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THE INFLUENCE OF EMOTION ON GIVING

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*In this research, I experimentally examine the influence of incidental sadness and anger on charitable donations to an identified or statistical victim. First, subjects viewed a film clip and provided a written response to how they would feel in the situation in the clip. Subjects then viewed a charity letter and had the opportunity to make a donation. Sad individuals, whose emotion was elicited using a previously validated film clip, donated more money to a statistical victim relative to individuals in a neutral condition. This finding is consistent with appraisal tendency theories. Angry individuals, whose emotion was also elicited using a previously validated film clip, did not donate significantly more to either an identified or statistical victim relative to individuals in a neutral condition. Self-reported emotions reveal discrete levels of sadness elicited in the sad condition, but elevated levels of additional negative emotions in the anger conditions. The results indicate that incidental sadness and anger can influence charitable donations.*

JEL Classifications: M3, D8, Z00

Key words: identifiable victim effect, charitable giving, incidental affect, appraisal tendency framework

## Table of Contents

I. Introduction .....	5
II. Literature Review .....	7
III. Experiment Overview .....	13
A. Hypothesis .....	14
B. Participants .....	14
C. Methodology .....	14
D. Results.....	16
IV. Discussion.....	20
V. Limitations and Extensions for Future Research .....	22
VI. Conclusion .....	23
VII. References .....	25
Appendix A: Identified Victim Charity Letter.....	28
Appendix B: Statistical Victim Charity Letter.....	29

## **I. Introduction**

Charitable giving represents a substantial economic transaction in the United States and around the world. According to the American Association of Fundraising Counsel, Americans donated over \$290 billion to charities in 2010, over \$211 billion of which was donated by individuals. The amount of money donated to different causes has led researchers in various fields, from psychology to economics, to investigate the influences of altruistic behavior. Specifically, social scientists have examined what has become known as the identifiable victim effect and its potential causes.

Thomas Schelling first commented on this social phenomenon when he made the distinction between an identified individual and a statistical life. For example, the media reports reveal a young girl in need of money for a life-saving operation and many individuals rush to the post office to mail a donation. But in light of announcing a need to fund a hospital, few would act with equal generosity (Schelling, 1968). In this framework, an identified victim is one whose fate is seemingly certain in the mind of a potential donor through the absence of action. A statistical victim is one whose fate is uncertain – in the case of Schelling’s hospital example, increased funding could represent only a possibility of saving more lives, not a guarantee. Researchers have since expanded on this notion. Small and Loewenstein (2003) find support for the identifiable victim effect in the first explicit lab experiment through a dictator game with a weak form of identification. Small and colleagues (2007) continue this research and find that priming a “feeling” mode of thought, one driven first by emotion as opposed to a deliberative or thinking mode of thought, increases giving.

Psychologists have long been concerned with emotion and its influence on decision-making. Though at first concerned with examining emotions in terms pleasantness and arousal, a

more recent strand of research has further investigated similar emotions to show that not all positive or negative emotions are equal. According to cognitive appraisal theory, there exist appraisals, or evaluations, of an individual's environment combined with certain cognitive dimensions that form the foundation of emotions. Smith and Ellsworth (1985) experimentally study emotions on eight dimensions (pleasantness, attention, control, certainty, perceived obstacle, legitimacy, responsibility, and anticipated effort) to find that emotions are closely linked to specific cognitive evaluations. For example, if an individual thinks an event is caused by another individual, she will feel anger. An individual who sees an event as controlled by situational factors will feel sadness. Building on cognitive appraisal theory, the appraisal-tendency framework (ATF; Lerner & Keltner 2000) posits that emotions cause individuals to judge future events and decisions through a cognitive predisposition to the underlying appraisals of that emotion. For example, the individual who feels sadness from some negative event will then make a subsequent decision formed by the appraisals which characterize sadness.

The goal of the current research is to investigate the influence of sadness and anger on an individual's decision to give to an identified or statistical victim. That is, I seek to answer the question "how will appraisal theories of sadness and anger carry over to the decision of charitable giving?"

## **II. Literature Review**

There exists a large body of literature in psychology research concerned with incidental, or unrelated, emotion and the effect on judgment and decision-making. The findings of such research indicate that the carry-over effects of incidental emotions are robust to a variety of judgment scenarios and economic decisions. Keltner et al. (1993) examine the influence of sadness and anger on causal judgments. Several experiments first presented subjects with ambiguous scenarios to induce emotion (e.g. the death of a mother for sadness and unfair grading by a TA for anger) during which subjects were instructed to imagine how they would feel or what they might think in the given situations. Subjects then judged the likelihood of future life events associated with individual or situational agency. Following the emotion induction task in a second series of experiments, subjects read about an ambiguous failed romance scenario and are asked to judge the cause of the situation. Keltner and colleagues find angry individuals likely to blame someone else while sad individuals are likely to find fault with situational factors. These findings are consistent with cognitive appraisal theories of emotion (Smith and Ellsworth, 1985; Lazarus, 1991).

