

Spring 5-2014

Social Rejection: Downward Simulation, the Road to Recovery

Monica L. Hesler
University of Southern Mississippi

Follow this and additional works at: https://aquila.usm.edu/honors_theses



Part of the [Personality and Social Contexts Commons](#)

Recommended Citation

Hesler, Monica L., "Social Rejection: Downward Simulation, the Road to Recovery" (2014). *Honors Theses*. 258.

https://aquila.usm.edu/honors_theses/258

This Honors College Thesis is brought to you for free and open access by the Honors College at The Aquila Digital Community. It has been accepted for inclusion in Honors Theses by an authorized administrator of The Aquila Digital Community. For more information, please contact Joshua.Cromwell@usm.edu.

Running head: THE ROAD TO RECOVERY

The University of Southern Mississippi

Social Rejection: Downward Simulation, the Road to Recovery

by

Monica Hesler

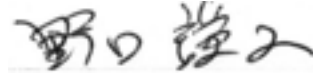
A Thesis
Submitted to the Honors College of
The University of Southern Mississippi
in Partial Fulfillment
of the Requirement for the Degree of
Bachelor of Science
in the Department of Psychology

May 2014

THE ROAD TO RECOVERY

THE ROAD TO RECOVERY

Approved by



Kenji Noguchi, Ph.D., Thesis Adviser
Assistant Professor of Psychology

Joe Olmi, Ph.D., Chair
Department of Psychology

David R. Davies, Ph.D., Dean
Honors College

THE ROAD TO RECOVERY

Abstract

Prior research on social rejection has found that people with high self-esteem tend to cope better with social rejection. However, there is still not a complete understanding as to why they tend to cope better with rejection. Some research has found that persons with high self-esteem think about rejection differently than persons with low self-esteem which results in a better ability to cope. This thesis further examines the relationship between self-esteem and social rejection. Specifically this thesis examines how different thought being used by persons with high or low self-esteem may affect their reactions to social rejection. Based on prior research on social rejection and mental simulations, it was hypothesized that persons with high self-esteem would use more downward simulations than persons with low self-esteem. According to this hypothesis, the use of downward simulations would result in a more positive mood after thinking about a past event of social rejection; the hypothesis was not supported by the results. Participants in the rejection condition with HSE tended to create more upward simulations than downward simulations, which is the opposite of what was hypothesized. Many of the analysis conducted were not statistically significant. The direction of simulation was not related to self-esteem, condition, or the interaction of self-esteem and condition. There was no relationship between implicit mood, positive or negative, and self-esteem, condition or the interaction of self-esteem and condition. However, explicit mood was found to be significantly related to self-esteem.

Keywords: social rejection, self-esteem, counterfactual, mental simulation

THE ROAD TO RECOVERY

Acknowledgements

I would like to send a very big thank you to both my thesis advisor, Dr. Kenji Noguchi, and to all of the Honors College faculty and staff. My appreciation for Dr. Noguchi's guidance and encouragement throughout this thesis process cannot be expressed in words. Thank you Dr. Noguchi for all you have done. This project could not have happened without your help.

My experience with the Honors College would not have been the same if it were not for their wonderful faculty and staff who helped me through every step of the process. I am honored to have been able to work them and to have been involved with the Honors College.

Table of Contents

List of Figures	vii
List of Abbreviations	viii
Social Rejection: Downward Simulation, the Road to Recovery	1
Social Rejection and Mood.....	1
Social Rejection and Self-esteem.....	3
Mental Simulation and its Characteristics	4
Mental Simulation and Self-esteem	6
The Current Study.....	7
Methods.....	8
Participants.....	8
Procedures.....	8
Results.....	11
Discussion.....	17
References.....	21
Appendices.....	25
Rosenberg Self-esteem Scale	25
Past Event Writing Task	26
Direction of Simulation Writing Task	27
PANAS	28
Word Stem Task	29
IRB Approval Letter	30

List of Figures

Figure 1: Downward Simulations12

Figure 2: Upward Simulations12

Figure 3: Implicit Positive Mood13

Figure 4: Implicit Negative Mood14

Figure 5: Explicit Positive Mood15

Figure 6: Explicit Negative Mood15

THE ROAD TO RECOVERY

List of Abbreviations

HSE High self-esteem

LSE Low self-esteem

Social Rejection: Downward Simulation, the Road to Recovery

Social rejection has long been a topic of research in the psychological community, and for good reason. The formation of strong positive relationships is a fundamental human motivation (Baumeister & Leary, 2000). It is important to understand the implications that social rejection can have on human behavior and especially on mental health.

Past studies on social rejection have found many different reactions to rejection, both positive and negative. Certain personality traits, such as self-esteem, have been found to influence the effects or reactions to rejection. The current research seeks to establish a further understanding of the effects of rejection and how certain personality traits can influence these affects. Specifically, this research seeks to understand why people with high self-esteem (HSE) tend to be less adversely affected by rejection than persons with low self-esteem (LSE). This will be achieved by examining possible thought processes being used when thinking about a past event of rejection.

Social Rejection and Mood

Past studies in the area of social rejection have found many different negative effects elicited by rejection, such as becoming more lethargic, flattened affect or neutral mood, and decrease in ability to perform simple cognitive tasks (Baumeister, Twenge & Nuss, 2002; Twenge, Catanese & Baumeister, 2003). These studies on social rejection have found conflicting evidence of the effects that social rejection has on mood. Some studies have found that social rejection causes an effect on mood: specifically eliciting a negative mood (Bernstein & Claypool, 2012; Stroud, Tanofsky-Kraff, Wilfley & Salovey, 2000; Williams, Cheung & Choi, 2000). Most studies, however, have found

that social rejection causes a lack of emotion (Baumeister, Dewart, Ciarocco & Twenge, 2005; Baumeister et. al., 2002; Twenge et al., 2003). These studies, however, have measured mood through explicit measures, such as self-reported mood questionnaires.

Using explicit mood measures can have some limitations because people can alter their answers on questionnaires possibly because they do not want to admit that the rejection hurt. Implicit measures can be more revealing of the effects on mood. Implicit measures are measures where the participant is unaware of what is being measured. An example of an implicit mood measure would be a word stem task; this task involves completing a word when only given two to three letters from the beginning of the word. The types of words that participants choose to complete the word stem can reveal how that person might be feeling. DeWall et al. (2011) used an implicit mood measure in their study on social rejection and found that individuals with HSE engaged in automatic emotion regulation and became more attuned to positive emotion words after rejection than individuals with LSE. This means that after rejection people with HSE unconsciously choose more positive emotion words by completing the word stem with a positive emotion word than people with LSE. This unconscious attunement to positive emotion is really quite surprising since most studies have found either negative mood or lack of emotion following rejection. This result of unconscious attunement to positive emotion was only found in people with HSE. It is important to further understand the relationship between self-esteem and social rejection. Understanding why and how people with HSE deal with rejection better could help in the development of programs to teach people with LSE how to better cope with rejection.

