Exogenous Self-Blame Modulates Charitable Giving

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Abstract

The current study used a real-time interactive "advisor-decider" task, in which advice given by one participant results in an onerous workload for another participant, to show that self-conscious affect based on performance in one domain shapes decisions to engage in prosocial behavior in an unrelated domain: Advisors that performed at or worse than the norm, in terms of giving incorrect advice, made more frequent subsequent charity donations. Intriguingly, when advisors were given social information about their performance relative to the norm, this pattern was reversed, such that advisors that performed worse than the norm made less frequent donations. We interpret this finding as reflecting a shift in the emotion driving the behavior, from guilt to shame. Consistent with this interpretation, trait measures of guilt proneness but not of shame proneness predicted an increase in both the probability and magnitude of donations. This work provides important empirical evidence for the role of self-conscious emotions and social conformity in prosocial behavior.

Keywords: guilt; social norms; prosocial behavior; charitability

Introduction

Substantial evidence suggests that guilt – a self-conscious emotion that involves negative feelings about having broken a social or moral norm (Leith & Baumeister, 1998; Tangney, 1990; Tangney, Miller, Flicker, & Barlow, 1996) – mediates prosocial behavior (e.g., Ketelaar & Tung Au, 2003; Ty, Mitchell, & Finger, 2017). However, such demonstrations often employ autobiographical recall and self-reports to establish guilt (e.g., Polman & Ruttan, 2012), which poses significant threats to construct validity. Other studies have used hypothetical monetary outcomes (e.g., De Hooge, Zeelenberg, & Breugelmans, 2007), or outcomes based on experimental endowments (e.g., Polman & Ruttan, 2012), which introduces confounds in terms of well-established heuristics and biases (Weaver & Frederick, 2012; Xu, Pan, Qu, Fang, Yang, Yang, ... & Rao, 2018). Finally, research on guilt and charitability has mainly focused on the effects of *endogenous guilt* – assessing the influence on an individual's behavior in situations that are related to the emotion-eliciting event (e.g., Ty, Mitchell, & Finger, 2017). The current study employed a real-life guilt-inducing interaction between participants, without experimental deception, to evaluate the influence of guilt on subsequent decisions to donate time & effort to gain money for real-life charities. Thus, the study assessed whether *exogenous guilt* (i.e., guilt based on performance in an unrelated domain), would influence subsequent decisions to engage in prosocial behavior.

Unlike acute guilt-eliciting events, guilt and shame *proneness* refer to the predisposition of experiencing such emotions after committing a transgression (Cohen, Panter, & Turan, 2012). While guilt involves a focus on the emotion-eliciting behavior, shame focuses on the individual, such that the transgressor believes that their action is a representation of who they are as a person (Tangney, 1990). Previous research has found that guilt tends to motivate apologizing and repairing (Tangney, 1990), while shame appears to make people feel more isolated and inferior to others, feeling more compelled to remove oneself from the situation and less inclined to confess (Tangney et al., 1996). Here, we hypothesized that guilt proneness would increase prosocial behavior, but that shame proneness would have the opposite effect.

Importantly, both guilt and shame have been argued to help individuals to align with social norms of morality and competence (Abell & Gecas, 1997). Specifically, whereas guilt seems to derive from a commitment to social norms; shame appears to be more related to finding oneself to be deficient or incompetent relative to established norms, being concerned about social disapproval, and involving a threat to one's ethical identity (Abell & Gecas, 1997; Harris, 2019). Given the close relationship between self-blaming emotions and social norms, our study included an assessment of how learning about one's performance compared to the norm modulates the influence of self-blaming emotions on decisions to donate.

Methods

Participants

Two hundred and forty participants (103 female, mean age 37.90 ± 11.86) completed the study on Prolific (www.prolific.com). Data from thirty participants was initially collected for each of six groups (i.e., 180 participants). The sample size was determined by the number of participants needed to detect a 0.5 correlation with 80% power (Bujang & Baharum, 2016). To further divide the two groups from the social information condition by performance relative to the social norm in the correlation analyses, data

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was collected from thirty additional participants for each of those two groups (i.e., 60 additional participants). Participants were paid $5 for thirty minutes of participation. Moreover, they had the option to complete additional tasks to gain money for charity, without direct monetary compensation for themselves. All participants gave informed consent and the Institutional Review Board of the University of California, Irvine approved the study.