Raghunathan and Pham (1999) study the influence of sadness and anxiety on risky decisions through a series of experiments. The experiments compared subjects induced with one of three affective conditions (sadness, anxiety or neutral) and those who made a choice between a low-risk/low-reward or high-risk/high-reward gamble. Subjects read one-page scenarios to elicit emotions and were asked to imagine themselves in the situation while reading. The anxiety scenario related to a doctor informing the subject that s/he may have cancer. The sadness scenario related to the death of the subject's mother. The neutral scenario related to every-day events of a fictional character. The researchers also compared the affective manipulations to the

choice of job options: high salary/low job security or average salary/high job security. They find that sad individuals prefer both a high-risk/high-reward gamble and high-risk/high-reward job option. Anxious individuals prefer a low-risk/low-reward gamble and low-risk/low-reward job option.

Lerner and Keltner (2000) examine the influence of incidental fear and anger on risk perception. In the first series of studies, subjects rated the degree of emotion induced in response to a dispositional fear and anger survey. Subjects were then asked to estimate the number of annual fatalities due to different causes in the United States (e.g. brain cancer, strokes). The researchers find a positive correlation between fear and perceived risk and a negative correlation between anger and risk. The researchers conclude that anger and fear influence subsequent decisions in parallel to the underlying appraisal characteristics such that anger is characterized by certainty and human agency, while fear is characterized by uncertainty and situational agency.

Lerner and Keltner (2001) extend their previous research to examine a different set of judgments and to compare fear and anger to happiness, an emotion of different a valence (i.e. positive) but with a similar appraisal framework to anger. They first investigate Tversky and Kahneman's (1981) "Asian disease problem," a scenario comparing programs to fight the outbreak of a disease, by manipulating affective induction (fear or anger) and the framing of the issue. In this study, angry individuals were risk-seeking while fearful individuals were risk-averse. In a second study, Lerner and Keltner (2001) include a happiness induction and ask subjects to estimate the likelihood of experiencing future events in their own lives relative to the average likelihood of the events happening to their peers. According to this experiment, angry and happy individuals reported optimistic risk estimates while fearful individuals reported pessimistic risk estimates. The risk estimates of angry individuals closely resembled those of



happy individuals, which is consistent with cognitive appraisals of certainty and control in anger and happiness.

Expanding the range of decision contexts influenced by emotion, Lerner et al. (2004) examine the impact of sadness and disgust on the endowment effect, a hypothesis that claims individuals value things they own more than things they do not own. Their experiment crossed an affect manipulation (disgust, sadness, neutral) with an ownership condition in which half of the subjects were given an object and presented with the opportunity to sell it, while the other half were shown the object and asked if they would like to receive cash or the object. To induce emotion, subjects viewed one of three film clips: *The Champ* in the sadness condition, *Trainspotting* in the disgust condition, and a *National Geographic* depiction of fish to induce neutrality. Subjects then wrote a self-reflective response on how they might feel had they been in the situation viewed in the film clip. The results suggest that disgust reduces buying and selling prices, while sadness increases buying but decreases selling. The endowment effect is eliminated in the disgust condition and reversed in the sadness condition.

Small and Lerner (2008) examine the effects of incidental affect on an individual's judgment of a welfare recipient. In this research, participants first completed the PANAS baseline measure of affect (Watson, Clark & Tellegen, 1988). Following this, participants wrote about what made them most sad or angry and then read about a current welfare recipient. Participants wrote about the cause of the person's need and selected a recommendation to increase or decrease poverty assistance. The researchers find that incidental anger decreases recommended assistance while sadness increased assistance.

Kuhnen and Knutson (2011) create an experiment to observe influences of emotion on decisions involving risky decisions in which subjects were asked to make investment decisions

related to a risky stock and riskless bond. Before each decision subjects viewed an unrelated geometric shape followed by a picture (highly arousing and positive, highly arousing and negative, or neutral). Kuhnen and Knutson (2011) find that viewing a negative picture, associated with increased anxiety, reduced risk-taking, whereas viewing a positive picture, associated with increased excitement, increased risky investing.

In daily activities as well, individuals frequently encounter events that trigger emotional responses, many of which occur in succession. Winterich et al. (2010), following cognitive appraisal theories, induce different emotions of the same valence in succession. In one study, subjects watch a film clip to induce sadness (*The Champ*) or to induce a neutral state (*National Geographic*). Part two of study one induces anger by assigning subjects as the recipient of an unfair offer (\$8 dictator/\$2 receiver) in a dictator game, and by giving them the choice to accept or reject. Following the dictator game, subjects recorded emotional responses to the allocation and completed the Life Events Questionnaire adapted from Lerner and Keltner (2001). Winterich and colleagues find that sad individuals report less anger and less optimistic risk estimates than do those in the neutral condition, a finding which indicates a blunting effect of sadness on anger. In a second study, subjects were primed with a writing task to induce sadness, anger, or neutrality and asked to read one of two scenarios (angry or sad). Subjects then responded to the Life Events Questionnaire. Results from the second study further indicate the role of sadness in blunting anger, and also that anger blunts sadness.

Jenni and Loewenstein (1997) examine an individual's judgment of an identifiable and statistical victim. The researchers claim the differences which characterize the two victims are vividness, certainty/uncertainty, proportion of the reference group that can be saved, and ex post versus ex ante evaluation. Employing a survey analysis of different risky scenarios, Jenni and

Loewenstein find the major differentiating factor to be the relative size of the reference group that can be saved. Following up on this study, Small and Loewenstein (2003) produce the first explicit test of the identifiable victim effect. They utilize a dictator game in which all subjects are given an endowment and half are randomly selected to lose their money. Those who retained the endowment are matched with those who had lost in order to play a dictator game. Half of the subjects are identified by a matching number prior to the choice of allocation and half are matched after allocation. The researchers find this weak form of identification to significantly increase contributions.

