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COLUMBUS STATE UNIVERSITY

SCHADENFREUDE: THE IMPACT OF ANOTHER'S MISFORTUNE ON THE MOOD OF COLLEGE STUDENTS

A THESIS SUBMITTED TO THE

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IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR HONORS IN THE DEGREE OF

BACHELOR OF SCIENCE

DEPARTMENT OF PSYCHOLOGY

COLLEGE OF LETTERS AND SCIENCES

BY

ERIN A. CHALMERS

COLUMBUS, GEORGIA

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SCHADENFREUDE: THE IMPACT OF ANOTHER'S MISFORTUNE ON THE MOOD OF COLLEGE STUDENTS

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ABSTRACT

The present study was focused on determining if positive affect scores increase after viewing an example of misfortune which would demonstrate the psychological phenomenon of *schadenfreude*- defined as a feeling of pleasure or satisfaction when something misfortunate happens to someone else. Measures used in the study included the Positive and Negative Affect inventory (PANAS; Watson et al., 1988) and a modified version of the Velton mood induction procedure developed by Seibert and Ellis (1991) which was used to measure and manipulate students' mood, respectively. Students enrolled in a psychology research pool at Columbus State University participated in the study (*N*=46). The results of a paired samples t-test suggested that positive affect decreased after viewing the example of misfortune instead of increased, as expected. These results did not support the hypothesis that positive affect would increase, and therefore did not show evidence of *schadenfreude.* Rather than feeling schadenfreude, participants appeared to experience empathy. Future directions for this project include delving into empathy, social groups, and demographic factors that may or may not relate to experiencing *schadenfreude*, as well as hypothetical versus real-life examples of misfortune. Investigating this concept further is valuable in the understanding of competition, interpersonal interactions in college students, and bullying.

Keywords: misfortune, negative affect, positive affect, *schadenfreude*, Social Identity Theory, Tall Poppy Syndrome

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Schadenfreude: The impact of another's misfortune on the mood of college students

People can appear more relatable to other people when they are perceived as flawed and imperfect. It can be comforting to know that other people make mistakes and have unfortunate things happen to them for no apparent reason. This phenomenon of experiencing positive emotions in a situation where another person is experiencing something unfortunate can be defined by the German term *schadenfreude*. *Schadenfreude* is defined by the Cambridge English Dictionary as a feeling of pleasure or satisfaction when something bad happens to someone else. The present study examined if witnessing a misfortune would increase positive affect and show any evidence of *schadenfreude* in college students.

Affect versus mood

In the present study, the term "affect" is used to describe the emotions or feeling felt in a short period of time or the present moment, while "mood" is more long term and consists of multiple factors, including current affect. Positive affect is used to express feeling emotions that have a positive valence, or intrinsic "good-ness" while negative affect is used to express feeling emotions with a negative valence, or intrinsic "bad-ness." Positive and negative affect are the two broad factors that dominate self-reported mood (Watson & Tellegan, 1985). Negative affect covers a range of negative mood states that include fear, anxiety, scorn, and disgust. Positive affect covers levels of pleasure and satisfaction such as joy, alertness, and determination (Watson & Clark, 1984).

Rising above others

There are existing concepts that help us understand the *schadenfreude* phenomenon and how it relates to human behavior. Previous research shows that human behavior is similar to crabs left unattended in a bucket; if one crab tries to climb up above the others to reach the top of

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the bucket and escape, the other crabs will drag it back down, forcing it to remain in the bucket (Spacey, 2015). The concept is called crab mentality (Spacey, 2015), and is similar to what is known as tall poppy syndrome (Feather, 1989), which can be traced back to the Romans. Legend has it that the king, Tarquin, chopped the tops off of all the poppies in the fields that were taller than the others, symbolizing that Tarquin's son should annihilate any high-achieving enemies blocking his way to success (Livius, 2010). These two concepts are a figurative way of describing competition and status, as viewed by an evolutionary perspective. When someone sees another person succeeding at competitive tasks, they may begin to develop feelings of jealousy and resentment towards that person, which would then create a drive to become more successful (Feather, Wenzel, & McKee, 2013).

