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Motivational and Behavioral Expressions of Schadenfreude among Undergraduates

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Thesis completed in partial fulfillment of the Honors Program in the

Psychological Sciences

Under the Direction of Dr. Leslie Kirby and Dr. Craig Smith

Vanderbilt University

April 2017

Abstract

Schadenfreude, the pleasure that results from another person's misfortune, is an interesting topic within emotion research. However, there has been limited research regarding whether cultural tendencies influence the motivational urges, action tendencies, and enacted behaviors of schadenfreude. In order to find out whether culture and language influence the motivational and behavioral expressions of schadenfreude, participants (N=146) completed an online questionnaire in which they read a schadenfreude eliciting vignette and responded to a series of questions to assess their appraisals, emotions, thoughts, and action tendencies. In addition, participants filled out measures to assess their levels of individualism/collectivism and empathy. The vignettes followed a 2 (competitive, slapstick) x 2 (academic, social) x 3 (friend, stranger, disliked target) design in order to determine whether certain situations and/or targets elicited greater amounts of schadenfreude. Although the expected culture and language differences were not significant in predicting schadenfreude, we found that schadenfreude is influenced by the target, the situation, and the individual's level of empathy. In addition, we found that the significant appraisals associated with schadenfreude were: relevance, congruence, outside factors, other accountability, and accommodation-focused coping potential.

When another person experiences misfortune, our reactions can take several forms. We can sympathize and have feelings of concern for the other (Eisenberg, 2000) or maybe even feel pity and offer to help (Batson, Duncan, Ackerman, Buckley, & Birch, 1981). However, at times, the pain of one person may turn into the pleasure of another. This particular type of emotional reaction is termed schadenfreude, meaning to take pleasure in another's misfortune (Heider, 1958). Everyday life provides many opportunities for schadenfreude whether it be the cheering that follows when a waiter or waitress drops a tray of dishes, the pleasure we take on seeing who gets fired on *The Apprentice*, or even the joy of watching an opposing sports team lose an important game. We laugh instinctively at the misfortunes of others, and if the recipients have been presented as vicious or evil or arrogant, then there is a level of satisfaction that comes from seeing revenge enacted (Dorfman, 2013).

Although schadenfreude is expressed through laughter and feelings of pleasure, the emotion itself carries a negative connotation (van Dijk 2011). It is reasonable to assume that most people feel uneasy taking pleasure in the misfortunes of others, as this usually violates social norms and verges on shameful in many contexts (Wills, 1981). Our moral tradition praises sympathetic people because they show concordance and sympathetic identification. However, by showing discordance and antagonism, people who express schadenfreude seem to violate the obligation to cultivate the virtue of compassion (Heider, 1958; Portmass, 2000, van Dijk et al 2012). This violation can be understood by considering that emotional disturbances are to some extent relative to their cultural emotion norms and practices (Jenkins, 1994, 1996). Thus, the primary goal of this study is to determine whether culture influences the motivational and behavioral expression of schadenfreude.

Cultures are often categorized as either collectivist or individualistic. Historically, in Western-based, more individualistic societies, the culture emphasizes standing out and becoming distinguished from others through self-sufficiency and personal accomplishment, while more traditional, collectivist societies (specifically Japan, Korea, etc.) underline meeting social obligations and responsibilities in order to maintain interpersonal relationships and group harmony (Mesquita 2003, Elliott, Chirkov, Kim, & Sheldon, 2001; Heine, Lehman, Markus, & Kitayama,1999; Karasawa, 2001). For example, Kitayama, Matsumoto, Markus & Norasakkunki (1997) found that events that positively reflect on the self are more frequent in a U.S. context, whereas events that keep the individual modest or self-critical are more frequent in a Japanese cultural context.

As a result of this way of thinking and behaving, specific opinions regarding self and others are theorized to have become engrained into the individual as a result of culture. Thus, when faced with a schadenfreude eliciting event, it is likely that people from individualist cultures will prioritize the self, while those from collectivist cultures will prioritize maintaining interpersonal relationships. It is possible that this different ecology of events possibly leads to different practices of schadenfreude in that people with individualist tendencies will be more likely to not only feel, but also outwardly express pleasure at another person's pain while those with collectivist tendencies will be less likely to feel and express schadenfreude.

Although this classification is related to culture, collectivist and individualistic tendencies are not entirely predicted by location or culture and can vary between individuals. So, in this study, collectivism and individualism will be conceptualized as a key individual difference within cultures. Initially, we had hoped to survey people from different cultures to research cross-cultural differences in the motivational and behavioral expressions of schadenfreude.

However, due to the constraints of the study, many of the initial intentions were modified to work within these limitations. We decided to assess individual collectivism and individualism rather than basing their cultural classification based on their country of origin for two reasons: 1.) people within the same culture may vary individually on their levels of collectivist and individualistic tendencies and 2.) there was not adequate cultural variability in the population we were able to sample. Therefore, scales of individualism and collectivism were used as proxies to differentiate between cultures.

**Language**

The process of emotion-related communication depends in part on the words that are available to us. Therefore, much of what we know about people's inner feelings comes to us via language and the fact that we have different words to label different emotional experiences (Harkins & Wierzbicka, 1997). The concept of linguistic relativity, also known today as the Sapir-Whorf hypothesis (Sapir, 1921; Whorf, 1956), is the idea that culture influences the structure of language and the language in turn influences our thoughts and our behavior (Rolbin 2010). Schadenfreude originates from the German words "schaden" which means harm and "fruede" which means joy. However, because many languages, including English, do not have an equivalent word for schadenfreude, there is a possibility that people experience this emotion differently depending on whether or not they have an equivalent word in their first language.

According to Google Translator, there is an equivalent word for schadenfreude in Afrikaans, Arabic, Bealrusian, Bulgarian, Chinese, Danish, Dutch, Estonian, Greek, Hebrew, Japanese, Korean, Russian, Serbian, Swahili, Vietnamese, and Yiddish. The following languages do not have an equivalent word and simply use the German word "schadenfreude": Albanian, Bosnian, Catalan, Croatian, Czech, English, Filipino, Finish, French, Galician, Haitian, Hindi,

Hungarian, Iclandic, Indonesian, Irish, Italian, Latvian, Lithuanian, Macedonian, Malay, Maltese, Norwegian, Persian, Polish, Portuguese, Romanian, Slovak, Slovenian, Spanish, Swedish, Thai, Turkish, Ukranian, and Welsh. Some argue that language determines how we think because it provides us with the words to communicate (Harkins & Wierzbicka, 1997). However, others argue that even if a language lacks a word for a certain emotion, the emotion can be expressed in a phrase or communicated nonverbally (Russell, 1991). If the data we collect show that people across languages report the same number of occurrences and same levels of schadenfreude across situations, then this may indicate that language is not fundamental in shaping the emotion of schadenfreude. However, schadenfreude is also influenced by a number of additional situational and dispositional factors beyond culture.

**Targets of Schadenfreude**

An important determinant of schadenfreude is dislike towards the person whom a misfortune befalls (Van de Ven, Hoogland, Smith, van Dijk, Breugelmans, & Zeelenberg, 2015). Hareli and Weiner (2002) found that disliking another person, with dislike unrelated to envy or competition, was associated with being pleased with any misfortune. In addition, the more a target was disliked and the more a misfortune was appraised as deserved, the more schadenfreude was elicited. However, schadenfreude is not evoked if the target does not deserve the misfortune (Feather & Sherman, 2002; Hareli & Weiner, 2002; van Dijk et al, 2005, 2006). From these results, I hypothesize that, due to the socially undesirable nature of schadenfreude (Powell, Smith, & Schurtz, 2009; Smith & Kim, 2007), people will be less likely to express schadenfreude when the target of schadenfreude is a stranger who does not deserve the misfortune.

We also know that when people strongly identify with an in-group, they tend to interpret events with respect to group rather than the self (Feather, 2013). In other words, the group becomes a part of the self, and the self becomes a part of the group. Thus, although there is no research at the moment that has tested whether schadenfreude is elicited when a close friend is the target, I hypothesize that people are less likely to feel schadenfreude when their close friend suffers a misfortune because, if they have extended their sense of self to this friend, it would be as though they experienced the misfortune themselves.

**Schadenfreude Situations**

At first, it might seem as though there is little to gain from other people's suffering. However, we may gain more from the misfortunes of others than it might seem, particularly incompetitive circumstances that occur in everyday life (Smith, 2009). Competitive situations bring out what is arguably a naturally rivalrous streak in most people which sets the table for pleasure when rivals suffer. Some argue that schadenfreude can be compared to other competitive, social-compared-based emotions such as envy and resentment because it involves pleasure associated with the gains in the context of limited resources (Smith & Kim, 2007; Hareli & Weiner, 2002; Shamay-Tsoory, Ahronberg-Kirschenbaum & Bauminger-Zviely, 2014) For example, siblings—who from conception are rivals for a parent's resources may experience schadenfreude as a response to a potential reward such as parental availability. Similarly, mating rivalry may have evolved as a response to competition between same-sex individual who are rivals for mating partners (Buss & Dedden, 1990). Based on these findings, it has been proposed that schadenfreude is a psychological mechanism that responds to misfortunes that lowers competitors' mate values in order to increase mating opportunities (Colyn & Gordon, 2012). According to these examples, it seems that schadenfreude originates from competition over

limited resources (Smith, 2009). However, schadenfreude also originates in situations that are more humorous in nature. For example, each season of the talent show American Idol starts with auditions in which aspiring singers perform before the show's judges to secure a place in the contest. Televised excerpts of these predominately disparaging, defamatory, and embarrassing auditions attract millions of viewers, suggesting that people can enjoy the suffering of others, even when there is no competition for resources (van Dijk, Ouwerkerk, Koningsbruggen & Wesseling, 2012). While both competitive and slapstick situations seem to elicit schadenfreude, I hypothesize that competitive situations will bring about the greater levels of schadenfreude than slapstick situations because of the potential gain involved during competition.