Seeking to further understand the identifiable victim effect, Kogut and Ritov (2005a) investigate whether this phenomenon holds only for a single victim or also for an identified group of victims. They employ a 2 (single child vs. group of children) x 4 (unidentified; age only; age and name; age, name and picture) between-subject factorial experiment in which subjects rate sympathy levels and specify an amount they would be willing to donate. The researchers find that a single, identified victim (fully identified by age, name and picture) gains greater contributions than one which is non-identified, but that fully identified groups do not gain more than non-identified groups. In addition, a single identified victim evokes the strongest feelings of sympathy. Kogut and Ritov (2005b) follow up their previous study using actual contributions and find further support that giving to a single, identified victim exceeds contributions to an identifiable group. In explaining this finding, the researchers argue that in the donors' information processing the singularity of the individual victim represents coherency. The expectation of coherency leads to greater information processing and generates a higher level of empathy for the single victim (Hamilton and Sherman, 1996; Susskind, Maurer, Thakkar, Hamilton & Sherman, 1999).

Small et al. (2007) test the effect of educating people about the inconsistent valuation of lives when considering an identified or statistical victim. The first experiment crossed an identification manipulation (identified vs. statistical victim) with an intervention aimed at informing participants about the identifiable victim effect. Subjects first completed a short, unrelated survey in exchange for \$5. They then received an envelope and a charity letter in which half of the subjects read a brief paragraph on the difference between an identified or statistical victim. The letter also contained text on either an identified or a statistical victim. The statistical victim condition presented facts related to starvation in Africa. The identified victim condition presented a picture of a small girl and brief description of the poverty and possibility of starvation she experiences. Subjects were asked if they would like to donate any amount of the \$5 they had received and if so to place it in the envelope. Results from this experiment indicate that the intervention decreased donations to the identified victim but not to the statistical victim relative to donations from subjects who had not received the intervention information. An additional study added a joint comparison manipulation, presenting an identified victim with statistical information. According to this study, identified victims receive the most donations and the joint comparison was not significantly different than the statistical victim manipulation alone. A final study first primes either a deliberative or feeling mode of thought by asking participants to either perform calculations or to describe feelings in response to different words (e.g. “baby”). Participants were then asked to give to either a statistical or identified victim. The results suggest that priming with a calculative mode of thought decreases the preference for an identified victim but does not increase giving to a statistical victim.

Dickert et al. (2010) build directly on Small et al. (2007) but vary the affective primes and the victim manipulation. These experiments prime with either calculations or affective

responses to a newborn baby or George W. Bush. In the latter manipulation, subjects are asked to describe their feelings about the affective stimuli. The victim manipulation was adapted from Kogut and Ritov (2005a) in which subjects were shown a picture of a single victim identified by name and age, or a group portrait of eight victims identified by name and age. Dickert and colleagues find an increase in the proportion of subjects who donate and the average amount of donations in the affective manipulation relative to the deliberative manipulation.

### **III. Experiment Overview**

The goal of this experiment is to investigate the influence of incidental sadness and anger on an individual's propensity to donate to a victim. The experiment follows a 3 x 2 between-subject design, crossing an emotion manipulation (sadness, anger, neutral) with the decision to give to a victim (identified, statistical). The experiment was presented as two short studies to reduce demand effects (subjects' awareness of the intention of the emotion elicitation and the potential carry-over of their emotions to the donation decision) (cf. Lerner, Small & Loewenstein, 2004; Small & Lerner, 2008). The first study follows cognitive appraisal theories of emotion and the appraisal tendency framework, eliciting sadness and anger to examine the influence on subsequent decisions (Smith & Ellsworth, 1985; Lazarus, 1991; Raghunathan & Pham, 1999; Lerner & Keltner, 2000; Lerner & Keltner, 2001; Lerner et al., 2004; Small & Lerner, 2008). Incidental emotion elicitation has been shown to influence subsequent, unrelated decisions (Bodenhausen, 1993; Forgas, 1995; Schwarz, 1990; Schwarz & Clore, 1996). Those who participated received \$5 compensation. The second study presented a short charity letter to subjects along with two envelopes in which they had the opportunity to make a donation using the \$5 compensation, or retain any amount of that money. Study 2 follows the identified victim

effect literature and adapts the procedure used in inducing an affective mode of thinking prior to a donating decision (Small et al., 2007; Dickert et al., 2010).

### **A. Hypothesis**

Sadness and anger exhibit divergent appraisal characteristics (Smith and Ellsworth, 1985; Lazarus, 1991; Small and Lerner, 2008). Sadness, associated with relatively less certainty, leads to a need to examine information before making a decision. Anger, associated with a sense of certainty, gives individuals the impression that they already have enough information to make a sound decision. Moreover, sadness is associated with situational agency, while anger is associated with human agency. In this way, I expect that emotion will have a positive effect on donations relative to the neutral conditions. Following the appraisal tendency framework, which says that emotions influence subsequent decisions in parallel to the underlying appraisal characteristics, I expect that relative to the neutral condition angry individuals will contribute more to identified victims and that sad individuals will contribute more to statistical victims.

