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## Self-enhancement, righteous anger, and moral grandiosity

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### ABSTRACT

Do people self-enhance by dwelling in righteous anger in an effort to preserve their self-views as pillars of morality? We addressed this question in two experiments. Participants read a story about an injustice (experiencing righteous anger) or grocery shopping (experiencing neutral emotion), indicated their interest in reading injustice-relevant or happiness-relevant newspaper articles, and rated themselves on moral and agentic traits. Participants who experienced righteous anger (vs. neutral emotion) maintained their anger (i.e., exhibited stronger interest in reading injustice- than happiness-relevant articles) and rated themselves more positively on moral, but not on agentic, traits. Furthermore, anger maintenance mediated the effect of righteous anger on moral grandiosity. The findings illustrate tactical self-enhancement: the instrumental use of one's negative emotions for self-enhancement purposes.

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People can regulate their emotions both for short-term gain (hedonic view) and long-term gain (instrumental view). They regulate their emotions instrumentally in order to achieve social goals (e.g., interaction, cooperation, confrontation). But do they also regulate their emotions instrumentally for self-related goals (e.g., self-enhancement)? In particular, do they regulate their negative emotional states (i.e., anger) to entrench their cherished self-views as paragons of morality? We addressed these questions in two experiments.

### *Emotional hedonism and instrumentality*

Emotions are hedonic states (Averill, 1994; Barrett, Mesquita, Ochsner, & Gross, 2007; Tamir, 2016). People want to experience pleasant emotions and avoid experiencing unpleasant ones (Diener, 2000; Kahneman, 1999). Hence, people regulate their emotions accordingly: They strive to increase the experience of positive emotions and decrease the experience of negative emotions (Larsen, 2000; Larsen & Prizmic, 2008). The hedonic view of emotions has made insightful contributions to the intricacies of the emotion regulation process and its psychological health benefits (Denollet, Nyklicek, & Vingerhoets, 2008; Gross, 2007).

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Complementary to the hedonic view is the instrumental view (Frijda, 1986; Gross, 1999; Tamir, 2016). The latter posits that people are primarily interested in emotional hedonism when they take a short-term perspective. Emotions, however, can be regulated both on a short-term and a long-term basis (Bonanno, 2001; Erber & Markunas, 2006; Martin, Abend, Sedikides, & Green, 1997). When people take a long-term perspective, they often forsake momentary hedonism for extended utility. In such cases, they prefer to maintain or even increase the experience of negative emotions and decrease the experience of positive emotions. The instrumental view is consistent with statements highlighting evolutionary advantages of negative emotions (Forgas, 2013; Haselton & Ketelaar, 2006).

What constitutes long-term utility? This construct refers to goals that people set and pursue. Aspects of the social context, for example, may prompt people to pursue cooperative goals. Participants match their emotional state to that of their social interactants (Huntsinger, Lun, Sinclair, & Clore, 2009), neutralize their emotions when they expect to collaborate on a task with a stranger rather than work on the task alone (Erber, Wegner, & Therriault, 1996), increase their level of excitement at the pursuit of an approach goal (Tamir & Ford, 2009), and raise their level of happiness when they expect to pursue an interdependent goal (Tamir & Ford, 2012). Yet, other aspects of the social context may direct people towards antagonistic goals. Participants increase their level of fear when pursuing an avoidance goal and raise their level of anger when expecting to pursue a confrontational goal (Tamir & Ford, 2009; Tamir, Mitchell, & Gross, 2008).

### *Emotional Instrumentality and Self-Enhancement*

The literature on the instrumental view of emotion regulation has been predominantly concerned with social goals (e.g., cooperation, antagonism). But what about self-related goals, and, in particular, the fundamental goal (or motive) of self-enhancement? This refers to preserving or bolstering the positivity of valued self-views (Alicke & Sedikides, 2009; Alicke, Zell, & Guenther, 2013; Sedikides & Gregg, 2008). Can and do people use negative emotions (e.g., righteous anger) for self-enhancement purposes? Do they maintain or even increase their anger to attain positive inferences about themselves (Tamir, 2016)? A theoretical model, the self-concept enhancing tactician (SCENT) model, purports that they do.

The SCENT model (Sedikides & Strube, 1997; see also Sedikides, Gaertner, & Cai, 2015) advocates the normative or contextual nature of self-enhancement. In particular, the model postulates that, although self-enhancement can manifest itself in a candid manner, more often than not self-enhancement strivings are tactical. As a characteristic example of that postulate, people self-enhance particularly so on domains that are personally important (rather than personally unimportant ones). It is mostly self-enhancement on personally important domains that validates their sense of worth as a person or fulfills their role as a good citizen (cf. Martin et al., 1997). As another example, people may forgo immediate self-enhancement gains (e.g., ostentatious display of one's knowledge on a topic at a meeting) for future self-enhancement gains (e.g., being thought of well when summarizing issues and proposing solutions later at that meeting; cf. Sedikides & Hepper, 2009).

