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# Guilt, Shame, Sympathy, and Prosocial Behavior

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The present study was designed to replicate and extend the original research on the negative state relief model linking guilt, shame, and sympathy to prosocial behavior. Participants were 202 students from a Southern regional university in the USA. Results showed no differences between the emotion-eliciting conditions (“breaking” the researcher’s computer when alone—guilt condition, “breaking” the researcher’s computer when another participant is present—shame condition, or watching another participant “break” the researcher’s computer—sympathy condition) and the control group (the computer did not break) with regard to prosocial behavior (agreeing to help a professor out by filling out an additional questionnaire after completion of the experiment), even when taking the personality variable of social value orientation into account.

**Keywords:** guilt, shame, sympathy, prosocial behavior, negative state relief, social value orientation, social influence

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In the 1960s and 1970s there was a wave of social psychology research in which participants were made to transgress in order to assess the relationship between guilt and prosocial behavior. For example, participants were made to believe they had shocked another participant, broken a person's camera, toppled a table containing a person's thesis data, damaged an electrical machine designed to deliver electric shocks, injured a 6-week old lab rat, or been induced to lie to the experimenter, all to create a sense of guilt in the subject (Carlsmith & Gross, 1969; Cunningham, Steinberg, & Grev, 1980; Darlington & Macker, 1966; Freedman, Wallington, & Bless, 1967; Regan, 1971; Regan, Williams, & Sparling, 1972). After creating this emotional state through the means mentioned above, the researchers gave the participants the opportunity to behave in a prosocial manner by offering to volunteer for another study, give blood, pick up papers, and so forth. The results indicated that people who had been led to transgress in some way (the "guilt" conditions) were more likely to behave in a prosocial manner. This finding has not been limited to guilt alone. In fact, Brock (1969) criticized the transgression-compliance literature suggesting restraint in the use of the term "guilt" to describe the emotional state of the transgressor given the "imprecise conceptual status of guilt" (p. 139). Indeed, some studies indicated that sympathy for the victim was just as effective as guilt in increasing prosocial behavior (e.g., Konecni, 1972; Regan, 1971). Further, Steele (1975) used name-calling to induce "negative emotion" (viz., shame or humiliation) which also produced an increase in helping behavior.

These results prompted Cialdini, Darby, and Vincent (1973) to propose the negative state relief model of prosocial behavior. This model proposes that when people are in a negative mood, they can alleviate this negative mood state by offering to help someone in need. In Carlson and Miller's (1987) mega-analysis (a modified meta-analysis), they found support for the relationship between guilt and helping, but no link between sadness or more general negative affect and helping. Cialdini and Fultz (1990) wrote a rejoinder article disputing the methodology and conclusions of Carlson and Miller; however, their responses were not altogether convincing, especially in light of Miller and Carlson's (1990) subsequent rebuttal. Despite the lack of clear empirical support for the negative state relief model, it is common to see it presented in introductory social psychology textbooks with the connection to the idea that negative emotions, especially guilt, predict prosocial behavior (e.g., Gilovich, Keltner, Chen, & Nisbett, 2015). However, although this model has been around for nearly four decades, there has not been much experimental research to state whether a specific emotion state, such as guilt, is needed to lead to prosocial behavior, or whether other negative emotions, such as shame or sympathy, may also lead to prosocial behavior. As far as we can tell, no researchers have looked at both shame and guilt in the same study. We investigated this phenomenon by attempting to evoke the specific emotions of shame, guilt, and sympathy, based on modern conceptualizations of the differences between these emotions, and comparing them with a control group in terms of the level of prosocial behavior (agreeing to help a professor by filling out an additional questionnaire after the completion of the experiment) demonstrated by participants in the different conditions. This research is important because there has recently been a resurgence of interest in shame as a prosocial behavior elicitor (de Hooge, Breugelmans, & Zeelenberg, 2008; de Hooge, Zeelenberg, & Breugelmans, 2010, 2011), and guilt has long been thought to be linked to prosocial behavior (Baumeister, Stillwell, & Heatherton, 1994; de Hooge, Zeelenberg, & Breugelmans, 2007; Zahn-Waxler & Robinson, 1995). The current study was thus designed to tie together the literature from the 1960s and 1970s with the research

that is being conducted by de Hooge and colleagues in the Netherlands today.