### **B. Participants**

Two hundred and thirty five undergraduate students in the school of business at Duquesne University participated in the experiment. The mean age of the subjects was 20 years. About 52% of subjects were male, and 57% of subjects reported having a part-time job. About 95% of the subjects reported that they enjoyed the experiment or were indifferent, and 4% reported they did not.

### **C. Methodology**

Following the completion of the consent forms, subjects received their \$5 compensation which had been placed in a blank envelope beneath their survey packet. Due to budget restrictions on the project, the money was allocated through a randomized lottery at the end of

the study such that roughly 40% of subjects had the opportunity to leave with the share of the \$5 which they did not donate. The five dollar compensation consisted of four one-dollar bills and four quarters. Next, subjects completed a baseline survey of affect (Positive and Negative Affect Scale scores, adapted from Watson, Clark & Tellegen, 1988). The baseline affect survey has been used in past research to simply ease participants into the emotion elicitation task by instructing them to begin thinking about and feeling emotions (cf. Lerner, Small & Loewenstein, 2004; Small & Lerner, 2008). The survey consists of twenty emotions, both positive and negative, which subjects rate on a scale of 1 (very slightly/not at all) to 5 (extremely) based on how they felt at that time. Following this initial survey, subjects began the “imagination study” in which they watched one of three film clips (sad, angry, neutral) and were asked to imagine themselves in the situations in the clip. For the neutral conditions, subjects were asked to simply watch the clip. In the sadness condition, a scene from *The Champ* showed a young boy grieving over the death of a boxer. In the anger condition, a scene from *My Bodyguard* portrayed a bully scene. Subjects in the neutral condition saw a documentary on the Great Barrier Reef from *National Geographic* (film clips adapted from Gross and Levenson, 1995; Lerner et al., 2004; Winterich et al., 2010). After viewing the clip, subjects wrote about how they would feel if they were in the situation in the clip to create a deeper personal connection. Subjects in the neutral condition wrote about what they had done that day (cf. Lerner & Keltner, 2001). The use of film clips and a writing response has been shown to be a reliable method of eliciting target emotions (Lerner, Goldberg & Tetlock, 1998; Lerner & Keltner, 2001).

Study 2 consisted of the charity letter and the exit survey. Subjects were given two envelopes (labeled “me” and “charity”) along with a charity letter in which they read about a single identified child (name, age picture; Appendix A) or factual information on poverty in the

United States (Appendix B). The child's picture and poverty information was obtained from *Save the Children.org*. Subjects were then asked if they would like to donate any amount of their \$5 compensation by placing a donation into the envelope labeled *charity*; otherwise they could retain any share of the five dollars by placing that amount into the envelope labeled *me*. The exit survey, adapted from Rottenberg, Ray and Gross (in press) asked subjects to rate how they felt during the film clip on a scale of 0 ("not at all/none") to 8 ("extremely/a great deal"). Subjects also answered simple demographic questions such as age and gender, and answered yes/no to "do you have a part-time job" and "did you enjoy this study". The 9-point affect survey consisted of eighteen emotions, of which only two were of primary interest (sad/angry), to further ensure subjects did not know the intention of the emotion elicitation's possible carry-over effects. This scale has been used extensively in past research (see Lerner and Keltner, 2001; Lerner et al., 2004; Small and Lerner, 2008). The exit survey was placed at the end to prevent subjects from thinking about or labeling their emotions felt as a result of watching the film clip (cf. Lerner, Small & Loewenstein, 2004; Lerner & Keltner, 2001). Once subjects completed the exit survey, those with randomly chosen IDs were able to keep the envelope labeled *me*. Forty percent of subjects were randomly chosen to "win" the money they chose to keep in each session.

#### **D. Results**

Subjects' donations ranged from \$0 to \$5 and 97% of all subjects donated some amount of the \$5 compensation. About 70% of all subjects donated the entire \$5. Descriptive statistics on donations across conditions are presented in Table 1. Subjects felt significantly more sad than angry in the sad conditions,  $t(89) = 20.47$  ( $p < 0.001$ ), but did not feel significantly more angry than sad in the anger conditions,  $t(86) = -0.779$  ( $p = 0.438$ ; see Fig. 1). The effect of gender on