Social Rejection and Self-Esteem

As stated before, several studies in social rejection have found that certain personality traits affect the reactions people have to rejection and other negative events. Some of these studies have found a more positive effect after social rejection for people with certain personality traits. Dewall et al. (2011) found more creative thought in people with an independent self-concept after rejection. Kim, Vincent, and Goncalo (2012) found an unconscious attunement to positive affect in people with HSE and low depression. The study by Dewall et. al. (2011) was not the only study to find that people with HSE better coped with rejection. Vandellen et. al. (2012) found that people with HSE were better able to exert self-control after social rejection than persons with LSE. The remaining question then is why people with HSE are better able to cope with rejection than people with LSE.

Leary, Tambor, Terdal, and Downs (1999) proposed the sociometer hypothesis which predicts that self-esteem serves as a monitor of the degree to which a person is being rejected or accepted by others so that the person being accepted or rejected can change behavior in order to prevent rejection. Koch (2002) found that people with LSE were more sensitive to rejection cues than people with HSE possibly because people with HSE are used to being accepted and people with LSE are particularly worried about being accepted. Brown (2010) found that people with HSE were better able to deal with negative feedback and proposed that HSE works as a buffer for negative feedback and reduces the negative effect on self-worth.

It can be presumed by examining the results of these past studies on self-esteem that different thought processes are what affect the reactions elicited in LSE or HSE

individuals after rejection. People with LSE tend to take the opinions of others about them more seriously than people with HSE. So, it is possible that how a person thinks about rejection affects their reactions to rejection and how they cope. Rude, Mazzetti, Pal, and Stauble (2011) found that thinking about rejection from an outside perspective resulted in a more positive self-evaluation, which reinforces this idea. There have not been many other studies examining the thought process being used after rejection and how that thought process affects participant's reactions.

Mental Simulation and its Characteristics

To further understand how different thought processes might affect people's reactions to social rejection I looked into a seemingly unrelated field of study, mental simulations. This led to some insight of how people with HSE might think about rejection differently than individuals with LSE. When people think about past events they simulate that event in their mind creating a mental simulation or representation of the event. In creating these simulations people tend to think about how the event could have been different from what actually happened. These made up alterations of a past reality are called counterfactuals (Sanna, 2000). Counterfactuals can have an upward or downward direction. The directions of these counterfactuals can be influenced by many factors such as mood and personality traits. These simulations can also be either contrasted or assimilated with reality creating different effects on mood.

Downward simulations create a worse reality by using "At least" type thoughts such as "At least I was wearing my helmet, or I could have been seriously hurt" or "at least I attended all the classes, or my test score could have been worse" (Sanna, 2000). When these downward simulations are contrasted with reality it can result in a positive

mood (Markman, Gavanski, Sherman & McMullen, 1993). This makes intuitive sense, people feel better about what happened because it could have been worse. When a downward simulation is assimilated, however, it results in a negative mood. In this case the simulation is the sole focus or the simulation can or will happen. Focusing on the simulation creates a bad mood because thinking about how that bad thing could really happen makes people feel worse.

Self-motives that have been found to be associated with downward simulations are self-enhancement (mood repair) and mood maintenance (Sanna, 2000). Mood maintenance occurs when a downward simulation is created and prolongs positive emotion. Usually mood maintenance occurs after positive events or when someone is already in a good mood. Self-enhancement or mood repair occurs in response to negative events. When individuals think about how things could have been worse mood repair can help restore a positive sense of self.

An upward simulation creates a better reality by using “If only” type thoughts such as “If only I had attended class, I could have done better on the test” or “if only I had listened to her, I could have avoided this fight” (Sanna, 2000). When an upward simulation is contrasted with reality it results in a negative mood (Markman, Gavanski, Sherman & McMullen, 1993). This is because thinking about how things could have been better makes the person feel worse. However, when the upward simulation is assimilated with reality it creates a positive mood. Again when the simulation is assimilated the focus is placed solely on the simulation or the fact that the simulation can or will occur. Thinking about this better reality results in the positive mood. Upward simulations are associated with self-improvement and self-protective motives (Sanna,

2000). Thinking about how things could be better can result in self-improvement by resulting in needed preparation and finding ways to solve problems. It can also result in self-protection which usually occurs when the individual thinks about how the worst could transpire allowing them to prepare for the worst.

Just as mood can be influenced by the direction of the simulation mood can affect the direction of the simulation as well. Bad moods tend to result in more upward simulations being created while good moods tend to result in the creation of more downward simulations.

Mental Simulation and Self-Esteem

Personality traits, such as self-esteem, have also been found to be associated with the direction of the simulation. People with HSE tend to use downward contrasted simulations, which cause a positive mood (Sanna, Meier, & Turley-Ames, 1998; Sanna, Turley-Ames, Meier, 1999). People with HSE tend to use downward simulations after a negative event because thinking about how the event could have been worse makes them feel better by comparison resulting in mood repair. Sanna (1998) also found that optimistic individuals, a trait sometimes associated with HSE, tended to create more downward simulation as a possible mood repair attempt.

This tendency of individuals with HSE to use downward simulations may represent a trend of individuals with HSE using downward simulations for the purpose of mood repair in order to ward off the negative effects of rejection. It is plausible that using these downward simulations is the road to recovery from the adverse effects of rejection for people with HSE. This use of downward simulation would start an unconscious mood repair which would lead to an unconscious attunement of positive

affect like what was found in the study by DeWall et. al. (2011). Despite the fact that the rejection may hurt initially, thinking about the event in this downward direction (how it could have been worse) allows them to think more positively even if only at an unconscious level.

The Current Study

The current study will examine whether individuals with HSE tend to use downward simulations in order to better cope with rejection. Participants will be asked to write about a past event of rejection, acceptance or a past trip to the super market. This writing task will induce feelings of rejection for individuals in the rejection condition. After which, they will be asked to think about how their past event could have been better or worse. This will allow participants to create as many counterfactuals in any direction they choose. The number of downward versus upward simulations can then be counted and compared between individuals with HSE and LSE. Mood will be measured with both an implicit measure, a word stem task, and explicit measure, PANAS. Using both an explicit and implicit measure allows for a complete understanding of the effects on mood after rejection.