One of the main differences between the research done in the 1960s and today is that there was a burst of research on emotion in the 1990s and 2000s, teasing apart the differences between the emotional states of guilt and shame.<sup>1</sup> Early clinical theorists and researchers suggested that shame involved a global self-evaluation of the self as inferior, but more recent research suggests that shame more often encompasses an appraisal of a specific self-defect that can be corrected through reparation, amends, and prosocial behavior (cf. Gausel & Leach, 2011; Gausel, Vignoles, & Leach, 2016; Lewis, 1971; Tangney, 1995). Olthof and colleagues specifically suggest that shame stems from an unwanted identity (being seen in a manner contrary to one's self-perception) whereas guilt stems from a causing harm appraisal (hurting someone by one's actions; Ferguson, Eyre, & Ashbaker, 2000; Olthof, 1996; Olthof, Schouten, Kuiper, Stegge, & Jennekens-Schinkel, 2000). Although both emotions are very similar and both are likely to be elicited in situations where the person has transgressed, shame appears to be the more public of the two emotions (Smith, Webster, Parrott, & Eyre, 2002; Tangney, 1992; Wolf, Cohen, Panter, & Insko, 2010). Thus, if other people witness a transgression or failing, then shame is the most likely emotion; whereas if a transgression or failing happens in private, then guilt is more likely. Sympathy would be the emotion elicited when one is a witness to another's transgression or failing, such as in the public shame condition.

In sum, the goal of the current project was to tease apart the contributions of different emotions and allow the negative state relief model to be more clearly defined with regard to which emotions are most strongly related to prosocial behavior and under what conditions. We investigated this phenomenon further by attempting to evoke different emotions such as shame, guilt, and sympathy and compare them with a control group in terms of the level of prosocial behavior (agreeing to help a professor by filling out an additional questionnaire after the completion of the experiment). We also included a measure of social value orientation (SVO) since it has "been identified as a covariate, interacting with different emotional states and influencing the propensity to cooperate" (Murphy, Ackermann, & Hadgraaf, 2011, p. 771). Thus, SVO was included in this study as a personality variable to determine if it predicted propensity to help independent of the situational variables manipulated. Specifically, our hypotheses were that those in the guilt and shame conditions would be most likely to engage in prosocial helping behavior, followed by those in the sympathy condition, with those in the control condition being least likely to engage in prosocial helping. Further, we expected that social value orientation would be correlated with helping propensity, such that those who were classified as prosocial and altruistic would be more likely to help than those who were classified as individualistic and competitive. Finally, we expected SVO would serve as a covariate that would account for some of the variance between emotion propensity and helping (a person x situation interaction).

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**1** There has also been a great deal of research conducted on the trait propensity to feel guilt and shame (e.g., guilt- and shame-proneness and guilt and shame frequency; Eyre, 2004; Harder, 1995; Robins, Nofle, & Tracy, 2007), although there has not been as much research done to examine the relationship between trait and state levels of guilt and shame (Ferguson & Stegge, 1995; Kugler & Jones, 1992). In the current study, we only dealt with state emotions due to concerns about tipping our hand regarding the purpose of the study, although we encourage future researchers to devise a way to study the interaction of trait and state guilt and shame in predicting prosocial behavior.