**Empathy**

One reason empathy has captured the attention of many researchers lies in its ability to predict various outcomes in Western culture (Cassels, Chan, Chung & Birch, 2010). Empathy in the broadest sense refers to the reactions of one individual to the observed experiences of another (Davis, 1983). Based on this definition, I thought empathy would be an appropriate measure to predict whether one feels pleasure after observing another person's misfortune. Starting in infancy, humans are affected by others' suffering (Batson, 2009). However, despite its early origins, empathy is not a universal response in all situations. Previous research has found that patterns of empathic responding are subject to context effects (Gutsell & Inzlicht, 2010). Specifically, Batson & Ahmad (2009) found that people often feel less empathy for strangers who belong to a differential racial, political, or social groups compared to strangers who are described as belonging to their same in-group. Because I am looking at different conditions and targets that may elicit schadenfreude, I predict that empathy will play a role in whether schadenfreude is elicited. However, the concept of empathy is multifaceted. Although there are

various conceptualizations in the current literature, most researchers characterize empathy as consisting of two components: cognitive and affective. Cognitive empathy refers to one's ability to recognize and identify another person's feelings whereas affective empathy refers to one's emotional responses to another person's emotion or situation (Davis, 1980; Feshbach, 1975; Hoffman, 1977; Eisenberg and Miller, 1987). In this study, empathy will be assessed by the Interpersonal Reactivity Index (Davis, 1980). I hypothesize that empathy will be negatively associated with schadenfreude; those who empathize with the target will be less likely to take pleasure in their misfortune.

**Appraisal Theory**

A key goal of this study is to discover the specific process that generates a feeling of schadenfreude. Appraisal theory posits that emotions are generated as a response to one's current circumstances. Individuals evaluate the situation based on their current goals, and this evaluation elicits an emotion. The essential component of this theory, an appraisal, can be defined as a person's cognitive evaluation of the significance of a situation for that person's well-being (Smith & Lazarus, 1990). In other words, an emotion is elicited as a result of these appraisals, which reflect what one perceives about a situation, in that moment, and how one thinks the situation relates to oneself.

Through a series of questions referring to the participant's feelings of motivational relevance, self-accountability, problem-focused coping potential, accommodation-focused coping potential, motivational congruence, negative aspects, positive aspects, other accountability, outside factors, and future expectancy, I hope to find out the appraisal pattern associated with this emotion. A determination of the motivational relevance of a situation is a calculation of whether or not the circumstance matters to the person making the appraisal. A

determination of congruence is a calculation of whether or not the circumstance is in line with their goals. The person also decides who is responsible for the situation (accountability), whether he or she will be able to emotionally handle or accept the situation (accommodation-focused coping potential), whether he or she will have a controlling influence over changing that situation (problem-focused coping potential), and finally whether the situation is likely to turn out how he or she would like it to (future expectancy).

As of now, there are no clear findings in the literature about the appraisal antecedents of schadenfreude. However, we do know that, from studying the antecedents of schadenfreude, that schadenfreude is related to deservingness, resentment, and pain of inferiority (Feather, Wenzel & McKee, 2012). We also know that self-esteem has a negative relationship with schadenfreude when a high achiever evokes self-threat (van Dijk, 2011). These findings about self-esteem and pain of inferiority indicate that the misfortunes of others can evoke schadenfreude because they provide people with an opportunity to protect or enhance their self-views. Because of this, I hypothesize that those with lower accommodative coping potential will be more likely to feel schadenfreude. In other words, the less that someone is able to handle the situation emotionally, the more likely they are to feel pleasure at the target person's misfortune. I also hypothesize that, because deservingness is related to schadenfreude, other accountability may play a role in eliciting schadenfreude if the target is seen as deserving the misfortune that occurs.

In addition, evaluation of motivational relevance is necessary for strong emotion because it indicates whether there is any personal stake in the encounter (Smith, 1991). In this framework, I hypothesize that if the situation is appraised as relevant and congruent, with low emotion-coping potential and other accountability, it is likely that schadenfreude is evoked.

**Goals of Current Research**

The goal of this thesis is to determine the motivational and behavioral expression of schadenfreude. Drawing on previous research, I have formulated five main hypotheses. First, because of the types of relationships that are promoted within collectivist cultures, I hypothesize that those with collectivist tendencies will be less likely to feel and express pleasure at another person's pain. I hypothesize that the opposite is true for those with more individualistic tendencies; that people with individualist tendencies will be more likely to not only feel, but also outwardly express schadenfreude.

Previous research has shown that how people respond to situations depends, at least in part, on what is accepted in their culture. For example, display rules are the culturally specific rules that govern which facial expressions are appropriate in a given situation and how intensely they should be exhibited (Heine, 2015). Therefore, one subset of my study is going to measure how collectivist and individualist tendencies affect the behavioral differences of schadenfreude. From my survey, I will be able to see whether people's expressions are in line with their emotions and whether cultural identification affects how they express their emotions.

Second, based on Sapir-Whorf hypothesis, which states that structural differences between language systems are paralleled by nonlinguistic cognitive differences in the native speakers of the two languages, I hypothesize that those who have learned a language that has a word for schadenfreude would be able to experience this emotion to a greater extent because they have the relevant words to describe that emotional state.

Third, by assigning participants to different conditions, I hope to determine whether certain situations and/or targets elicit greater amounts of schadenfreude. Because of the amount of personal investment that goes into competitions, I hypothesize that, between the slapstick and

competitive situations, competitive situations will elicit greater amounts of schadenfreude. In addition, I predict that the disliked targets will elicit more schadenfreude than strangers or close friends.

Fourth, I hope to discover whether empathy influences schadenfreude. Because of the way empathy provides people with the ability to perceive what other people are feeling, I hypothesize that empathy will cause participants to share the emotional state of the target rather than take pleasure in their suffering.

Finally, by evaluating how people appraise their schadenfreude eliciting vignette, I hope to determine whether, in terms of appraisal, schadenfreude just looks like happiness or if there are other factors that lead it to being a discrete state. The important appraisal components of happiness are motivational relevance and motivational congruence. Perhaps the appraisal that differentiates happiness and schadenfreude is the low accommodative coping potential.

**Experiment 1**

A common way to test schadenfreude in a research setting is to create hypothetical situations in which misfortunes occur to different types of people, and then ask participants to rank how much pleasure they received from that event. For example, Van de Ven et al. (2014) tested envy and schadenfreude by having participants recall a situation in which someone was better off in a domain that was important to them. The study found that feelings of discomfort arise when people who are self-relevant seem to have more value. Thus, it is important to establish that the domain of interest is relevant to the participant in order to elicit schadenfreude. To make sure I was using vignettes that would be relevant to the participants in this study, I carried out a pilot survey to determine what types of situations are relevant to undergraduates.

**Participants and Recruitment**

The participants were 66 undergraduate students (22 male, 44 female), of ages 19-22 (M = 20.08, SD = 1.13). An anonymous Survey-Monkey was sent to my peers and posted on social media platforms.

**Methods**

Participants were asked to complete an online survey that consisted of three-questions. Participants were asked to indicate their age, gender, and lastly, recall and describe a situation in which they felt pleasure at another's misfortune.

**Results**

After looking at the responses and organizing them into categories, it was determined that the target person of the descriptions were primarily a person who had a personal relationship with the participant whether it was a friend, colleague, roommate, someone they disliked, or someone in the context of a romantic relationship (e.g., ex-boyfriend). Otherwise, the situation they described involved strangers or celebrities with whom participants had no relationships. Considering the nature of the misfortunes described, many involved a failure or a loss in an academic, professional, romantic, or athletic context (65%), while the others involved an injury (20%), or an embarrassing situation (15%).

Based on the results of the pilot study, I created schadenfreude eliciting vignettes that involved either a close friend, a stranger, or a disliked person. Scenarios involved academic and social scenarios because of their relevance to everyday situations experienced by undergraduates, and the situations were either competitive in nature or slapstick in nature because both types of situations elicited schadenfreude in undergraduates (see Appendix D). By assigning participants to different vignettes, I intend to find out whether certain situations and/or targets elicit greater

amounts of schadenfreude. I predict that people assigned to a vignette directed at a disliked person, regardless of scenario, will have the strongest elicitation of schadenfreude.

## Experiment 2

The research questions I hope to answer in this experiment are whether individual differences within culture influences how people feel and express schadenfreude, which situations and/or targets elicit greater amounts of schadenfreude, the appraisal structure for schadenfreude, and finally, how language and empathy influence schadenfreude.

## Methods

### Participants and Design

The participants were 156 undergraduate students (109 females and 37 males), of ages 18-23 (M = 20.03, SD = 1.58). They consisted mostly of undergraduates at Vanderbilt University and a total of 4 English-speaking participants from Italy, Korea, Israel, and Australia.

Participants were presented with one of twelve hypothetical scenarios that are often encountered in day-to-day life and intended to elicit schadenfreude. The vignettes followed a 2 (competitive, slapstick) x 2 (academic, social) x 3 (friend, stranger, disliked target) design. The type of scenario was either competitive or slapstick and the topic of the scenario was either academic or social. In addition, the target of the schadenfreude eliciting vignette was either a friend, stranger, or disliked colleague.

We randomly assigned conditions based on participants' birth month. If people were born in January – March, they were assigned to a "competitive social" scenario. Similarly, April-June were "slapstick social" scenarios, July-September were "competitive academic" scenarios, and October-December were "slapstick academic". Within each scenario, the target was either a

friend, stranger, or disliked person. For example, the "competitive academic" scenario for a friend was the following: *Your friend gets an interview for the job/school you want, but you are not invited for an interview. However, you find out that they messed up during their interview and are not accepted.* The "slapstick social" scenario for a disliked target was: *Someone you really dislike is in the middle of the dining hall and spills their tray of food all over themselves.*

Of the 146 participants, 78 individuals were assigned to a competitive situation and 68 individuals were assigned to a slapstick situation. Of all of the vignettes, 46 people read a schadenfreude eliciting situation directed at a close friend, 55 people read a schadenfreude eliciting situation directed at a stranger, and 45 people read a schadenfreude eliciting situation directed at a disliked target.

**Recruitment**

Participants were recruited in one of two ways. The first group of participants were recruited through Vanderbilt University Psychology Department's SONA system. These participants are Vanderbilt undergraduates who use SONA to identify studies they can participate in as part of their psychology course requirements. These participants voluntarily signed up to participate in our survey and were provided with a URL that took them to a survey. 100 participants obtained the link from SONA, but only 98 participants completed all of the sections. I hoped to get people from different cultures and backgrounds to test my main hypothesis so outside of the SONA system, the survey link was sent to leaders of multicultural organizations on Vanderbilt University's campus. Participants were also friends and acquaintances of key study personnel, who invited these participants through an email with a direct URL link to the survey. 53 participants obtained the link in this way, but only 48 participants completed all of the sections.

