

On the Influence of Emotion on Decision Making: The Case of Charitable Giving

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Abstract This chapter summarizes and discusses methodologies and findings of recent research focused on the influence of emotion on decision-making in general and charitable giving in particular. Exploring how appraisal theory findings carry over to the decision of charitable giving, we experimentally examine the influence of incidental sadness and anger on charitable donations to an identified or a statistical victim. First, subjects viewed a previously validated 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. Overall, participants in both the sad and angry conditions donated more than participants in the control condition. Sad individuals donated more money to a statistical victim relative to individuals in a neutral condition. This finding is consistent with appraisal-tendency theories. Angry individuals, however, 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.

Keywords Identifiable victim effect · Charitable giving · Incidental emotion · Appraisal tendency framework

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1 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. In the words of Harbaugh et al. ([19], p. 1622), “[t]o economists, charitable giving is a puzzle: Money is good, so why are people willing to give it away?”

It is clear that people give for many reasons, and equally clear that much effort is focused on how to get people to give. The reasons why people give include guilt [5, 30, 50], sympathy and empathy [11, 40, 48], happiness [12, 35], self-therapy [5], and donor (e.g. moral) identity [1]. Cialdini et al. [9] claim that since altruism has reinforcing properties, it is employed by people who wish to make themselves feel better. Increased self-gratification following negative mood priming (e.g. sadness) is mediated by an attempt to comfort oneself, to engage in self-therapy. With regard to donor identity, Aaker and Akutsu [1] argue that there are contexts in which a person thinks of her/himself as a giver (cf. [39, 45]). Referring back to the above list of reasons why people give, there is mounting evidence that spending money (or time through volunteering) on other people has a more positive impact on happiness than spending on oneself [1, 22, 35]. Interestingly, however, Dunn and colleagues [12] show that a significant majority of participants in their study thought that personal spending would make them happier than pro-social spending. In three early studies, Cialdini et al. [9], Cialdini and Kenrick [10] and Baumann et al. [5] explore altruism as hedonism, finding support for a view of adult benevolence as self-gratification. Cialdini and Kenrick primed subjects to think of either depressing or neutral events and subsequently gave them the opportunity to be privately generous. They found that subjects in the most socialized (oldest) group in the negative-mood condition were significantly more generous than subjects in the neutral-mood control group. Thus Cialdini and Kenrick showed the influencing of an action by an idea, a process that has become known as the ideomotor effect. In the same vein of research, Vohs et al. [52], show that study participants primed with money donated significantly less money to a student fund than participants not primed with money. For further insights on ideomotor processes and priming see Vohs et al. [53] and Kahneman [21].

Harbaugh and colleagues [19] discuss two possible motives for charitable contributions: “pure altruism” and “warm glow.” The first motive is satisfied by increases in the public good no matter the source or intent. The second motive is only fulfilled by an individual’s own voluntary donations. The fMRI studies of Harbaugh and his colleagues show that neural activation in very similar areas of the brain increased with the monetary payoff to both the subject and to the charity. They demonstrate that mandatory taxation for a good cause can produce activation in specific areas of the brain associated with concrete, individualistic rewards; that transfers to others are associated with neural activation akin to that of receiving money (rewards) for

oneself. This finding was anticipated by Cialdini and his research associates in the 1970s and 1980s who argued that "... individuals often behave charitably in order to provide themselves with reward" ([5], p. 1039).

Finally, Dickert et al. [11] explored the role of affective versus deliberate information processing in decisions to provide financial aid to people in need. They found that different mechanisms influence the decision to donate money compared to subsequent decisions on how much money to donate. Whereas motivations for mood management were predictive of donation decision, empathic feelings were predictive of the amount.