Real-life *schadenfreude*

Past research has indicated that three circumstances will invoke *schadenfreude* (See Fig. 1). The three circumstances are (1) when failure is perceived as deserved; (2) when someone who is envied, idolized, or looked up to experiences failure; (3) *schadenfreude* may be experienced when the perceiver gains something, emotional or tangible, from another's misfortune (Feather, 2008; van Dijk, Ouwerkerk, Goslinga, & Nieweg, 2005). The latter circumstance has been demonstrated in the French and Russian versions of the show "Who wants to be a Millionaire?" Culture contributes to how people choose to act towards each other in competitive situations like a game show or contest. The audience of the competitors determine the deservingness of success or failure, and act in an according way, sometimes giving wrong answers on purpose if they feel the contestant is undeserving (Franzen & Pointner, 2011). The more deserving of a misfortune that a person appears to be, the more *schadenfreude* is to be experienced or evoked. More so, research has indicated that the more an individual appears to be

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responsible for their own misfortune, the more positive emotions (i.e. *schadenfreude*) will be provoked in others (van Dijk, Goslinga, & Ouwerkerk, 2008).

In a study by Feather, Wenzel, and McKee (2013), the emotions experienced by students based off of another student's negative outcome were measured. The emotions were expected to be different if the negative outcome was perceived as deserved or not deserved. Participants who thought the student's negative outcome was deserved were expected to experience feelings of *schadenfreude* and pleasure, rather than the feeling of sympathy had the outcome been undeserved (Feather, Wenzelm & McKee, 2013). This kind of reaction in an academic setting could produce other behaviors like cheating, sabotaging peers' grades, and bullying- all problematic behaviors in modern educational systems. The deservingness of such actions towards a peer is determined by the individual who is engaging in the behavior and by their current emotional needs. Feelings such as envy and jealousy that are invoked may produce *schadenfreude*, making it more probable that the logic and reasoning parts of the brain will be overpowered and will react.

Emotions and *schadenfreude*

Theoretical accounts of *schadenfreude* date back to the times of philosophers such as Nietzsche, Plato, and Spinoza; empirical studies did not occur until the 1990s. The research performed regarding *schadenfreude* showed support for the tall poppy phenomenon, meaning that *schadenfreude* was more likely to occur when it involved high achievers or people who are envied (van Dijk, Goslinga, & Ouwerkerk, 2008). The misfortune of others, whether it be a financial, physical, or emotional misfortune, can serve as a source of positive affect for those observing the situation. The source for the feeling of positive affect many not only be the misfortune itself, but also the characteristics surrounding the people involved, such as envy,

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jealousy, hostility, and inferiority. These characteristics can spark an upward comparison process and competition between the individuals involved (Feather & Nairn, 2005). *Schadenfreude* is not well understood by researchers, even though it is a common element of human nature. Jung (2017) conducted a study in which happiness was shown to be a predictor of *schadenfreude*. The results of this study suggested that happier people feel less *schadenfreude* because their happiness buffers self-threat and focuses their attention on an inner standard, rather than focusing on the comparison to others. Jung also found that happiness can be a variable in feeling less *schadenfreude* as it reduces self-threat, whereas increased self-threat would increase the feelings of *schadenfreude* as well.

Hypothesis and rationale

In the present study I chose to examine how witnessing a misfortune would affect the mood of college students. Based on results from previous studies on *schadenfreude*, it was predicted that witnessing a misfortune would improve mood in terms of current affect. It was also expected that since the example used in the experiment was one in which the person seems to be deserving of the misfortune, *schadenfreude* would be evoked. The example used was also one that college students could identify with experiencing in their daily lives. Social Identity Theory (Tajfel & Turner, 1979) creates the possibility of our participants identifying as an in-group with the hypothetical student example. This has been addressed by also including a professor in the example, which would be the out-group with a perceived higher status to all of our student participants, giving the opportunity for *schadenfreude* to be felt in relation to the student or the professor, depending on which of the three circumstances of *schadenfreude* was evoked. Studying this phenomenon amongst students could be useful for determining actions and programs to stop peer bullying and hostility in schools or in the workplace amongst classmates

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and colleagues, as well as getting a deeper look into the interpersonal interactions and emotions of college students.