**Measures**

At the beginning of the survey, each participant was asked to indicate what their first language was. 118 participants reported that English was their first language, three participants reported that English was their first language along with another language (one Arabic and English, one Flemish and English, one Marathi and English), 11 participants reported that Chinese was their first language, three reported Korean, two reported Spanish, two reported French, two reported Hebrew, one reported Gujarati, one reported that Creole, one reported Italian, one reported Russian, and one reported Telugu as their first language. After coding their responses, there were 121 participants who learned English (or another language that does not have an equivalent word for schadenfreude) as their first language, and 25 participants whose first language has an equivalent for schadenfreude.

**Measures to assess appraisals, emotions, and action tendencies:**

*Appraisal Components Measure* (Smith & Lazarus, 1993): Appraisal components represent the specific questions evaluated in appraisal. Single item scales assessed motivational relevance, self-accountability, problem-focused coping potential, emotion-focused coping potential, motivational congruence, negative aspects, positive aspects, other accountability, outside factors, and future expectancy (see Appendix A). For example, following the vignette would be a question that says: "Think about what you do and don't want in this situation. How certain are you that you will be able to influence to make (or keep) the situation the way you want it? (1= completely certain WILL NOT be able; 5= completely uncertain, 9= completely certain WILL be able)." This example is used to assess problem-focused coping potential. It is important to note that this appraisal scale measures the instantaneous appraisal, rather than a trait level appraisal measure.

*Emotional Scale (FEEL):* After individuals read their assigned vignette, they were asked rate the degree to which they had felt each group of emotions on a 7-point slider scale, with the two extremes "not at all" and "extremely". For each question, there was a pair of words describing similar emotional constructs for each group of emotions. 23 groups of emotions were tested (see Appendix B), but only two groups of emotions were considered in the schadenfreude; 1.) satisfied/content and 2.) pleasure/enjoyment. Van Dijk (2006) uses the emotions "pleasure", "enjoyment", and "satisfied" in order to assess schadenfreude. Thus, I combined these two items create a single schadenfreude score for each participant ($\alpha$ = .89). Higher ratings of these emotions indicate stronger feelings of schadenfreude. I decided not to include the word schadenfreude at any point in the survey because I wanted to evaluate this emotion in other terms.

*EMGEBS* (Smith & Kirby, 2010). The Emotivational Goals and Enacted Behavior Scale (EMGEBS) is used in order to look at the action tendencies and enacted behaviors of individuals. This scale was developed to study the range of behaviors an emotion might elicit or motivate in an individual. To generate the items, the members of the lab tried to include all motivational tendencies and behaviors that could occur. After reading their vignette, the participants were then asked to rate, for each of 17 actions (see Appendix C), how much they wanted to perform each action on a scale ranging from "not at all motivated to do this" to "very much motivated to do this", with "somewhat motivated to do this" as the middle point. Five of these behaviors have been proposed to reflect schadenfreude (van Dijk, 2006): laugh, smile, take pleasure, feel satisfied with what happened, enjoy what is happening. Therefore, I combined these five schadenfreude behaviors to create a single "desired schadenfreude behavior" score for each

participant ($\alpha$ = 0.90). Higher scores meant greater desire to express schadenfreude. We first calculated the Cronbach's alpha for each of our measures.

Next, participants were given a checklist of the same list of behaviors and asked to select all of the behaviors they would *actually* do if they were in private and no one was watching. If all five of the schadenfreude behaviors were selected, then the participant was given a score of five, which is the highest score possible. If none of the behaviors were selected, the participant was given a score of zero for "actual schadenfreude behaviors". Thus, I added the binary values for the five schadenfreude behaviors to create a single "actual schadenfreude behavior" score for each participant ($\alpha$ = 0.73).

To get a sense of whether participants would behave differently in different settings, they were given the opportunity to type in their own response to how they would react if 1) there were other people around and 2) if they were with their best friends. While these responses were not used in this study, we intend to use them in a future study to see whether schadenfreude responses differ in different social contexts.

**General Dispositional Measures:**

*ICIAI* (Matsumoto, 1996). The Individualism-Collectivism Interpersonal Assessment Inventory (ICIAI) is a domain-specific measure of individualistic and collectivistic values related to social interaction. This test is one of the few available today that allows researchers to assess IC tendencies related to the interpersonal context across multiple social groups and rating domains which is relevant to this study. In this test, IC tendencies are assessed as ratings of values across four social groups: family ($\alpha$=.83), close friends ($\alpha$=.81), colleagues ($\alpha$=.83), and strangers ($\alpha$=.77). There were 19 items for each of the four social groups. Although participants

rated values across all four social groups, only close friends, colleagues, and strangers were used in analysis.

*Interpersonal Reactivity Index* (Davis, 1980): The Interpersonal Reactivity Index (IRI) was designed to assess empathy, which was defined as the "reactions of one individual to the observed experiences of another" (Davis 1983). The measure consists of 28-items answered on a 5-point Likert scale ranging from "Does not describe me well" to "Describes me very well". The measure has 4 subscales, each made up of 7 different items. I used each of the four subscales: perspective taking ($\alpha$= .78), fantasy ($\alpha$= .82), empathic concern ($\alpha$= .78), and personal distress ($\alpha$=.82). Perspective taking measures the tendency to spontaneously adopt the psychology point of view of others. Fantasy taps respondents' tendencies to transpose themselves imaginatively into the feelings and actions of fictitious characters in books, movies, and plays. Empathic concern assesses "other-oriented" feelings of sympathy and concern for unfortunate others. Personal distress measures "self-oriented" feelings of personal anxiety and unease in tense interpersonal settings.

**Procedure**

Participants were asked to complete a five-part online questionnaire called "Personality and Situational Evaluation" through REDcap (Harris, Tyler, Thielke, Payne, Gonzalaz & Conde, 2009). The questionnaire first asked for basic demographic information of our participants such as age, sex, ethnicity, first language, level of education, location (current and origin), and employment status. Following this, participants were assigned to a schadenfreude eliciting vignette based on their birth month. After reading the vignette, participants responded to a series of question that were intended to assess their appraisals, emotions, thoughts, and action tendencies. Next, participants filled out the ICIAI and ICI measure in order to assess their values

in terms of individualism or collectivism, and to evaluate degrees of empathy, respectively. The participants were then debriefed, thanked, and in the case of those participants receiving SONA credit, compensated for their participation. The entire RedCap survey can be found in the appendix.

## Results

**Correlations of Schadenfreude Measures (FEEL, EMGEBS actual, EMGEBS desired):**

First, correlational analyses were conducted on the schadenfreude emotions, as measured by FEEL, as a check to see whether they line up with desired and actual schadenfreude behaviors, as measured by EMGEBS. I predicted that the three schadenfreude emotions from the FEEL measure (satisfied, pleasure, enjoyment) would be correlated to the schadenfreude behaviors, but that the desired and actual behaviors would not be as strongly correlated. As expected, the schadenfreude emotions were strongly positively correlated with the schadenfreude behaviors from the desired EMGEBS scale (laugh, smile, take pleasure, feel satisfied with what happened, and enjoy what is happening), $r(146) = .771$, $p < .001$. In addition, the schadenfreude emotions were strongly positively correlated with the schadenfreude behaviors that were actually carried out, $r(146) = .673$, $p < .001$. However, because the desired EMGEBS measure has more variability (7-point Likert scale) than the enacted EMGEBS measure (binary scale), it is possible that the weaker correlations with the enacted behaviors is a measurement artifact. Nonetheless, there is still a strong positive correlation between the desired and actual schadenfreude behaviors, $r(146) = .747$, $p < .001$.

**T-test for Language Effects**

A t-test was also conducted between the 121 participants whose original language was English (or another language that does *not* have an equivalent word for schadenfreude) and the

25 participants whose first language *does* have an equivalent for schadenfreude in order to determine whether having a word for this emotion determines one's ability to feel this emotion. Because there were a small number of people in the non-English origin language group (25 people), I conducted a Levene's test for variance of equality before proceeding to test the group differences. The equal variance assumption for the desired schadenfreude behaviors was rejected, but was not rejected for the actual schadenfreude behaviors or the schadenfreude emotions. For desired schadenfreude, I used a corrected degrees of freedom to compare group differences.

The t-test result for comparing the two different languages is $t(44.792) = -1.41$ , $p = .167$ for desired schadenfreude behaviors, $t(144) = -.248$, $p=.804$ for actual schadenfreude behaviors, and $t(144)= -1.55$, $p = .122$ for schadenfreude emotions. Initially, I hypothesized that people who knew an equivalent word for schadenfreude in their original language would feel schadenfreude to a greater extent. However, there was no significant difference between the two groups in terms of the extent they feel or express schadenfreude, suggesting that origin language is not indicative of emotional or behavioral expression of schadenfreude.

**Correlations Between Schadenfreude Measures (FEEL, EMGEBS) and Appraisals:**

Table 1:

|  | FEEL | EMGEBS desired | EMGEBS actual |
|---|---|---|---|
| Problem-focused coping potential |  |  |  |
| Pearson Correlation | -.06 | -.01 | .02 |
| Sig. (2 tailed) | .483 | .943 | .812 |
| N | 146 | 146 | 146 |
| Accommodation-focused coping potential |  |  |  |
| Pearson Correlation | **-.26\*\*** | -.01 | -.12 |
| Sig. (2 tailed) | .001 | .431 | .140 |
| N | 146 | 146 | 146 |
| Motivational Relevance |  |  |  |
| Pearson Correlation | **.19\*** | .07 | .04 |
| Sig. (2 tailed) | .021 | .373 | .673 |
| N | 146 | 146 | 146 |

| Motivational Congruence | | | |
|---|---|---|---|
| Pearson Correlation | **.364\*\*** | **.342\*\*** | **.25\*\*** |
| Sig. (2 tailed) | <.001 | <.001 | .002 |
| N | 145 | 145 | 145 |
| Negative Situation | | | |
| Pearson Correlation | -.15 | **-.302\*\*** | **-.20\*** |
| Sig. (2 tailed) | .072 | <.001 | .013 |
| N | 146 | 146 | 146 |
| Positive Situation | | | |
| Pearson Correlation | .08 | .06 | .01 |
| Sig. (2 tailed) | .327 | .448 | .875 |
| N | 146 | 146 | 146 |
| Self-accountability | | | |
| Pearson Correlation | -.06 | -.07 | -.06 |
| Sig. (2 tailed) | .511 | .396 | .482 |
| N | 146 | 146 | 146 |
| Other Accountability | | | |
| Pearson Correlation | **.17\*** | **.21\*** | .15 |
| Sig. (2 tailed) | .041 | .011 | .068 |
| N | 146 | 146 | 146 |
| Outside Factors | | | |
| Pearson Correlation | **.19\*** | **.22\*\*** | **.21\*** |
| Sig. (2 tailed) | .021 | .008 | .010 |
| N | 146 | 146 | 146 |
| Future expectancy | | | |
| Pearson Correlation | -.06 | -.07 | -.04 |
| Sig. (2 tailed) | .508 | .420 | .672 |
| N | 146 | 146 | 146 |

\*\* correlation is significant at the 0.01 level (2-tailed)
\* correlation is significant at the 0.05 level (2-tailed)

In order to get at the appraisal structure of schadenfreude, the schadenfreude measures (FEEL, EMGEBS desired, EMGEBS actual) were correlated with the participant's appraisal of the situation. As demonstrated in Table 1, six of the ten appraisals had significant correlations.