The domain of morality is personally important to people, and indeed they self-enhance on it (Allison, Messick, & Goethals, 1989; Sedikides, Meek, Alicke, & Taylor, 2014; Van Lange & Sedikides, 1998). But how so? We propose that they do so, in part, by regulating their emotional states. People, as per the SCENT model, will capitalize on the experience of

righteous anger to preserve or augment their self-views as moral (i.e., moral grandiosity). For example, the angrier about injustice one feels, the more caring and compassionate one will see herself as being. Righteous anger, then, serves as input for whether one fulfills the role of a moral person and citizen. The SCENT model also explains why people may eschew opportunities to exit a negative emotional state: The short-term negative emotions are a small price to pay, if these emotions are to help boost one's cherished self-views. Here, people will be harnessing a negative emotion for positive (i.e., self-enhancement) gains: The more one *remains* angry about injustice, the more moral one is.

## Overview

We asked whether righteous anger feeds into moral grandiosity. Could reading stories about injustice or corruption give rise to both righteous anger and positive self-evaluations on morality? Anger over a case of injustice could serve as relevant input to judgments of one's moral goodness, leading to higher ratings on "saint-type" or moral traits such as compassionate, responsible, and caring (Paulhus & John, 1998; cf. Gebauer, Sedikides, Verplanken, & Maio, 2012). People could prioritize feeling good *about themselves* over merely feeling good. We conducted two experiments to find out. Based on the SCENT model, we derived three hypotheses:

*Hypothesis 1 (H1):* Righteously angry individuals will rate themselves higher on moral (but not on agentic) traits than those in a neutral emotional state (Experiments 1 and 2).

*Hypothesis 2 (H2):* Righteously angry individuals will express greater interest in maintaining an angry emotional state relative to those in a neutral emotional state (Experiment 2).

*Hypothesis 3 (H3):* Maintenance of an angry emotional state will transmit (i.e., mediate) the effect of righteous anger on self-enhancement (i.e., moral, but not agentic, grandiosity; Experiment 2).

## Experiment 1

In Experiment 1, participants read a story intended to trigger either righteous anger (injustice in the wake of a catastrophe) or neutral emotion (grocery shopping). Next, they rated themselves on both moral and agentic traits. As per the SCENT model, we hypothesized that participants who read the injustice story (relative to those who read the neutral story) would self-enhance on morality, but not on agency—that is, would rate themselves higher on moral, but not agentic, traits (H1). Righteous anger would be relevant input to inferences about one's moral uprightness, but not to inferences about one's agentic strength.

## Method

### Design and participants

Our full design was a 2 (story: injustice, neutral)  $\times$  2 (trait type: moral traits, agentic traits)  $\times$  2 (trait order: moral traits rated first, agentic traits rated first)  $\times$  2 (emotion type: anger-denoting adjectives, contentment-denoting adjectives) mixed factorial. Story and trait order were between-subjects factors, whereas trait type and emotion type were within-subjects factors. We note that the Analyses of Variance (ANOVAs) in this and the next experiment often rely on a subset of design factors, due to theoretical or data-analytic considerations, and thus degrees of freedom will vary.

We conducted a power analysis using G\*Power software (Faul, Erdfelder, Buchner, & Land, 2009) to determine sample size. Assuming a medium effect size (Cohen's  $d = .5$ ) and based on previous relevant research (Martin et al., 1997), 45 participants total would suffice to detect an effect (power  $\geq 0.95$ ,  $\alpha \leq 0.05$ ). Given that this was our first experiment on the topic, we conservatively recruited 100 introductory psychology students ( $M_{\text{age}} = 20.80$ ,  $SD_{\text{age}} = 4.69$ ); 53 of them were from Soka University, a small private university, and 47 from Virginia Commonwealth University, a large public university. Sixty percent of participants in each university were women. Across both universities, participants were of diverse nationalities, representing 13 countries. We compensated them either with partial course credit or the opportunity to win small gift certificates. One participant failed to complete the trait ratings.