Method

Participants

Participants for this study were recruited through the SONA Research Participation system linked to Columbus State University. Only enrolled CSU students over the age of 18 were allowed to take part in the study. There was *N*=46 participants consisting of *n*=8 males (17.4%), *n*=38 females (82.6). Median age was 20 years old, with *n*=10 freshman year (32.6%), *n*=11 sophomore year (23.9%), *n*=10 junior year (21.7%), and *n*=10 senior year (21.7%). The racial and ethnic identities of the participants consisted of *n*=1 Asian (2.17%), *n*=15 Black (32.61%), *n*=24 White (52.17%), *n*=3 Biracial (6.52%), and *n*=3 who chose not to answer (6.52%). There were *n*=5 Hispanic/Latino participants (10.9%) and *n*=40 Non-Hispanic/Latino participants (86.9%) with one participant choosing not to answer. The mean grade point average was 3.27 on a 4.0 scale (See Table 1).

Measures

The present study was a repeated measures design using an online survey which included a mood induction technique and a pre-test and post-test affect inventory. The independent variable was the presented misfortune, and the dependent variable was mood based on current affect.

Modified Velton mood induction procedure (Seibert and Ellis, 1991) This procedure includes a list of 25 items which are all individual statements. Examples of the statements in the sad mood induction included: “I feel a little down today,” “My classes are harder than I

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expected," "Everyone else seems to be having more fun," "Sometimes I feel so guilty that I can't sleep," "I wish I could be myself, but nobody likes me when I am."

The participant was instructed to read each statement and to allow themselves to fully experience any emotion or feeling that comes up with each statement. By doing this, there was the capability to induce a sad, happy, or neutral mood. The modified Velton procedure appears to be at least as effective as the Velton procedure as determined by comparing Depression Adjective Checklist (DACL) scores after both procedures (Seibert & Ellis, 1991). See Appendix A for full instructions and list of items.

Positive and Negative Affect Scale (PANAS; Watson et al., 1988) The PANAS inventory used for the present study consisted of 20 items rated on a Likert scale (1-very slightly or not at all; 2-a little; 3-little moderately; 4-quite a bit; 5-extremely). Items included feeling and emotion words such as "distressed," "guilty," "enthusiastic," "irritable," and "proud." PANAS can be used to calculate scores for both positive and negative affect. The scores for each type of affect can range from 10-50, with lower scores meaning less positive or negative affect, and higher scores meaning more positive or negative affect. PANAS has been found to have good test-retest reliability and good internal consistency reliability (Watson et al., 1988). See Table 2 for PANAS reliability in the current study. See Appendix B for full instructions and list of items.

Procedures

The survey was presented online through Qualtrics® and consisted of the informed consent form, a brief demographics section, two affect inventory checkpoints (PANAS), a sad mood induction, a neutral mood induction, and a fictional example of a misfortune. The sad mood induction procedure and the first affect inventory checkpoint preceded the presentation of the misfortune example, which was then followed by the second affect inventory checkpoint.

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The scenario used for the misfortune example was "You see a student who is texting and looking down at their phone on their way to class. The student collides with a professor and drops their phone, resulting in a cracked screen and papers scattered all over the ground. The student frantically tries to gather the papers while the professor screams at them and makes frustrated hand motions."

The participant was directed to take a note of how they were feeling emotionally after reading the scenario, and to use that awareness when completing the second affect inventory. The survey ended with a neutral mood induction to reduce risk to the participant of remaining in a potential depressed mood.