**Accommodation-focused coping potential**. Accommodation-focused coping potential reflects to what extent an individual can accept or handle a situation should the situation become incongruent with their goals. As expected, accommodation-focused coping potential and schadenfreude emotions were slightly negatively correlated, $r(146) = -.261$, $p = .001$ suggesting

that those with higher accommodation-focused coping potential were less likely to feel schadenfreude. There was no significant correlation between accommodation-focused coping potential and desired or actual schadenfreude behaviors.

**Motivational Relevance**. I expected that relevance and schadenfreude would have a strong positive correlation because the participant will only feel a strong emotion if the issue is relevant to them. However, relevance and the feelings of schadenfreude emotions were only slightly positively correlated, $r(146) = .191$, $p = .021$. There was no significant correlation between relevance and desired or actual schadenfreude behaviors.

**Motivational Congruence.** Motivational congruence measures the degree to which the situation is in line with the person's goals. This construct is positively correlated with all three schadenfreude measures; schadenfreude emotions, $r(145) = .364$, $p < .001$, desired behaviors, $r(145) = .342$, $p < .001$, and actual behaviors, $r(145) = .252$, $p = .002$.

**Negative Situation.** This appraisal measures the extent to which the negative aspects of the situation were things that the participant did not want. The results of this correlation indicate that negative situation is negatively correlated with desired behaviors, $r(146) = -.302$, $p < .001$ and actual behaviors, $r(165) = -.204$, $p = .013$. There was no significant correlation between negative situation and schadenfreude emotions.

**Other Accountability**. Other accountability measures the degree to which the participant considers someone else to be responsible for the situation. The results of this correlation indicate that other accountability is positively correlated with schadenfreude emotions, $r(146) = .169$, $p = .041$, and desired schadenfreude emotions, $r(146) = .210$, $p = .011$. There was no significant correlation between "other blame" and actual schadenfreude behaviors.

**Outside Factors.** Outside factors measures the degree to which outside factors (chance, God, karma, etc.) are responsible for the situation. The results of this correlation indicate that outside factors are positively correlated with schadenfreude emotions, $r(146) = .190$, $p = .021$, desired behaviors, $r(146) = .220$, $p = .008$, and actual behaviors, $r(146) = .212$, $p = .010$.

These results indicate that the types of appraisals related to the experience of schadenfreude are motivational relevance, congruence, and other accountability/factors. In other words, when individuals express schadenfreude, it seems as though they are appraising the situation as congruent, relevant, and due to outside factors. The results also revealed that accommodation-focused coping potential is negatively correlated with schadenfreude emotions. This may indicate the possibility that schadenfreude is a form of coping for those with low self-confidence. In addition, when participants were asked to what extent the negative aspects of the situation were things they were displeased about, it seems as though the more displeased the participants were about the negative situation, the less schadenfreude they expressed. This makes theoretical sense because schadenfreude is the pleasure at someone's misfortune, so if people think the negative aspects of the situation were displeasing, they are not going to express schadenfreude. Finally, the non-significant correlations indicate that, as expected, problem-focused coping potential, displeasure about positive aspects of the situation, self-accountability, and future expectancy do not appear to influence the feelings or behaviors of schadenfreude.

**ANOVA for Experimental Conditions (Scenario x Target)**

**FEEL Results.** First, a 2 (type of scenario) X 3 (target) ANOVA was used to determine whether different experimental conditions influenced the schadenfreude emotions that were experienced. Initially, the vignettes were set up according to a 2 (competitive, slapstick) x 2 (academic, social) x 3 (friend, stranger, disliked target) design. However, because a preliminary

look at the data suggested that whether the setting was academic or social did not seem to affect the results, I disregarded the academic vs. social factor in this analysis. I hypothesized that the competitive situations will elicit stronger feelings of schadenfreude and that, when comparing targets, the disliked target will create the greatest feeling of schadenfreude.

The ANOVA reveals that the main effect of *type of scenario* is statistically significant ($F(1, 140)=22.84$, $p<.001$) and that the main effect of *target* is statistically significant ($F(2, 140)=7.438$, $p=.001$). The interaction effect between type of scenario and target is not significant ($F(2, 140)=1.411$, $p=.247$).
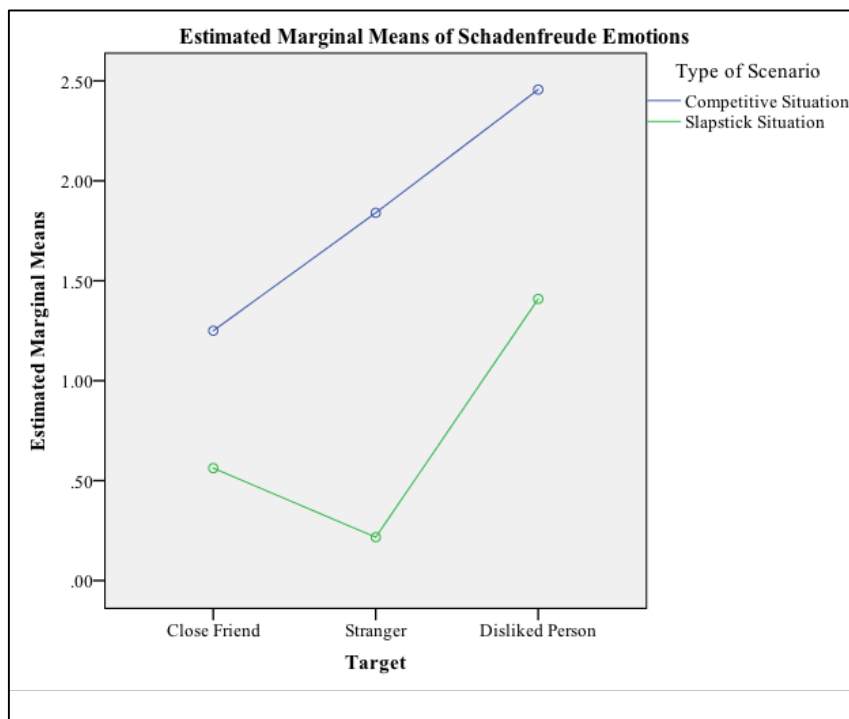


As seen in the figure, both the competitive and slapstick situations bring about the emotions of schadenfreude. The competitive situations bring about higher levels of satisfaction, pleasure, and enjoyment across all target. In the competitive situations, higher degrees of schadenfreude are felt when the target is a stranger than when it is a close friend, and even higher levels of schadenfreude are felt when the target is a disliked person. A different pattern emerges

when the situation is slapstick. Again, the highest degrees of schadenfreude are felt when the target is a disliked person, but in the slapstick situation, higher levels of schadenfreude are felt when the target is a close friend. Due to the nature of the vignette, it is reasonable to assume that humor is a factor in the slapstick situation. Perhaps the least schadenfreude is felt for strangers suffering a slapstick misfortune because it is not socially appropriate to laugh at that situation. Perhaps they also believe that, unlike the disliked person, the stranger was not deserving of that misfortune. As expected, the disliked target brings about the greatest amount of schadenfreude in both the competitive and slapstick scenario.

To further understand the significant main effects, a pairwise comparison of targets illustrates that the close friend target and stranger target do not elicit significantly different schadenfreude emotions. However, the schadenfreude emotions elicited from the disliked target significantly differs from both the close friend target and stranger target. There is also a main effect of the situation variable. The pairwise comparison of situations illustrates that the competitive situations create significantly higher schadenfreude feelings than slapstick situations.

I also decided to conduct a post-hoc analysis to look more closely at the non-significant interaction effect. By removing the disliked targets from the analysis and only looking at the close friend and stranger situation, I thought I might find a significant interaction effect. However, the interaction remained marginally significant ($F(1, 101)=3.416, p=.068$).

**Desired and Actual EMBEGS Results.** Next, a similar 2 (type of scenario) X 3 (target) ANOVA was used to determine whether different experimental conditions influenced desired and actual schadenfreude behaviors. The green line indicates the slapstick scenarios and the blue line indicates the competitive scenarios. Although the experience of schadenfreude is not uncommon, it typically carries a negative connotation (van Dijk, 2012). Because it is not socially

acceptable to laugh at other people's misfortunes, I believed that most people would want to express their emotions, but do not actually do so when the occasion presents itself. Thus, I hypothesized that the pattern of desired behaviors would be different from the pattern of actual schadenfreude behaviors.