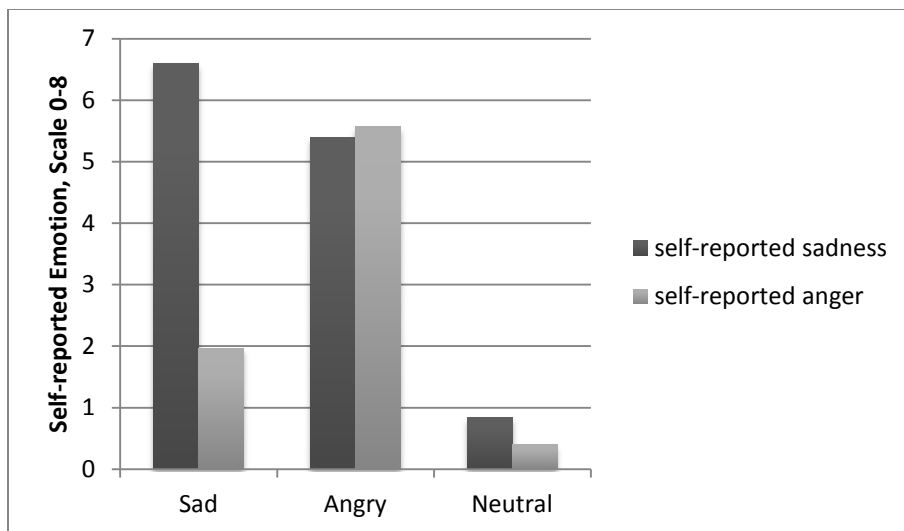


donations was not significant,  $t(225) = -1.599$  ( $p = 0.112$ ). Having a part-time job also did not have a significant effect on donations,  $t(227) = 0.746$  ( $p = 0.457$ ).

Examining the influence of emotion on donations, one-way analysis of variance (ANOVA) revealed a marginally significant effect,  $F(2, 232) = 2.346$  ( $p = 0.098$ ). Post-hoc LSD tests revealed the difference in mean donations between sad and neutral conditions to be

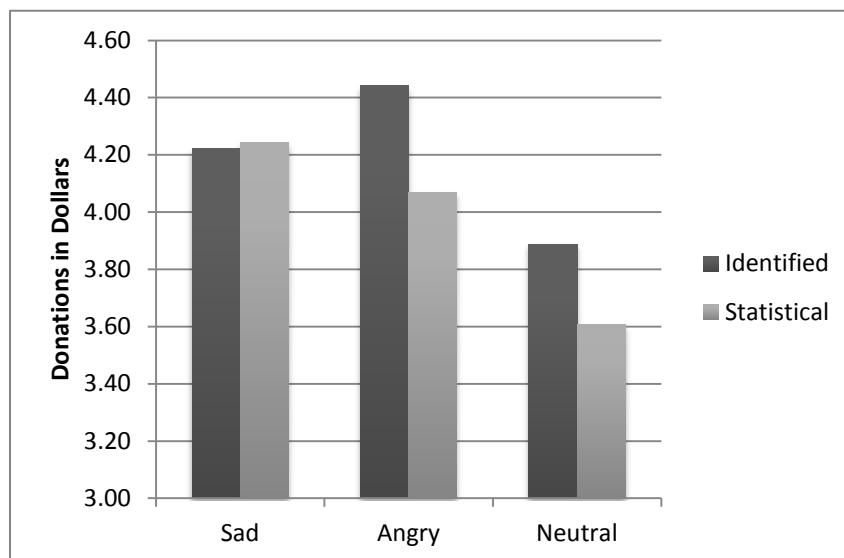
**Table 1. Descriptive Statistics**

Emotion, Victim	N	Mean Donation	Std. Deviation	Std. Error
Sad, Identified	44	4.22	1.319	.199
Sad, Statistical	47	4.24	1.448	.211
Angry, Identified	43	4.44	1.259	.192
Angry, Statistical	44	4.07	1.433	.216
Neutral, Identified	29	3.89	1.674	.311
Neutral, Statistical	28	3.61	2.025	.383
Total	235	4.12	1.505	.098



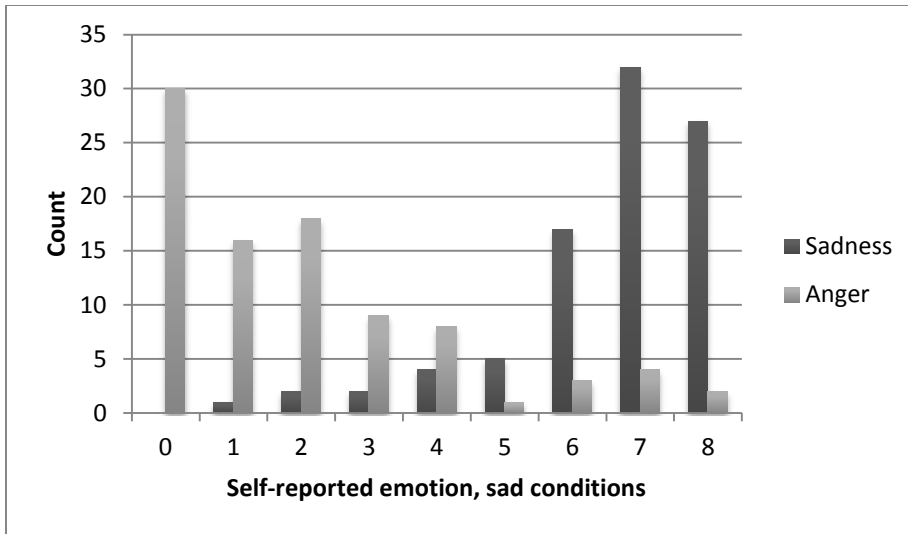
**Figure 1.** Mean self-reported emotion across the three emotion manipulations.

marginally significant ( $p = 0.057$ ), and the difference in mean donations between angry and neutral conditions to be significant ( $p = 0.05$ ). Mean donations in the sad and angry conditions were not significantly different ( $p = 0.931$ ). One way ANOVA between all six conditions revealed an overall insignificant difference in mean donations,  $F(5,229) = 1.305$  ( $p = 0.263$ ), but post-hoc LSD tests revealed a marginally significant difference between the sad and neutral statistical conditions ( $p = 0.076$ ). The difference in donations between the angry and neutral identified conditions was not significant ( $p = 0.126$ ; see Fig. 2 below).