Tasks & Procedure

At the start of the study, participants completed a questionnaire assessing Self-Conscious Affect (Tangney, Dearing, Wagner, & Gramzow, 2000) in which they were presented with eleven negative daily-life scenarios and given a set of possible responses. For each possible response, participants rated how likely they were to react or feel that way, and these ratings yield scores – ranging from 11 to 55 – of guilt proneness, shame proneness, externalization, and detachment. Following completion of the questionnaire, participants proceeded to the interactive Guilt Induction Task described below.

Guilt Induction Task Acute guilt was induced using an interactive dot task, based on Yu, Hu, Hu, & Zhou (2014) and Zhu, Feng, Zhang, Mai, & Liu (2019). Participants were grouped into pairs, and randomly assigned a role within the pair as Advisor or Decider. In each round of the task, both participants in a pair saw a white screen with black dots for 1.5 seconds and were asked to estimate how many dots were presented. In half of the rounds the Decider had to arrive at a decision on their own; in the other half, the Advisor would indicate to the Decider what they believed the correct decision to be, and the Decider had to submit that advice as their response. Critically, each incorrect response provided by the Advisor and submitted by the Decider forced the Deciders to complete three additional rounds of the task on their own once the initial rounds were completed. The degree of guilt experienced by the Advisor was assumed to increase with the number of incorrect advice trials.

Participants were assigned to one of three different conditions (Easy, Hard, or Hard & Social Information). In the Easy condition, participants had to determine whether the number of dots was below or above 20. In the Hard conditions, participants had to select if the number of dots were exactly 17, 19, 21, or 23. The number of dots were set across rounds with and without advice such that the difficulty of the task was the same for both participants in a pair. Performance in the Easy and Hard conditions was calibrated using a separate cohort of participants (n=48), to ensure low and high rates of incorrect advice, respectively. Finally, in the Hard & Social Information (HSI) condition, at the end of the 30 interactive rounds of the dot task, the participants were provided with the average number of incorrect advice trials given by the thirty Advisors in the Hard condition.

Once the interactive rounds were completed, participants in all conditions were told how many incorrect advice they gave or received, and how many extra rounds the Decider would have to complete. On the same page, participants were asked to describe how they would characterize their performance as Advisor (or the Advisor's performance in the case of the Deciders), on a five-point Likert scale ranging from "Very poor" to "Very good". [1] The Advisor was then free to move on to the subsequent Charity Commitment Task (described in the next subsection), while the Decider had to complete *n* additional dot estimation rounds by themselves, where *n* was 3 times the number of incorrect advice (i.e., anywhere between 0 and 45 extra rounds), before proceeding to the Charity Commitment Task.

Charity Commitment Task Consistent with previous work (e.g., Böckler, Tusche, & Singer, 2016), we operationalized prosocial behavior as charitable giving. In a charity commitment task, illustrated in Figure 1, participants were presented with the name, an image, and mission of 20 real charities, one per round. In each round participants had to decide whether they wanted to spend extra time at the end of the study to earn money for the presented charity. They were instructed that to earn money for the charity they would have to perform Slider Tasks (described in the next subsection). Participants entered a number between 0 and 20, referring to the number of Slider Tasks they were willing to complete. For each completed Slider Task, they could earn $1 for the charity. Participants were informed that only one of the twenty rounds would be randomly selected, and they would be asked to complete the number of Slider Tasks they had committed to in that round. All donations were translated into monetary amounts and sent to the relevant charities.

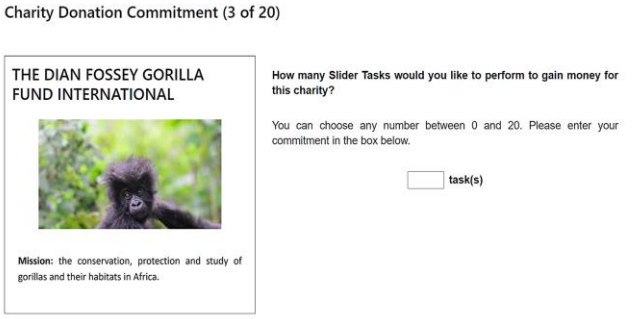

Figure 1: A Round of the Charity Commitment Task. On the left side of the screen participants saw the charity's name, picture, and mission. On the right side of the screen, participants had to enter a number from 0 to 20 indicating how many "Slider Tasks" they were willing to perform to gain money for the presented charity.