## Method

### *Participants*

Students ( $N = 202$ ) enrolled in an introductory psychology course at a regional university in the Southeastern United States participated for course credit. Of that initial pool of students, seven students' data were discarded (3 due to suspicion, 4 due to computer malfunctions). Participants were not asked to report their age or gender in order to increase students' feelings of anonymity in the experiment. However, students all appeared to be traditional college-aged students and the gender ratio was approximately 32% male and 68% female.<sup>2</sup>

### *Design*

The SVO Slider Measure (Murphy et al., 2011) is an individual difference measure which assesses how much money a decision maker would allot to him/herself versus to a hypothetical partner. Six hypothetical choices are presented in form of a ruler where the decision maker selects a tick mark on the ruler to give a set dollar amount to the self and to the relationship partner (e.g., you receive \$85; other receives anywhere from \$15 to \$85). Some of the rulers are set that if the person maximizes their own reward, it minimizes the other's reward. In other rules, both can receive a high payoff. Thus, the calculations center on how much the person focuses on joint maximization versus inequality aversion. Maximizing the payoff to the other person across the board would result in an "altruism" classification, whereas maximizing the payoff to the other person while simultaneously maximizing the payoff for the self would result in a "prosocial" classification. Maximizing the payoff to the self across the board would result in an "individualistic" classification and maximizing payoff to the self while minimizing the payoff to the other would result in a "competitive" classification.

There were three situational variables manipulated in order to create the four main conditions of the experiment: (1) roommate status (alone in room or had a roommate), (2) computer crashing (computer crashed or operated normally), and (3) presence of a reprimand for breaking computer (reprimand, no reprimand). The situations in which the computer operated normally for participant (and roommate if present) constituted the control condition ( $n = 41$ ). If the computer worked normally for the participant, but crashed for a roommate, then the person was labeled as being in the sympathy condition ( $n = 59$ ). If the participant was alone in the room and the computer crashed, then the person was in the guilt condition ( $n = 46$ ). If the participant had a roommate in the room and his/her computer crashed then he/she was in the shame condition ( $n = 49$ ). The reprimand condition was designed to induce mild versus moderate levels of the emotion in the participant.<sup>3</sup>

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**2** One reviewer requested gender information, so the first author coded gender based on names provided on the informed consents. Thus, these numbers are approximate because some participants' gender could not be easily determined based on name provided (e.g., Jordan was not coded) and others were coded based on most common gender associations, which could be incorrect (e.g., Meredith was coded as female and Dylan as male).

**3** In the reprimand condition, the following script was used: "What happened? What did you do? Did

The emotion questionnaire used as a manipulation check was modeled after the Positive and Negative Affect Schedule (PANAS, Watson, Clark, & Tellegen, 1988). Students were asked to report which emotions they felt right now, at this moment, on a scale of 1 (very slightly or not at all) to 5 (extremely). Emotions consisted of a variety of positive emotions (enthusiastic, alert, excited) and negative emotions (upset, nervous, irritable). Three key emotions (guilty, ashamed, and sympathy toward someone else) were embedded in the total list of 14 emotions.

### *Procedure*

When students first arrived in the laboratory, they were asked to randomly choose an ID number from a cup to use to label all their questionnaires. Next, they were placed in a small research room with three computers, either alone or with a roommate. Next, they were told the experiment involved choices about money and were instructed to first fill out a paper version of the questionnaire about individual differences in decisions about money (Social Value Orientation Slider Measure; Murphy et al., 2011). After they completed that task, they were instructed to complete a computer program ostensibly measuring delayed discounting of money. They were warned that the computers were old and they should not press the keys too quickly because it might overload the computer (to set up the expectation that they would be responsible for what happened to the computer). Based on condition, the computer either worked fine for the participant or it was rigged to “break” after a set amount of time. When the computer “broke,” it showed the “blue screen of death” where it appears that the entire hard drive of the computer has corrupted. The screen was locked so pressing buttons will not fix the problem (only a certain order of key presses allowed the researcher to reset the computer). The researcher then came into the room and make a remark to the participant about the status of the broken computer.

In the computer crashing conditions, the research assistant instructed the students, “I guess you can go ahead and fill out the last questionnaire now, even though you didn’t get to finish the computer program. I guess I can just give you full credit and mark down that the computer crashed.” In conditions where the students’ computer did not crash, they were given this questionnaire after they had completed the computerized survey. This last questionnaire was a state emotion questionnaire assessing the key emotions of guilt, shame, and sympathy for another person, in addition to a variety of other emotional states. This questionnaire was ostensibly to measure students’ emotional reactions to the monetary choices they had just made, but really it was designed to serve as an emotional manipulation check. All students were then instructed to go out into the hall when they had finished the emotion questionnaire.

