

DESTRUCTIVE CRITICISM, SHAME, AND WORK PERFORMANCE

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ABSTRACT

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by Amanda McDonald

Destructive criticism is negative, inconsiderate, often delivered in a sarcastic tone, involves threats, and typically attributes poor performance to internal causes (Baron, 1988). It is not surprising, then, that this type of criticism results in many unintended consequences. The purposes of the current studies were to investigate the emotional consequences of destructive criticism on employees and their subsequent performance, with a particular focus on the emotion of shame.

The first study revealed that participants who experienced destructive criticism reported significantly higher levels of shame, embarrassment, anger, and rumination than those who experienced a foolish mistake or an emotion neutral condition, as well as lower levels of pride and performance scores. The purpose of the second study was to test whether impeding rumination, through a working memory task, reduced the effect the shaming experience had on performance. There was a significant difference within the destructive criticism condition on problem solving scores: Participants in the rumination condition performed significantly worse than participants in the working memory/filler task condition.

In addition to the detriments in employee's moral and emotional states, these studies show that destructive criticism leads to a reduction in work performance, particularly in the ability to problem solve and persistence on tasks. The current study has helped to identify destructive criticism as one of the causes of workplace related shame, which has created an important foundation for the study of shame in the work environment.

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CHAPTER I

INTRODUCTION

Providing negative feedback (criticism of performance) is a necessary component of the work environment but one that is often dreaded. Managers, unfortunately, tend to provide criticism when they are upset and not fully in control of what they say (Baron, 1988). The criticism is usually negative, broad, and inconsiderate. This destructive criticism can result in unexpected and undesirable consequences, such as vengefulness and lowered self-efficacy on the part of the employee (Baron, 1988). The purposes of the current studies are to investigate the emotional consequences of destructive criticism on employees and their subsequent performance, with a particular focus on the emotion of shame.

Employees are likely to feel shame, an emotion that will be discussed at length later, when supervisors (or co-workers/subordinates) address a problem or criticize their performance in a destructive and demeaning way. Often, manager's intents are to induce feelings of shame and guilt to encourage employees to want to better themselves, but unfortunately, employees sometimes feel offended, attacked, outraged, and potentially vengeful (Combs, Campbell, Jackson, & Smith 2010). These emotions are unlikely to help complete the goal of the superior (i.e., to improve performance by discouraging the poor behavior). The feeling of shame, and the subsequent negative emotions that accompany it are, in fact, hypothesized to have the opposite effect of the superior's intentions, reducing employee's work performance and increasing unwanted behavior. In this paper, discussions of two studies on the impact of destructive criticism in simulated work-related situations follow reviews of the existing literature on destructive criticism, the concept of shame, shame and co-occurring emotions, and shame and rumination.

Destructive Criticism

Baron (1988) found that destructive criticism increased conflict within an organization and adversely affected employee self-efficacy. Although Baron (1988) built a strong case for the negative effects of destructive criticism, he failed to mention what may be the link between the criticism and the observed outcomes. The results of Baron's (1988) study can be used to support the idea that destructive criticism causes the recipient to feel shameful and that shame may subsequently be responsible for lowered self-efficacy and organizational conflict.

The key features of destructive criticism, according to Baron (1988), include feedback that is often delivered in a sarcastic tone, involves threats, and usually attributes poor performance to internal causes (i.e., a lack of motivation or ability on the part of the employee). This type of criticism may not only have negative effects on the employee being attacked but on the functioning of the organization, lowering job motivation and reducing organizational commitment.

Baron (1988) hypothesized that destructive criticism would elicit negative emotions, such as anger and resentment, that would cause the employee to either engage in direct confrontation or avoid the criticizer. His second hypothesis was that when the criticism focused on specific personal attributes about the employee, such as their work ethic, it would "undermine [the] recipients' feelings of confidence or self-efficacy and reduce their self-set goals. Such effects, in turn, may impair their performance on various tasks" (p.199).

In the first study, Baron (1988) found that destructive criticism contributed to organizational conflict. He asked 83 undergraduate students to develop an advertising campaign and then provided constructive or destructive criticism of the project. Baron found that after participants received destructive criticism, they felt more tense and angry. They also reported

being more likely to avoid the criticizer in future situations. The second study by Baron (1988) found that destructive criticism adversely affected recipients' self-set goals and feelings of self-efficacy. Study three interviewed 108 employees from a large food-processing company who reported that destructive criticism was one of the leading causes of conflict in the work environment.

When a superior suggests that poor performance is a direct result of personal inadequacy, as demonstrated in Baron's (1988) study, recipients will feel a lowered sense of self-worth. According to Bennett et al. (2010), low levels of positivity are linked to an increase in feelings of shame. In adults, especially shame-prone individuals (who will be discussed later), the low levels of positivity from an authority figure or superior can be a cause of increased shame feelings.

The lack of research on shame in the workplace as a result of destructive criticism, combined with the long lasting and painful repercussions associated with the emotion (Tangney, 1990), provide a strong argument as to why this area needs to be further researched. Previous research has discussed how shame personally affects the employee by inducing depression, decreasing self-esteem, and lowering self-set goals (Baron, 1988; Poulson, 2000). The purpose of the current studies is to extend the research on shame in the workplace and to investigate how it affects performance through thorough examination of shame induced through destructive criticism.

Shame

Feeling shameful is an emotion that many people have experienced: People may be ashamed of something they said or did, of their backgrounds, jobs, or even families. According

to descriptions of shameful experiences, people may feel powerless (Lewis, 1992) and that they have low social worth (Guenwald et al., 2004).

What is Shame?

Shame can be internal or external. Personal negative feelings about oneself elicit internal shame (Gilbert, 2003; Pinto-Gouveia & Matos, 2010), which is an evaluation of the self and by the self (Gilbert & Andrews, 1998) that can be caused by negative self-evaluation of one's own thoughts or actions. When people feel that their personal thoughts/actions are below standard or disgraceful in some way, they may feel shame. No other person needs to be involved for the experience of internal shame.

External shame, on the other hand, is caused by how one believes other people are evaluating one's actions (Gilbert & Andrews, 1998). Shame is a self-conscious emotion (Verbeke & Bagozzi, 2002) and often involves concern of how one appears to others (Tangney & Dearing, 2002). It occurs most frequently when one's social self is threatened (Kemeny et al., 2004). External shame is more common in the literature, as it occurs most often in social interactions. Destructive criticism would be a cause of external shame because the criticizer is a person other than the self.

When people believe that others are negatively evaluating them, they may feel shame. This is especially true if they believe that the negative evaluation consists of the belief that they are worthless and lowered in value in the eyes of evaluators (Gilbert, 2003). This negative evaluation usually results from shame recipients' inability to meet common standards of normal/worthy behavior.

Standards of worthy behavior are developed through cultural norms, morals, and laws. Common ones usually involve how you dress, speak, and perform tasks (job performance). Standards can also involve your background, either social or cultural. When others positively evaluate people on these standards, those individuals may feel proud and worthy. Violation of these standards, however, usually leads to a negative evaluation by others and subsequent feelings of shame (Verbeke and Bagozzi, 2002).

While the feeling of shame may be easily recognized within the self, people are not as adept at recognizing shame in others. In one study by Widen, Hewett, and Russell (2011), the investigators had university students look at photographs of facial expressions and indicate which emotion was being shown through a free-labeling task. When free-labeling the emotion of shame (i.e., looking at the picture and saying the emotion), the mean correct was only 17%, indicating that people are not very successful at identifying shame in others. In addition, people may not know when they are the cause of that shame (Widen, Hewett, & Russell, 2011). This is surprising, as being able to display shame has long been an important tool in social survival.

Hypothesis 1: Destructive criticism will result in higher levels of reported shame than a neutral emotional condition.

Evolutionary Aspect of Shame

Our social status within a group is not only related to survival and reproduction (Kemeny et al., 2004) but also to advancement opportunities. Advancement opportunities within a group allow one to gain access to more resources and mating prospects. According to Gilbert (2003), shame developed as a system to help deal with threats, especially threats to social status. Evolutionarily, being able to exhibit shame-like qualities may have stopped numerous

unnecessary attacks. The precursor to shame was the ability to recognize and react to social threats, usually from within the same pack. The shameful experience helped the lower ranking member submit to his or her position within the hierarchy as opposed to accepting the challenge from a higher-ranking member, which could result in reduced chances of reproduction or survival.