[1] Due to an error in the code, participants were not able to select the option "Very Good". Only two participants reported this error.

Following completion of the Charity Commitment Task, participants were thanked for their participation, informed which charity had been chosen and the number of Slider Tasks they had committed to that charity. They were reminded that they would not receive any additional monetary compensation for the time they spent completing the Slider Tasks, but that they would be donating their time and effort to gain money for the charity.

Slider Task In order to donate time and effort, on each "Slider Task", participants were presented with five sliders positioned randomly across the screen. All sliders began with their value set at zero (left of the slider), and participants had 30 seconds to move all values to fifty (middle of the slider). If all sliders had a value of fifty when the timer ran out, the participant would earn $1 for the selected charity. Participants could complete up to 20 Slider Tasks, with the position of the sliders on the screen being random at the beginning of each task. See Figure 2 for an illustration of the task. To make sure that they understood what they were committing to, all participants were allowed to complete one "practice" Slider Task prior to the Charity Commitment Task.

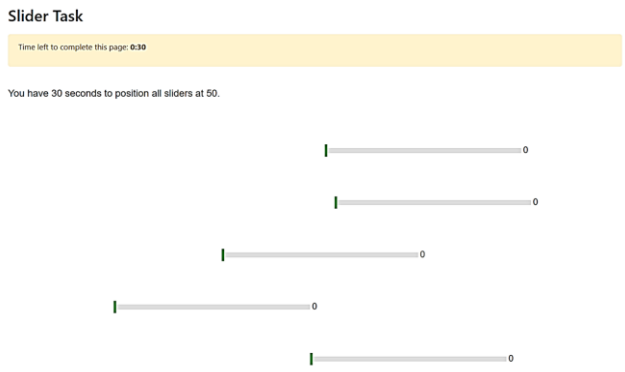

Figure 2: A Slider Task. Participants were presented with five sliders randomly positioned across the screen and had 30 seconds to change all slider values from 0 to 50. The position in which the sliders appeared on the screen changed in every task.

Statistical Analyses

All statistical analyses were implemented in JASP, MATLAB, and G*Power. As criterion check, a two-way ANOVA compared the objective performance in the Guilt Induction Task as a function of role (Advisor vs. Decider) and condition (E, H, HSI). For the main analysis, two two-way analyses of variance (ANOVA) were performed to compare the mean difference in (i) proportion of donations (i.e., number of rounds in the Charity Commitment Task in which participants entered a positive donation over the total number of rounds) and (ii) average magnitude of donations on rounds with a donation (i.e., average number of Slider Tasks across rounds with donations), by Advisors in the Hard and Hard & Social Information groups, and with participants further divided into subgroups based on their performance relative to the norm (Better vs. At/Worse). The same two ANOVAs were also performed for the Deciders' data.

In addition, correlation analyses using Pearson's r were performed assessing the relationship between proportion and magnitude of donations by Advisors and the objective and rated advisor performance (the Likert scale was converted to numeric values from -1 to 2, where a higher value indicated worse rated performance), in the E group, H group, HSI Better than Norm subgroup, and HSI At/Worse than Norm subgroup. Finally, Pearson's r were computed between proportion and magnitude of donations, and the measures of guilt and shame proneness, collapsing the data of all participants, including both Advisors and Deciders. Due to their partial conceptual overlap, guilt proneness was partialed out of shame proneness and vice versa (Tangney, 1990; Leith & Baumeister, 1998). Confidence intervals (CI) based on 10000 bootstraps and post hoc power are presented in the correlation analyses when informative.

Results

The criterion check confirmed condition (E, H, HSI) had a significant effect on objective performance ($F(2,234)=56.9$, $p<0.001$, $\eta^2=0.324$), but there was no effect of role ($F(1,234)=1.21$, $p=0.27$) and no significant interaction ($F(2,234)=0.81$, $p=0.45$). The mean number of incorrect advice were 4.53 (0.41) in the Easy group, 8.13 (0.53) in the Hard group, and 7.95 (0.34) in the HSI group. The mean number of incorrect decisions by Deciders were 4.27 (0.40) in the Easy group, 8.9 (0.44) in the Hard group, and 8.57 (0.31) in the HSI group. Post-hoc comparisons confirmed no significant differences between Advisor and Decider performance within the same condition, no significant difference in participant performance in the H and HSI conditions, and better performance of participants in the E condition that in either of the Hard conditions.