Results

A paired samples *t*-test was conducted to compare positive affect scores before and after being presented with an example of misfortune. There was a significant difference in the scores for before misfortune (M=24.3, SD=9.7) and after misfortune (M=20.8, SD=6.6) conditions; $t(45)=2.4$, $p= 0.02$, $d=0.46$, $r^2=0.11$.

Discussion

The present study hypothesized that the mood in terms of positive affect of participants would increase after viewing an example of a misfortune. The results showed that this hypothesis was not supported, in fact, the results were the exact opposite of expected. Participants showed a decrease in positive affect after reading the example of misfortune that was provided, meaning that *schadenfreude* did not occur, while empathy may have taken its place. Previous research has noted that social identification with an in-group versus a deserving out-group may have an effect on emotions when it comes to experiencing *schadenfreude* (Feather, Wenzelm & McKee, 2013).

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Research on affective forecasting (or the ability to predict future emotional states) demonstrates that people are not efficient at guessing how they will feel in the future (Wilson & Gilbert, 2005). This relates to the present study in that the example of misfortune used was hypothetical and did not occur in real-life. A study by Gonzalez-Gadea, Ibanez, and Sigman (2018) investigated if *schadenfreude* was experienced more in hypothetical or real-life situations. The conclusion to the study stated that *schadenfreude* was indeed experienced at a higher level in real-life situations. Lower *schadenfreude* outcomes in the hypothetical situations could be due to the participants' psychological distance from the situation, or in other words, being unable to relate to the situation. A phenomenon known as the "hot-cold empathy gap", shows that emotions in the heat of the moment of a real-life event tend to be higher than emotions during hypothetical events (Gonzalez-Gadea, Ibanez, & Sigman, 2018). The example of a misfortune used in the present study was hypothetical and made up to be relatable to the participant population and also to be unbiased as far as a particular demographic (gender, race, age, etc.)

One component not accounted for in the present study was the preexisting mood of each participant before they walked in to take the survey. Perhaps they were in a good mood, or they were in a poor or neutral mood. In a study about *schadenfreude* and depression, participants with moderate depression reported feeling more *schadenfreude* than their less depressed peers. The less-depressed participants had more empathetic reactions (Pietraszkiewicz & Chambliss, 2015). The present study accounted for this by attempting to induce a sad mood in all participants before they were exposed to the misfortune example, however the participant's mood was not measured before mood induction to determine the level of sadness or depression they were feeling.

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In a research study by Russell Spears (2013), the intragroup and intergroup relationship of gender and *schadenfreude* was tested. As noted in Spears' study, it is argued that we are more likely to experience negative emotions like *schadenfreude* towards those of the same gender group since they are our most relevant comparisons, and most relevant rivals (2013). It is worthwhile to investigate this in-group and out-group relationship with gender and *schadenfreude* in a multitude of scenarios as good expansion for the present study, which did not give an explicit description of gender in the misfortune example that was used.

Implications and Future Directions

One limitation of the present study was that there was an overwhelming amount of females (n=38) versus male (n=8) participants. It's possible that this uneven distribution of gender contributed to the example of misfortune being gender stereotyped. Even though there were no identifying characteristics in the example, it still appears as if the student in the example was female and the professor was male. Same goes for age. The median age of participants was 20 years of age, however there were 3 participants above the age of 35 years old (two standard deviations away from the mean). What made this a limitation was that there was no previous determination of the in-group or out-group of the participant in reference to demographics or characteristics. The participant could have identified with the student or the professor in the example depending on how the example was perceived.

The results of this study could be used for future inquiries, such as how certain factors like GPA, gender, year in school, or even race could manifest a change in mood using a more specified example of misfortune. Inquiries could also be made into measuring levels of empathy compared to *schadenfreude*, what preexisting moods determine feeling more or less

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schadenfreude, and if a real-life example would elicit more *schadenfreude* than a hypothetical one.