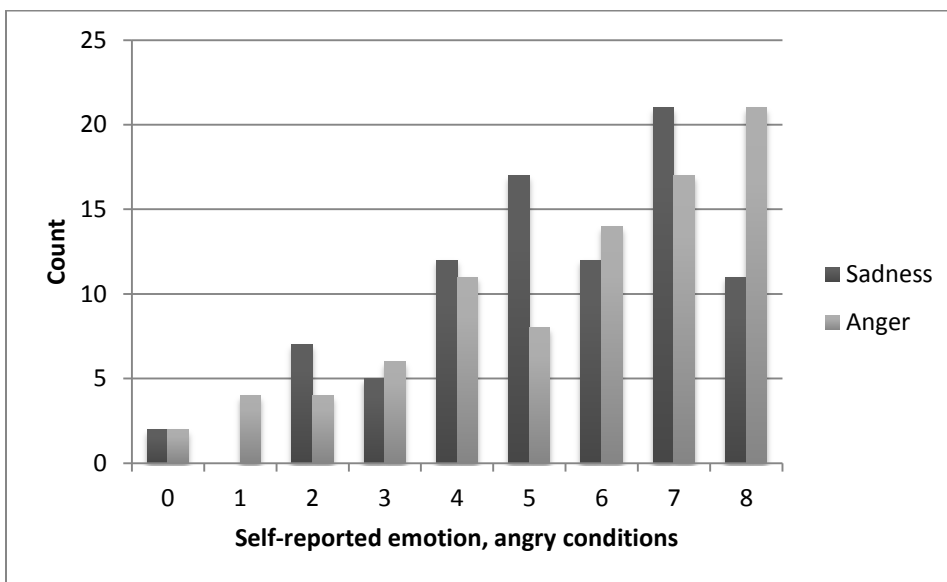
**Figure 2.** Mean donations across all six conditions.

Sadness was cleanly elicited such that the self-reported levels of sadness were significantly higher level than anger, but the same does not hold for anger in the anger manipulations. Subjects felt high levels of sadness and low levels of anger in the sad conditions while subjects felt high levels of both anger and sadness in the anger conditions. Figure 3 shows self-reported sadness and anger within the sad condition.



**Figure 3.** Self-reported anger and sadness within sadness conditions.

Figure 4 shows self-reported sadness and anger across within the anger condition.



**Figure 4.** Self-reported anger and sadness within anger conditions.

In the exit survey, subjects responded to eighteen different emotions of which only two were of primary interest to the current study (i.e. sad/angry). However, it is interesting to note some of the additional emotions felt by subjects, all of which have been studied in similar research. In

addition to sadness and anger, I examined disgust and fear (see Table 2 for mean self-reported levels of emotion).

**Table 2. Mean self-reported emotion in sadness and anger manipulations**

Emotion	Sadness Manipulation Mean	Anger Manipulation Mean
Anger	1.96	5.57
Disgust	1.88	6.06
Fear	2.4	2.95
Sadness	6.6	5.39

Taking into account these other negative emotions, the sad manipulation elicited a more discrete emotion while the anger manipulation appears to have generated an overall negativity.

The results suggest that incidental sadness and anger do indeed increase charitable donations. As hypothesized, sadness increased giving to a statistical victim relative to the neutral condition. Surprisingly, anger did not significantly increase donations to an identified victim relative to the neutral condition. This could be due to a general negativity, or elevated levels of self-reported disgust.

#### **IV. Discussion**

The present research indicates that incidental emotions carry over and influence the decision to donate to a charity. Sad individuals donated more to statistical victims – Americans in poverty – relative to individuals in the neutral condition. This result is supported by an appraisal tendency framework which suggests sad individuals find events caused by situational factors more likely. Interestingly, angry individuals did not donate significantly more than did those in the neutral condition ( $p = 0.126$ ). There was no statistical difference between identified

and statistical victims within any of the emotion manipulations, but this could be due to small samples within each condition.

The emotion elicited in the sad condition was cleaner in that self-reported sadness far exceeded any of the other emotions felt by subjects. However disgust was the highest self-reported emotion felt by subjects in the anger manipulation and there was no significant difference between self-reported anger and sadness. It is interesting to note the high levels of disgust, however, in relation to its associated appraisal characteristics. Disgust, associated with an appraisal of being in close proximity to a disagreeable idea or object, has been shown to be further associated with an appraisal tendency to avert from accepting a new object or idea (Lerner, Small & Loewenstein, 2004). In this way, it could be that subjects, driven by disgust and refusal to accept anything new, are donating a relatively large amount of their \$5 compensation. However, due to increased levels of anger and sadness in addition to disgust, this is a difficult assumption to tease out.