Shame, although a much more evolved self-conscious emotion, is also related to recognizing social threats against the self (Gilbert, 2003). Feeling shame allows you to recognize when a situation is threatening your position within a social hierarchy. People feel shame when their thoughts or actions are the perceived cause of the threatening situation. When actions are perceived to cause a threat to advancement or a possible demotion within the hierarchy, shame is the natural response (Gilbert, 2003). Destructive criticism, especially from superiors, is a possible threat to hierarchy position, as this type of criticism is used to let employees know that a common standard of work behavior is not being met.

Superiors and Workplace Shame

Superiors are able to induce large levels of shame in subordinates because the superiors control the most resources, and from an evolutionary standpoint resources equal a greater chance of survival. Superiors also have the most control over subordinates' positions in a hierarchy (Gilbert, 2003; Fessler, 2004). Therefore, appearing inadequate, or unworthy, in the eyes of superiors would pose the greatest threat to employees' social selves as well as advancement opportunities. Similar to other evolved natural emotional responses, some people are more likely than others to respond to destructive criticism with the feeling of shame.

Hypothesis 2: Superior-induced shame will result in a greater decrease in work performance than colleague induced shame.

Shame-Proneness

Internal negative representations of the self, caused by shameful experiences, result in excessive shame-proneness (Pinto-Gouveia & Matos, 2010). Shame-proneness is defined as a predisposition to respond with shame and can vary in degrees of severity (Mills et al. 2010). Shame-prone individuals are more likely to blame themselves, as well as others, for negative life events. They are more prone to anger and hostility and are less able to empathize with others (Tangney & Dearing, 2002).

Because many of the first experiences of being shamed occur in childhood, Bennett, Sullivan, and Lewis (2010) looked at shame-proneness as a result of childhood neglect. They suggested that shame-proneness was a link to the depressive symptoms seen in some children who suffered from neglect. They also discussed that it was not only children who suffer from neglect but also those who suffer physical or sexual abuse, or an authoritarian, negative, or rejecting parenting style, who were likely to report higher levels of shame and shame-proneness.

Shame is such an uncomfortable and overwhelmingly painful emotion that many people try to suppress the experience (Tangney & Dearing, 2002). This act of suppression may lead to feelings of sadness and depression. When feeling shameful, people often feel the need to hide themselves and withdraw from the situation. This leads to social isolation, which has been linked to feelings of depression, especially for children and young adults (Lewis et al. 1992).

Bennett et al. (2010) also suggested that people who have an attribution style known as depressogenic attribution are more prone to feelings of shame. This attribution style attributes

negative events to internal, stable qualities about the self and attributes positive events to external, unstable qualities. People with a depressogenic attribution style are more likely to agree with the negative evaluation of them that is regularly provided through destructive criticism.

Mills et al. (2010) also looked at childhood indicators of shame-proneness. They investigated whether shame responding at a young age was predictive of shame-proneness in middle childhood. The findings showed that, overall, girls exhibited higher levels of shame than boys by the time they reached school age (Mills et al., 2010). For girls, lower temperamental inhibition and/or higher levels of mother shaming were predictive of increased shame response between preschool age and school age; for boys, higher mother shaming was also a predictor, but only if the boy was highly temperamentally inhibited.

These studies demonstrate that some people are more prone to feelings of shame than others. Degree of shame-proneness in adulthood is caused by experiences in childhood as well as personality type/temperament. Parenting styles that caused excessive shame-proneness (authoritarian, authoritative, or permissive) are also present in the managerial styles of a workplace (Lyon, 2006).

Emotional Impact of Shame

Shame is a very powerful emotion that can affect many aspects of people's lives. Shame influences feelings about the self, behavior in social contexts, and is a factor in the development of self-identity. Feelings about social desirability and acceptability are also shaped by shame (Pinto-Gouveia & Matos, 2010). Pinto-Gouveia and Matos (2010) looked into the question of whether a memory of a shameful experience, known as a shame memory, could become a central

part of a person's identity. They also wanted to know if the shame memory would be used as an everyday reference point. The investigators tested 811 participants on shame levels and the centrality of shame memory, among other factors. Results indicated that the centrality of shame memories was positively associated with internal and external shame: When a person experiences a strong moment of shame it may become a memory that influences their everyday actions and the person that they become.

Gruenewald et al. (2004) also investigated potential negative effects of shame, such as decreased self worth and esteem, and increased stress levels. They defined shame as the feeling of being small and inferior, being socially isolated and feeling a pressure to hide from other people. Shame is the emotion most commonly experienced in response to the devaluation of the social self (Gruenewald et. al., 2004). Gruenewald et al. (2004) developed the Social Self Preservation Theory, which states that situations that threaten to lower someone's self worth, social standing, or image result in feelings of shame, decrements in social self-esteem, and increased cortisol levels.

In the study, participants performed difficult speech and math tests with half performing the tasks in private while the others performed them in front of an unfriendly, judgmental audience. The audience was meant to make participants feel as though they were being socially evaluated. The task was made stressful by requiring the participants to use cognitive resources, to present their prepared speech orally, and to solve math problems that increased in difficulty until they became impossible (Gruenewald et. al., 2004). As expected, both groups, private or public task completion, reported increased anxiety and decreased performance self-esteem. The public task completion group, however, displayed higher levels of shame, higher cortisol levels, and lower reported social state self-esteem than the private completion group. Gruenewald et al.

(2004) concluded that when the social self is threatened, people feel increased levels of shame and decreased social self-esteem. People also feel increased stress, resulting in higher levels of cortisol, when they are being socially evaluated.

As mentioned earlier, according to Lewis et al. (1992), feeling shame makes people feel the desire to withdraw socially and to be isolated. Feeling shame can decrease social self-esteem, cause increased stress, influence people's every day actions, and cause self-isolation (Gruenewald et al., 2004; Pinto-Gouveia & Matos, 2010).

Poulson (2000) gave a few examples of how shame in the workplace can lead people to take drastic, violent measures. People can feel intense shame from being passed over for promotion, demoted, or bullied in the workplace. This intense feeling of shame results in greater levels of depression, social isolation, and vengeful contemplations. For some, the last resort is to escape the shame by taking not only their own life but also the lives of the people who caused, or were associated with, the shame (Poulson, 2000).

Co-Occurring Emotions

Shame is a distinct, long-lasting, emotion with immediate and ongoing ramifications. During the initial shaming experience, however, other emotions may also occur. These emotions are all unique and it is necessary to discuss the differences between them, as they are often confused as being one in the same (Tangney & Dearing, 2002).

Humiliation

Although humiliation and shame are similar in that they are both self-conscious emotions that can be caused by the actions or evaluations of other people, they are different in the way that the person experiencing them feels. Shame is a personal negative evaluation of the self: Another

person can make someone feel ashamed by negatively evaluating or criticizing him or her as a person. The only reason they can cause shame, however, is because the person being shamed believes the negative evaluation and thus is lowered in his or her own eyes. Therefore, even though the actions of another person triggered the emotion, it is self-caused because it is a self-evaluation.

Humiliation, on the other hand, is more closely related to anger. According to Gilbert and Andrews (1998, p. 9) “humiliation is what can be done to one person by another person purely for their own pleasure or purpose.” Humiliation involves being put down, or put in a lower place, against one’s will. The person putting another down is usually one who has a position of greater power in some way.

According to Gilbert and Andrews (1998), humiliation has to do with one’s position in relation to others. When someone else puts people into lower positions, against their will, most people respond with anger and humiliation. It is also possible to respond with feelings of shame. The two emotions co-occur when someone of greater power puts other people into positions against their will (humiliation) and those people feel they somehow deserve the position (shame). Humiliation comes from the feelings about being put into a lower position; shame is from the feeling that the position is deserved because the person is somehow unworthy of anything else.

Anger

Shame can also cause “humiliated fury,” according to Thomaes, Olthof, Bushman, and Nezlek (2011). They operationalized shame as “strongly devalued, inferior, and exposed—feelings that interfere with the fundamental human motive to feel good about oneself” (p. 786). Thomaes et al. (2011) addressed the issue that shame is often so painful for people that they will

often try and repress it or replace it with another emotion. When shame leads to anger, this shame-based anger is called “humiliated fury.”