Conclusion

The present study did not find evidence to support the hypothesis that positive affect would increase after viewing an example of a misfortune. It was determined by a paired samples *t*-test that negative affect increased, as opposed to positive affect. *Schadenfreude* was not experienced by participants in this study. Reflecting on the implications and limitations of this study provides a fair amount of questions that could be investigated with further research and exploration. Some future research opportunities include learning more about how certain factors or demographic characteristics might have an effect on empathy or *schadenfreude* and if *schadenfreude* might be experienced differently in real-life situations as opposed to hypothetical situations. Although the present study could have been improved considering the limitations that were defined in hindsight, it did accomplish the goal of answering the question of whether or not positive affect would increase after witnessing an example of a misfortune. Exploration of any phenomenon or concept must start somewhere, and this study helped contribute, even if just a small amount.

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Tables and Figures

Table 1

Participant Demographics

Characteristic		n	%
Gender			
Male		8	17.39
Female		38	82.61
Year in School			
Freshman		15	32.60
Sophomore		11	23.90
Junior		10	21.70
Senior		10	21.70
Racial Identity			
Asian		1	2.17
Black		15	32.61
White		24	52.17
Biracial		3	6.52
No Response		3	6.52
Ethnic Identity			
Hispanic/Latino		5	10.90
Non-Hispanic/Latino		40	86.90
	Mean		Median
Age	22.02 (*SD* =6.68)		20
GPA	3.27 (*SD* =0.46)		3.31

Note . *SD* = standard deviation

Table 2

Descriptive Statistics and Results for Pre- and Post-Test Affect Scores

Variable	*M*	*SD*	Min	Max	α	*df*	*t*	*p*	*d*
Positive Affect						45	2.63	0.012	0.388
Pre-Test	24.44	9.70	10	50	0.93				
Post-Test	20.61	6.60	10	39	0.85				
Negative Affect						45	2.41	0.020	0.356
Pre-Test	22.52	8.51	10	43	0.87				
Post-Test	25.93	10.28	10	47	0.92				

Note. *N* =46 participants

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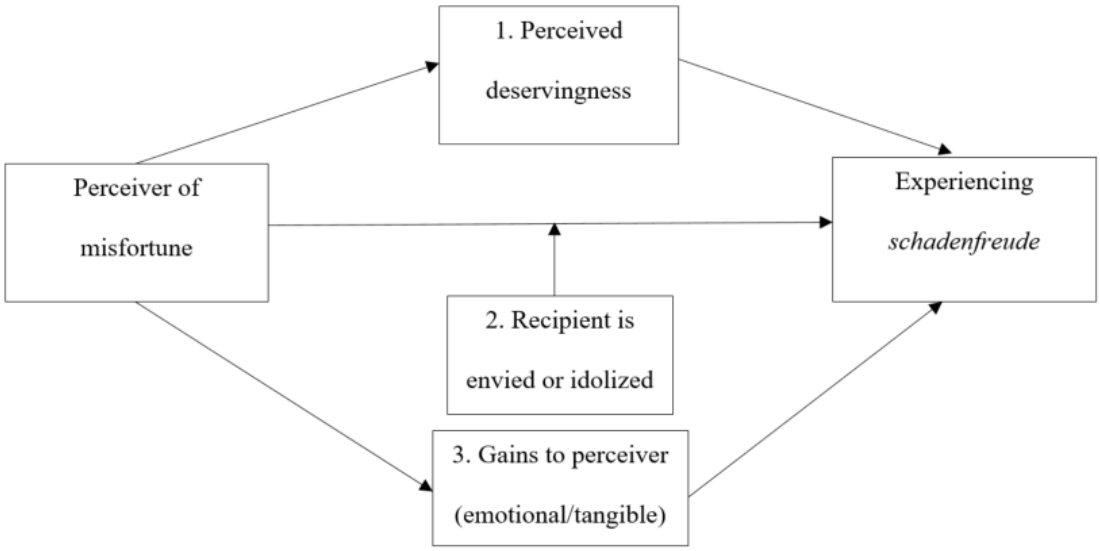

Figure 1. Model of the three circumstances in which *schadenfreude* may occur.