Advisors

Of primary interest was whether objective performance on the advising task would modulate the tendency of Advisors to donate in the subsequent charity task, even though the tasks were independent with respect to the Decider, the presumed object of the Advisor's guilt. Moreover, we expected that knowledge about the performance of other Advisors would modulate these effects.

First, the ANOVA with Social Information (H vs. HSI) and Performance Relative to the Norm (Better vs. At/Worse) as factors yielded a significant interaction, such that the proportion of donations was greater in Advisors that performed worse relative to the norm than in Advisors that performed better than the norm when no norm information was provided, while the proportion of donations was smaller in Advisors that performed worse relative to the norm than in Advisors that performed better than the norm when Advisors were informed about their performance relative to the norm ($F(1,86)=4.05$, $p<0.05$, $\eta2=0.043$; see Figure 3). Post-hoc comparisons revealed the only significant difference to be

between the H At/Worse than Norm and HSI At/Worse than Norm subgroups (t(54)=2.6, ptukey=0.052). Regarding the ANOVA comparing the average magnitude of donations, there were no significant effects.

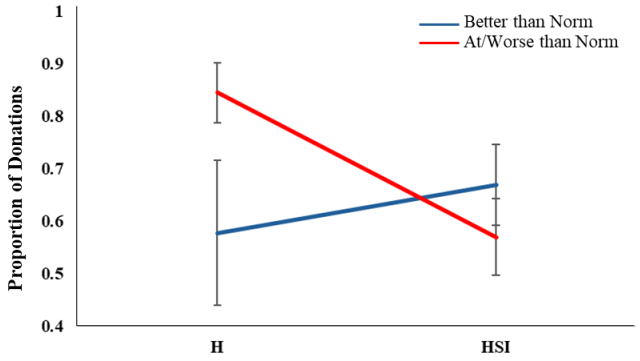

Figure 3: Mean proportion of rounds in which Advisors donated, given their objective performance and their knowledge about their performance relative to the social norm. Error bars = SE

Second, in the Hard group, an increase in the number of incorrect advice predicted an increase in the number of subsequent, independent, donations (r=0.38, p<0.05, 95% CI = [0.02, 0.67]). Notably, a trend in the opposite direction was observed for the magnitude of donations, which decreased as the number of incorrect advice increased (r=-0.21): though this latter correlation did not reach significance (p=0.29), the correlation coefficient, going in the opposite direction, was significantly different from that involving the proportion of donations (p<0.01). In the Easy group, the magnitude of donations significantly decreased with a decrease in self-rated performance (r= -0.45, p<0.03, 95% CI= [-0.65, -0.21]), such that Advisors donated less the worse they perceived their own performance. A similar, though non-significant, trend was observed for the objective performance (r= -0.33, p<0.11, post hoc power = 0.44). Finally, the group receiving social information about their peers' performance (HSI) was further divided according to their performance relative to the social norm (Better vs. At/Worse). The only correlations that showed a trend were between the magnitude of donations and performance, specifically for Advisors that performed better than the social norm. However, these trends did not reach significance (r=0.27, p=0.22 for objective performance; r=0.33, p<0.14 for self-rated performance). Interestingly, the difference between the correlation coefficients for magnitude of donations and self-rated performance between the Better (r=0.33, p<0.14) vs. At/Worse (r= -0.13, p<0.52) subgroups has a p<0.10 and post hoc power of 0.39, suggesting a potential difference that might have not reached significance due to lack of power. All Pearson's correlation coefficients are presented in Table 1.

Table 1: Correlations between objective and rated performance and donation decisions for Advisors. The HSI group is further divided based on performance relative to the norm (Better vs. At/Worse). *p≤0.10, **p≤0.05.