While many economists have been concerned with policies and tax implications relating to charities (e.g. Randolph, 1995; Pélouza & Steel, 2005), relatively few have examined the determinants of charitable giving (e.g. Andreoni, 2006; Karlan & List, 2007). One such contribution in economics has been the “warm glow” theory, which states that individuals may simply gain positive utility from the act of giving (Andreoni, 1990). The current research contributes to our knowledge by finding a determinant of increased donations founded on psychological theory. The current research also contributes an additional application of appraisal tendency theories to an economic decision. Recent behavioral economics has sought to incorporate psychological insights into models and experiments to further understand decision-making (see Camerer, Loewenstein, & Rabin, 2004). This strand of research seeks to bridge the

gap between social sciences to create stronger theories and boundaries for decision-making, and the current research falls into that gap by providing experimental evidence of the influence of sadness and anger on charitable donations.

## **V. Limitations and Extensions for Future Research**

The present research is perhaps most limited by the sample size of subjects. With between 28 and 47 subjects in each of the six conditions, statistical significance could not be attained for all differences. However, it could be argued that the difference in mean donations between subjects in the angry and neutral manipulations shows directional support ( $p = 0.126$ ). Additionally, the difference in mean donations between males and females was also nearing significance ( $p = 0.112$ ). That is, with a larger sample size these differences could perhaps become statistically significant. Moreover, the sample consisted only of college students with mean age of 20 years. This homogeneous sample of students in the school of business is not representative of the general population in terms of demographics. Further research on the present study could utilize a larger, more heterogeneous sample.

In addition to sample size issues, the experiment was conducted in classrooms. This is a limitation due to the threat of peer influences: subjects may not have felt as strongly as they would have in isolation due to potential embarrassment of being visibly upset. Subjects also could have watched their peers placing money into envelopes and been influenced by their donations. Past research using film clips to elicit emotion placed subjects in a small cubicle out of sight of other subjects. This would allow for full privacy in feeling an emotion and in making a decision, conditions which were simply not feasible for the current research.

Given the elevated levels of emotion in the anger condition, the film clip used to elicit anger comes under question. Though past research has used this film clip without reports of elevated levels of other negative emotions, the anger condition in the present research is polluted with emotions such as disgust, sadness and fear. Gross and Levenson (1995) found sixteen film clips which were moderately successful in eliciting discrete emotions. One such film clip was *My Bodyguard*, the clip used in the present research to elicit anger. Gross and Levenson note that anger is a complex emotion and difficult to elicit using a film clip. Though the best film clip tested for eliciting high levels of anger, they also found that subjects reported high levels of disgust and sadness. Instead of a film clip, Gross and Levenson suggest that eliciting anger may require a more personal involvement for subjects. Future research could try to elicit anger using unfair offers to subjects in a dictator game, a procedure employed by Winterich et al. (2010). That is, subjects play a dictator game in which their partner is, unbeknownst to them, the experimenter who offers to give the subjects \$2 and keep \$8. Here the anger is driven by an expectation and norm for fairness in such a decision. Future research could also elicit disgust to examine its influence on giving and contrast that to anger.

## **VI. Conclusion**

The primary goal of this paper was to experimentally examine the influence of emotion on the decision to donate to a charity, thus expanding the scope of the applications of the appraisal tendency framework to another economic decision. Subjects watched one of three different film clips to elicit anger, sadness or a neutral state of emotion. They then read a charity letter displaying either a single child or factual information on poverty in America. Lastly, subjects reported emotions felt during the clip and basic demographic information. It was found

that sad individuals gave more to statistical victims relative to those in the neutral condition. This is supported by the appraisal characteristics of sadness and the tendency to form judgments based on those characteristics. Sadness, associated with relatively less certainty and situational agency, leads to a need to examine information before making a decision. Sadness was discretely elicited, while the anger manipulation elicited a general negativity, with elevated levels of anger, sadness and disgust. Interestingly, the strongest emotion reported by subjects in the anger manipulation was disgust, which is associated with an appraisal tendency to avert from accepting a new object or idea. This could explain the relatively high levels of altruism in the anger conditions (i.e. relative to sadness or neutral).

Future research should further examine the role of disgust in the context of charitable donations. In addition, future research could re-examine anger by using a different method of elicitation.



## VII. References

- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *The Economic Journal*, 100(401): 464-477.
- Andreoni, J. (2006). "Philanthropy," in Handbook of Giving, Reciprocity and Altruism, eds. S-C. Kolm and J. Mercier Ythier, 1201-1269, Amsterdam: North Holland.
- Bodenhausen, G.V. (1993). Emotions, arousal, and stereotypic judgments: A heuristic model of affect and stereotyping. In D.M. Mackie & D.L. Hamilton (Eds.), *Affect, cognition, and stereotyping: Interactive processes in group perception* (pp. 13-37). San Diego, CA: Academic Press.
- Camerer, C., Loewenstein, G. & Rabin, M. (2004). Advances in behavioral economics. New York, NY: Russell Sage Foundation.
- Dickert, S., Namika, S., & Slovic, P (2010). Affective motivation to help others: A two-stage model of donation decisions. *Journal of Behavioral Decision Making*, 24: 361-376.
- Forgas, J.P. (1995). Mood and judgment: The affect infusion model (AIM). *Psychological Bulletin*, 117, 39-66.
- Gross, J., & Levenson, R. (1995). Emotion elicitation using films. *Cognition and Emotion*, 9(1): 87-108.
- Hamilton, D. & Sherman, S. (1996). Perceiving persons and groups. *Psychological Review*, 103(2), 336-355.
- Jenni, K., & Loewenstein, G. (1997). Explaining the identifiable victim effect. *Journal of Risk and Uncertainty* 14, 235-257.
- Karlan, D. and List, J. (2007) Does price matter in charitable giving? Evidence from a large-scale natural field experiment. *American Economic Review*, 97(5): 1774-1793.
- Keltner, D., Ellsworth, P., Edwards, K. (1993). Beyond simple pessimism: Effects of sadness and anger on social perception. *Journal of Personality and Social Psychology*. 64(5): 740-752
- Kogut, T. & Ritov, I. (2005a). The "identified victim" effect: An identified group, or just a single individual? *Journal of Behavioral Decision Making*, 18: 157-167.
- Kogut, T. & Ritov, I. (2005b). The singularity effect of identified victims in separate and joint evaluations. *Organizational Behavior and Human Decision Processes*, 97: 106-116.
- Kuhnen, C. & Knutson, B. (2011). The influence of affect on beliefs, preferences and financial decisions. *Journal of Financial and Quantitative Analysis* 46(3): 605-626.