I hypothesize that people with HSE will create more downward contrasted simulations after rejection in order to achieve mood repair and feel better about the social rejection by comparison. Creating these downward simulations will result in the use of automatic emotion regulation as a coping technique leading to unconscious attunement to positivity. In turn, I hypothesize that rejected individuals with LSE will create more upward simulations and result in attunement to negative emotions words. This would occur because creating the worse reality results in a more negative mood, which should

come across in both the implicit and explicit mood measures discussed in the methods section.

Methods

Participants

Participants were recruited from the student population of The University of Southern Mississippi. The study was posted on SONA Systems, an online research form where students can participate in research in order to receive extra credit in their undergraduate courses. There were 221 participants, 30 males, 179 females and 12 who did not report gender. The average age of participants was 21.09 ($SD = 4.39$). Most of the participants were European American (42%) or African American (35%). The remaining 23% of participants were Hispanic (2%), Asian American (1%), Native Hawaiian or Pacific Islander (1%), other (15%), or non-reported (4%).

Procedure

Participants were asked to complete a consent form in which the dynamics of the study were discussed and participants were assured that their information was completely confidential before being forwarded to the study. The first task was to complete the Rosenberg Self-Esteem Scale, which has been used and validated in several psychological journals (e.g., Molden, Lucas, Gardner, Dean & Knowels, 2009; Williams et. al., 2000). Participants were told that this was a pre-study questionnaire. This task comprised of ten statements related to self-esteem that were rated on a five-point scale with 1 being “strongly disagree” and five being “strongly agree.”

Once participants completed the self-esteem questionnaire, they were randomly assigned to one of three conditions (rejection, acceptance or control condition) in which

they were asked to write about a past event corresponding to their assigned condition.

Participants assigned to the rejection condition were prompted with the directions below:

Please write an essay about a time when you experienced rejection or exclusion by others in the space below. Please think of a time when you felt that others did not want to be in your company and when you did not feel a strong sense of belongingness with another person or group. Many people have had such an experience more than once; please choose an especially important and memorable event. Try to recall where you were, what you were doing, how you acted during the event, and how you felt physically and emotionally.

The acceptance condition were prompted with the same directions except that all references to rejection were replaced with acceptance. The control condition were asked to write about a recent trip to the super market. This method was adapted from Greitemeyer, Fischer and Kastenmüller (2012) with the addition of the direction to recall specific details of the event to ensure the client takes into account all details of the event. A manipulation check was included consisting of one question indicating how positive or negative the event was on a five point scale.

After participants were exposed to one of the three conditions (rejection, acceptance or control condition) they were prompted with another short writing task to determine the direction of simulation. Participants were prompted with the following directions:

People often have thoughts like “if only.....” or “at least.....” when thinking about past events. Sometimes these thoughts can be about how things could have been better than what actually happened, and some thoughts can be about how things

could have been worse than what actually happened. For example, “if only I had studied more I could have done better on the test” or “at least I attended all of the classes or my score could have been worse.” In the spaces below, please describe alternatives that could have been better or worse than what actually happened in your first essay.

Participants were asked to code their own responses by placing a + or – sign next to statements that are better or worse than the reality of their situation, respectively. This procedure was adapted to fit this study from Sanna (1998).

Mood was measured with two tasks, one explicit and one implicit mood measure. The explicit mood measure was the Positive and Negative Affect Schedule, PANAS, a well-known and validated measure used in the psychological community. There were five positive emotion words (e.g. happy, enthusiastic), five negative emotion words (e.g. lonely, dissatisfied with self) and five general dimension, or in other words positive and negative affect, words (e.g. irritable, proud). These emotion words were rated on a five-point scale, one being “very slightly or not at all” and five being “extremely.”

The implicit mood measure was a word stem task. There were twenty-five word stems to complete; ten of which could have been completed as positive or neutral words, ten which could have been completed as negative or neutral words, and five filler words that had no emotional meaning. The purpose of the filler words was to prevent participants from guessing what was being measured. An example of a positive word stem would be H A _ _ _, this could be completed as happy, a positive emotion word, or handy a neutral word. The number of word stems completed with the appropriate emotion word will be measured for later interpretation. This task was also used in

Dewall et. al. (2011). In order to prevent order effect on the mood measures they were counter balanced. So some participants completed the explicit mood measure first then the implicit mood measure while others completed the implicit mood measure then the explicit mood measure. This process was randomized.

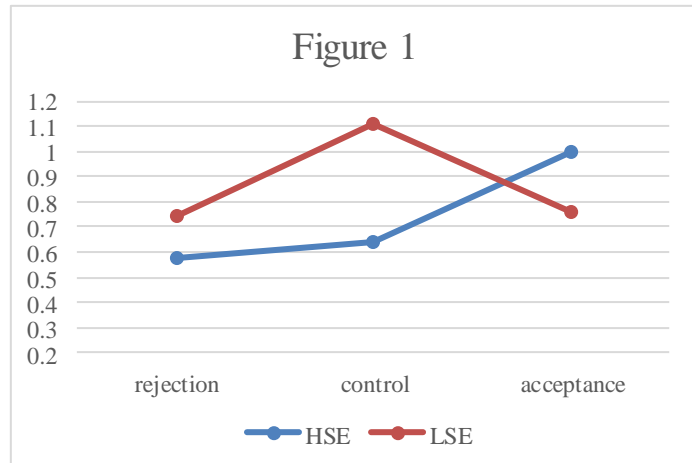
Finally, participants provided demographic information such as age, sex and race. All participants were fully debriefed at the end of the study and provided with contact information for both my advisor and myself if they had any questions or concerns.

Results

A manipulation check was performed to test whether feelings of rejection were successfully manipulated. In this manipulation check participants rated their past event as being either positive or negative on a five point scale with one being negative and five being positive. A one way ANOVA was completed for the manipulation check which revealed that the manipulation was successful, $F(2, 221) = 85.92, p < .01$. Participants in the rejection condition rated their past experience as significantly more negative ($M = 1.88, SD = 1.02$) than the acceptance ($M = 4.35, SD = 1.24$) and control condition ($M = 3.88, SD = 1.25$).