Thomaes et al. (2011) showed that shameful events would sometimes trigger anger and fury in young adolescents. They tested adolescents because that is a time period where individuals’ vulnerability to shame is at a high. They noted that peer harassment is aimed at causing others shame and destroying their social status.

One reason Thomaes et al. (2011) gave for the transfer of emotions from shame to anger was that it gave the subject a way to shift the blame. When feeling shame, a person feels that they did something wrong—that they somehow violated a social norm and are subsequently inadequate in some way. In contrast, when people feel angry they usually blame another person for the situation. The situation occurred because someone else did something wrong or that other person violated a social norm. By shifting the blame from themselves to others, people are able to restore their social self-esteem.

Shame over one’s position within a social hierarchy can also lead to maladaptive behavior, such as violence. According to Wilkinson (1999), when people use violence to protect their dignity or to “save face,” it is usually in a situation where there is greater hierarchical inequality. In a company with a strict vertical hierarchy the lower employees may become shameful of their position and feel the need to defend their status.

Hypothesis 3: Anger will be expressed toward the person who is the perceived cause of shame.

The decreased feelings of self-worth and the reduction in global self-esteem that result from shame, may be indicated through reporting of lowered levels of pride in individuals experiencing shame (Tangney & Dearing, 2002).

Hypothesis 4: Lower levels of pride will be reported in a condition involving shame than in a neutral emotional condition.

Guilt

Shame can also co-occur with guilt. It is often assumed that shame and guilt are one in the same, but Tangney (1990) emphasizes a clear distinction: Shame involves an evaluation of the self as a whole, whereas guilt is an evaluation of a specific aspect of the self, particularly a behavior. Shame involves more stable attributions of the self. When a person experiences guilt, it is usually from a recent behavior or action, and the normal response is to try to remedy the situation. People experiencing shame, on the other hand, would rather remove themselves from, than remedy, the situation. Tangney (1990) considers shame a much more painful experience than guilt. Such a painful experience can alter a person's self-perspective.

Embarrassment

The emotion most similar to, and most often confused with shame, is embarrassment. The initial experience of shame and embarrassment are comparable in that most often they are caused by a public acknowledgement of a person's thoughts, actions, or behavior. The two emotions may initially occur together but are separate experiences with different triggers and outcomes. Embarrassment usually follows relatively trivial social transgressions; such as doing something inappropriate in a public setting and being or becoming aware that it is inappropriate.

Embarrassment can be remedied by a quick apology and, although the feeling may linger for a while, it does not affect the global self (Poulson, 2000).

Embarrassment is less intense than shame and usually accompanied by blushing, smiling, and feelings of foolishness. The most important difference between embarrassment and shame is that embarrassment results from self-perceived deficiencies in one's presented self whereas shame results from self-perceived deficiencies in one's core self. Feelings of foolishness and awkwardness are involved in embarrassment whereas feelings of regret and depression are more often associated with shame (Tangney, Miller, Flicker, & Barlow, 1996). While shame and embarrassment will make it more difficult to focus on the task at hand, shame is a more intense, all encompassing emotion that will most likely result in longer impairments of performance.

Hypothesis 5: Embarrassment will initially be present in both a shaming and embarrassing situation, and shame and embarrassment will result in greater decreases in work performance than a neutral emotional state.

Rumination

Shame is so painful because it lowers people's entire self-concepts and people ruminate about the experience. People ruminate because the feeling of shame and the subsequent lowering of self-esteem is an indication that the fundamental need of belongingness is not being met (Orth, Berking, & Burkhardt, 2006), and this interrupts other cognitive processes (Leary & Baumeister, 2000).

Rumination is evolutionarily advantageous. Although at times it seems excessive and unnecessarily painful, it serves an important purpose (Nesse, 1998). The act of ruminating over a situation allows the person to evaluate why the situation occurred and helps to encourage

avoidance of a similar situation in the future. Reoccurring thoughts of the painful experience further solidify the desire to prevent the same circumstances in the future (Nesse, 1998).

Humans have a fundamental need to belong to a group because it improves the chances of survival (Gilbert, 2003). When a person does something to threaten his or her position within the group, the feeling of shame and rumination that follow are a lasting reminder to not repeat the same behavior.

This threat to the social self becomes the focus of attention through intrusive rumination. This is because the goal—obtaining the fundamental need to belong—is being blocked (Orth, Berking, & Burkhardt, 2006). Shame has no immediate remedy since people try to avoid the situation or person that caused the shame and the emotion involves a negative evaluation of the core self. It is difficult to quickly move past the pain and the feeling of worthlessness, which causes long periods of rumination because the fundamental need to belong will remain blocked as long as the person is experiencing shame.

Hypothesis 6: Higher levels of rumination will be reported for a shame condition than in an emotion neutral condition.

Hypothesis 7: Shame will result in a greater decrease in work performance when the subject is given time to ruminate than when they engage in a distractor task.

The Current Studies

The small literature on shame in the workplace, combined with the evidence showing the strength and depth of the emotion, provide a strong argument for an investigation into the impact that shame caused by destructive criticism has in the workplace.

Two studies were conducted. Study 1 examined the emotions of shame, embarrassment, anger, rumination, and pride that were reported during a (1) shaming experience caused by destructive criticism, (2) a work related embarrassing experience, and (3) a work related emotion neutral experience. Study 1 looked specifically at one potential effect of shame, the reduced performance on cognitive and persistence tasks, as well as if these results differed by perpetrator type (superior or colleague). The purpose of Study 2 was to test whether impeding rumination, through requiring the participant to engage in a working memory task, reduced the effect shame had on performance.

CHAPTER II

STUDY ONE

METHOD

Participants

Participants ($N = 180$) were recruited using Amazon Mechanical Turk (MTurk). The participants were filtered for a 90% or greater approval rate as well as a high school diploma or above education level. Recent research has supported the use of MTurk for data collection (Buhrmester, Kwang, & Gosling, 2011). The final survey was created in Survey Monkey (www.surveymonkey.com).

Stimulus Materials

Shame-inducing short scenarios were created for two conditions (supervisor and colleague). In each condition the person indicated (supervisor or colleague) provided the participants with destructive criticism on their ability to sufficiently complete requested tasks on Mechanical Turk. The negative comments were similar to the criticism used in the studies conducted by Baron (1988). The criticizer was the only person present in the room and was looking directly at the camera. The scenarios were videotaped; the scripts can be found in Appendix A. Embarrassment-inducing short scenarios were also created for each of the two conditions (supervisor and colleague), and the scenarios were videotaped (Appendix B). The embarrassing situation was a common workplace error in which the person in the video mentions an email that was accidentally sent to them. Emotion-neutral scenarios were also created for each of the two conditions (supervisor and colleague) in which the actor discussed the lack of

fluctuation on Mechanical Turk, which is neither emotionally positive nor negative (Appendix C). Each video (approximately 25-35 seconds long) was pilot tested (described later) to confirm it induced the intended emotion.

Dependent Measures

Shame

Shame was measured with five questions from the State Shame and Guilt scale (Tangney, J.P., & Dearing, R. (2002). These were from the shame subscale of the questionnaire. The reliability (alpha) Tangney and Dearing (2002) found for the subscale is .89. All questions were based on a 1 to 5 scale with 1 indicating the participant was not feeling this way at all and 5 indicating feeling very strongly (Appendix E).

Pride

Pride was measured with five questions from the State Shame and Guilt scale (Tangney & Dearing, 2002). These were from the pride subscale of the questionnaire (Appendix D).

Embarrassment

The scale for embarrassment was developed based on definitions of embarrassment by Verbeke and Bagozzi (2002) and Keltner and Buswell (1997). Reliability was measured in the pilot tests (Appendix F).

Anger

The anger scale was the state-anger subscale of the State-Trait Anger Expression Inventory for Children and Adolescents, developed by del Barrio, Aluja, and Spielberger (2004). The reliability (alpha) for the subscale was .81 (Appendix I).