A key distinction in studies of charitable giving has been made between donations to an identifiable victim versus a statistical victim. Substantial research has focused on how and why donors are affected by the two forms of presenting need, as well as on in what conditions donors may be swayed in either direction. Thomas Schelling first commented on this social phenomenon when he made the distinction between an identified individual and a statistical life. For example, when the media reports on a young girl's need of funds for a life-saving operation, many individuals quickly respond with donations. However, when an announcement is made about a need to fund a hospital, few would act with equal generosity [42]. Within this framework, an identified victim is one whose fate is seemingly certain in the mind of a potential donor in the absence of action. A statistical victim is one whose fate is uncertain as increased funding could represent only a possibility of saving more lives, not a guarantee. Researchers have since expanded on this notion. Small and Loewenstein [47] find support for the identifiable victim effect in the first explicit lab experiment structured as a dictator game with a weak form of identification. Continuing this research, Small and colleagues [48] find that priming a "feeling" mode of thought, one driven first by emotion, as opposed to a deliberative 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 of pleasantness and arousal, a more recent strand of research has shown that not all positive or negative emotions are equal. According to cognitive appraisal theory people extract emotions from evaluations (appraisals) of events in their environment. Smith and Ellsworth [49] experimentally study emotions on eight dimensions (pleasantness, attention, control, certainty, perceived obstacle, legitimacy, responsibility, and anticipated effort), finding that emotions are closely linked to specific cognitive evaluations. For example, if an individual thinks that a negative event is caused by another individual, she will feel anger. In contrast, an individual who sees a negative event as controlled by situational factors will feel sadness. Building on cognitive appraisal theory, the appraisal-tendency framework [8, 18, 32] serves as a framework for distinguishing and predicting the influence of specific emotions on judgment and decision making. The appraisal-tendency framework posits that specific emotions trigger specific cognitive and emotional processes, which delineate the effects of each emotion on decision making [18]. For example, the individual who feels sadness from some negative event will then make a subsequent decision formed by the appraisals which characterize sadness.

This chapter summarizes and discusses methodologies and findings of recent research focused on the influence of emotion on decision-making in general and charitable giving in particular. After reviewing the relevant research, we present the results of an experiment designed to examine the influence of incidental sadness and anger on charitable donations to an identified or a statistical victim. That is, we explore how appraisal theories of incidental sadness and anger carry over to the decision of charitable giving.

2 Review of Key Literature

2.1 *Emotion and Decision-Making*

The early study of decision-making paid rather little attention to the role of emotions. Instead, researchers focused on cognitive errors/biases and heuristics in judgment. More recently, social scientists have turned their attention to the study of emotions, arriving at a granular perspective on emotion and its influence on decision-making. Before reviewing recent research on emotion, it is useful to present the conceptual distinction between emotion, affect, and mood, three terms sometimes used interchangeably for emotional states. Affect refers to a general emotional state without deliberation on cause. It has traditionally been studied in terms of positive and negative valence. Emotion is characterized by a specific cause or behavior, a short duration, and a physiological manifestation. For example, when coming into contact with a grotesque image an individual might feel disgust. When looking away or leaning backwards (physiological manipulation), an individual immediately wishes to reverse the feeling of disgust and thus the emotion does not last. In addition, emotion can be *incidental* or *integral*. Incidental emotions are caused by dispositional factors and are unrelated to the decision faced by an individual. Integral emotions occur at the time of making a decision and are derived from considering the consequence of a decision. Mood, however, is distinguished by its long duration and diffuse cause. For example, an individual might be in an irritable mood for no particular reason, simply feeling vexed by the world in general.¹

The study of incidental emotion and its influence on subsequent decisions has blossomed recently, and results suggest that the carry-over effects of incidental emotions are robust to a variety of judgment scenarios and economic decisions. A number of methodologies have been used to elicit emotion. A frequently-used method involves reading an emotionally-charged scenario and then performing a writing task where participants imagine themselves in the scenario and write about how they might feel. Keltner et al. [24] examined the influence of incidental sadness and anger on causal judgments. In several experiments, subjects were first presented with ambiguous scenarios in order to induce emotion (e.g. the death of a family member to elicit sadness)

¹ On the mapping of the distinction between emotion, affect, and mood, Ryan Kandrack has benefited from personal communication with Dr. Nicole Verrochi Coleman.

and subsequently 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 an individual or a situational cause. Keltner and colleagues find angry individuals likely to blame someone else while sad individuals are likely to find fault with situational factors, results which are consistent with cognitive appraisal theories of emotion [18, 28, 49].

This methodology has been extended to the study of incidental emotion's influence on risk-taking. There is evidence that sad individuals are risk-taking and anxious individuals are risk averse [27, 37]. In addition, fear has been shown to be associated with risk-aversion, while anger has been associated with risk-taking [32, 33]. The results of these studies were instrumental in creating the appraisal-tendency framework (ATF) through which researchers have been able to differentiate specific emotions regardless of valence [18, 32, 33]. The ATF creates an emotion-to-cognition pathway that relies on appraisal dimensions which fuel motivation to appraise, or evaluate, future decisions by using the appraisal dimensions of the specific emotion. Small and Lerner [46] provide an extension of the ATF by examining the effects of incidental sadness and anger on the judgment and justification of a welfare recipient's amount of assistance. Participants in this study 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.