**Desired Schadenfreude Behaviors**   **Enacted Schadenfreude Behaviors**
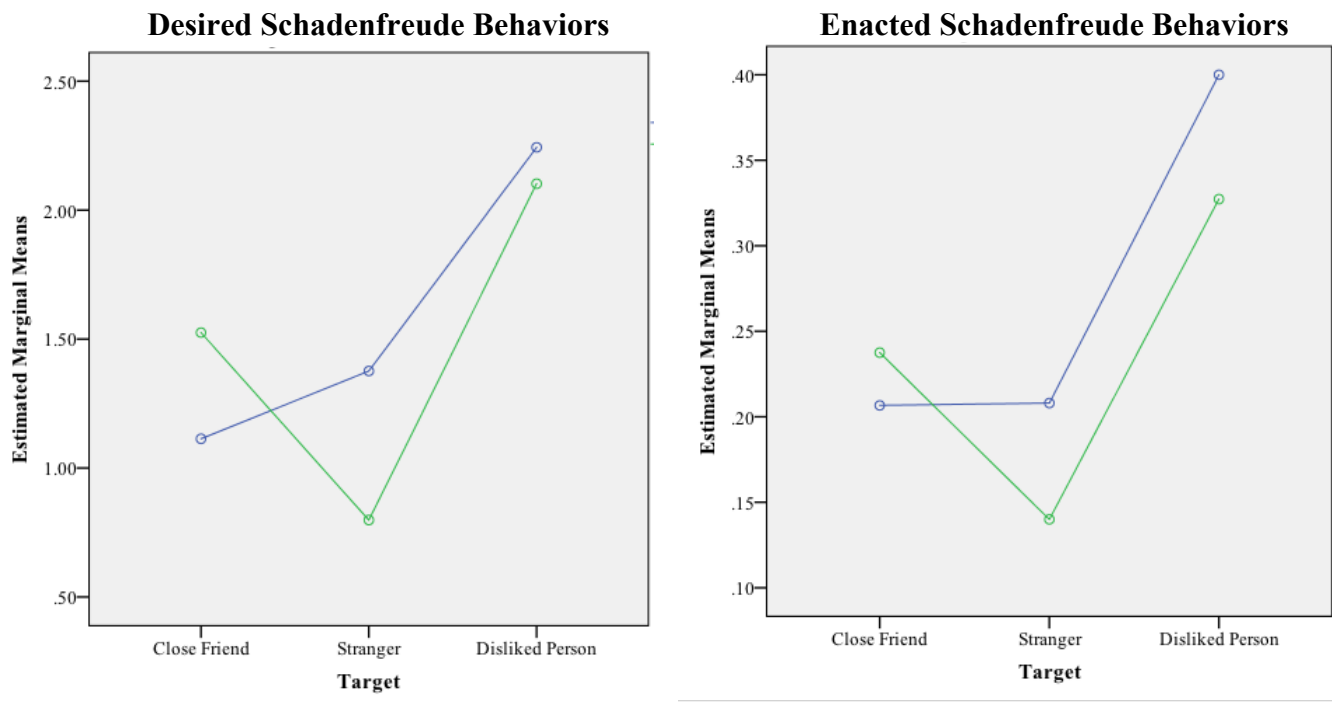
Unfortunately, because of the way desired vs. enacted behaviors were measured, it is not possible to directly compared the marginal means. Therefore, it is important to note that the ANOVAs are within each type of measure. However, similar patterns emerged between the desired and actual EMGEBS graph. In both graphs, schadenfreude is expressed more in the competitive situation for the stranger and disliked person, but is expressed more in the slapstick situation for a close friend.

The results of the ANOVA indicated that the main effect of the *target* is statistically significant in both the desired EMGEBS (F(2, 140)=8.51, p<.001) and the enacted EMGEBS (F(2, 140)=5.81, p=.004). However, the main effect *of type of scenario* is not significant in either

the desired EMGEBS ($F(1, 140)=.200$, $p=.655$) or the enacted EMBEGS ($F(1, 140)=.585$, $p=.445$). In order to understand the main effect of target, a pairwise comparison of targets in each of these conditions illustrates that each are different from each other. The interaction effect between type of scenario and target is not significant in either the desired EMGEBS ($F(2, 140)=1.586$, $p=.208$) or the enacted EMBEGS ($F(2, 140)=1.470$, $p=.626$).

Again, I decided to conduct a post-hoc analysis to look more closely at the non-significant interaction effect. When I removed the disliked targets and only looked at the close-friend targets and stranger targets, I found a significant interaction effect for desired EMGEBS ($F(1, 101)=3.95$, $p<.050$) but a non-significant interaction effect for actual EMBEGS ($F(1, 101)=.942$, $p=.334$).

**Predicting Schadenfreude Measures with Personality Variables**

Multiple regression analyses were conducted to examine if any of these dispositional variables are related to the schadenfreude variables overall—regardless of which condition the participants were responding to. As a reminder, there were two measures used to assess personality variables: the individual/collectivist scale (ICIAI) and the empathy scale (IRI). The ICIAI created four scores depending on which social group the values were towards: family, close friend, stranger, and colleague. There was no theoretical underpinning of using the ICIAI score for family because the target conditions in the vignettes did not concern family social groups. However, I used the other three scores from the ICIAI (close friend, stranger, colleague) as predictors for the schadenfreude. In addition, I used all four subscales of the IRI (perspective taking, fantasy, empathic concern, and personal distress) as predictors for this regression as well. In general, I hypothesized that individuals who scored higher on the empathy and collectivist assessments would not only feel less schadenfreude, but also express it to a lesser extent.

**Predictors for FEEL**

The first regression analysis was conducted to determine whether the four items from the empathy scale (IRI) and the three items from the collectivist/individualist scale (ICIAI) predict whether you **feel** schadenfreude emotions (satisfied, pleasure, enjoyment). The results of the regression indicated that the FEEL measure could be reliably predicted from the set of predictors, with two indicators, in particular, being significantly related to the FEEL ($R^2$=.108, $F(7,145)$=2.38, p=.025). It was found that personal distress scale significantly predicted schadenfreude emotions (β= .268, p= .003), as did empathic concern (β= -.194, p=.050). Thus, on average, across all conditions, the general tendency for people to express schadenfreude can be predicted by these two subscales. The higher the personal distress score is, the more likely they are to feel schadenfreude, controlling for other predictors. On the other hand, the more people have empathic concern, the less they will feel schadenfreude, controlling for other variables. It is reasonable to assume that people who have strong feelings of sympathy and concern for unfortunate others will not likely feel pleasure at another's misfortune. Participants' ICIAI score towards *strangers* was marginally significant in predicting schadenfreude FEEL (β= -.173, p=.089).

**Predictors for EMGEBS**

The purpose of the second regression analysis was to see whether the seven scores from the ICI and ICIAI scores predict whether you desire schadenfreude behaviors or actually carry out schadenfreude behaviors. The results of the regression indicated that the four subscales of IRI and the three subscales for ICIAI can only slightly predict desired schadenfreude behaviors ($R^2$=.093, $F(7,145)$=2.03, p=.056), but not the actual schadenfreude behaviors ($R^2$=.050, $F(7,55)$=1.041, p=.406). No individual predictors were statistically significant in either case.

**Individualism/Collectivism as a Moderator for Schadenfreude**

After looking at the previous results, it is clear that, in general, the *disliked, competitive* condition creates the highest degree of schadenfreude (for both FEEL and EMGEBS). Therefore, I decided to look particularly at this condition to see whether individual ICIAI scores influences their feelings of schadenfreude. ICIAI generated individualist and collectivist scores for four social groups: family, close friends, strangers, and colleagues. Of these scores, colleagues would be the most relevant in describing a disliked target since it is likely someone that the participant knows. I hypothesize that individuals with higher IC-colleague scores (more collectivist) will feel and express schadenfreude to a lesser extent than individuals who have more individualistic tendencies. However, as seen in Table 1, there were non-significant correlations between the IC-colleague score and any of the schadenfreude measures.

Table 1: Correlations of IC-colleague with FEEL, EMGEBS desired, and EMGEBS actual.

|  | FEEL | EMGEBS desired | EMGEBS actual |
|---|---|---|---|
| IC_colleague score | | | |
| Pearson Correlation | -.162 | .039 | .015 |
| Sig. (2 tailed) | .288 | .799 | .920 |
| N | 45 | 45 | 45 |

**Discussion**

As mentioned in the results section, there were fewer statistically significant results than expected in terms of cultural differences. However, there were some interesting results regarding empathy, targets, situations, and appraisals. Specifically, I found that disliked targets in competitive type vignettes elicited the greatest amount of schadenfreude. In terms of dispositional variables, empathic concern and personal distress were the only predictors of schadenfreude. Finally, in terms of appraisals, I found that accommodation-focused coping potential and negatively congruent situations were negatively correlated with schadenfreude,

while motivational relevance, motivational congruence, other accountability, and other factors were positively correlated to schadenfreude.

To address the issue of culture, I found that, within the regression analysis, none of the ICIAI subscales for different social groups significantly predicted whether participants felt or expressed schadenfreude. Even within one specific condition (competitive situation, disliked target), I did not find any significant correlations between collectivist scores and schadenfreude measures. These results indicate that cultural tendencies do not influence the motivational or behavioral expression of schadenfreude. However, the fact that our sample size ended up being skewed in the "western" direction may factor into this specific result. Although culture was assessed individually and not by location, there was not a wide variety of people from different countries or locations. Perhaps if the survey was given to more people outside of the United States, there may have been significant results.

In addition, I hypothesized that language would play a role in whether or not schadenfreude is felt. Because the word schadenfreude originates from the German words "schaden" which means harm and "fruede" which means joy, I hypothesized that those who spoke a language that has a word for schadenfreude would be able to experience this emotion to a greater extent because they have the relevant words to describe that emotional state. However, after conducting a t-test between groups of people who spoke a schadenfreude language and those who did not, I did not find any evidence that language played a role either. There is a chance that the survey itself, because it was presented in English, may have diminished potential language effects. Perhaps if the survey was given to more people who spoke different languages and presented to them in their original language, there may have been significant results. Nonetheless, the results of this study seem to demonstrate that language is not fundamental in

shaping the cognition of schadenfreude. In other words, this emotion can be expressed through other means, even if there is not a word to express this emotion.

Despite the non-significant cultural variables, the results from the ANOVA suggest that the situation and target conditions do have a significant effect on the motivational and behavioral expressions of schadenfreude. Participants who were assigned to competitive vignettes reported greater feelings of schadenfreude than those who were assigned to slapstick situations, across all target conditions. It makes theoretical sense that competitive situations elicit more feelings of schadenfreude because according to the gain hypothesis (Smith, Powell, Combs & Schurtz, 2009), people will benefit when a misfortune occurs to their competitor. The only case in which the slapstick situation created more schadenfreude than the competitive situation was the close friend target in a slapstick situation. The types of situations in the slapstick situations were of people falling and minor embarrassing situations, so it makes sense that these situations elicited laughter. However, it is interesting to note that, when the target changes from a close friend to a stranger or a disliked person, people no longer express schadenfreude to the same events. When the target becomes a stranger or a disliked person, the results return to the expected pattern of competitive situations eliciting more schadenfreude. One way of interpreting this finding is that people feel more comfortable expressing pleasure when their friend suffers a minor slapstick misfortune and may not feel as comfortable laughing at someone they do not know. This interpretation falls in line with the beliefs that schadenfreude is not a socially accepted emotion. However, people seem to laugh at stranger's misfortunes on television on shows such as American Idol or America's Funniest Home Videos. Therefore, another way to interpret this finding is that laughing and showing enjoyment is a way of showing social support. The types of slapstick situations involved in this study were mostly embarrassing in nature, none of the

misfortunes were too extreme. Thus, if the friend happens to witness their friend fall or do something embarrassing, laughing and smiling at them is not necessarily evil, it could be a way of helping the friend get over the embarrassment. Nonetheless, the most significant and consistent takeaway from the experimental conditions was that the disliked targets in competitive situations elicited the greatest feelings and expressions of schadenfreude.