Rumination

For this study rumination was defined as intrusive thoughts about the shaming incident. The Rumination about an Interpersonal Offense Scale was used. Validities for this scale have been well established (Wade, Vogel, Liao, & Goldman, 2008). Internal consistency estimates were all above .90 (Appendix H).

Final Problem Solving Task

This task was a list of ten problem-solving (brain-teaser) questions. The score was calculated by how many problems the participant got correct. The average score was determined in pilot testing (Appendix L).

Final Persistence Task

This task required participants to code letters into numbers (A=1 B=2 C=3) from an emotion-neutral paragraph. The score was determined by the amount of letters that each participant recodes (Appendix M).

Pilot Tests

Manipulation Check for Proper Functioning of Stimulus Videos

To confirm that the stimulus videos (destructive criticism, foolish mistake, and emotion neutral) were inducing the intended emotions, 60 participants were divided into three groups, each receiving one of the three video clips. All three conditions used the superior as the perpetrator. After watching the scenario, each participant completed the shame and embarrassment measurement (Appendix D for scale). The participants experienced a greater level of shame in the destructive (shame) condition ($M = 3.00$, $SD = 1.30$) than in the emotion

neutral condition ($M = 2.15$, $SD = 1.33$), with a medium to large effect size ($d = .65$). They also experienced a greater level of embarrassment in the foolish condition ($M = 2.69$, $SD = 1.34$) than in the emotion neutral condition ($M = 1.31$, $SD = 0.88$) with a large effect size ($d = 1.22$). This confirmed that the manipulations were performing correctly.

Randomization of Tasks

Participants could not be completely randomly divided into groups due to the design of Mechanical Turk: Mechanical Turk users select which tasks they would like to complete and, therefore, the tasks selected by participants are completely random but the availability of the tasks is not. To ensure this did not make a difference in the samples obtained, the tasks were uploaded randomly without replacement using a random number generator. Tasks were monitored to confirm that they were completed at approximately the same rate. Demographic information on participants was also collected at the end of each pilot test as well as during the experiment to confirm that the participants who complete each task did not differ significantly from one another. (Appendix N for demographic questionnaire.)

Final Task

One of the final tasks to test performance was a problem-solving task in which 20 participants completed “brain teasers” (Appendix L). These questions were used because they require mental concentration and effort but are not education or gender biased. The task was pilot tested to obtain a normal distribution of scores during an emotion neutral condition (no emotional stimulation). The average score on the pilot test was 0.51. This pilot test also confirmed that the difficulty of the task was appropriate.

Procedure

One hundred and eighty participants were divided into six groups: Two groups received the destructive condition, two received the foolish condition, and two received the emotion neutral condition. Within each condition, one group received the superior as the perpetrator and the other group received the colleague as the perpetrator.

After watching the initial emotion stimulating (shame or embarrassment) or emotion neutral (control) video, the participants were instructed to watch a video while monitoring the number of dots that appeared. The video lasted for 2 minutes and six dots appeared throughout that time. This low effort monitoring allowed the participants the opportunity to ruminate about the previous emotional stimulation as well as keep their attention on the task.

After watching the two videos, the participants completed the shame, embarrassment, pride, anger, and rumination combined scale (Appendix J). They were then given two tasks to test their performance (Appendix L and M). In order to counterbalance, Survey Monkey randomly assigned which task was presented first. At the end of the study, the participants filled out a demographics questionnaire (Appendix N). Before beginning the study participants were presented with a consent form (Appendix O) and upon completion of the study were provided with a debriefing form explaining the purpose of the study (Appendix P).

CHAPTER III

RESULTS (STUDY 1)

Results from the first study are summarized in Table 1. All emotion variables (shame, anger, pride, embarrassment, and rumination) were subjected to a two-way analysis of variance with three levels of feedback (destructive, foolish, and emotion neutral) and two levels of perpetrator type (superior, colleague). A post hoc Tukey HSD test was conducted on feedback for all emotion variables to determine which feedback conditions were different from one another. There was a significant main effect of feedback for all emotion variables, $p < .001$. Perpetrator type and the interaction between feedback and perpetrator type were not significant throughout all measures and will not be reported.

Table 1. Emotion Variable Ratings for Study 1 (Standard Deviations Are in Parentheses).

Emotion Measure	Feedback condition			<i>df</i>	<i>F</i>	η_p^2
	Destructive	Foolish Mistake	Emotion Neutral			
Shame	2.71 ^a (1.20)	2.17 ^b (1.11)	1.23 ^c (0.49)	(2, 174)	34.89*	.286
Anger	2.66 ^a (1.22)	1.71 ^b (0.93)	1.26 ^c (0.49)	(2, 174)	35.15*	.288
Pride	2.39 ^d (1.26)	2.76 ^d (1.09)	3.39 (0.94)	(2, 174)	12.52*	.126
Embarrassment	2.79 ^d (1.14)	2.74 ^d (1.20)	1.33 (0.48)	(2, 174)	40.57*	.318
Rumination	2.92 ^a (1.12)	2.15 ^b (1.03)	1.32 ^c (0.52)	(2, 174)	43.89*	.335

* $p < .001$.

a = significantly different from the foolish condition and the emotion neutral condition at $p < .05$.

b = significantly different from the destructive condition and the emotion neutral condition at $p < .05$.

c = significantly different from the destructive condition and the foolish condition at $p < .05$.

d = significantly different from the emotion neutral condition at $p < .05$.

The results supported the first hypothesis that destructive criticism would result in higher levels of reported shame than a neutral emotional condition. Shame levels were significantly greater in the destructive criticism condition than in the foolish mistake and emotion neutral condition. There was a medium effect size with feedback accounting for 8.2% of the variance in the reported shame levels, holding perpetrator type constant, $\eta_p^2 = .286$. The second hypothesis, which stated that superior-induced shame would result in a greater decrease in work performance than colleague-induced shame, was not supported. Although there were differences among the conditions on work performance scores, mentioned later, there was no effect of perpetrator type (superior or colleague).

Study 1 results indicated that anger ratings differed significantly by feedback condition. The most anger was expressed in the destructive criticism condition, supporting the third hypothesis that anger would be expressed toward the person who is the perceived cause of shame. While shame and anger were present in the foolish mistake condition, the reported levels were significantly less than the destructive criticism condition. Along with an increase in reported shame and anger, pride ratings significantly decreased in the destructive criticism condition. As predicted by the fourth hypothesis, the emotion neutral condition had the highest levels of reported pride whereas the destructive criticism condition had the lowest.

Part of hypothesis five, regarding embarrassment being initially present in both a shaming and embarrassing situation, was also supported by the results in Table 1: The reported levels of embarrassment for the destructive criticism and foolish mistake condition were not significantly different, as expected, but both conditions did differ significantly from the emotion neutral condition. The last hypothesis that was supported, hypothesis six, predicted that rumination would be greater in the destructive criticism condition than in an emotion neutral

condition. Rumination levels were significantly greater in the destructive criticism condition than both of the other two conditions (foolish mistake and emotion neutral).

Problem Solving and Persistence

The hypothesis that shame and embarrassment would result in greater decreases in work performance than a neutral emotional state (hypothesis 5) was partially supported by the data, as can be seen in Table Two.

Table 2. Final Task Scores for Study 1 (Standard Deviations Are in Parentheses).

Final Task	Feedback condition			<i>df</i>	<i>F</i>	<i>p</i>	η_p^2
	Destructive	Foolish Mistake	Emotion Neutral				
Problem Solving	0.45 (0.25)	0.39 (0.22)	0.49 (0.26)	(2, 174)	2.66	.07	.03
Persistence	9.38 ^a (13.96)	6.98 ^a (14.53)	26.23 (54.39)	(2, 174)	5.84*	.003	.06

**p* < .01.

a = significantly different than the emotion neutral condition

The problem solving condition, which consisted of ten brainteaser questions, did not come out significant but was trending in the correct direction. The mean scores for the foolish mistake and destructive criticism conditions were lower than the mean score for the emotion neutral condition. For the persistence task, there was not a significant difference between the destructive criticism condition and the foolish mistake condition, but both had significantly lower scores than the emotion neutral condition.