Expanding the range of decision contexts influenced by emotion, as well as the methodologies to induce emotion, Lerner and colleagues [34] examine the impact of incidental sadness and disgust on the endowment effect, a notion that individuals value things they own more than things they do not own. Their experiment crossed an emotion 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 prices. The endowment effect is eliminated in the disgust condition and reversed in the sadness condition.

In daily activities individuals frequently encounter events that trigger emotional responses, many of which occur in succession. Winterich and colleagues [55], following cognitive appraisal theories, utilize film clips to induce different emotions of the same valence in succession to examine the blunting effects of subsequent emotion elicitation. In one study, subjects watch a film clip to induce sadness (*The Champ*) or to induce a neutral state (*National Geographic*). A second study induces anger by assigning subjects as the recipient of an unfair offer (\$8 dictator/\$2 receiver) in a dictator game, and then 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 [33]. The results

suggest that sadness mediates the effect of subsequent anger, and that the reverse also holds.

2.2 Charitable Giving and the Identified Victim Effect

The identified victim effect refers to the propensity of donors to give more assistance to a single, specific, and vivid victim. On the other hand, a statistical victim refers to a large, ambiguously-defined entity (e.g. starving children in Africa). This phenomenon has been attributed to an individual's judgment of the relative size of the reference group given aid [20]. That is, the identified victim is one of one, whereas a statistical victim represents a vaguely defined set. Small and Loewenstein [47] provide the first explicit test of the identifiable victim effect, (1) in a dictator game lab experiment, and (2) in a field experiment where people in an airport terminal were given a chance to donate all or any part of \$5 given to them by the experimenters. The studies employed a weak form of identifiability—determining the victim without providing any personalized information—focusing on determined versus not-yet-determined victims. In both experiments the contributions were larger when the recipients had already been determined than when they were yet to be determined.

Kogut and Ritov [25, 26] study the identifiable/statistical victim phenomenon to examine its boundary conditions and find that a single, identified victim (in this case a child identified by age, name and picture) gains greater contributions than one which is non-identified, but that fully identified groups of children do not gain more than non-identified groups. 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 [17, 51].

Small et al. [48] test the effect of educating people about the inconsistent valuation of lives when considering an identified or a statistical victim. The researchers provide a written explanation of the differences between the two and then present experiment participants with the choice to give. The authors find that providing education on the identifiable victim bias decreased donations to the identified victim, but did not increase donations to the statistical victim. While priming with education was not successful to counter the predispositional bias, there is evidence that priming with an emotional task increases the amount donated [11, 48].

3 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 3×2 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 (cf. [34, 46]). 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 [28, 32–34, 37, 46, 49]. Incidental emotion elicitation has been shown to influence subsequent, unrelated decisions [6, 13, 43, 44]. Those who participated received \$5 compensation. In the second study a short charity letter was presented 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 [11, 48].

4 Propositions

Proposition. 1 Anger is associated with appraisals of increased certainty and human agency. The identifiable victim effect has been shown to be a dispositional bias in decision-making, yielding increased giving to the victim. An individual primed to feel anger will feel more certain of his/her decision, and will also find the plight of the identified victim more likely, which will intensify the identifiable victim effect. That is, individuals in the anger condition are predicted to give more money to an identifiable victim relative to individuals in the neutral condition.

Proposition. 2 Sadness is associated with cognitive appraisals of decreased certainty and situational agency. An individual primed with sadness will therefore require more cognitive processing to make a decision and will find the plight of the statistical victim more likely. Therefore, individuals in the sadness condition are predicted to give more to the statistical victim relative to individuals in the neutral condition.

Proposition. 3 Drawing on earlier research relating altruism and spending money on others to happiness, we expect that participants who donate more to charity will report greater happiness than participants who keep more of the money for themselves. We expect this relationship to hold in all three conditions, and to be most clearly evident in the neutral condition.

5 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.