	Prop. of Donation	**Magn. of Donations**
Number Incorrect Advice		
E (n=30)	-0.13	-0.33
H (n=30)	**0.38****	-0.21
HSI Better (n=25)	0.14	0.27
HSI At/Worse (n=35)	-0.18	-0.10
Rated Advisor Performance		
E (n=30)	-0.17	**-0.45****
H (n=30)	0.21	-0.24
HSI Better (n=25)	0.14	0.33
HSI At/Worse (n=35)	-0.05	-0.13

Deciders

Of primary interest was to test whether the results shown in Figure 3 were replicated for the Deciders. Similar results would imply that Advisors' behavior was not driven by self-blame as hypothesized. As predicted, the ANOVA comparing the proportion of donations by Deciders, with Social Information (H vs. HSI) and Advisor Performance Relative to the Norm (Better vs. At/Worse) as factors, yielded no significant effects ($F(1,86)=0.004$, $p=0.947$, $\eta 2=0.00$). The ANOVA comparing the average magnitude of donations also showed no significant effects.

Self-Conscious Traits

Table 2 shows the Pearson's r correlation coefficients between guilt and shame proneness and the donation decisions, grouping all participants. Guilt proneness showed a positive correlation with both the proportion of donations (r=0.25, p<0.001, 95% CI= [0.11, 0.38]) and the magnitude of donations (r=0.17, p<0.02, 95% CI= [0.05, 0.29]).

Table 2: Correlation between Trait Measures and Donation Decisions (n=240). *p≤0.10, **p≤0.05, ***p≤0.01

	Prop. of Donations	**Magn. of Donations**
Guilt Proneness	**0.25*****	**0.17****
Shame Proneness	-0.05	0.00

Discussion

This study assessed the relationship between self-conscious affect, social information, and charitable donations. Participants completed one of three conditions of an interpersonal task in which the decisions of one of the members of the pair (Advisor) could negatively impact the other person (Decider) but not themselves. Whereas an Easy (E) condition had a low probability of error, so that no negative self-conscious emotion would be elicited, the Hard (H) condition was designed to generate high levels of Advisor errors and corollary guilt experienced by the Advisor. Lastly, the Hard & Social Information (HSI) condition had the same level of difficulty as the H condition, but the emphasis was shifted from the Advisors' behavior having a negative effect on the Decider, to how the Advisors' performance compared to that of other Advisors.

Advisor participants that performed worse than the norm donated more when they did not know how other Advisors performed than when that information was provided. The lower prosocial behavior seen in participants that learned they performed worse than the social norm can be interpreted in two different ways. Participants might have changed their reference point about what a poor performance consisted of. The distance between the number of incorrect responses they gave and what they thought was expected of them might have shrunk, implying they caused the Decider less harm than originally thought and, therefore, felt less guilty. Another interpretation is that, when learning about the social norm, feelings of guilt were exceeded by feelings of shame, which have been related to finding oneself to be incompetent relative to established norms (Abell & Gecas, 1997). In a study by Ibanez & Roussel (2021), results pointed towards feelings of shame reducing average donations towards a non-governmental organization. In the present study, feelings of shame might have decreased the probability of making a donation. De Hooge, Breugelmans, & Zeelenberg (2008) made the distinction between endogenous and exogenous influences of shame on behavior. Endogenous shame led to higher prosocial behavior in a social dilemma game, with participants classified as proselfs – having an overall tendency to be more selfish or individualistic (vs. prosocial) – contributing more to their interaction partners. Their study, however, found no evidence of exogenous shame promoting prosocial behavior. An exogenous influence of shame implies the person has removed themselves of the situation that elicited the emotion, so, by definition, one of the action tendencies underlying shame (i.e., to withdraw) is already satisfied, which might explain the difference in prosocial behavior between endogenous vs. exogenous shame (De Hooge, Breugelmans, & Zeelenberg, 2008). In our work, as participants ended the interaction with the partner and moved to the Charity Commitment Task, they were removed from the emotion-eliciting event, thus the influence of shame on behavior would be considered exogenous. Further support for the second interpretation (i.e., that there was a change in the emotion driving the behavior), can be found in that correlations from the HSI At/Worse than Norm subgroup had a negative trend – the worse the Advisors performed (i.e., the higher the difference between own performance and the social norm performance), the less prosocial behavior –, while correlations from the HSI Better than Norm subgroup had a positive trend – the closer the Advisor's performance to the social norm (i.e., the lower the difference between social norm performance and own performance), the more prosocial behavior –. However, these correlations were based on small groups and did not have sufficient power, so the results can only be taken as preliminary evidence. Important to mention is that the behavioral pattern found for the Advisors' donation decisions was not found for the Deciders, suggesting self-blame as a core modulator for prosocial behavior. Had the Deciders shown the same pattern of decisions, the motivating factor for Advisors could have not been interpreted as acute self-blame.