After they completed the last questionnaire (the entire study took about 15 minutes of the 30-minute time-slot for which they had signed up), they were given directions to the experimenter’s office where they could pick up their research participation slip (required for credit). Then the research assistant casually mentioned, “By the way, there is another very short study on Personality being conducted in the Psychology Department and it would

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you press any buttons or go outside of the survey? I’ll have to let the professor know that something happened to the computer so she can try to figure out how to fix it. I hope she backed up everyone’s data from the past week.” In the no reprimand condition, the following script was used: “What happened? I’ll have to let the professor know that something happened to the computer so she can try to figure out how to fix it. Don’t worry about it.”

be very helpful if you could spare a few minutes to participate in it. It would take about 5 minutes to complete. If you would like to do this, then the study is found on the table in room 201 (first door on your left down this hall). Just open the door and walk in and sit down at the conference table and follow the instructions. You will not receive any additional points for participating in this study, but the professor would appreciate your help.” When students arrived in the experimenter’s office (after either completing the additional survey or not), they were asked a few manipulation check questions (Was anyone else in the room with you? Did anything happen to the computer? Did you participate in the additional personality survey?) and then fully debriefed about the purposes and procedures of the study. At that point students were given their research participation slip and then asked to sign an informed consent to either allow their data to be used or not in the study (no students refused). The experimenter then verified whether the student had actually completed the personality survey (by comparing names on informed consents for the personality survey and current study).

## Results

First, as a test of the manipulation, we examined whether students in the sympathy, guilt, and shame conditions differed from the control group in the level of sympathy toward another person, guilt, and shame emotions after the computer crashing. Results indicated there were no differences in level of emotion for sympathy toward another person,  $t(98) = .42, p = .68$ , for the sympathy condition ( $M = 1.98, SD = 1.54$ ) compared to the control condition ( $M = 1.85, SD = 1.49$ ). Further, there were no differences in the amount of guilt reported,  $t(85) = .51, p = .61$ , for the guilt condition ( $M = 1.74, SD = 1.37$ ) compared to the control condition ( $M = 1.59, SD = 1.41$ ). Nor were there any differences in the amount of shame reported,  $t(88) = .31, p = .76$ , for the shame condition ( $M = 1.53, SD = 1.40$ ) compared to the control condition ( $M = 1.44, SD = 1.36$ ). Thus, students from all key conditions reported feeling very low amounts of emotional reaction to witnessing or experiencing the computer breaking (ratings were made on a 1 to 5 scale).

With regard to the individual difference measure of Social Value Orientation (SVO), when the data were coded, one student was identified as competitive (0.5%), 51 as individualistic (26.2%), 141 as prosocial (72.3%), and two as altruistic (1.0%). Given the small numbers in the extreme categories, data were combined into two categories that will be used for analysis—individualistic and prosocial. To test our hypothesized effects of the negative state relief model, we ran a 2 (SVO; individualistic, prosocial) x 4 (condition; control, sympathy, guilt, shame) ANOVA.<sup>4</sup> Contrary to our hypothesis, there was not a main effect for SVO,  $F(1, 187) = 2.44, p = .12, \eta_p^2 = .013$ . Thus, there was no difference with regard to individualistic individuals’ helping tendencies ( $M = 33\%$  helped,  $SD = 47\%$ ) and prosocial individuals’ helping tendencies ( $M = 48\%$  helped,  $SD = 50\%$ ). Also, contrary to our expectations, a comparison of means in Table 1 illustrates that there was not a main effect for experimental condition on percent of participants who help,  $F(3, 187) = 1.10, p = .35, \eta_p^2 = .017$ . Finally, contrary to our hypotheses, there was no interaction between SVO and experimental condition,  $F(3, 187) = 0.09, p = .96, \eta_p^2 = .001$ .