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Appendix A

Instructions for Mood Induction

1. In this part of the experiment, I will be reading a series of cards with statements typed on them. These statements represent a mood state. In order to participate fully and successfully, I will need to be willing to feel and experience each statement as it would apply to me personally. In other words, when I read each statement, I will allow myself to respond as though the statement had been my own original thought. I will go with the feeling and not try to stop it.
2. At first I might feel like resisting the mood. However, I will see that it is the case that I have the opportunity to learn to talk myself into a mood, and obviously I will learn to talk myself out of one. When this happens, I will find that I have learned something valuable about myself; I can learn to control my moods. Thus, I will try to experience the mood suggested.
3. I will feel each item, making the statement my own. I will experience the mood suggested and will not attempt to stop it. I will visualize a scene in which I have had a feeling or thought. Then I will begin to say whatever comes to my mind that relates to the feeling. This is a type of free association- letting thoughts that pertain to the feeling flow freely.
4. I am now ready to experience the statements that follow. From this point forward whenever I head the tone, I will go on to the next page. I will spend the time between tones reading the statements. I am ready to begin.

Sad Mood Induction Scale

I. I feel a little down today.
2. My classes are harder than I expected.
3. Everyone else seems to be having more fun.
4. Sometimes I feel so guilty that I can't sleep.
5. I wish I could be myself, but nobody likes me when I am.
6. Today is one of those days when everything I do is wrong.
7. I doubt that I'll ever make a contribution in the world.
8. I feel like my life's in a rut that I'm never going to get out of.
9. My mistakes haunt me, I've made too many.
10. Life is such a heavy burden.
II. I'm tired of trying.
12. Even when I give my best effort, it just doesn't seem to be good enough.
13. Nobody understands me or even tries to.
14. I don't think things are ever going to get better.
15. I feel worthless.

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16. What's the point of trying?
17. My parents don't know who I am.
18. When I talk no one really listens.
19. I feel cheated by life.
20. Why should I try when I can't make a difference anyway?
21. Sometimes I feel really guilty about the way I've treated my parents.
22. Every time I turn around, something else has gone wrong.
23. I'm completely alone.
24. There is no hope.
25. I feel I am being suffocated by the weight of my past mistakes.

Neutral (Control) Mood Induction Scale

I. There are sixty minutes in one hour.
2. A neuron fires rapidly.
3. New Mexico is in the United States.
4. Apples are harvested in the Fall.
5. Basket weaving was invented before pottery making.
6. Some baseball bats are made from the wood of the ash tree.
7. The Shakers invented the circular saw.
8. It snows in Idaho.
9. Perennials bloom every year.
10. Arizona has both deserts and pine covered mountains.
II. You have to take the ferry to get to the island.
12. Santa Fe is the capital of New Mexico.
13. Elephants carried the supplies.
14. The Pacific Ocean has fish.
15. Most high schools have a band.
16. The rug was made according to an old Navajo pattern.
17. Some think that electricity is the safest form of power.
18. Most oil paintings are done on canvas.
19. Many buildings in Washington were made of marble.
20. Corn is sometimes called maize.
21. An orange is a citrus fruit.
22. Some say that ladybugs are good for the garden.
23. New York City is in New York State.
24. Diamonds really can cut glass.
25. Some chimps have been taught to use sign language.

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Appendix B

The PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is at the present moment. Use the following scale to record your answers.

Scale:
1-very slightly or not at all
2-a little
3-little moderately
4-quite a bit
5-extremely

Items:
_ interested
_ distressed
_ excited
_ upset .
_ strong
_ guilty
_ scared
_ hostile
_ enthusiastic
_ proud
_irritable
_alert
_ashamed
_inspired
_nervous
_determined
_attentive
_jittery
_active
_afraid

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