To continue, the number of incorrect advice had a moderate positive correlation with the proportion of donations by Advisors in the Hard (guilt-eliciting) condition. This points to exogenous feelings of guilt increasing the probability that a person would donate, consistent with Hibbert et al. (2007), where the level of endogenous guilt a participant felt was positive related to a participant's self-report of how likely they were to donate. While guilt increased the proportion of donations, it showed a tendency to reduce the magnitude of donations, suggesting, perhaps, a compensatory mechanism. Intriguingly, Polman & Ruttan (2012) found that participants in an exogenous guilt, vs. neutral, condition donated more money to cancer research; however, their study involved a one-shot decision, so a compensatory mechanism was not possible.

Unlike acute feelings of guilt, guilt proneness was positively correlated with both the proportion of donations and the magnitude of donations. Guilt proneness has been positively linked to a cognitive component of empathy, perspective taking, both as measured by Davis (1983)'s Interpersonal Reactivity Index and by an experimental, behavioral measure involving autobiographical narratives (Leith & Baumeister, 1998). People higher in guilt proneness might have been better able to focus on the needs of the populations served by the charities (perspective take), leading to a higher expected probability of feelings of guilt if one did not help, and thus increased prosocial behavior. Cohen, Panter, & Turan (2012) found that guilt proneness predicted the likelihood that a person would behave unethically when choosing between moral and selfish actions, noting that guilt-prone individuals anticipate feeling guilty about wrongdoings, even if they are private. This suggests guilt avoidance as a motivator of prosocial behavior in guilt-prone people. On the other hand, we found no significant evidence of shame proneness either positively or negatively impacting donation decisions. Leith & Baumeister (1998) found a positive correlation between shame proneness and the personal distress (from witnessing another suffering) affective dimension of empathy, as well as no relation between shame proneness and perspective taking, as measured by Davis (1983). Moreover, through the use of

autobiographical narratives, they found that shame proneness inhibits taking other people's perspectives. For this reason, we had expected shame proneness to be negatively correlated with donation decisions. The absence of a correlation in our results might be related to two factors. If shame proneness inhibited perspective taking, then the lack of consideration of the charities' perspective might imply there is no influence in the motivation to either help or not help them. Moreover, if shame proneness can lead to a decrease in prosocial behavior due to the focus in one's own personal distress, it is probably dependent on the severity of that personal distress, which might have not been strong enough in our Charity Commitment Task, as participants might take into consideration that the pre-existent suffering of the populations serve by the charities was not a direct consequence of their behavior.

The present study investigated the effects of exogenous guilt, given that the decision to donate to charity was not related to the emotion eliciting event. Although guilt has been generally considered as a negative emotion that leads to positive interpersonal consequences (e.g., Tangney, 1990), a study by de Hooge (2012) suggested that the main goal of guilt reparations might not be the welfare of the person damaged but getting rid of the feeling itself. This might be one of the reasons why exogenous guilt seems to have the same effects as endogenous guilt; if the welfare of the person damage is not the main concern, then the reparative behavior does not need to go towards them.

A final consideration is that the current results may reflect a prosocial act towards the charities as a positive compensation for injury to the Decider; alternatively, participants may have attempted to punish themselves in lieu of recompensing the Decider. Nelissen & Zeelenberg (2009) showed that self-punishment can occur in participants that are not able to compensate the victim of their transgression.

One of the limitations of the present study is that it did not include a measure of the task-elicited emotions (e.g., guilt and shame). Instead, participants were assumed to be likely or not to experience feelings of guilt depending on which condition and role they were placed in. While the pattern of results strongly suggests that the manipulations were successful, future studies should include a criterion check. It is also important to acknowledge that the group size in each condition was only able to reliably detect strong correlations; for this reason, many correlations lack sufficient power and should only be interpreted as preliminary evidence.

Despite these limitations, we conclude that this work adds valuable and compelling information about the interplay between self-conscious emotions, social conformity, and charity donations.

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All charities selected for this study were highly rated for financial health, accountability, and transparency by Charity Navigator. Charity Navigator is a non-profit organization whose ratings seek to show donors how efficiently a charity will use their support.

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