CHAPTER IV

DISCUSSION (STUDY 1)

This study showed that one consequence of destructive criticism is the feeling of shame. The participants in the destructive criticism condition experienced the highest levels of shame, indicating that shame is induced in the person experiencing the destructive criticism. While participants in the foolish mistake condition reported significantly higher levels of shame than the emotion neutral condition, the important distinction to notice is the significant difference between the destructive criticism condition and the foolish mistake condition.

Shame and embarrassment are often reported as being very similar, if not the same, but these results suggest that the experience of shame is more all encompassing and painful. Participants in the destructive condition reported greater feelings of worthlessness, powerlessness, feeling small, feeling humiliated/disgraced, and wanting to sink into the floor and disappear. The reduction in reported levels of pride is also an indication that destructive criticism affects the global self-image.

Anger felt towards the person providing the criticism was another consequence of destructive criticism. This anger leads to feelings of resentment and vengefulness towards not only the criticizer but also towards the company of employment (Combs, Campbell, Jackson, & Smith, 2010; Poulson, 2000).

The higher levels of rumination often associated with shame (Orth, Berking, & Burkhardt, 2006) were also noticeable in the current study. Participants in the destructive condition had the highest levels rumination, reporting feelings of not being able to get the incident out of their head, that the wrong they suffered would not be far from their minds, and that the memory of the incident could ruin their day. The consistent rumination about the event

results in the continuation and long-lasting feeling of shame. This can be very emotionally taxing and painful for the person experiencing the rumination and shame (Poulson, 2000).

This is the first known study to use videotaped scenarios as well as destructive criticism to induce shame. Although both of the performance variables did not reach significance, they were trending in the direction of the destructive condition having lower performance scores than the emotion neutral condition. The lower scores on the performance tasks suggest that destructive criticism has a negative effect on performance.

CHAPTER V

STUDY TWO

Rumination over an incident has been proposed to be an important factor in the feeling of shame that extends the experience of shame (Orth, Berking, & Burkhardt, 2006). Supposedly, the feeling of shame will continue until the situation has been resolved in the experiencer's mind and the rumination desists. When people are unable to ruminate due to their working memory being engaged in another task, it is hypothesized that shame will have less of a negative effect on work performance than was seen in Study One.

METHOD

Procedure

One hundred and twenty participants were divided into four conditions: destructive criticism with the opportunity to ruminate, destructive criticism without the opportunity to ruminate, emotion neutral with the opportunity to ruminate, and emotion neutral without the opportunity to ruminate. After watching the initial destructive criticism video or emotion neutral video, half of the participants received the rumination video that was used in the previous study and half received a filler task (Appendix K) designed to minimize the opportunity to ruminate by occupying working memory. Specifically, participants were first shown a list of five neutral words. They were asked to look at the list carefully before proceeding to the next page. On the next page, they were given a list of four words and asked which word was not in the previously seen list. Lists of emotionally neutral words were used so as to not prime any additional emotions.

As in the previous study, after watching the rumination video or completing the filler task the participants completed the shame, embarrassment, pride, anger, and rumination combined scale (Appendix J). They were then given the two tasks to test their performance (Appendix L and M). At the end of the study, they filled out a demographics questionnaire (Appendix N). Before beginning the study participants were presented with a consent form (Appendix O) and upon completion of the study were provided with a debriefing form explaining the purpose of the study (Appendix P).

CHAPTER VI

RESULTS (STUDY 2)

Similar to Study 1, the emotion variables (shame, anger, pride, embarrassment, and rumination) were subjected to a two-way analysis of variance with two types of feedback (destructive or emotion neutral) and two different task types (rumination or filler task). Confirming the consistency of the manipulation (feedback videos), Study 2 had similar reported levels for all emotion variables as Study 1. The results for the emotion variables in study two can be seen in Table 3.

Table 3. Emotion Variable Ratings for Study Two (Standard Deviations Are in Parentheses).

Emotion Measure	Feedback condition		<i>df</i>	<i>F</i>	η_p^2
	Destructive	Emotion Neutral			
Shame	2.42 (1.06)	1.36 (0.58)	(1, 116)	45.82*	.283
Anger	2.70 (1.04)	1.43 (0.73)	(1, 116)	58.99*	.337
Pride	2.76 (1.18)	3.42 (0.79)	(1, 116)	12.63*	.098
Embarrassment	2.47 (0.96)	1.47 (0.73)	(1, 116)	40.51*	.259
Rumination	2.66 (1.00)	1.67 (0.92)	(1, 116)	31.83*	.215

* $p < \text{or} = .001$.

Comparable to Study 1, there was a main effect of feedback for all emotion variables: The destructive criticism condition had significantly higher levels of shame, anger, embarrassment, and rumination than the emotion neutral condition. Pride levels, once again,

were significantly lower in the destructive criticism condition than in the emotion neutral condition. There was not a significant main effect of task type or a significant interaction between feedback and task type for shame, embarrassment, anger, rumination, pride, or the persistence task.

Problem Solving and Persistence

The hypothesis that shame would result in a greater decrease in work performance when subjects are given time to ruminate than when they engage in a distractor task (hypothesis seven) was only partially supported by the data. The results for the problem solving and persistence task can be seen in Table 4.

Table 4. Final Task Scores for Study Two (Standard Deviations Are in Parentheses).

Final Task	Feedback condition		<i>df</i>	<i>F</i>	<i>p</i>	η_p^2
	Destructive	Emotion Neutral				
Problem Solving	0.39 (0.27)	0.48 (0.25)	(1, 116)	3.51	.064	.029
Persistence	8.43 (22.94)	15.70 (42.25)	(1, 116)	1.36	.246	.012
Persistence (Outliers removed)	5.86 (11.52)	6.75 (12.56)	(1, 116)	0.14	.707	.001

Counter to predictions, shame and rumination levels did not differ by task type. There was not a significant main effect of feedback on the problem solving results, but it was trending in a significant direction, $p = .064$.

There was, however, a significant main effect of task type on problem solving results, $F(1, 116) = 4.983, p < .05, \eta_p^2 = .041$. In the destructive criticism condition, participants who

partook in the rumination task scored significantly lower ($M= .395$, $SD= .269$) than those assigned to the filler task ($M= .483$, $SD= .210$).

There was not a significant main effect of stimuli type on persistence scores, possibly due to large variability in reported persistence scores, resulting in the destructive criticism condition not being significantly different from the emotion neutral condition. A follow up analysis attempted to reduce this large variability by removing the extreme outliers, but there was still no significant main effect of stimuli type on persistence scores.

CHAPTER VII

DISCUSSION (STUDY 2)

In Study 2, the reported levels of all of the emotion variables (shame, anger, pride, embarrassment, and rumination) were not significantly different between the rumination task and filler task within each condition. Particularly interesting was the lack of difference between the destructive filler task condition and the destructive rumination condition on the reported level of rumination. Seeing as the difference between the destructive and emotion neutral condition was significant, this lack of difference between task types within the destructive condition suggests that rumination still occurs despite having the working memory otherwise occupied. Rumination may not have occurred during the working memory task but it was reportedly present after the task.

Once again, the performance variables were not significantly different between the feedback conditions. They were, however, trending in the correct direction of the destructive criticism condition scores being lower than the emotion neutral condition scores. Intriguingly, despite there not being a difference between the task types on reported rumination levels, the participants in the destructive rumination condition performed significantly worse on the problem-solving task than the destructive filler condition.

Since the only difference between the two conditions was whether or not they were able to ruminate, it can be concluded that the opportunity to ruminate results in lower scores on a problem solving task than if the person is distracted by a working memory task. This difference, however, cannot be attributed to the level of rumination that occurred, as this was not significantly different by task type, and therefore, more exploration is needed. The difference between the two task types on problem solving scores supports the hypothesis (hypothesis seven)

that shame would result in greater decreases in work performance when the participant was given the opportunity to ruminate.

The lack of a significant difference within feedback type or task type on persistence score may be attributed to the large amount of variability within participant's scores. Whereas some participants refused to code any letters, others coded over two hundred. Even when the extreme outliers were removed, large standard deviations, almost double the mean score, still existed. This amount of variability between individual's scores suggests that this task is not an appropriate measure for performance when comparing between subjects. The task is better suited for a within subjects design where it is performed before and after the manipulation.