Even though none of the ICIAI subscales significantly predicted whether participants felt or expressed schadenfreude, I used the subscales of IRI (perspective taking, fantasy, empathic concern, personal distress) in this regression model as predictors for schadenfreude. Only empathic concern (EC) and personal distress (PD) were significant in predicting feelings of schadenfreude emotions. The EC scale assessed "other oriented" feelings of sympathy and concern for unfortunate others while the PD scale measures "self-oriented" feelings of personal anxiety and unease in tense interpersonal settings. The negative EC finding is reasonable in the context of schadenfreude; those with high EC scores are likely to feel sympathy and concern, rather than pleasure, towards the person suffering the misfortune. However, the positive association between PD and schadenfreude is worth discussing. The results suggest that those with higher PD scores are more likely to feel schadenfreude. Unlike empathic concern, personal distress does not have to be congruent with the other's state. Because the PD scale taps into one's own feelings of personal unease and discomfort in reaction to the emotions of others, personal distress often leads to a self-oriented, egoistic reaction to reduce it. One way to do so is to withdraw from the stressor and feel pleasure in their misfortune. The fact that people feel anxiety, worry, and discomfort when a they experience schadenfreude further suggests how socially undesirable this emotion is.

In terms of the other two subscales, I would have assumed that perspective taking (PT), the tendency to spontaneously adopt the psychological point of view of others, would also be negatively associated with schadenfreude, but the fact that this subscale was not significant suggests that this trait is not relevant in predicting schadenfreude. As expected, fantasy (FS) was not significant in predicting schadenfreude because the vignettes did not require the participants to transpose themselves into the feelings and actions of fictitious characters in books, movies, and plays, but rather to imagine the feelings and actions of people in their everyday life. In summary, the major findings of the regression analysis were that dispositional variables of empathy were more predictive for schadenfreude than collectivist/individualist cultural values.

Lastly, I analyzed the correlations between appraisals and schadenfreude emotions and behaviors in order to see if there was an appraisal pattern associated with this emotion. From the results, it seems as though the appraisals that are positively associated with schadenfreude are relevance, congruence, and outside factors/accountability while accommodation-focused coping potential and the measure to assess negative aspects of the situation that participants were displeased about were negatively correlated with schadenfreude. One interesting finding was the participants' responses to motivational congruence. The participants' responses to "how consistent is the situation with what you want" (motivational congruence) indicated that the situation was what they wanted, but their responses to the extent that the negative and positive aspects of this situation were things they did not want did not seem to line up. Only the negative situation responses were significant meaning that the positive and negative aspects of the situation were influencing them differently. Another interesting finding was the fact that accommodation-focused coping potential was negatively correlated with schadenfreude. Accommodation-focused coping potential requires making cognitive changes to one's goals. In

other words, the more that someone is able to handle the situation emotionally, the less likely they are to feel pleasure at the target person's misfortune. Those with low self-esteem feel schadenfreude more than those with high self-esteem because it is a way for them to temporarily feel better about themselves by social comparison (van Dijk, Koningsbruggen, Ouwerkwerk & Wesseling, 2011). As such, individuals with low self-esteem have a greater motivation for self-protection and experience schadenfreude specifically when they feel threatened. One way of interpreting the results from this study is that schadenfreude is an outlet for coping. For example, if someone is confident in their standing, they will not feel the need to take pleasure in someone else's misery.

**Limitations & Future Directions**

The first limitation evident in this study is the sample size and demographic information. In terms of looking for cross-cultural differences in schadenfreude, the greatest limitation was the lack of geographic variety among the population tested. In future research, testing subjects in different countries and languages might allow for a better comparison between cultures. In addition, by surveying undergraduate students in the pilot study, the scenarios used in the vignettes were specifically designed for an undergraduate population. Even though schadenfreude was elicited with social and academic scenarios, the specific situations were directed towards undergraduates and may not elicit schadenfreude for all populations. The final limitation of the current study is the speculative nature of the survey. Participants were asked to speculate how they would want to behave if the situation were to occur and how they would actually behave. However, there is no way of knowing whether this is actually how the participants would have felt or behaved in the moment. In addition, there is no way of knowing whether participants were fully immersed in the situation and felt the emotions to the extent that

they would in a real scenario. Perhaps, in future studies, a video of the schadenfreude eliciting event might be a more powerful way of eliciting schadenfreude. In addition, if a future study were conducted, it would be interesting to determine whether participants' responses differed in different social contexts. For instance, by asking how participants would behave if people were around, if no one was around, and if they were with their best friend, we could see whether social context influences their behaviors of schadenfreude. We look forward to the prospect of further illuminating the variables associated with the motivational and behavioral expression of schadenfreude.

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Appendix A: Appraisal Components Measure

Primary Appraisal
- **Motivational relevance:** *How important is what is happening in this situation to you?*
- **Motivational Congruence:** *How consistent is the situation with what you want?*
- **Negative situation:** *To what extent were the negative aspects of this situation things that you didn't want, or were displeased about?*
- **Positive situation**: *To what extent were the positive aspects of this situation things that you didn't want, or were displeased about?*

Secondary appraisal:
- Accountability:
    - **Outside Factors.** *To what extend did you consider OUTSIDE FACTORS (chance, karma, God, etc.) to be responsible for this situation?*
    - **Other accountability**. *To what extent did you consider SOMEONE ELSE to be responsible for this situation?*
    - **Self-accountability**: *To what extent did you consider YOURSELF to be responsible for this situation?*
- Coping Potential
    - **Problem-focused coping potential**: *How certain are you that you will be able to influence things to make (or keep) situation the way you want it?*
    - **Accommodative focused coping potential**. *How certain are you that you will, or will not, be able to deal emotionally with what is happening in this situation however it turns out?*
- **FUTURE EXPECTANCY**: *How, if at all, did you expect this situation to change in the future?*

Appendix B: Emotional Scale (FEEL)

1. Surprised/Astonished
2. Guilty/Culpable
3. Relieved/Unburdened
4. Tranquil/Calm/Serene
5. Regretful/Remorseful/Sorry
6. Shy/Timid/Bashful
7. Grateful/Appreciative/Thankful
8. Interested/Engaged,
9. Hopeful/Optimistic
10. Bored/Detached/Uninterested
11. Proud/Triumphant
12. Afraid/Frightened/Scared
13. Sad/Downhearted/Blue
14. Ashamed/Disgraced
15. Disgusted/Repulsed/Revolted
16. Irritated/Annoyed
17. Indebted/Obligated
18. Amused
19. Joyful/Happy/Glad
20. Eager/Enthused/Excited
21. Embarrassed/Humiliated
22. **\*Satisfied/Content**
23. Compassionate/Empathetic
24. Awed/Wondrous/Amazing
25. **\*Pleasure/enjoyment**

Appendix C: EMGEBS

1.  Talk to someone about it
2.  Take a picture/record it
3.  **\*Laugh**
4.  **\*Smile**
5.  Ask them if they are OK
6.  Watch to see how they react/deal with it
7.  Pretend to look at phone
8.  Hide
9.  Leave the situation
10. Think about why they deserved it
11. Think about karma
12. Think about how relieved you are that it wasn't you
13. Do nothing
14. **\*Take pleasure**
15. Feel glad that it happened to them
16. **\*Feel satisfied with what happened**
17. **\*Enjoy what is happening**

Appendix D: Vignettes by Month (with built in scenario/target manipulations)

Competitive Social
1.  You are at a party and your friend starts flirting with someone you like. After a few minutes, the boy/girl you like laughs and indicates that your friend's zipper is undone. Your friend gets embarrassed and walks away.
2.  You are at a party and someone starts flirting with someone you like. After a few minutes, the boy/girl you like laughs and indicates that the person's zipper is undone. That person gets embarrassed and walks away from your crush.
3.  You are at a party and someone that you have always disliked starts flirting with someone you like. After a few minutes, the boy/girl you like laughs and indicates that the person's zipper is undone. The person you dislike gets embarrassed and walks away from your crush.

Slapstick Social
4.  Your friend is in the middle of the dining hall and spills their tray of food all over themselves.
5.  Someone is in the middle of the dining hall and spills their tray of food all over themselves.
6.  One of the people you really dislike is in the middle of the dining hall and spills their tray of food all over themselves.

Competitive Academic
7.  Your friend gets an interview for the job/school you want, but you are not invited for an interview. However, you find out that your friend messed up during their interview and is not accepted.
8.  A person in your class gets an interview for the job/school you want, but you are not invited for an interview. However, you find out that he/she messed up during their interview and is not accepted.
9.  A person that you really dislike gets an interview for the job/school you want, but you are not invited for an interview. However, you find out that they messed up during their interview and is not accepted.

Slapstick Academic
10. Your friend is giving a presentation in class. However, when he/she plugs in their computer to the projector, everyone can see their personal contents. Your friend's face turns red and quickly closes his/her computer shut.
11. A classmate is giving a presentation in class. However, when he/she plugs in their computer to the projector, everyone can see their personal contents. Their face turns red and quickly closes his/her computer shut.
12. Someone that you really dislike is giving a presentation in class. However, when he/she plugs in their computer to the projector, everyone can see their personal contents. Their face turns red and the person you dislike quickly closes his/her computer shut.

# Personality and Situational Evaluations

Vanderbilt University

INFORMATION PAGE AND CONSENT TO PARTICIPATE IN RESEARCH

Survey of Emotional and Behavioral Responses

You are asked to take part in a research study by Professor Leslie Kirby in the Department of Psychology because you are an undergraduate student. You are free to decide whether you would like to take part in this study.

Why is this study being done?

To study the emotional and behavioral responses that undergraduate students may have in response to certain situations.

What will happen if I take part in this research study?

If you take part in this study, you will be asked to fill out an online survey that will take approximately 10-15 minutes. The survey will ask about your demographics, dispositional characteristics, and emotional responses and behaviors regarding a made-up situation.