6 Methodology

Following the completion of 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 (PANAS, adapted from Watson et al. [54]). 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. [34, 46]). The survey consists of twenty emotions, both positive and negative, which the subjects rate on a scale of one (very slightly/not at all) to five (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, a documentary on the Great Barrier Reef from *National Geographic*. 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 (the film clips were adapted from [16, 34, 55]). After viewing the clip, subjects wrote about how they would feel if they were in the situation in the clip in order to create a deeper personal connection. Subjects in the neutral condition wrote about what they had done that day (cf. [33]). The use of film clips and a writing response has been shown to be a reliable method of eliciting target emotions [31, 33].

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) or factual information on poverty in the United States. 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 et al. [41], asked subjects to rate how they felt during the film clip anchored on 0 (“not at all/none”) to 8 (“extremely/a great deal”). The survey consisted of eighteen emotions, of which only three were of primary interest (sad, angry, and happy). This scale has been used extensively in past research (see [33, 34, 46]). These survey questions were asked toward the end of each session to prevent subjects from thinking about or labeling their emotions felt as a result of watching the film clip (cf. [33, 34]). 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”.

Once subjects completed the exit survey, those with randomly chosen participant IDs were able to keep the envelope labeled *me*. Forty percent of subjects were randomly chosen to keep the money they chose not to donate.

7 Results

The 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 Tables 1 and 2. Overall, participants in both the sad and angry conditions (identified and statistical victims), donated marginally more than participants in the neutral condition; $t(95) = 1.704$ ($p = 0.092$) and $t(95) = 1.770$ ($p = 0.080$), respectively. Note that the degrees of freedom in each case reflect unequal variances. Given the relatively high mean donations, Table 2 summarizes the proportions of participants in the various categories who donated the full \$5 amount, along with the proportions of participants who donated half or less ($\leq \$2.50$) of the received payment. The highest proportion of full-amount-donors is associated with the angry-identified (81.40%) and sad-statistical (76.60%) conditions. This donating behavior provides directional (but not statistically significant, $\chi^2 = 1.315$, d.f. = 1, $p = 0.251$) support for our expectation

Table 1 Descriptive statistics of overall donations

Emotion, Victim	n	Mean Donation	Standard Deviation	Standard Error	Coefficient of Variation
Sad, Identified	44	4.22	1.319	0.199	0.312
Sad, Statistical	47	4.24	1.448	0.211	0.341
Angry, Identified	43	4.44	1.259	0.192	0.284
Angry, Statistical	44	4.07	1.433	0.216	0.352
Neutral, Identified	29	3.89	1.674	0.311	0.431
Neutral, Statistical	28	3.61	2.025	0.383	0.561
Total	235	4.12	1.510	0.099	0.367

Table 2 Proportion of participants donating all versus half or less

Emotion, Victim	n	Donated Full Amount (%)	Donated Half or Less (%)
Sad, Identified	44	68.18	15.91
Sad, Statistical	47	76.60	17.02
Angry, Identified	43	81.40	11.63
Angry, Statistical	44	63.64	18.18
Neutral, Identified	29	65.52	31.03
Neutral, Statistical	28	64.29	32.14
Total	235	70.64	19.57

that, relative to the neutral condition, angry individuals will contribute more to identified victims and sad individuals more to statistical victims. The highest proportions of participants who donated \$2.50 or less are associated with the neutral-statistical (32.14 %) and neutral-identified (31.03 %) conditions. These two proportions clearly differ from the proportions in the other four conditions, as reflected in the noticeably higher coefficients of variation 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 angry 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 ($p = 0.098$). Post-hoc LSD tests revealed the difference in mean donations between sad and neutral conditions to be marginally significant at 5 % ($p = 0.057$), 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).

A further dissection of how cleanly the various emotions were elicited helps us understand why our results were not as strong as expected. Sadness was cleanly elicited such that the self-reported levels of sadness were significantly higher than the anger level, but the same does not hold for anger. 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 angry conditions. Figure 3 shows self-reported sadness and