In order to test the hypothesis that persons with HSE would create more downward simulations after rejection I regressed downward simulations simultaneously on condition, self-esteem and the interaction of condition and self-esteem. This analysis revealed that downward simulations were not significantly related to condition, self-esteem or the interaction of self-esteem and condition, $R^2 = .032, F(3, 214) = 2.35, p = .07$. A graph comparing HSE and LSE participants mean number of downward simulations was created in order to better interpret the data (Figure 1). This allowed for

the observation that LSE individuals actually created more downward simulations in the rejection ($M = .74, SD = 1.02$) and control condition ($M = 1.11, SD = .92$) than HSE



individuals (rejection; $M = .58, SD = .81$, control; $M = .64, SD = .99$). The reverse was found for the acceptance condition with HSE individuals creating more downward simulations ($M = 1, SD = 1$) than LSE individuals ($M = .76, SD = .97$).

Figure 1: Downward Simulations. This graph depicts the mean number of downward simulations created by persons with high self-esteem (HSE) and low self-esteem (LSE) within each condition.

I then regressed upward simulations simultaneously on condition, self-esteem and the interaction of self-esteem and condition in order to test whether there was a significant relationship between these variables. This analysis revealed that upward simulations were not significantly related to self-esteem, condition or the interaction of self-esteem and condition, $R^2 = .006, F(3,212) = .41, p = .75$. A graph was created comparing the mean number

of upwards simulations created by HSE and LSE individuals in order to better interpret the data (Figure 2).

As can be seen HSE individuals created more

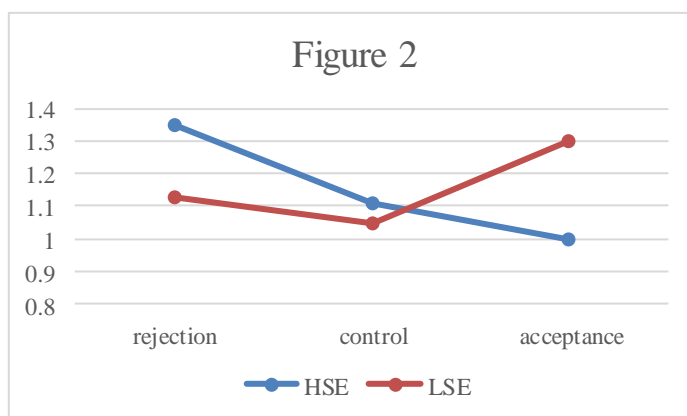


Figure 2: Upward Simulations. This graph depicts the mean number of downward simulations created by persons with high self-esteem (HSE) and low self-esteem (LSE) within each condition.

upward simulations in both the rejection ($M = 1.35$, $SD = .78$) and control condition ($M = 1.11$, $SD = .71$) than LSE individuals (rejection; $M = 1.13$, $SD = .80$, control; $M = 1.05$, $SD = .84$). The reverse was again found for the acceptance condition with LSE individuals creating more upward simulations ($M = 1.3$, $SD = .95$) than HSE individuals ($M = 1$, $SD = .83$). Overall both LSE and HSE individuals created more upward simulations than downward simulations in the rejection condition. These results of HSE individuals using more upward than downward simulations is the opposite of what was hypothesized.

I then wanted to test whether there were any significant relations between mood, self-esteem and condition. In order to do this I separated each mood measure, implicit and explicit into positive and negative scores. Implicit positive mood was simultaneously regressed on self-esteem, condition and the interaction of self-esteem and condition which did not yield significant results, $R^2 = .009$, $F(3, 212) = .62$, $p = .61$.

Implicit negative mood was then regressed simultaneously on self-esteem, condition and the interaction of self-

esteem and condition which

also was not significant, R^2

$= .010$, $F(3, 212) = .71$, $p =$

$.55$. The mean scores for

both implicit positive

(Figure 3) and implicit

negative (Figure 4) were

graphed in order to further

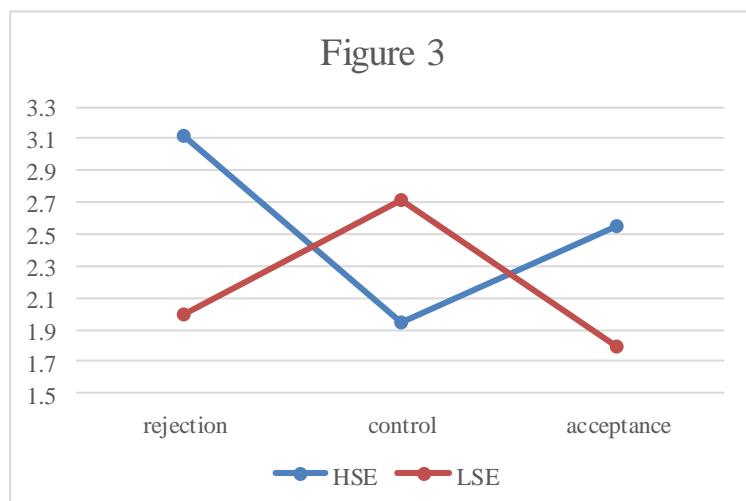
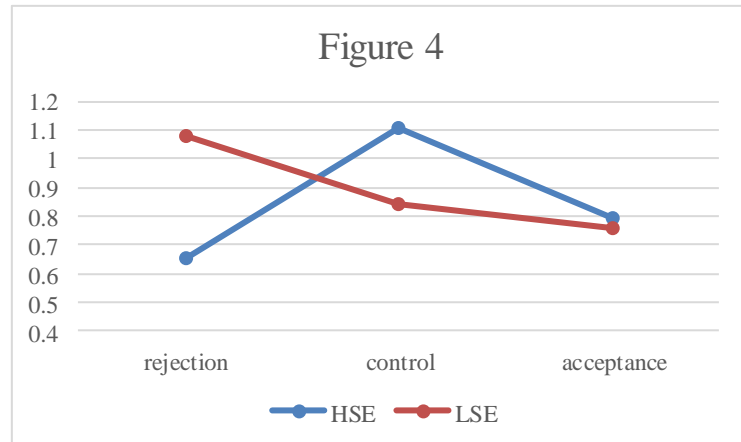


Figure 3: Implicit Positive. This graph depicts the mean scores for implicit positive mood for individuals with high self-esteem (HSE) and low self-esteem (LSE) within each condition.

interpret the data. Even though the results for this implicit mood measure did not reach significance it can be seen that individuals with HSE in the rejection



condition were more positive ($M = 3.12$, $SD =$

Figure 4: Implicit Negative. This graph depicts the mean scores for implicit negative mood for individuals with high self-esteem (HSE) and low self-esteem (LSE) within each condition.