Are there any potential risks or discomforts that I can expect from this study?

The type of situations participants will be placed (i.e., reflecting on their thoughts, emotions, and behaviors) and the types of reactions to be evoked (i.e., mild levels of negative and possibly positive affect during the duration of the study) are of the sort they would naturally feel in response to daily circumstances. Some of the questions may make you feel uncomfortable. However, you are free to skip any question if you choose.

Are there any potential benefits if I participate?

Although you will not receive any benefits directly, this study is meant to gain a better understanding of emotion as a process, which would have far-reaching implications for both basic and clinical research.

Will I receive any compensation if I participate in this study?

You will receive 1 SONA credit after completion of the survey.

Will information about me be kept confidential?

Yes. REDCap is a secure website through which you will complete surveys. None of the participant's personal information will be obtained through this study.

What are my rights if I take part in this study?

You may withdraw your consent at any time and drop out of the study without penalty. You can choose whether or not you want to be in this study. If you volunteer to be in this study, you may leave the study at any time. You are not waiving any of your legal rights if you choose to be in this research study. You may refuse to answer any questions that you do not want to answer and still stay in the study.

Who can answer questions I might have about this study?

In the event of a research related injury, please contact the researchers right away. You can reach the study coordinator, Kelsey, at (615) 936-0272 or Kelsey.t.laird@vanderbilt.edu. If you have any questions or concerns, you can talk to the researcher. You may also contact the principal investigator for the study, Dr. Leslie Kirby. You can reach Dr. Kirby at (615) 322-0059.

If you want to talk to someone other than the researcher, please call a Research Subject Advocate at (615) 322-2918 or (866) 224-8273. You can also write to Vanderbilt Human Research Protection Program, 1313 21st Ave. South, 504

Oxford House, Nashville, TN 37232-4315.

CONSENT OF STUDY PARTICIPANT

○ After reading and understanding the procedures described above, I agree to participate in this study.
○ I do not agree to participate in this study

## Page 1

PLEASE FILL OUT THE INFORMATION BELOW

How old are you?

- ○ 16
- ○ 17
- ○ 18
- ○ 19
- ○ 20
- ○ 21
- ○ 22
- ○ 23
- ○ 24
- ○ 25
- ○ 26
- ○ 27
- ○ 28
- ○ 29
- ○ 30
- ○ 31
- ○ 32
- ○ 33
- ○ 34
- ○ 35
- ○ 36
- ○ 37
- ○ 38
- ○ 39
- ○ 40
- ○ 41
- ○ 42
- ○ 43
- ○ 44
- ○ 45
- ○ 46
- ○ 47
- ○ 1

Do you identify as male or female?
- ○ Male
- ○ Female
- ○ Other

How do you identify yourself?
_____

Please specify your ethnic/racial background
- ☐ White/European American
- ☐ Black/African-American
- ☐ Asian
- ☐ Indian subcontinent
- ☐ Native Hawaiian/Pacific Islander
- ☐ Native American/Alaska Native

Are you Latino/Latina/Hispanic
- ○ Yes
- ○ No

Please fill in the country where you were BORN
_____

Please fill in the country where you CURRENTLY LIVE
_____

In what country/countries are you a citizen?
_____

What is your first language?
_____

Are you

- ☐ A full-time student
- ☐ A part-time student
- ☐ Working full-time
- ☐ Working part-time

How would you classify your level of education?

- ◯ less than high school education
- ◯ high school graduate
- ◯ some college/technical training
- ◯ associate's degree
- ◯ bachelor's degree
- ◯ master's/professional degree
- ◯ doctorate

Which category best describes your total household income?

- ☐ Less than $25,000
- ☐ $25,000 to $34,999
- ☐ $35,000 to $49,999
- ☐ $50,000 to $74,999
- ☐ $75,000 to $99,999
- ☐ $100,000 to $149,999
- ☐ $150,000 to $199,999
- ☐ $200,000 or more

What month were you born in?

- ◯ January
- ◯ February
- ◯ March
- ◯ April
- ◯ May
- ◯ June
- ◯ July
- ◯ August
- ◯ September
- ◯ October
- ◯ November
- ◯ December

REDCap

**Page 2**

On the next page you will be presented with a hypothetical scenario that you might encounter in your day-to-day life. Please read the scenario and imagine yourself in it as vividly as you can. Do your best to imagine what it would be like to actually be in this situation. What would you be thinking and feeling? Try to experience these thoughts and feelings as strongly and as deeply as you can. Once you have the scenario in mind, and are responding to it as deeply as you can, please answer the questions that follow.

REDCap

**Page 3**

Try to imagine yourself in the following situation. If such a situation happened to you, how do you think you would be feeling while you were in this situation? Once you have the scenario in mind, please answer the questions that follow.

YOU ARE AT A PARTY AND YOUR FRIEND STARTS FLIRTING WITH SOMEONE YOU LIKE. AFTER A FEW MINUTES, THE BOY/GIRL YOU LIKE LAUGHS AND INDICATES THAT YOUR FRIEND'S ZIPPER IS UNDONE. YOUR FRIEND GETS EMBARRASSED AND WALKS AWAY.

YOU ARE AT A PARTY AND SOMEONE STARTS FLIRTING WITH SOMEONE YOU LIKE. AFTER A FEW MINUTES, THE BOY/GIRL YOU LIKE LAUGHS AND INDICATES THAT THE PERSON'S ZIPPER IS UNDONE. THAT PERSON GETS EMBARRASSED AND WALKS AWAY.

YOU ARE AT A PARTY AND SOMEONE THAT YOU HAVE ALWAYS DISLIKED STARTS FLIRTING WITH THE PERSON YOU LIKE. AFTER A FEW MINUTES, THE BOY/GIRL YOU LIKE LAUGHS AND INDICATES THAT THE PERSON'S ZIPPER IS UNDONE. THE PERSON YOU DISLIKE GETS EMBARRASSED AND WALKS AWAY.

YOUR FRIEND IS IN THE MIDDLE OF THE DINING HALL AND SPILLS THEIR TRAY OF FOOD ALL OVER THEMSELVES.

SOMEONE IS IN THE MIDDLE OF THE DINING HALL AND SPILLS THEIR TRAY OF FOOD ALL OVER THEMSELVES.

ONE OF THE PEOPLE YOU REALLY DISLIKE IS IN THE MIDDLE OF THE DINING HALL AND SPILLS THEIR TRAY OF FOOD ALL OVER THEMSELVES.

YOUR FRIEND GETS AN INTERVIEW FOR THE JOB/SCHOOL YOU WANT, BUT YOU ARE NOT INVITED FOR AN INTERVIEW. HOWEVER, YOU FIND OUT THAT YOUR FRIEND MESSED UP DURING THEIR INTERVIEW AND ARE NOT ACCEPTED.

A PERSON IN YOUR CLASS GETS AN INTERVIEW FOR THE JOB/SCHOOL YOU WANT, BUT YOU ARE NOT INVITED FOR AN INTERVIEW. HOWEVER, YOU FIND OUT THAT THEY MESSED UP DURING THEIR INTERVIEW AND ARE NOT ACCEPTED.

A PERSON THAT YOU REALLY DISLIKE GETS AN INTERVIEW FOR THE JOB/SCHOOL YOU WANT, BUT YOU ARE NOT INVITED FOR AN INTERVIEW. HOWEVER, YOU FIND OUT THAT THEY MESSED UP DURING THEIR INTERVIEW AND ARE NOT ACCEPTED.

YOUR FRIEND IS GIVING A PRESENTATION IN CLASS. HOWEVER, WHEN HE/SHE PLUGS IN THEIR COMPUTER TO THE PROJECTOR, EVERYONE CAN SEE THEIR PERSONAL CONTENTS. YOUR FRIEND'S FACE TURNS RED AND HE/SHE QUICKLY CLOSES THEIR COMPUTER.

A CLASSMATE IS GIVING A PRESENTATION IN CLASS. HOWEVER, WHEN HE/SHE PLUGS IN THEIR COMPUTER TO THE PROJECTOR, EVERYONE CAN SEE THEIR PERSONAL CONTENTS. THEIR FACE TURNS RED AND HE/SHE QUICKLY CLOSES THEIR COMPUTER.

SOMEONE THAT YOU REALLY DISLIKE IS GIVING A PRESENTATION IN CLASS. HOWEVER, WHEN HE/SHE PLUGS IN THEIR COMPUTER TO THE PROJECTOR, EVERYONE CAN SEE THEIR PERSONAL CONTENTS. THEIR FACE TURNS RED AND HE/SHE QUICKLY CLOSES THEIR COMPUTER.

Think about what you want and don't want in this situation...

How certain are you that you will be able to influence things to make (or keep) situation the way you want it?

○ 1 completely certain WILL NOT be able
○ 2
○ 3
○ 4
○ 5 completely uncertain
○ 6
○ 7
○ 8
○ 9 completely certain WILL be able

How certain are you that you will, or will not, be able to deal emotionally with what is happening in this situation however it turns out?

○ 1 completely certain WILL NOT be able
○ 2
○ 3
○ 4
○ 5 completely uncertain
○ 6
○ 7
○ 8
○ 9 completely certain WILL be able

How important is what is happening in this situation to you?

○ 1 not at all
○ 2
○ 3
○ 4
○ 5 moderately
○ 6
○ 7
○ 8
○ 9 extremely much

How consistent is the situation with what you want?

○ 1 not at all
○ 2
○ 3
○ 4
○ 5 moderately
○ 6
○ 7
○ 8
○ 9 extremely much

To what extent were the negative aspects of this situation things that you didn't want, or were displeased about?

○ 1 not at all
○ 2
○ 3
○ 4
○ 5 moderately
○ 6
○ 7
○ 8
○ 9 extremely much

To what extent were the positive aspects of this situation things that you didn't want, or were displeased about?

○ 1 not at all
○ 2
○ 3
○ 4
○ 5 moderately
○ 6
○ 7
○ 8
○ 9 extremely much

To what extent did you consider YOURSELF to be responsible for this situation?

- ◯ 1 not at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 moderately
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9 extremely much

To what extent did you consider SOMEONE ELSE to be responsible for this situation?

- ◯ 1 not at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 moderately
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9 extremely much

To what extend did you consider OUTSIDE FACTORS (chance, karma, God, etc.) to be responsible for this situation?

- ◯ 1 not at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 moderately
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9 extremely much

How, if at all, did you expect this situation to change in the future?