### Materials

We composed two short stories, matched for length, to induce either righteous anger or neutral emotion. The injustice story centered on an Indonesian villager's tragedy as a result of a tsunami, and the political corruption that led to failure for critical aid to reach his family and village. The neutral story described a university student shopping for dinner. (We provide both stories in the Appendix 1) We pilot tested the stories to ensure that they differed in valence, but not abstractness. Forty-two participants read the stories (in counterbalanced order) and rated (1 = *very negative/abstract*, 5 = *very positive/concrete*) the injustice story ( $M = 1.77$ ,  $SD = 0.90$ ) as significantly more negative than the neutral story ( $M = 3.37$ ,  $SD = 0.72$ ),  $t(42) = 8.38$ ,  $p = .001$ , but not as more abstract ( $M = 2.30$ ,  $SD = 0.86$ ) than the neutral story ( $M = 2.55$ ,  $SD = 1.24$ ),  $t(42) = 1.17$ ,  $p = .25$ .

We also selected 20 moral and 20 agentic traits based on previous research (Anderson, 1968; Campbell, Rudich, & Sedikides, 2002; Gebauer, Wagner, Sedikides, & Neberich, 2013). Sixty-five participants rated themselves on the traits, in counterbalanced order. We conducted a maximum likelihood factor analysis on the 40 traits, with promax rotation, to extract two factors. Scree plot identified two primary factors (eigenvalues = 15.06 and 4.29). Item loadings for both factors were all above .60, and all cross-loadings were under .21. The ratio of observations (participants) to items (trait words) was not optimal (i.e., under 2:1). We chose the traits with the highest loadings on one factor and the lowest loadings on the other factor. This procedure yielded 10 moral traits (caring, charitable, compassionate, considerate, generous, kindhearted, moral, nurturing, respectful, responsible) and 10 agentic traits (ambitious, confident, dominant, go-getter, independent, leader, original, powerful, self-reliant, winner).

### Procedure

Participants were seated, separated by dividers. The experimenter explained that she would guide them through a visualization study. The first two visualizations served as practice trials and to add credibility to the cover story. Participants closed their eyes and visualized the details of their most recent bus ride. After one minute, they rated (1 = *not at all*, 7 = *extremely*) their visualization ("How vivid/clear/difficult was your visualization?"). Next, they visualized a local movie theatre for 1.5 min, and responded to the same rating scales. Subsequently, participants read either the injustice or neutral story, and visualized the scene details. Every 20 s, for 2.5 min, the experimenter guided the visualization with brief instructions (e.g.,

"Imagine you are watching the scene in person," "Focus on your emotional reaction to the situation"). Next, participants completed the manipulation check. In particular, they rated how they felt at that moment (1 = *extremely uncharacteristic*, 11 = *extremely characteristic*) on three anger-denoting (furious, irritated, mad) and three contentment-denoting (calm, peaceful, tranquil) adjectives, presented in a single fixed random order. Then, participants rated themselves on the 10 moral and 10 agentic traits (1 = *describes me not at all*, 11 = *describes me very much*), in counterbalanced order. Finally, both in this and the next experiment, participants were probed for suspicion (none guessed correctly the experimental purpose) and debriefed.

## Results and discussion

### Manipulation check

We analyzed manipulation check data via a 2 (story)  $\times$  2 (trait order)  $\times$  2 (emotion type) ANOVA. The assessment of anger-denoting adjectives ( $\alpha = .90$ ) and contentment-denoting adjectives ( $\alpha = .92$ ) was reliable. The critical interaction was significant,  $F(1, 96) = 18.19, p = .001$ , partial  $\eta^2 = .16$ . As intended, participants who read the injustice story reported feeling angrier ( $M = 4.45, SD = 2.76$ ) than those who read the neutral story ( $M = 2.43, SD = 2.05$ ),  $t(98) = 4.12, p = .001$ , partial  $\eta^2 = .15$ ; also, participants who read the injustice story reported feeling less content ( $M = 6.60, SD = 2.76$ ) than those who read the neutral story ( $M = 8.64, SD = 1.94$ ),  $t(98) = 4.25, p = .001$ , partial  $\eta^2 = .16$ . The injustice story elicited significantly more anger and significantly less contentment than the neutral story. We note that trait order, along with sex and university affiliation, did not moderate manipulation check or any other results.

### Self-enhancement

We analyzed the self-enhancement data via a 2 (story)  $\times$  2 (trait type)  $\times$  2 (trait order) ANOVA. The assessment of moral traits ( $\alpha = .93$ ) and agentic traits ( $\alpha = .93$ ) was reliable. In replication of past research (Allison et al., 1989; Van Lange & Sedikides, 1998), a significant trait type main effect,  $F(1, 95) = 59.60, p = .001$ , partial  $\eta^2 = .39$ , indicated that participants rated themselves higher on moral ( $M = 8.16, SD = 1.64$ ) than on agentic ( $M = 6.84, SD = 1.85$ ) traits.