CHAPTER VIII

GENERAL DISCUSSION

These two studies show that destructive criticism results in multiple negative consequences. People who experience destructive criticism report greater feelings of shame and higher levels of rumination over the incident: They are also embarrassed and their pride levels decrease. This type of criticism causes recipients to feel anger and hostility toward critics. These emotions discourage employees from participating in the work environment, as the emotions are associated with the need to withdraw and wanting to isolate oneself.

In addition to the detriments in employee's moral and emotional states, these studies show that destructive criticism leads to a reduction in work performance particularly in the ability to problem solve and persistence on tasks. A main effect of feedback type was occasionally present and performance scores were consistently less in the destructive criticism condition than in the emotion neutral condition.

These studies are the first known studies to use videotaped workplace scenarios to induce emotions. They are also the first studies to investigate the relationship between destructive criticism, shame and related emotions, and work performance. The results from this investigation highlight an area that needs to be further explored: The emotional and performance-related consequences of destructive criticism.

Limitations and Future Research

As previously mentioned, one of the limitations of the study was that the persistence measure did not perform well in the context of the study. A second limitation was that the same actor was used in all of the videos. While this provided an important amount of consistency and

reduced testing error, it limits the generalizability of the results. It will be imperative in future studies to conduct the study using multiple actors as the superior providing the criticism.

The results of this experiment create an important foundation for the study of shame in the workplace. Future studies to strengthen the investigation into destructive criticism and shame should involve a study conducted in the field. Measurements of employee's performance levels should be taken before and after their performance is destructively criticized. It will also be important in future studies to observe the differences in shame levels and performance when employees are provided destructive criticism as opposed to constructive criticism.

While this study shows some short-term effects of a shaming experience the long-term implications need to be further investigated. The use of shame is prevalent in many cultures and organizations (Gilbert & Andrews, 1998; Poulson, 2000; Tangney, 2002). It is a common child rearing practice in some eastern cultures, a key feature of basic training in the armed forces, and a motivational tool within sporting teams. All of these systems have functioned well for many years, suggesting that shame is helpful in encouraging conformity within an organization, but at what cost to the individual? This investigation into shame as a result of destructive criticism is just the beginning of an extensive amount of knowledge yet to be discovered on the benefits and disadvantages of shame.

The findings from this study and future studies will help to identify and combat workplace shame. Poulson (2000) identified some of the personal negative repercussions of shame in the workplace. The current study has helped to identify destructive criticism as one of the causes of that workplace related shame. Knowing the causes and repercussions of this shame is helpful for creating system interventions to reduce, if not eliminate the shame. There is little

research on shame in the workplace, but the results of this study are an important first step into the investigation of shame as a consequence of destructive criticism.

APPENDICES

APPENDIX A

SHAME VIDEO SCRIPTS

1A: Superior induced shame scenario

Directions before the video-

This video includes a hypothetical situation with your **supervisor**. Your supervisor is providing feedback on your ability on/to do tasks on Mechanical Turk.

“I have been reviewing the recent tasks you have completed on Mechanical Turk. To be completely honest it doesn’t seem like you even try. You can’t seem to do anything right. Personally, I wasn’t impressed at all. All of the tasks need to be fixed, possibly even redone. It really is not that difficult. I get the impression that either you did not try at all or maybe it is just lack of talent. Whatever the reason, if you do not improve I will get someone else who is not so completely incompetent.”

1B: Colleague induced shame scenario

Directions before the video-

This video includes a hypothetical situation with your **colleague**. Your colleague is providing feedback on your ability on/to do tasks on Mechanical Turk.

“I have been looking over the recent tasks you have completed on Mechanical Turk. To be completely honest it doesn’t seem like you even try. You can’t seem to do anything right. Personally, I wasn’t impressed at all. All of the tasks need to be fixed, possibly even redone. It really is not that difficult. I get the impression that either you did not try at all or maybe it is just lack of talent. Whatever the reason, if you do not improve I am sure they will get someone else who is not so completely incompetent.”

APPENDIX B

EMBARRASSMENT VIDEO SCRIPTS

1A: Superior induced embarrassment scenario

Directions before the video-

This video includes a hypothetical situation with your **supervisor**. Your supervisor is discussing with you an event that occurred earlier in the day.

“I received an email from you earlier today that I don’t think was intended for me. It was discussing a party that you and your friend, I’m presuming, are going to this weekend. Although it does sound like fun, I don’t think you meant ask me to bring a 24 pack of beer (laugh). Hope you have a great time, just wanted to let you know I got the email instead of your friend so you might want to resend that.”

1B: Colleague induced shame scenario

Directions before the video-

This video includes a hypothetical situation with your **colleague**. Your colleague is discussing with you an event that occurred earlier in the day.

“I received an email from you earlier today that I don’t think was intended for me. It was discussing a party that you and your friend, I’m presuming, are going to this weekend. Although it does sound like fun, I don’t think you meant ask me to bring a 24 pack of beer (laugh). Hope you have a great time, just wanted to let you know I got the email instead of your friend so you might want to resend that.”

APPENDIX C

EMOTION NEUTRAL VIDEO SCRIPTS

1A: Superior control scenario

Directions before the video-

This video includes a hypothetical situation with your **supervisor**. Your supervisor is discussing with you an event that occurred earlier in the day.

“While exploring Mechanical Turk I noticed that the rate of HITs being submitted and the amount of workers available to complete them have remained relatively steady. This isn’t necessarily good or bad news. Just an observation that things have remained pretty much the same for this past week in terms of workload and available workers.”

1B: Colleague induced shame scenario

Directions before the video-

This video includes a hypothetical situation with your **colleague**. Your colleague is discussing with you an event that occurred earlier in the day.

“While exploring Mechanical Turk I noticed that the rate of HITs being submitted and the amount of workers available to complete them have remained relatively steady. This isn’t necessarily good or bad news. Just an observation that things have remained pretty much the same for this past week in terms of workload and available workers.”

APPENDIX D

SHAME AND EMBARRASSMENT SCALE

The following are some statements that may or may not describe how you are feeling *right now*. Please rate each statement using the 5-point scale below. Remember to rate each statement based on how you are feeling *right at this moment*.

	Not feeling this way at all.	Feeling this way somewhat	Feeling this way very strongly
1. I feel good about myself	1-----2-----3-----4-----5		
2. I want to sink into the floor and disappear.	1-----2-----3-----4-----5		
3. I feel foolish.	1-----2-----3-----4-----5		
4. I feel worthwhile, valuable.	1-----2-----3-----4-----5		
5. I feel small.	1-----2-----3-----4-----5		
6. I feel like blushing.	1-----2-----3-----4-----5		
7. I feel capable, useful.	1-----2-----3-----4-----5		
8. I feel like I am a bad person.	1-----2-----3-----4-----5		
9. I feel embarrassed.	1-----2-----3-----4-----5		
10. I feel proud.	1-----2-----3-----4-----5		
11. I feel humiliated, disgraced.	1-----2-----3-----4-----5		
12. I would not want to look a person in the eyes.	1-----2-----3-----4-----5		
13. I feel pleased about something I have done.	1-----2-----3-----4-----5		
14. I feel worthless, powerless.	1-----2-----3-----4-----5		
15. I feel self-conscious.	1-----2-----3-----4-----5		

Some scale questions created by Tangney, J.P., & Dearing, R. (2002). *Shame and Guilt*. New York: Guildford Press.

APPENDIX E

STATE SHAME SCALE

	Not feeling this way at all.	Feeling this way somewhat	Feeling this way very very strongly
1. I want to sink into the floor and disappear.	1-----2-----3-----4-----5		
2. I feel small.	1-----2-----3-----4-----5		
3. I feel like I am a bad person.	1-----2-----3-----4-----5		
4. I feel humiliated, disgraced.	1-----2-----3-----4-----5		
5. I feel worthless, powerless.	1-----2-----3-----4-----5		

Shame questions taken from the State Shame and Guilt scale created by Tangney, J.P., & Dearing, R. (2002). *Shame and Guilt*. New York: Guildford Press.

APPENDIX F

STATE EMBARRASSMENT SCALE

	Not feeling this way at all	Feeling this way somewhat	Feeling this way very very strongly
1. I feel foolish.	1-----	2-----	3-----4-----5
2. I feel like blushing.	1-----	2-----	3-----4-----5
3. I feel embarrassed.	1-----	2-----	3-----4-----5
4. I would not want to look a person in the eyes.	1-----	2-----	3-----4-----5
5. I feel self-conscious.	1-----	2-----	3-----4-----5

Embarrassment items are questions 4, 8, 12, 16, and 19.