- ◯ 1 to get much worse
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 to stay the same
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9 to get much better

## Page 3

Below are a number of adjective clusters that described different emotions or feelings. Each group of adjectives is meant to convert a single feeling or emotion.

After witnessing:

YOUR FRIEND WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

THE PERSON WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

THE PERSON YOU DISLIKE WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

YOUR FRIEND SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

SOMEONE SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

SOMEONE YOU DISLIKE SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

YOUR FRIEND GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

SOMEONE GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

SOMEONE YOU DISLIKE GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

YOUR FRIEND DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

A CLASSMATE DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

SOMEONE YOU DISLIKE DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

Indicate the extent to which you feel different emotions and feelings

|  | Not at all | 1 | 2 | 3<br>Moderately | 4 | 5 | 6<br>Extremely |
|---|---|---|---|---|---|---|---|
| Surprised, astonished | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Guilty, culpable | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Relieved, unburdened | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Tranquil, calm, serene | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Regretful, remorseful, sorry | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Shy, timid, bashful | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Grateful, appreciative, thankful | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Interested, engaged | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Hopeful, optimistic | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Bored, detached, uninterested | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Proud, triumphant | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Ashamed, disgraced | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Disgusted, repulsed, revolted | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Irritated, annoyed | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Indebted, obligated | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Amused | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Joyful, happy, glad | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Eager, enthused, excited | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Embarrassed, humiliated | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Satisfied, content | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Compassionate, empathetic | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Awed, wondrous, amazed | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Pleasure, Enjoyment | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Page 4**

People have desires and urges of behaviors they would like to carry out after they witness a situation. However, these may or may not line up with the actual behaviors one actually carries out. Below is a list of behaviors that people may have think about after they witness

YOUR FRIEND WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

THE PERSON WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

THE PERSON YOU DISLIKE WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

YOUR FRIEND SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

SOMEONE SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

SOMEONE YOU DISLIKE SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

YOUR FRIEND GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

SOMEONE GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

SOMEONE YOU DISLIKE GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

YOUR FRIEND DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

A CLASSMATE DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

SOMEONE YOU DISLIKE DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

Do your best to imagine what it would be like to actually be in this situation. Once you have the scenario in mind, and are responding to it as deeply as you can, please indicate the extent you WANT to:

|  | 0 - Not at all | 1 | 2 | 3 - Moderately | 4 | 5 | 6 - Very much so |
|---|---|---|---|---|---|---|---|
| Talk to someone about it | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Take a picture/record it | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Laugh | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Smile | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Ask them if they are OK | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Watch to see how they react/deal with it | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Pretend to look at phone | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Hide | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Leave the situation | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Think about why they deserved it | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Think about karma | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Think about how relieved you are that it wasn't you | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Do nothing | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Take pleasure | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Feel glad that it happened to them | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Feel satisfied with what happened | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Enjoy what is happening | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Page 5**

If you were in private and no one was watching, what would you ACTUALLY do after you witness

YOUR FRIEND WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

THE PERSON WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

THE PERSON YOU DISLIKE WALK AWAY BECAUSE THE PERSON YOU LIKE LAUGHED AT THEIR ZIPPER BEING DOWN.

YOUR FRIEND SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

SOMEONE SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

SOMEONE YOU DISLIKE SPILL THEIR FOOD IN THE MIDDLE OF THE DINING HALL

YOUR FRIEND GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

SOMEONE GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

SOMEONE YOU DISLIKE GETTING REJECTED FROM THE JOB/SCHOOL YOU WANT BECAUSE THEY HAD MESSED UP THEIR INTERVIEW

YOUR FRIEND DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

A CLASSMATE DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

SOMEONE YOU DISLIKE DISPLAY THE PERSONAL CONTENTS OF THEIR COMPUTER TO THE ENTIRE CLASS

Select all that apply

☐ Talk to someone about it
☐ Take a picture/record it
☐ Laugh
☐ Smile
☐ Ask them if they are OK
☐ Watch to see how they react/deal with it
☐ Pretend to look at phone
☐ Hide
☐ Leave the situation
☐ Think about why they deserved it
☐ Think about karma
☐ Think about how relieved you are that it wasn't you
☐ Do nothing
☐ Take pleasure
☐ Feel glad that it happened to them
☐ Feel satisfied with what happened
☐ Enjoy what is happening

How would you react if other people were around?  _____

How would you react if you were with your best friends?  _____

## Page 4

In the following questionnaire, we would like to ask you about your values when interacting with people in four different types of relationships: (1) Your Family; (2) Close Friends; (3) Colleagues; and (4) Strangers. For the purposes of this questionnaire, we define each of these relationships as follows:

YOUR FAMILY: By "family," we mean only the core, nuclear family that was present during your growing years, such as your mother, father, and any brothers or sisters. Do not consider other relatives such as aunts, uncles, grandparents, cousins, etc., as your "family" here unless they actually lived with you while you were growing up.

CLOSE FRIENDS: By "close friends," we mean those individuals whom you consider "close;" i.e., with whom you spend a lot of time and/or have known for a long time. Do not consider people who are "just" acquaintances, colleagues, or others whom you would not consider as your close friends. Also, do not consider intimate partners (e.g., boyfriend, girlfriend) here, either.

COLLEAGUES: By "colleagues," we mean those people with whom you interact on a regular basis, but with whom you may not be particularly close (for example, people at work, school, or a social group). Do not consider close friends on the one hand, or total strangers on the other.

STRANGERS: By "strangers," we mean those people with whom you do not interact on a regular basis, and whom you do not know (i.e., total strangers such as people in the subway, on the street, at public events, etc.). Do not consider friends, acquaintances, or family.

We know that your values may differ within each of these groups, depending on with whom you are interacting. Try not to be too concerned with specific individuals, but rather, try to respond to what you believe about each of these groups as general categories of social relationships.

**Page**

In this section, tell us about the values you have when interacting with people in the four relationship groups. Values are concepts or beliefs about desirable end states or behaviors that guide our selection of behaviors and evaluation of events. Use the following rating scale to tell us how important each of the following is as a value to you for each social group.

Share credit for their accomplishments

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Maintain self-control toward them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Share blame for their failures

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Respect and honor their traditions and customs

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|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Be loyal to them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Sacrifice your goals for them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Sacrifice your possessions for them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Respect them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Compromise your wishes to act in unison with them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Maintain harmonious relationships with them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Nurture or help them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Maintain a stable environment (e.g., maintain the status quo) with them

| | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Close Friends | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Colleagues | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Strangers | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

Exhibit "proper" manners and etiquette, regardless of how you really feel, toward them

| | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very Important |
|---|---|---|---|---|---|---|---|
| Family | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Close Friends | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Colleagues | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Strangers | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

Be like or similar to them

| | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Close Friends | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Colleagues | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Strangers | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

Accept awards, benefits, or recognition based only on age or position rather than merit from them

| | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Close Friends | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Colleagues | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Strangers | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

Cooperate with them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Communicate verbally with them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

"Save face" for them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Follow norms established by them

|  | 0 - Not at all important | 1 | 2 | 3 | 4 | 5 | 6 - Very important |
|---|---|---|---|---|---|---|---|
| Family | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Close Friends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Colleagues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Strangers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Page**

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number on the scale at the top of the page: 0, 1, 2, 3, or 4. When you have decided on your answer, select the number next to the item. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can.

|  | 0 - does not describe me well | 1 | 2 | 3 | 4 - describes me well |
|---|---|---|---|---|---|
| I daydream and fantasize, with some regularity, about things that might happen to me | ○ | ○ | ○ | ○ | ○ |
| I often have tender, concerned feelings for people less fortunate than me | ○ | ○ | ○ | ○ | ○ |
| I sometimes find it difficult to see things from the "other guy's" point of view. | ○ | ○ | ○ | ○ | ○ |
| Sometimes I don't feel very sorry for other people when they are having problems | ○ | ○ | ○ | ○ | ○ |
| I really get involved with the feelings of the characters in a novel | ○ | ○ | ○ | ○ | ○ |
| In emergency situations, I feel apprehensive and ill-at-ease | ○ | ○ | ○ | ○ | ○ |
| I am usually objective when I watch a movie or play, and I don't often get completely caught up in it | ○ | ○ | ○ | ○ | ○ |
| I try to look at everybody's side of a disagreement before I make a decision | ○ | ○ | ○ | ○ | ○ |
| When I see someone being taken advantage of, I feel kind of protective towards them | ○ | ○ | ○ | ○ | ○ |
| I sometimes feel helpless when I am in the middle of a very emotional situation | ○ | ○ | ○ | ○ | ○ |
| I sometimes try to understand my friends better by imagining how things look from their perspective | ○ | ○ | ○ | ○ | ○ |
| Becoming extremely involved in a good book or movie is somewhat rare for me | ○ | ○ | ○ | ○ | ○ |
| When I see someone get hurt, I tend to remain calm | ○ | ○ | ○ | ○ | ○ |
| Other people's misfortunes do not usually disturb me a great deal | ○ | ○ | ○ | ○ | ○ |

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| | | | | | |
|---|---|---|---|---|---|
| If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. | ○ | ○ | ○ | ○ | ○ |
| After seeing a play or movie, I have felt as though I were one of the characters | ○ | ○ | ○ | ○ | ○ |
| Being in a tense emotional situation scares me | ○ | ○ | ○ | ○ | ○ |
| When I see someone being treated unfairly, I sometimes don't feel very much pity for them | ○ | ○ | ○ | ○ | ○ |
| I am usually pretty effective in dealing with emergencies | ○ | ○ | ○ | ○ | ○ |
| I am often quite touched by things that I see happen | ○ | ○ | ○ | ○ | ○ |
| I believe that there are two sides to every question and try to look at them both | ○ | ○ | ○ | ○ | ○ |
| I would describe myself as a pretty soft-hearted person | ○ | ○ | ○ | ○ | ○ |
| When I watch a good movie, I can very easily put myself in the place of a leading character | ○ | ○ | ○ | ○ | ○ |
| I tend to lose control during emergencies. | ○ | ○ | ○ | ○ | ○ |
| When I'm upset at someone, I usually try to "put myself in his shoes" for a while | ○ | ○ | ○ | ○ | ○ |
| When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me | ○ | ○ | ○ | ○ | ○ |
| When I see someone who badly needs help in an emergency, I go to pieces | ○ | ○ | ○ | ○ | ○ |
| Before criticizing somebody, I try to imagine how I would feel if I were in their place | ○ | ○ | ○ | ○ | ○ |