<sup>4</sup> We initially examined the effect of reprimand versus no reprimand in creating different levels of guilt and shame, but there were no differences in degree of helping (46% helping in mild guilt and 50% helping in moderate guilt; 52% helping in mild shame and 50% helping in moderate shame). Thus, we combined these into a single guilt condition and single shame condition in order to increase power to detect differences between conditions.

**Table 1.** Mean Percentage of Helping by Condition

Condition	N	Mean	Standard Deviation
Control	41	32%	47%
Sympathy	59	42%	50%
Guilt	46	48%	51%
Shame	49	51%	51%

## Discussion

Past research in social psychology has documented a clear causal link between guilt and prosocial behavior across a wide variety of studies (Carlson & Miller, 1987; Miller & Carlson, 1990). Even beyond guilt, many studies have also shown a causal link between other negative emotions, such as sadness, with prosocial behavior (Cialdini, Darby, & Vincent, 1973; Cialdini & Fultz, 1990). However, the current study did not replicate any of the previous findings in the literature. None of the negative mood manipulations in the current study had any effect on prosocial behavior. Why the discrepant results?

First, we must rule out possible methodological or experimental flaws. According to a G\*Power analysis (Faul, Erdfelder, Lang, & Buchner, 2007), the given sample size was large enough to detect an effect size of 0.3, so the results should not be due to lack of statistical power to determine an effect. The results also should not be due to suspicion regarding the experimental manipulation because the first author probed all participants for this at the end of the study and only three students showed the slightest suspicion about the computer breaking or the connection between the computer task and the subsequent helping task. It may be the case that the manipulation was not strong enough. There is some evidence of this, given that the means for guilt, shame, and sympathy were all below 2.0 on a scale ranging from 1 to 5. Thus, it may be that the manipulations were not strong enough, although they were comparable to the manipulations made in previous research. Participants also may not have internalized responsibility for causing the harm to the computer in the current situation. For example, Wallace and Sadalla (1966) demonstrated that transgressors who were seen as responsible for breaking a tone generator were more likely to volunteer for an aversive experiment than those who had been absolved of responsibility. In the current study, we attempted to prime an internal attribution by warning participants about the age of the computer and the need to take care, but perhaps we accidentally primed an external attribution (e.g., “the computer is old, so it isn’t my fault if it breaks”). If so, this would minimize their feelings of guilt and shame, although it is less clear why this would make participants who are watching another person’s computer break feel equally low amounts of sympathy. Another possibility is that it is more difficult to make students feel guilty or ashamed today, as compared to the 1960s and 1970s. De Hooze and colleagues (2011) would theorize that there would not be a shame-prosocial behavior link unless students were asked to help the person they directly transgressed against (although this is not consistent with the vast majority of the transgression-prosocial behavior literature). Finally, there could be some external factor affecting participant’s interpretation and internalization of the emotion-eliciting situations (e.g., being fatigued or ego depleted; Xu, Bègue, Sauve, & Bushman, 2014).

Thus, future research needs to determine whether this finding is an anomaly due to the particular type of manipulation used or if it illustrates some generational differences between college students of today compared to the 1960s and 1970s. Future studies should ask participants about their feelings of responsibility for the harm caused to see if they are making internal or external attributions for the cause of the computer breaking. Another option would be to require them to do a task that would be essentially impossible (e.g., press a certain letter on the keyboard when typing a response) that would cause the computer to crash if/when they were to type the letter; it would be much more difficult for participants to avoid taking responsibility for the harm in that type of situation.

Even more puzzling is the fact that the personality variable of social value orientation was also unrelated to helping. Thus, those who were prosocial in their choices of hypothetical money allocations were no more likely to help by filling out a survey than those who were individualistic and there were no interactions with the situational variables. This could be because one situation is hypothetical and the other real, or perhaps there were other variables affecting the participants' choices when it came time to engage in helping behavior.