Scale created from definitions of embarrassment by Verbeke & Bagozzi (2002) and Keltner & Buswell (1997).

APPENDIX G

RUMINATION AND ANGER SCALE

Please indicate the degree to which you agree or disagree with the following statements based on your experience with the hypothetical situation you watched.

	Strongly disagree	Strongly agree
1. I can't stop thinking about how I was wronged by this person.	1-----2-----3-----4-----5	
2. I am angry with this person.	1-----2-----3-----4-----5	
3. Memories about this person's wrongful actions could limit my enjoyment of the day.	1-----2-----3-----4-----5	
4. I feel annoyed with this person.	1-----2-----3-----4-----5	
5. I have a hard time getting thoughts of how I was mistreated out of my head.	1-----2-----3-----4-----5	
6. I am furious with this person.	1-----2-----3-----4-----5	
7. I try to figure out the reasons why this person hurt me.	1-----2-----3-----4-----5	
8. I feel like hitting this person.	1-----2-----3-----4-----5	
9. The wrong I suffered would never be far from my mind.	1-----2-----3-----4-----5	
10. I feel irritated with this person.	1-----2-----3-----4-----5	
11. I find myself replaying the events over and over in my mind.	1-----2-----3-----4-----5	

Wade, N. G., Vogel, D. L., Liao, K. Y., & Goldman, D. B. (2008). Measuring state-specific rumination: Development of the rumination about an interpersonal offense scale. *Journal of Counseling Psychology, 55*(3), 419-426

State anger scale taken from the state anger section of the State-Trait Anger Expression Inventory for Children and Adolescents. del Barrio, V., Aluja, A., & Spielberger, C. (2004). Anger assessment with the STAXI-CA: Psychometric properties of a new instrument for children and adolescents. *Personality and Individual Differences, 37*(2), 227-244.

APPENDIX H

RUMINATION ABOUT AN INTERPERSONAL OFFENCE SCALE

	Strongly disagree	Strongly agree
1. I can't stop thinking about how I was wronged by this person.	1-----2-----3-----4-----5	
2. Memories about this person's wrongful actions could limit my enjoyment of the day.	1-----2-----3-----4-----5	
3. I have a hard time getting thoughts of how I was mistreated out of my head.	1-----2-----3-----4-----5	
4. I try to figure out the reasons why this person hurt me.	1-----2-----3-----4-----5	
5. The wrong I suffered would never be far from my mind.	1-----2-----3-----4-----5	
6. I find myself replaying the events over and over in my mind.	1-----2-----3-----4-----5	

Wade, N. G., Vogel, D. L., Liao, K. Y., & Goldman, D. B. (2008). Measuring state-specific rumination: Development of the rumination about an interpersonal offense scale. *Journal of Counseling Psychology, 55*(3), 419-426

APPENDIX I

STATE ANGER SCALE

	Strongly disagree	Strongly agree
1. I am angry with this person.	1-----2-----3-----4-----5	
2. I feel annoyed with this person.	1-----2-----3-----4-----5	
3. I am furious with this person.	1-----2-----3-----4-----5	
4. I feel like hitting this person.	1-----2-----3-----4-----5	
5. I feel irritated with this person.	1-----2-----3-----4-----5	

State anger scale taken from the state anger section of the State-Trait Anger Expression Inventory for Children and Adolescents. del Barrio, V., Aluja, A., & Spielberger, C. (2004). Anger assessment with the STAXI-CA: Psychometric properties of a new instrument for children and adolescents. *Personality and Individual Differences*, 37(2), 227-244.

APPENDIX J

FINAL SCALE (SHAME, EMBARRASSMENT, ANGER, RUMINATION, PRIDE)

The following are some statements that may or may not describe how you are feeling *right now*. Please rate each statement using the 5-point scale below. Remember to rate each statement based on how you are feeling *right at this moment*.

	Not feeling this way at all.	Feeling this way somewhat	Feeling this way very very strongly
1. I feel good about myself	1-----2-----3-----4-----5		
2. I can't stop thinking about how I was wronged by this person.	1-----2-----3-----4-----5		
3. I want to sink into the floor and disappear.	1-----2-----3-----4-----5		
4. I am angry with this person.	1-----2-----3-----4-----5		
5. I feel foolish.	1-----2-----3-----4-----5		
6. I feel worthwhile, valuable.	1-----2-----3-----4-----5		
7. I feel small.	1-----2-----3-----4-----5		
8. I feel annoyed with this person.	1-----2-----3-----4-----5		
9. Memories about this event could limit my enjoyment of the day.	1-----2-----3-----4-----5		
10. I feel like blushing.	1-----2-----3-----4-----5		
11. I feel capable, useful.	1-----2-----3-----4-----5		
12. I feel like I am a bad person.	1-----2-----3-----4-----5		
13. I am furious with this person.	1-----2-----3-----4-----5		
14. I have a hard time getting thoughts of how I was mistreated out of my head.	1-----2-----3-----4-----5		
15. I feel embarrassed.	1-----2-----3-----4-----5		
16. I feel like hitting this person.	1-----2-----3-----4-----5		
17. I feel proud.	1-----2-----3-----4-----5		
18. I feel humiliated, disgraced.	1-----2-----3-----4-----5		
19. The wrong I suffered would never be far from my mind.	1-----2-----3-----4-----5		
20. I would not want to look a person in the eyes.	1-----2-----3-----4-----5		
21. I feel pleased about something I have done.	1-----2-----3-----4-----5		
22. I feel irritated with this person.	1-----2-----3-----4-----5		
23. I feel worthless, powerless.	1-----2-----3-----4-----5		
24. I feel self-conscious.	1-----2-----3-----4-----5		
25. I find myself replaying the events over and over in my mind.	1-----2-----3-----4-----5		

APPENDIX K

FILLER TASK

Participants are shown a list of neutral words. They are asked to look at the list carefully before proceeding to the next page. Once they click the next page icon they are unable to return to the previous page. They are given a list of four words and asked which word is not in the previously seen list. Lists of emotionally neutral words are used so as to not prime any additional emotions.

<u>List One</u>	<u>Next Page</u>	<u>List Two</u>	<u>Next Page</u>	<u>List Three</u>	<u>Next Page</u>
Aboard	Duplex	Amplify	Grape	Await	Faucet
Canopy	Aboard	Carpet	Expend	Click	Await
Define	Comet	Delay	Carpet	Dense	Glue
Duplex	Glance	Expend	Delay	Faucet	Saddle
Glance		Gate		Glue	

<u>List Four</u>	<u>Next Page</u>	<u>List Five</u>	<u>Next Page</u>	<u>List Six</u>	<u>Next Page</u>
Incline	Shade	Limit	Crack	Mustard	Swung
Obtain	Patio	Outset	Limit	Passage	Quart
Prefer	Obtain	Profile	Seeping	Quart	Baker
Shade	Adult	Patrol	Patrol	Shovel	Mustard
Adult		Crack		Baker	

Not currently being used

<u>List Seven</u>	<u>List Eight</u>	<u>List Nine</u>
Bagpipe	Anthem	Comet
Pearl	Reality	Saddle
Subway	Swung	Patio
Honey	Muscle	Seeping
Rumble	Bucket	Grape

Lists created and validated by McNeely, H. E. (1999).

APPENDIX L

PROBLEM SOLVING TASK

1. What is the missing letter?
J ? M A M J J A S O N D

Answer: F (Explanation: The letters are the first letter of each of the twelve months. The second month is February).

2. There's an electric train traveling south. The wind is from the north-west. In which direction would the smoke from the train be blowing?

Answer: Electric trains have no smoke.

3. While driving a father and his son had a car accident and then were rushed to two different hospitals. The son was about to be operated on when the surgeon said, "I can't operate... This is my son!" Who is the surgeon?

Answer: His mother.

4. You have a fox, a chicken and a sack of grain. You must cross a river with only one of them at a time. If you leave the fox with the chicken he will eat it; if you leave the chicken with the grain he will eat it. How can you get all three across safely?

