardless of cognitive load. It was revealed that those who experienced a self-esteem threat ($M = 2.77$, $SE = .091$) used self-enhancement of positive traits more so than those who experienced a no self-esteem threat ($M = 2.34$, $SE = .086$), $F\ (1, 51) = 11.65$, $p = .011$. This is a statistically significant outcome, resulting in the rejection of the null hypothesis (see Table 3).

Finally, I predicted there will be a cognitive load x self-esteem interaction, such that participants who experienced a high cognitive load and a self-esteem threat would be much more likely to use self-enhancement of positive traits than participants who experienced a low cognitive load and no self-esteem threat. Those who experienced low cognitive load and a self-esteem threat ($M = 2.63$, $SE = .119$) used self-enhancement of positive traits just as much as participants who experienced low cognitive load and no self-esteem threat ($M = 2.15$, $SE = .119$). And, those who experienced a high cognitive load and a self-esteem threat ($M = 2.90$, $SE = .139$)

used self-enhancement of positive traits just as much as participants who experienced a high cognitive load and no self-esteem threat ($M = 2.15$, $SE = .119$), $F\ (1, 51) = .198$, $p = .658$). There was no significant interaction between the two variables, and therefore, the null hypothesis will be retained (see Table 4).

Discussion

A correlation between cognitive load x self-enhancement, self-esteem x self-enhancement, and cognitive load x self-esteem x self-enhancement was predicted. Results conclude that there is a supported relationship between both self-esteem and self-enhancement of positive traits, and cognitive load and self-enhancement of positive traits, but there was no supported evidence of a correlation between self-esteem, cognitive load, and self-enhancement of positive traits. These findings contradict the study produced by Beer, Chester, and Hughes, stating individuals use self-enhancement of positive traits when experiencing a self-esteem threat and a cognitive load (2013). I was not focusing on social comparisons, which could be the cause to this contradiction. This experiment supports to some extent, the findings of the psychological well-being strategies in the Lynch and O'Mara study (2015).

As a result of not distinguishing between the high self-esteem participants and low self-esteem participants before manipulating the cognitive load, the study was limited because I did not truly test the degrees to which individuals self-enhance. If I were to redesign and conduct the experiment again, I would have also incorporated the implications of the Dutton and Brown study to find how individuals "overcome obstacles and deal with setbacks, rejection, and disappointment," (1997) while testing for the differences between approach-oriented self-enhancement and avoidance-oriented self-enhancement (Lynch & O'Mara, 2015).

It would be beneficial for future researchers to study how participants with high versus low self-esteem use self-enhancement differently. It would also be telling to explore under what situations self-enhancement is needed, and the effects self-enhancement has over short-term and long-term mechanisms. Researchers are by testing the effects of self-enhancement, researches can begin to understand the degree to which self-enhancement motivates acceptance after experiencing negative outcomes.

TABLE 1 Between-Subjects Effects for Study 1, Study 2, and Study 3 Variables

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	3.890[a]	3	1.297	6.107	.001	.264	18.321	.947
Intercept	352.119	1	352.119	1658.181	.000	.970	1658.181	1.000
Self_Esteem	2.473	1	2.473	11.645	.001	.186	11.645	.917
Cognitive_Load	1.469	1	1.469	6.918	.011	.119	6.918	.733
Self_Esteem * Cognitive_Load	.042	1	.042	.198	.658	.004	.198	.072
Error	10.830	51	.212					
Total	365.590	55						
Corrected Total	14.720	54						

a. R Squared = .264 (Adjusted R Squared = .221)

b. Computed using alpha = .05

Table 2 Cognitive Load x Self-Enhancement

Cognitive Load	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Low	2.386	.084	2.217	2.555
High	2.716	.093	2.529	2.902

Table 3 Self-Esteem x Self-Enhancement

Self-Esteem	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
No Threat	2.337	.086	2.165	2.509
Threat	2.765	.091	2.581	2.948

Table 4 Cognitive Load x Self-Esteem x Self-Enhancement

Self-Esteem	Cognitive Load	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
No Threat	Low	2.144	.119	1.906	2.383
	High	2.530	.123	2.283	2.777
Threat	Low	2.628	.119	2.389	2.867
	High	2.902	.139	2.623	3.180

References

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