Although our results have failed to show the commonly found transgression-helping link, our study is not the first to fail in this regard. Noel (1973) did a complex study looking at "level of transgression, the requester's awareness of the transgression, and the location of the request" (p. 151) and found no support for a transgression-compliance link. Silverman (1967) also failed to find evidence of this effect in children. This leads us to believe that perhaps we are not measuring the correct personality or situational variables and that there is not as clear of a link between guilt, shame, sympathy, and prosocial behavior as the negative state relief model would lead one to hypothesize. There must be other moderators that are driving individuals' responses whether or not to engage in prosocial behavior and we must work to find these variables.

## References

- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, *115*(2), 243-267.
- Brock, T. C. (1969). On interpreting the effects of transgression on compliance. *Psychological Bulletin*, *72*(2), 138-145.
- Carlsmith, J. M., & Gross, A. E. (1969). Some effects of guilt on compliance. *Journal of Personality and Social Psychology*, *11*(3), 232-239.
- Carlson, M., & Miller, N. (1987). Explanation of the relation between negative mood and helping. *Psychological Bulletin*, *102*(1), 91-108. doi:10.1037/0033-2909.102.1.91
- Cialdini, R. B., Darby, B. L., & Vincent, J. E. (1973). Transgression and altruism: A case for hedonism. *Journal of Experimental Social Psychology*, *9*(6), 502-516.
- Cialdini, R. B., & Fultz, J. (1990). Interpreting the negative mood-helping literature via 'mega'-analysis: A contrary view. *Psychological Bulletin*, *107*(2), 210-214. doi:10.1037/0033-2909.107.2.210

- Cunningham, M. R., Steinberg, J., & Grev, R. (1980). Wanting to and having to help: Separate motivations for positive mood and guilt-induced helping. *Journal of Personality and Social Psychology*, *38*(2), 181-192.
- Darlington, R. B., & Macker, C. E. (1966). Displacement of guilt-produced altruistic behavior. *Journal of Personality and Social Psychology*, *4*(4), 442-443.
- de Hooge, I. E., Breugelmans, S. M., & Zeelenberg, M. (2008). Not so ugly after all: When shame acts as a commitment device. *Journal of Personality and Social Psychology*, *95*(4), 933-943.
- de Hooge, I. E., Zeelenberg, M., & Breugelmans, S. M. (2007). Moral sentiments and cooperation: Differential influences of shame and guilt. *Cognition and Emotion*, *21*(5), 1025-1042.
- de Hooge, I. E., Zeelenberg, M., & Breugelmans, S. M. (2010). Restore and protect motivations following shame. *Cognition and Emotion*, *24*(1), 111-127.
- de Hooge, I. E., Zeelenberg, M., & Breugelmans, S. M. (2011). A functionalist account of shame-induced behaviour. *Cognition and Emotion*, *25*(5), 939-946.
- Eyre, H. L. (2004). *The Shame and Guilt Inventory: A new scenario-based measure of shame- and guilt-proneness*. Unpublished dissertation, University of Kentucky, Lexington.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175-191.
- Ferguson, T. J., Eyre, H. L., & Ashbaker, M. (2000). Unwanted identities: A key variable in shame-anger links and gender differences in shame. *Sex Roles*, *42*, 133-157.
- Ferguson, T. J., & Stegge, H. (1995). Emotional states and traits in children: The case of guilt and shame. In J. P. Tangney and K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 174-197). New York: Guilford Press.
- Freedman, J. L., Wallington, S. A., & Bless, E. (1967). Compliance without the pressure: The effect of guilt. *Journal of Personality and Social Psychology*, *7*(2), 117-124.
- Gausel, N., & Leach, C. W. (2011). Concern for self-image and social image in the management of moral failure: Rethinking shame. *European Journal of Social Psychology*, *41*, 468-478.
- Gausel, N., Vignoles, V. L., & Leach, C. W. (2016). Resolving the paradox of shame: Differentiating among specific appraisal-feeling combinations explains pro-social and self-defensive motivation. *Motivation and Emotion*, *40*(1), 118-139.
- Gilovich, T., Keltner, D., Chen, S., & Nisbett, R. E. (2015). *Social psychology (4th ed.)*. New York: W. W. Norton & Company.
- Harder, D. W. (1995). Shame and guilt assessment, and relationships of shame- and guilt-proneness to psychopathology. In J. P. Tangney and K. W. Fischer (Eds.), *Self-Conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 368-392). New York: Guilford Press.
- Konecni, V. J. (1972). Some effects of guilt on compliance: A field replication. *Journal of Personality and Social Psychology*, *23*(1), 30-32.
- Kugler, K. & Jones, W. H. (1992). On conceptualizing and assessing guilt. *Journal of Personality and Social Psychology*, *62*, 318-327.
- Lewis, H. B. (1971). *Shame and guilt in neurosis*. New York: International Universities Press.
- Miller, N., & Carlson, M. (1990). Valid theory-testing meta-analyses further question the negative state relief model of helping. *Psychological Bulletin*, *107*(2), 215-225. doi:10.1037/0033-2909.107.2.215
- Murphy, R. O., Ackermann, K. A., & Handgraaf, M. J. J. (2011). Measuring social value orientation. *Judgment and Decision Making*, *6*(8), 771-781.
- Noel, R. C. (1973). Transgression-compliance: A failure to confirm. *Journal of Personality and Social Psychology*, *27*(2), 151-153.
- Olthof, T. (1996, August). *A developmental tasks analysis of guilt and shame*. Paper presented at the International Society for Research on Emotion, Toronto, Ontario, Canada.
- Olthof, T., Schouten, A., Kuiper, H., Stegge, H., & Jennekens-Schinkel, A. (2000). Shame and guilt in children: Differential situational antecedents and experiential correlates. *British Journal of Developmental Psychology*, *18*, 51-64.
- Regan, D. T., Williams, M., & Sparling, S. (1972). Voluntary expiation of guilt: A field experiment. *Journal of Personality and Social Psychology*, *24*(1), 42-45.
- Regan, J. W. (1971). Guilt, perceived injustice, and altruistic behavior. *Journal of Personality and Social Psychology*, *18*(1), 124-132.