Fig. 1 Mean self-reported emotion across the three emotion manipulations

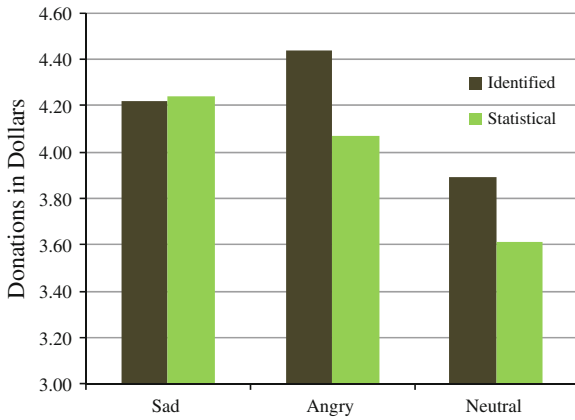


Fig. 2 Mean donations across all six conditions

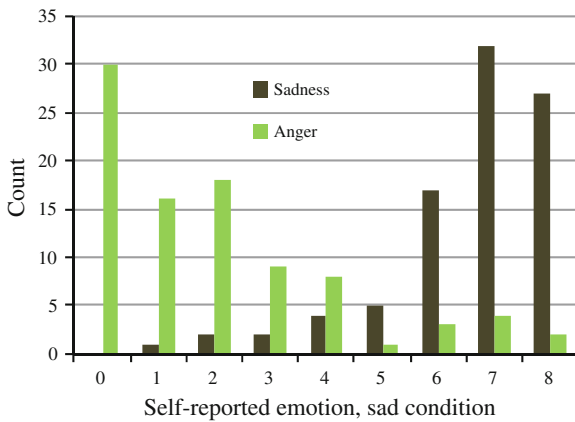


Fig. 3 Self-reported anger and sadness; sad condition

anger within the sad condition, whereas Fig. 4 shows self-reported anger and sadness in the angry condition.

In the exit survey, subjects responded to eighteen different emotions of which only three were of primary interest to the current study (i.e. sad, angry, and happy). However, it is interesting to note some of the additional negative emotions felt by the subjects, all of which have been studied in similar research. In addition to sadness and anger, we examined disgust and fear (see Table 3 for mean self-reported levels of emotion). Taking into account the additional negative emotions, the sad manipulation elicited a more discrete emotion while the anger manipulation appears to have generated an overall negativity, with elevated levels of disgust, anger, and sadness.

As proposed, sadness increased giving to a statistical victim relative to the neutral condition. Surprisingly, anger did not significantly increase donations to an identified

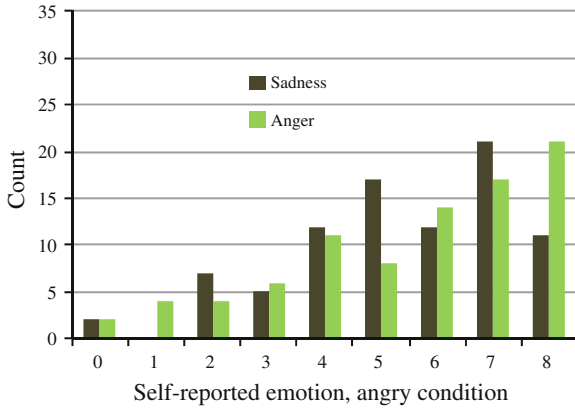


Fig. 4 Self-reported anger and sadness; angry condition

victim relative to the neutral condition. This could be due to a general negativity, characterized by multiple high-scoring components. Although no statistical significance was attained in the anger/identified victim condition, a case could be made that there is “practical” significance in that individuals in this condition averaged \$0.20 more in donations than donors in any other condition (see Table 1).

With respect to the relationship between giving to others and happiness, we expected that participants who donate more to charity will report greater happiness than participants who keep more of the money for themselves. Our proposition—largely an extension of the above general tendency—was that this relationship would hold in all three conditions (sad, angry, and neutral), and be most clearly evident in the neutral condition. As illustrated in Table 4, we observe an unexpectedly complex pattern. In accordance with our expectations, the correlation between amount given to charity and happiness was indeed positive and marginally significant in the neutral condition. This is consistent with earlier findings. However, the correlation coefficients in the angry and sad conditions are near zero and strongly negative, respectively. The induced sadness seems to have trumped any happiness stemming from giving-to-others, whereas the induced anger largely seems to have mitigated that happiness (cf. [55]). Lerner and colleagues [34] report a similar finding with

Table 3 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	2.40	2.95
Sadness	6.60	5.39

Table 4 Correlation coefficients relating amount given to charity and happiness for three induced conditions: sad, angry, and neutral

	Happiness	n	t	p
S_i and S_s	-0.3323	89	-3.286	0.0015
A_i and A_s	0.0340	87	0.314	0.7545
N_i and N_s	0.2452	57	1.876	0.0660

regard to the endowment effect, as discussed earlier, as in the case of disgust² the endowment effect is eliminated, whereas in the sadness case the endowment effect is reversed. A similar phenomenon is reported by Baumann et al. [5] who observed that for participants in a sad mood, altruistic activity canceled the enhanced tendency for self-gratification. All in all, these reversals illustrate that emotions of the same valence can have dissimilar effect (Table 4).