1.45) and less negative ($M = .65$, $SD = 1.38$) than individuals with LSE (positive; $M = 2$, $SD = 1.45$, negative; $M = 1.08$, $SD = 1.4$). This corresponds with what was hypothesized, that HSE individuals would have a more positive implicit mood after rejection than LSE individuals.

Explicit positive mood was then regressed simultaneously on self-esteem, condition and the interaction of self-esteem and condition which revealed significant results, $R^2 = .141$, $F(3, 205) = 11.26$, $p < .001$. This analysis revealed that explicit positive mood was significantly related to self-esteem ($\beta = .37$, $p < .001$) but was not significantly related to condition ($\beta = .24$, $p = .48$) or the interaction of self-esteem and condition, $\beta = -.26$, $p = .45$. Explicit negative mood was then regressed simultaneously on condition, self-esteem and the interaction of self-esteem and condition revealing significant results, $R^2 = .24$, $F(3, 205) = 21.55$, $p < .001$. This analysis revealed that self-esteem was significantly related to explicit negative mood ($\beta = -.49$, $p < .001$) but condition ($\beta = .27$, $p = .4$) and the interaction of condition and self-esteem were not, $\beta = -.19$, $p = .55$. Explicit positive (Figure 5) and explicit negative mood (Figure 6) were also

graphed comparing the mean scores of HSE and LSE individuals in order to further interpret the data. These graphs show that HSE individuals

reported a more positive ($M = 3.87, SD = .93$) and less negative mood ($M = 1.46, SD = .60$) than LSE individuals (positive; $M = 3.13, SD = .90$, negative; $M = 1.97, SD = .69$) in the rejection condition. These results

correspond with the hypothesis that HSE

individuals would report a more positive explicit mood than LSE individuals after rejection.

In order to further analyze the data collected so far I completed a correlation analysis on the entire subject pool comparing simulation direction, self-esteem, explicit mood and implicit mood. This analysis revealed a negative correlation between downward simulations and self-esteem, $r = -.13, p = .05$. As well as a marginally

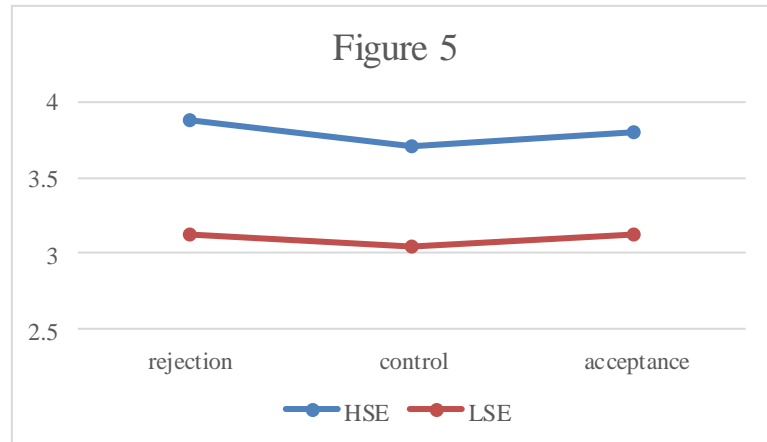


Figure 5: Explicit Positive. This graph depicts the mean scores for explicit positive mood for individuals with high self-esteem (HSE) and low self-esteem (LSE) with each condition.

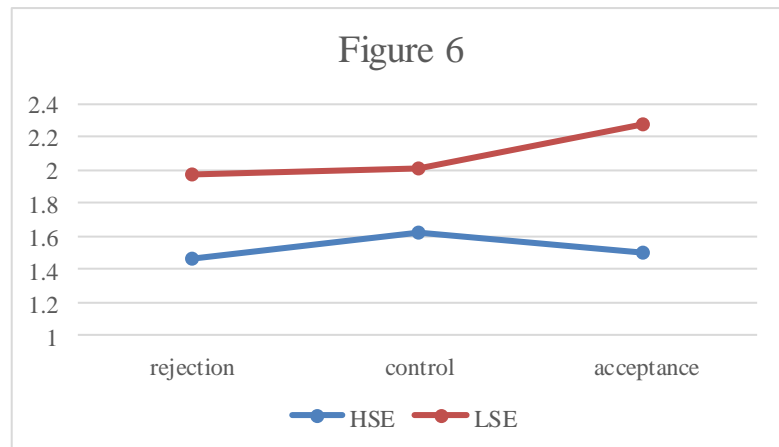


Figure 6: Explicit Negative. This graph depicts the mean scores for explicit negative mood for individuals with high self-esteem (HSE) and low self-esteem (LSE) with each condition.

significant positive correlation between downward simulations and implicit positive mood, $r = .13$, $p = .06$. No other correlations were found.

Another correlation analysis was completed in which subjects were separated by condition in order to better interpret the data. This analysis revealed that downward simulations and self-esteem were negatively correlated for participants in the control condition ($r = -.22$, $p = .05$) but not in the rejection ($r = -.20$, $p = .11$) or acceptance condition, $r = .08$, $p = .51$. The correlation between downward simulations and implicit positive mood was found for the acceptance condition ($r = .276$, $p = .021$) but not for the rejection ($r = .00$, $p = 1$) or control condition, $r = .03$, $p = .80$. This indicated that the more downward simulations that were created by individuals in the acceptance condition the more positive they would be. I then completed a correlation analysis separated by self-esteem. This correlation revealed that upward simulations were positively correlated with implicit negative mood for LSE individuals ($r = .21$, $p = .02$), while upward simulations were positively correlated with implicit positive mood for HSE individuals, $r = .21$, $p = .02$. So, while upward simulations caused a positive mood in individuals with HSE it resulted in a negative mood for individuals with LSE. A final correlation analysis was completed separated by condition and self-esteem. This analysis revealed a marginally significant positive correlation between upward simulations and implicit negative mood for individuals with LSE in the rejection condition ($r = .31$, $p = .052$) but not in the acceptance ($r = .06$, $p = .74$) or control condition, $r = .26$, $p = .11$. These results would correspond with what was hypothesized, that individuals with LSE would create upward simulations resulting in a negative mood.

Discussion

The results of a regression analysis revealed that there was not a significant relationship between simulation direction and self-esteem, condition or the interaction of self-esteem and condition. This means that self-esteem did not predict the direction of simulation used by participants as was predicted by the hypothesis. The data also revealed that there was no effect on implicit mood, positive or negative. However, there was a significant relationship between self-esteem and explicit mood, both positive and negative. Correlation analysis further revealed that upward simulations were positively correlated with implicit negative mood for individuals with LSE. On the other hand, upward simulations were positively correlated with implicit positive mood for individuals with HSE. These results do not completely correspond with the hypothesis.