- Robins, R. W., Nofhle, E. E., & Tracy, J. L. (2007). Assessing self-conscious emotions: A review of self-report and nonverbal measures. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.) *The self-conscious emotions: Theory and research* (pp. 443-467). New York: Guilford Press.
- Silverman, I. W. (1967). Incidence of guilt reactions in children. *Journal of Personality and Social Psychology*, 7, 338-340.
- Smith, R. H., Webster, J. M., Parrott, W. G., & Eyre, H. L. (2002). The role of public exposure in moral and nonmoral shame and guilt. *Journal of Personality and Social Psychology*, 83, 138-159.
- Steele, C. M. (1975). Name-calling and compliance. *Journal of Personality and Social Psychology*, 31(2), 361-369.
- Tangney, J. P. (1992). Situational determinants of shame and guilt in young adulthood. *Personality and Social Psychology Bulletin*, 18, 199-206.
- Tangney, J. P. (1995). Shame and guilt in interpersonal relationships. In J. P. Tangney and K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 114-139). New York: Guilford Press.
- Wallace, J., & Sadalla, E. (1966). Behavioral consequences of transgression: I. The effects of social recognition. *Journal of Experimental Research in Personality*, 1(3), 187-194.
- 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.
- Wolf, S. T., Cohen, T. R., Panter, A. T., & Insko, C. A. (2010). Shame proneness and guilt proneness: Toward the further understanding of reactions to public and private transgressions. *Self and Identity*, 9, 337-362.
- Xu, H., Bègue, L., Sauve, L., & Bushman, B. J. (2014). Sweetened blood sweetens behavior. Ego depletion, glucose, guilt, and prosocial behavior. *Appetite*, 81, 8-11. doi:10.1016/j.appet.2014.05.023
- Zahn-Waxler, C., & Robinson, J. (1995). Empathy and guilt: Early origins of feelings of responsibility. In J. P. Tangney and K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 143-173). New York: Guilford Press.

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