8 Discussion

We find support for our claim that incidental emotions can influence the decision to donate to a charity, that despite the fact that the two emotions elicited in our experiment were not equally unambiguous. The emotion elicited in the sad condition was clean in that self-reported sadness far exceeded any of the other emotions felt by the subjects. In contrast, 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. However, it is interesting to note the high levels of disgust 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 [34]—in the present case the \$5 compensation for themselves. However, due to increased levels of anger and sadness in addition to disgust, this is a difficult assumption to tease out. Clearly, the development of methods used to induce specific emotions is in its infancy, albeit a promising one, and much additional work is necessary.

While many economists have been concerned with policies and tax implications relating to charities (cf. [36, 38]), relatively few have examined the determinants of charitable giving (e.g. [3, 23]). One such contribution in economics has been the “warm glow” theory, which states that individuals may simply gain positive util-

² Interestingly, disgust and anger—used in our study—are located in close proximity to each other in Smith and Ellsworth’s [49] plot of 15 emotions where the vertical axis ranges from Situational to Human Control and the horizontal axis ranges from Other-Responsibility/Control to Self-Responsibility/Control. Both emotions are located in the Other-Responsibility/Control-Human Control quadrant.

ity from the act of giving [2]. 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 research has sought to incorporate psychological insights into models and experiments to further understand decision-making (see [7]). This strand of research seeks to bridge the gap between social sciences to create stronger theories and expand the boundaries for decision-making. The current research supports those goals by providing experimental evidence of the influence of sadness and anger on charitable donations.

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 ($p = 0.126$), and with a larger sample could attain some level of statistical significance. Similarly, the difference in mean donations between males and females was also nearing significance ($p = 0.112$). Importantly, the sample consisted only of college students with an average age of 20 years. This homogeneous sample of business school students is not representative of the general population in terms of demographics. The subjects' age may indeed matter. Baumann and colleagues [5] note that with increasing age, helping becomes a progressively greater response of subjects. In contrast, saddened young children engage in a higher degree of helping (compared to neutral mood controls) only when it leads to external (social) reinforcement. Also, it has been suggested that a person's field of study in itself may influence social behaviors like cooperation and views on altruism [14, 15, 29]. Also on these fronts there is ample room for further 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 [16] 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, and also found that subjects reported high levels of both 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 (rigged) offers to unknowing subjects in a dictator game, a procedure employed by Winterich et al. [55]. This method of eliciting anger has been successfully employed, resulting in a purer emotion compare to that/those induced by a film clip.

Future research should further examine the role of disgust and possibly moral outrage [4] in the context of charitable donations. In addition, future research should consider the effects of systematic processing and uncertainty associated with sadness related to the decision to give to an identified or statistical victim, possibly by inducing cognitive load prior to making the decision. We sense research opportunities in today's emotionally-charged political environment. For example, what would happen

if an organization like Save the Children were to air a solicitation message after a polarizing political advertisement? Such a laboratory or field experiment could serve as a managerial or practical extension of the current research.

9 Conclusion

The present research indicates that incidental emotions carry over and influence the decision to donate to a charity, a finding that resonates with the appraisal tendency framework and extends the applications of the framework to a new decision environment. 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 that sad individuals find events caused by situational factors more likely. Interestingly, angry individuals did not donate significantly more to an identified victim than did those in the neutral condition, although their contributions were larger than those of any other group in the experiment. Moreover, the identified victim effect was eliminated in the sad manipulation. This could be due to increased systematic processing associated with sadness. That is, individuals may read the description of the identified victim and think more about the plight instead of immediately making a donation. Likewise, sad individuals may see the description of the statistical victim and, instead of being distracted by the vague statistics, consider that this is indeed a victim which deserves aid. The elimination of the identified victim effect could also be due to the associated uncertainty. These issues merit future consideration.

While we found an expected positive relationship between the amount of money given to others and happiness, we also found no relationship between giving-to-others and happiness in the angry condition, and a strong negative relationship in the sad condition. While other researchers also have found reversals of established effects, e.g. the endowment effect, among subjects primed to be sad, collectively these reversals reveal how complex the impact of emotions are in diverse decision making and judgment contexts.

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