It was hypothesized that HSE individuals would create downward simulations that would result in a more positive mood after rejection. However, the opposite was observed with HSE individuals creating more upward than downward simulations after rejection (Figure 1 and 2). Nevertheless, the results of the regression analyses revealed that there was not a significant relationship between simulation direction and condition, self-esteem or the interaction of self-esteem and condition. This could be explained by the fact that participants were not instructed to create a certain number of simulations. Many participants tended to create two simulations, one upward and one downward no matter their condition or self-esteem rating, which might have caused this insignificant result.

Despite the fact that the results were insignificant, a pattern of HSE individuals creating more upward simulations after rejection was observed. Yet, HSE individuals still reported a more positive mood both implicitly and explicitly. In fact, upward

simulations were found to be positively correlated with implicit positive mood for individuals with HSE. This would imply that HSE individuals did not contrast their simulation with reality; otherwise, these upward simulations would have caused a negative mood. It is possible that HSE individuals created upward simulations that were assimilated with reality instead of contrasted with reality, which would result in them feeling more positive. As stated in the introduction, this happens because focus is placed solely on the positive alternative and simply thinking about the positive alternative produces a good mood.

Interestingly, LSE individuals also created more upward simulations than downward simulations after rejection but reported a more negative mood, as hypothesized. In fact, upward simulations were found to be positively correlated with implicit negative mood for individuals with LSE. This correlation was only found for individuals with LSE in the rejection condition and not the acceptance or control condition. Perhaps the LSE individuals contrasted their upward simulations with reality, which would result in a negative mood. As stated in the introduction, this happens because thinking about how things could have been better than their reality makes them feel bad by comparison.

The regression analyses, however, also did not find a significant relationship between implicit mood, positive or negative, and condition, self-esteem or the interaction of self-esteem and condition. So, despite the fact that there was a pattern of HSE individuals being more positive, it was insignificant. Recall that the word stem task was used to measure implicit mood and it is possible that this task could have been flawed in some way. Perhaps having two writing tasks and then a word stem task overwhelmed the

participants and affected the results of this study. It is also possible that the word stems could have been too easily completed with neutral words that may be highly frequent causing the insignificant results.

The only significant relationship found by the regression analyses was between self-esteem and explicit mood, both positive and negative. A positive correlation was also found between upward simulations and explicit positive mood for HSE individuals in the acceptance condition. These findings also would suggest that the upward simulations created by HSE individuals were assimilated rather than contrasted which would have resulted in a more positive mood.

There were some limitations to this study that should be addressed in future studies. The fact that participants were not asked to create a specific number or direction of simulation could explain why significant results were not found. In future studies, inducing the simulation direction would allow for better interpretation of the effects on mood. The word stem task also could have been flawed. Many participants did not follow directions or simply did not complete the task. Using another implicit measure for mood could result in more significant interactions. Another limitation was the fact that the majority of participants in this study were female. Perhaps there are sex differences in the use of upward versus downward simulations. This possibility should also be examined in future studies.

In summary, this study, if coupled with future studies, could add valuable information to the literature. The fact that upward simulations were found to be correlated with negative mood for LSE individuals and positive mood for HSE individuals is an important finding. This indicated that LSE individuals may have

contrasted their simulation while HSE individuals may have assimilated. A future study where simulation direction would be induced could allow for better understanding of these results. As mentioned above, most participants were female, so the effects found could be related to gender and should be investigated further. This study revealed that there is a real possibility of HSE and LSE individuals using different coping strategies after rejection. In the end, further research is needed to fully understand the results of this study and to fully understand the thought processes being used by HSE individuals after social rejection.

References

- Baumeister, R. F., DeWall, C., Ciarocco, N. J., & Twenge, J. M. (2005). Social Exclusion Impairs Self-Regulation. *Journal Of Personality And Social Psychology*, 88(4), 589-604. doi:10.1037/0022-3514.88.4.589
- Baumeister, R. F., & Leary, M. R. (2000). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. In E. Higgins, A. W. Kruglanski (Eds.) , *Motivational science: Social and personality perspectives* (pp. 24-49). New York, NY US: Psychology Press.
- Baumeister, R. F., Twenge, J. M., & Nuss, C. K. (2002). Effects of social exclusion on cognitive processes: Anticipated aloneness reduces intelligent thought. *Journal Of Personality And Social Psychology*, 83(4), 817-827. doi:10.1037/0022-3514.83.4.817
- Bernstein, M. J., & Claypool, H. M. (2012). Not all social exclusions are created equal: Emotional distress following social exclusion is moderated by exclusion paradigm. *Social Influence*, 7(2), 113-130. doi:10.1080/15534510.2012.664326
- Brown, J. D. (2010). High self-esteem buffers negative feedback: Once more with feeling. *Cognition And Emotion*, 24(8), 1389-1404. doi:10.1080/02699930903504405
- DeWall, C., Twenge, J. M., Koole, S. L., Baumeister, R. F., Marquez, A., & Reid, M. W. (2011). Automatic emotion regulation after social exclusion: Tuning to positivity. *Emotion*, 11(3), 623-636. doi:10.1037/a0023534

- Greitemeyer, T., Fischer, P., & Kastenmüller, A. (2012). The effects of social exclusion on confirmatory information processing. *European Journal Of Social Psychology*, 42(4), 462-469. doi:10.1002/ejsp.1851
- Kim, S. H., Vincent, L. C., & Goncalo, J. A. (2012). Outside Advantage: Can Social Rejection Fuel Creative Thought?. *Journal Of Experimental Psychology: General* doi:10.1037/a0029728
- Koch, E. J. (2002). Relational schemas, self-esteem, and the processing of social stimuli. *Self And Identity*, 1(3), 271-279. doi:10.1080/152988602760124883
- Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1999). Self-esteem as an interpersonal monitor: The sociometer hypothesis. In R. F. Baumeister (Ed.), *The self in social psychology* (pp. 87-104). New York, NY US: Psychology Press.
- Markman, K.D., Gavanski, I., Sherman, S.J., & McMullen, M.N. (1993). The mental simulation of better and worse possible worlds. *Journal of Experimental Social Psychology*, 29, 87-109.
- Molden, D. C., Lucas, G. M., Gardner, W. L., Dean, K., & Knowles, M. L. (2009). Motivations for prevention or promotion following social exclusion: Being rejected versus being ignored. *Journal Of Personality And Social Psychology*, 96(2), 415-431. doi:10.1037/a0012958
- Rude, S. S., Mazzetti, F. A., Pal, H., & Stauble, M. R. (2011). Social rejection: How best to think about it?. *Cognitive Therapy And Research*, 35(3), 209-216. doi:10.1007/s10608-010-9296-0