Answer: Take the chicken over first. Go back and bring the grain next, but instead of leaving the chicken with the grain, come back with the chicken. Leave the chicken on the first side and take the fox with you. Leave it on the other side with the grain. Finally, go back over and get the chicken and bring it over.

5. You have 12 black socks and 12 white socks mixed up in a drawer. You're up very early and it's too dark to tell them apart. What's the smallest number of socks you need to take out (blindly) to be sure of having a matching pair?

Answer: 3 socks. If the first sock is black, the second one could be black, in which case you have a matching pair. If the second sock is white, the third sock will be either black and match the first sock, or white and match the second sock.

6. What is special about the following sequence of numbers?
8 5 4 9 1 7 6 10 3 2 0

The numbers are in alphabetical order.
(eight, five, four, nine, one, seven, six, ten, three, two, zero)

7. I am the owner of a pet store. If I put in one canary per cage, I have one bird too many. If I put in two canaries per cage, I have one cage too many. How many cages and canaries do I have?

Four canaries and three cages.

If you put one canary in each cage, you have an extra bird without a cage. However, if you put two canaries in each cage then you have two canaries in the first cage, two canaries in the second cage and an extra cage.

8. Tom's mother has three children. One is named April, one is named May. What is the third one named?

Tom

9. How many common four letter English words can you make from the letters EANM using all the letters in each word?

Answer: 4. Mane, Mean, Amen, Name

APPENDIX M

PERISTENCE TASK

In this task you are asked to code each letter of the alphabet as a number (A=1 B=2 C=3.....Z=26). Please type into the text box as much of the passage as you are able before pressing continue at the bottom of the page.

Where and when did chemistry originate? Some chemists would identify ancient Egypt as the birthplace of chemistry because of that culture's glassworks, cosmetics, and mummification techniques. Advocates of this theory might also refer to a possible etymology of the word chemistry from the Egyptian word for black. Other historians place the origins of chemistry amid ancient Greek theories of matter that formulated the basic concepts—principles, elements, and atoms—for understanding the individuality of material substances and their transformations. Others would argue that chemistry emerged in medieval alchemy: alchemists invented the laboratory that is still the site for the production of chemical knowledge, and they established and transmitted techniques and instruments that are still at work in many chemical processes. Meanwhile, historians of institutional life would assert that chemistry emerged in seventeenth-century Europe when public lectures and chairs of chemistry were created.

The variety of answers to the question of origins points to the multiple identities of chemistry. A posteriori it seems natural to consider chemistry as an autonomous academic science with technological applications in a variety of domains. However, this is only one face of chemistry. Whether we consider chemistry as a set of technological practices—such as metal reduction, dyeing, glass-making—or as a theory of matter transformations, or as a teachable and public knowledge enjoying an academic status, the chronological marks change dramatically.

The question of origin cannot be settled not only because chemistry is multifaceted, but also because the answer depends heavily on the image of chemistry one wants to convey. For instance, eighteenth-century chemists strongly denied any connection between chemistry and alchemy. The kind of useful and reliable discipline they wanted to promote on the academic stage was contrasted with the obscurity and fraudulent practices of alchemists, although this is a discontinuity seriously questioned by historians of alchemy at the turn of the twenty-first century.

APPENDIX N

DEMOGRAPHIC QUESTIONNAIRE

Q. Gender

What is your sex?

- Male
- Female

Q. Age

What is your current age? _____

Q. Marital Status

What is your marital status?

- Now married
- Widowed
- Divorced
- Separated
- Never married

Q. Education

What is the highest degree or level of school you have completed? If currently enrolled, mark the previous grade or highest degree received.

- No schooling completed
- Nursery school to 8th grade
- 9th, 10th or 11th grade
- 12th grade, no diploma
- High school graduate - high school diploma or the equivalent (for example: GED)
- Some college credit, but less than 1 year
- 1 or more years of college, no degree
- Associate degree (for example: AA, AS)
- Bachelor's degree (for example: BA, AB, BS)
- Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)
- Professional degree (for example: MD, DDS, DVM, LLB, JD)
- Doctorate degree (for example: PhD, EdD)

Q. Employment Status

Are you currently...?

- Employed for wages
- Self-employed
- Out of work and looking for work
- Out of work but not currently looking for work
- A homemaker
- A student

- o Retired
- o Unable to work

Q. Ethnicity

Please specify your ethnicity.

- o Hispanic or Latino
- o Not Hispanic or Latino

Q. Race

Please specify your race.

- o American Indian or Alaska Native
- o Asian
- o Black or African American
- o Native Hawaiian or Other Pacific Islander
- o White

Survey questions taken from <http://blog.vovici.com/blog/bid/18176/Demographic-Questions-Sample-Survey-Template>

APPENDIX O

CONSENT FORM



Adult Consent Form

Study Title: Workplace Interactions

Research Investigators' Names and Departments (include Advisor, if researcher is a student):
Stephen Colarelli and Amanda McDonald

Department of Psychology

Central Michigan University

Contact information for researcher (and Advisor, if researcher is a student):

Stephen Colarelli

Sloan Hall 235 Department of Psychology

Central Michigan University

Mount Pleasant, MI 48859

colarism@cmich.edu

Introductory Statement

You are invited to participate in a study involving performance on certain tasks. The details of your participation in the study are provided in this consent document. I am available via email to answer any questions you may have about the project.

What is the purpose of this study? The purpose of the study is to look at performance on tasks following certain scenarios.

What will I do in this study? In this study you will view a hypothetical situation with another person. You will then fill out questionnaires and complete various tasks.

How long will it take me to do this? The study should take you approximately 10-15 minutes to complete.

Are there any risks of participating in the study? There are no risks involved with participating in this study. If at any point you experience a strong emotional reaction following the study please contact your local mental health services.

What are the benefits of participating in the study? Following the standards of Amazon Mechanical Turk, you will receive a monetary compensation of \$0.50 for completing this study.

Will anyone know what I do or say in this study (Confidentiality)?

Anonymity will be maintained through the use of the participant ID number given by Amazon Mechanical Turk. The data collected through the study will only be used by the investigators. Results from questionnaires, task results, and responses to a demographics questionnaire will be used by investigators for the purpose of the study. Any data under the investigator's control will, if disclosed, be presented in a manner that does not reveal the subject's identity, except as may be required by law.

Will I receive any compensation for participation? Following the standards of Amazon Mechanical Turk, you will receive a monetary compensation of \$0.25 for completing this study.

Is there a different way for me to receive this compensation or the benefits of this study?
No

Who can I contact for information about this study?

For answers to questions about the research, your rights, or in case of a research-related injury please contact Stephen Colarelli (989) 774-6483, colar1sm@cmich.edu or Amanda McDonald (734) 819-3138 mcdon5am@cmich.edu.

You are free to refuse to participate in this research project or to withdraw your consent and discontinue participation in the project at any time without penalty or loss of benefits to which you are otherwise entitled. Your participation will not affect your relationship with the institution(s) involved in this research project.

If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to the Institutional Review Board by calling 989-774-6777, or addressing a letter to the Institutional Review Board, 251 Foust Hall Central Michigan University, Mt. Pleasant, MI 48859.

My signature below indicates that all my questions have been answered. I agree to participate in the project as described above.

Signature of Subject

Date Signed

A copy of this form has been given to me.

_____ Subject's Initials

Signature of Responsible Investigator

Date Signed

APPENDIX P

BRIEFING FORM



Adult Briefing Form

This form will be given at the completion of the study as not much information on the nature of the study was given in the consent form.

Purpose of the study:

The purpose of this study was to examine how a situation in which you are made to feel shameful will affect your performance on tasks. You have been assigned to one of three conditions: shame, embarrassment, or an emotion neutral control condition. After viewing the condition you were then either directed to complete a distractor task or to sit and think about the experience. Finally all participants completed a problem solving task and a persistence task.

The purpose of the final tasks was to examine if the shame and embarrassment conditions resulted in lower scores than the emotion neutral condition. This will help the researchers to understand if feeling shame or embarrassment impairs a person's ability to complete tasks.

If the study results in strong, long lasting emotional reactions please contact your local mental health services.

Thank you for your participation.

Dr. Stephen Colarelli
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Amanda McDonald
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