- Lazarus, R.S. (1991). *Emotion and Adaptation*. New York: Oxford University Press.
- Lerner, J., Goldberg, J.H., & Tetlock, P.E. (1998). Sober second thought: The effects of accountability, anger and authoritarianism on attributions of responsibility. *Personality and Social Psychology Bulletin*, 24, 563-574.
- Lerner, J. & Keltner D. (2000). Beyond valence: Toward a model of emotion-specific influences on judgment and choice. *Cognition and Emotion*, 14(4): 473-493.
- Lerner, J. & Keltner, D. (2001). Fear, anger and risk. *Journal of Personality and Social Psychology*, 81(1): 146-159.
- Lerner, J., Small, D., & Loewenstein, G. (2004). Heart strings and purse strings: carryover effects of emotions on economic decisions. *Psychological Science*, 15(5): 337-341.
- Pelozo, J. & Steel, P. (2005). The price elasticities of charitable contributions: A meta-analysis. *Journal of Public Policy and Marketing*, 24(2): 260-272.
- Raghunathan, R. & Pham, M.T. (1999). All negative moods are not equal: Motivational influences of anxiety and sadness on decision making. *Organizational Behavior and Human Decision Processes*, 79(1): 57-77.
- Randolph, W. (1995). Dynamic income, progressive taxes, and the timing of charitable contributions. *Journal of Political Economy*, 103(4): 709-738.
- Rottenberg, J., Ray, R.R., & Gross, J.J. (in press). Emotion elicitation using films. In J.A. Coan & J.J.B Allen (Eds.), The Handbook of Emotion Elicitation and Assessment. New York: Oxford University Press.
- Schelling, T.C. (1968). The life you save may be your own, in Samuel Chase (Ed.), *Problems in Public Expenditure Analysis*. Washington DC: The Brookings Institute.
- Schwarz, N. (1990). Feelings as information: Informational and motivational functions of affective states. In E.T. Higgins & R.M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 527-561). New York: Guilford Press.
- Schwarz, N., & Clore, G. (1996). Feelings and phenomenal experiences. In E.T. Higgins & A.W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 433-465). New York: Guilford Press.
- Small, D. & Loewenstein, G. (2003). Helping a victim or helping *the* victim: Altruism and identifiability. *Journal of Risk and Uncertainty* 26, 5-16.
- Small, D., & Lerner, J. (2008). Emotional policy: Personal sadness and anger shape judgment about a welfare case. *Political Psychology*, 29(2) 149-168.

- Small, D., Loewenstein, G., & Slovic, P. (2007). Sympathy and callousness: The impact of deliberative thought on donations to identifiable and statistical victims. *Organizational Behavior and Human Decision Processes*, 102: 143-153.
- Smith, C. & Ellsworth, P. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, 48: 813-838.
- Susskind, J., Mauer, K., Thakkar, V., Hamilton, D., & Sherman, J. (1999). Perceiving individuals and groups: Expectancies, dispositional inferences, and causal attributions. *Journal of Personality and Social Psychology* 76(2), 181-191.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211, 453-458.
- Watson, D., Clark, L.A. & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54: 1063-1070.
- Winterich, K.P., Han, S. & Lerner, J. (2010). Now that I'm sad, it's hard to be mad: The role of cognitive appraisals in emotional blunting. *Personality and Social Psychology Bulletin*, 36: 1467-1483.

## Appendix A: Identified Victim Charity Letter



Any money that you donate will go to help Emily, a 2-year-old girl from New Jersey. Emily was displaced by Hurricane Irene and is struggling with poverty. Her life will be changed for the better as a result of your financial gift. With your support, and the support of other caring donors, Save the Children will work with Emily's family and other members of the community to help feed her and provide her with education, as well as basic medical care and hygiene.

## **Appendix B: Statistical Victim Charity Letter**

One in five American children live in poverty – a total of 16 million children going without. Four-year-olds from families affected by poverty are 18 months behind other 4-year-olds developmentally. In poor communities, there is an average of 1 book per 300 kids. Education is one of the most direct and viable pathways out of poverty; yet many of the 2.6 million poor children in rural America lack the literacy skills they need to be successful. With your support, and the support of other caring donors, Save the Children will work with the families of the children living in poverty in the United States to help give them access to education, healthy foods and opportunities to grow up in a nurturing environment.