- Sanna, L. J. (1998). Defensive pessimism and optimism: The bitter-sweet influence of mood on performance and prefactual and counterfactual thinking. *Cognition And Emotion, 12*(5), 635-665. doi:10.1080/026999398379484
- Sanna, L. J. (2000). Mental simulation, affect, and personality: A conceptual framework. *Current Directions In Psychological Science, 9*(5), 168-173. doi:10.1111/1467-8721.00086
- Sanna, L. J., Meier, S., & Turley-Ames, K. J. (1998). Mood, self-esteem, and counterfactuals: Externally attributed moods limit self-enhancement strategies. *Social cognition, 16*, 267-286.
- Sanna, L. J., Turley-Ames, K. J. & Meier, S. (1999). Mood, self-esteem, and simulated alternatives: Thought-provoking affective influences on counterfactual direction. *Journal of Personality and Social Psychology, 76*, 543-558.
- Stroud, L. R., Tanofsky-Kraff, M., Wilfley, D. E., & Salovey, P. (2000). The Yale Interpersonal Stressor (YIPS): Affective, physiological, and behavioral responses to a novel interpersonal rejection paradigm. *Annals Of Behavioral Medicine, 22*(3), 204-213. doi:10.1007/BF02895115
- Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2003). Social Exclusion and the Deconstructed State: Time Perception, Meaninglessness, Lethargy, Lack of Emotion, and Self-Awareness. *Journal Of Personality And Social Psychology, 85*(3), 409-423. doi:10.1037/0022-3514.85.3.409

- VanDellen, M., Knowles, M. L., Krusemark, E., Sabet, R. F., Campbell, W., McDowell, J. E., & Clementz, B. A. (2012). Trait self-esteem moderates decreases in self-control following rejection: An information-processing account. *European Journal Of Personality, 26*(2), 123-132. doi:10.1002/per.1845
- Williams, K. D., Cheung, C. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. *Journal Of Personality And Social Psychology, 79*(5), 748-762. doi:10.1037/0022-3514.79.5.748

Appendices

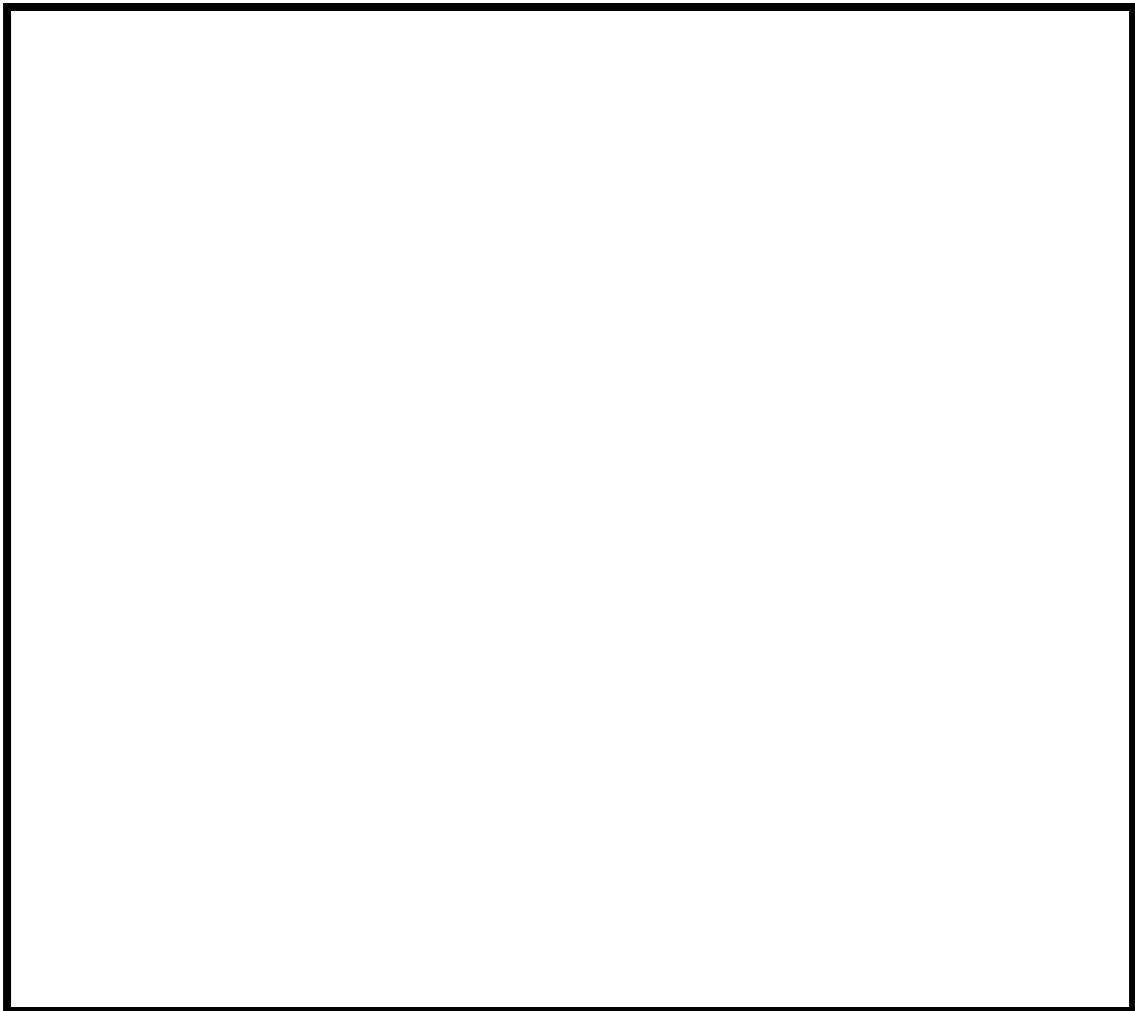
ROSENBERG SELF-ESTEEM SCALE

This is a pre-study questionnaire. Please read each statement carefully and consider how well it applies to you.

	Strongly Disagree 1	2	3	4	Strongly Agree 5
1. I feel that I am a person of worth, at least on an equal plane with others.					
2. I feel that I have a number of good qualities.					
3. All in all, I am inclined to feel that I am a failure.					
4. I am able to do things as well as most other people.					
5. I feel I do not have much to be proud of.					
6. I take a positive attitude toward myself.					
7. On the whole, I am satisfied with myself.					
8. I wish I could have more respect for myself.					
9. I certainly feel useless at times.					
10. At times, I think I am no good at all.					

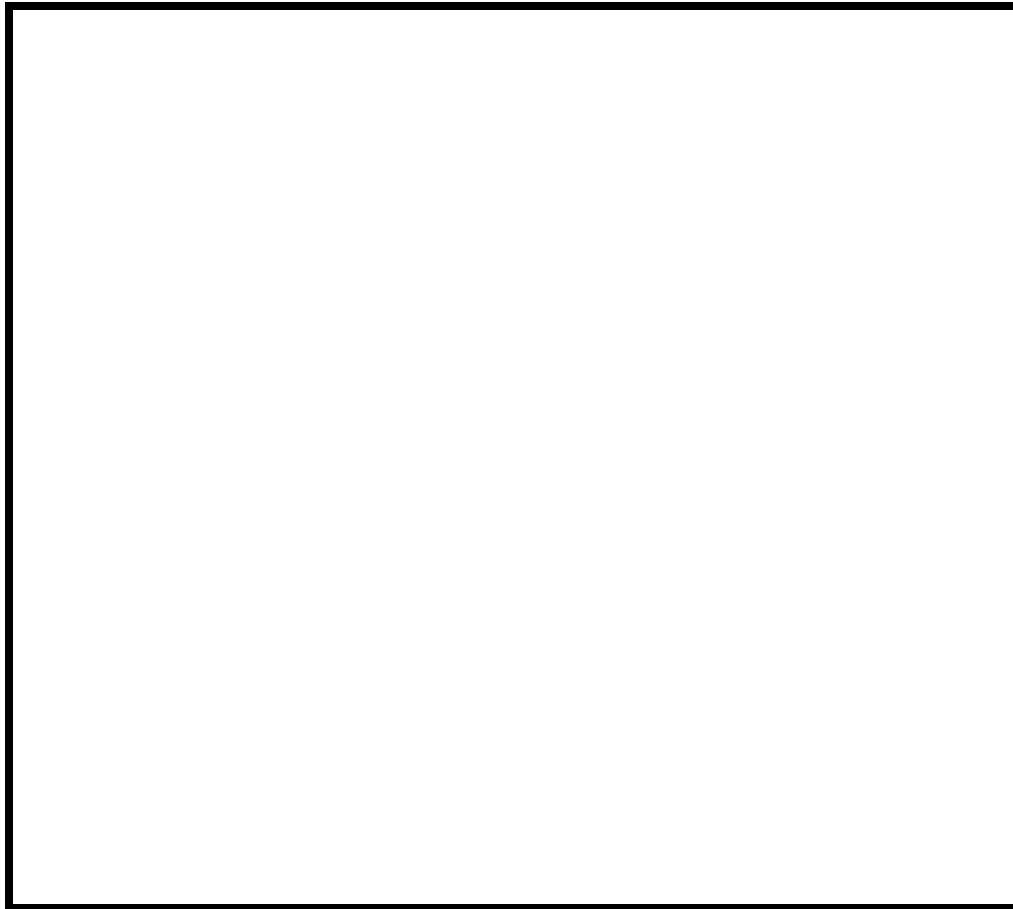
PAST EVENT WRITING TASK

Please write an essay about a time when you experienced rejection or exclusion by others in the spaces below. Please think of a time when you felt that others did not want to be in your company and when you did not feel a strong sense of belongingness with another person or group. Many people have had such an experience more than once; please choose an especially important and memorable event. Try to recall where you were, what you were doing, how you acted during the event, and how you felt physically and emotionally.



DIRECTION OF SIMULATION WRITING TASK

People often have thoughts like “if only.....” or “at least.....” when thinking about past events. Sometimes these thoughts can be about how things could have been better than what actually happened, and some can thoughts can be about how things could have been worse than what actually happened. For example, “if only I had studied more I could have done better on the test” or “at least I attended all of the classes or my score could have been worse.” In the spaces below, please describe alternatives that could have been better or worse than what actually happened in your first essay. Pleas indicate whether it is a better (+) or worse (-) by placing a positive or negative sign next to each statement.

A large, empty rectangular box with a thick black border, intended for the student to write their responses to the simulation writing task.

PANAS

This scale consists of a number of words and phrases that describe feelings and emotions.

Read each item and then select the appropriate response next to each word. Indicate to what extent you are currently feeling for each word listed below.

	very slightly or not at all	a little	moderately	quite a bit	extremely
Sad	1	2	3	4	5
Guilty	1	2	3	4	5
Dissatisfied					
with self	1	2	3	4	5
Ashamed	1	2	3	4	5
Nervous	1	2	3	4	5
Cheerful	1	2	3	4	5
Happy	1	2	3	4	5
Irritable	1	2	3	4	5
Angry	1	2	3	4	5
Distressed	1	2	3	4	5
Enthusiastic	1	2	3	4	5
Determined	1	2	3	4	5
Strong	1	2	3	4	5
Scornful	1	2	3	4	5
Confident	1	2	3	4	5

WORD STEM TASK

Please complete the following word stems with the first word that comes to your mind

that fits.

1. Kind
2. Good
3. Calm
4. Panic
5. Bad
6. Lost
7. Roof
8. Great
9. Upset
10. Angry
11. Alone
12. Jolly
13. Bark
14. Block
15. Bitter
16. Shoe
17. Draw
18. Pained
19. Glad
20. Sad
21. Grief
22. Loved
23. Happy
24. Joy
25. Hopeful

1. K I _ _
2. G O _ _
3. C A _ _
4. P A _ _ _
5. B _ _
6. L O _ _
7. R O _ _
8. G R _ _ _
9. U P _ _ _
10. A N _ _ _
11. A L _ _ _
12. J O _ _ _
13. B A _ _
14. B L _ _ _
15. B I _ _ _ _
16. S H _ _
17. D R _ _
18. P A _ _ _ _
19. G L _ _
20. S A _
21. G R _ _ _
22. L O _ _ _
23. H A _ _ _
24. J _ _
25. H O P _ _ _ _

IRB Approval Letter



INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.6820 | Fax: 601.266.4377 | www.usm.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 13081201
PROJECT TITLE: Social Rejections: Downward Simulation, the Road to Recovery
PROJECT TYPE: Thesis
RESEARCHER(S): Monica Hesler
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Psychology
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 09/09/2013 to 09/08/2014

Lawrence A. Hosman, Ph.D.
Institutional Review Board