Importantly, we obtained a significant Story  $\times$  Trait Type interaction,  $F(1, 95) = 5.50, p = .021$ , partial  $\eta^2 = .06$ . We proceeded to analyze moral and agentic traits separately. Angry participants (i.e., those who read the injustice story;  $M = 8.50, SD = 1.70$ ) rated themselves as more moral than neutral-emotion participants (i.e., those who read the neutral story;  $M = 7.82, SD = 1.51$ ),  $t(97) = 2.07, p = .041$ , partial  $\eta^2 = .04$ . Moreover, angry ( $M = 6.77, SD = 1.90$ ) and neutral-emotion ( $M = 6.90, SD = 1.83$ ) participants did not rate themselves differently on agentic traits,  $t(97) = .29, p = .77$ , partial  $\eta^2 = .001$ . Participants used their anger to self-enhance, but in a theoretically circumscribed fashion: they self-enhanced on moral, but not on agentic, traits.

### Summary

Participants placed in a state of righteous anger self-enhanced in the domain of morality, rating themselves as more moral than those in a neutral emotional state. Angry participants

apparently used their emotion as input to render judgments about their morality. This emotion, however, was not relevant input to judgments about their agentic strength: the two groups did not rate themselves differently on agentic traits. Angry participants inferred moral, but not agentic, grandiosity. The findings are consistent with H1.

## Experiment 2

In Experiment 2, we aimed to replicate and extend the findings of Experiment 1, thus providing a more rigorous test of the SCENT model. We used a different injustice story, but the same neutral-emotion story. After reading one of the two stories, participants completed a measure of emotion regulation and a measure of self-enhancement. The former measure involved the expression of interest in reading either injustice-relevant (and thus anger-maintenance) or happiness-relevant (and thus anger-reduction) newspaper articles (Erber et al., 1996). The latter measure involved self-ratings on the same moral and agentic traits as in Experiment 1.

We drew three hypotheses, based on the SCENT model. Specifically, as in Experiment 1, we hypothesized that angry participants would regard themselves as higher on morality, but not on agency, compared to neutral-emotion participants (H1). Distinctly, we hypothesized that angry participants would choose to maintain or increase their anger by indicating a greater interest in reading injustice-relevant than happiness-relevant newspaper articles (H2). Also distinctly, we hypothesized that anger maintenance would mediate the effect of righteous anger on self-enhancement (i.e., moral grandiosity; H3).

## Method

### Design and participants

Our full design was a 2 story (injustice, neutral)  $\times$  2 trait order (moral traits rated first, agentic traits rated first)  $\times$  2 headline order (anger-eliciting headlines presented first, happiness-eliciting headlines presented first)  $\times$  2 trait type (moral traits, agentic traits)  $\times$  2 emotion type (anger-denoting adjectives, contentment-denoting adjectives) mixed factorial. The first three factors were between-subjects, whereas the last two factors were within-subjects.

Given the addition of a between-subjects factor, we set the minimum sample size to 150. In all, we tested 159 undergraduates from Virginia Commonwealth University (83 women;  $M_{\text{age}} = 19.35$ ,  $SD_{\text{age}} = 1.69$ ), who completed the study in partial fulfillment of a course option. The sample composition was: 50% white, 21% African American, 21% Asian-American or Asian, 8% other. We conducted a *post hoc* power analysis using G\*Power software (Faul et al., 2009) to determine whether our sample size had provided sufficient power for the second experiment. Using the smallest significant effect size we found (partial  $\eta^2 = .03$ ), 159 total participants was indeed enough to detect sufficient power, even with this conservative estimate (power  $\geq 0.95$ , alpha  $\leq 0.05$ ).

### Materials

We composed a new injustice story around the effects of hurricane Katrina, in an attempt to make the manipulation more relevant for participants, the large majority of whom were US citizens. Thematically, though, the story was identical to that of Experiment 1, again focusing on avoidable tragedy due to political corruption. The neutral story was the same



as in Experiment 1. (We provide both stories in the Appendix 1) Also, we pilot tested injustice-relevant and happiness-relevant newspaper headlines by asking 50 Virginia Commonwealth University undergraduates to rate how angry or happy the corresponding articles would make them. We chose the three injustice-relevant news headlines (Couple Charged with Abusing Handicapped Son, Deaf Man Beaten for Not Answering Question, Animal Control Throws Pets Off Bridge to their Deaths) and the three happiness-relevant news headlines (Laughter Really is the Best Medicine: Health Benefits of Humor, Dog Saves Family from Fire started by Cat, Saturday Night Live Reunion!) that participants rated as most likely to evoke the strongest respective emotion.

### Procedure

Participants, again separated by dividers, read either the injustice or neutral story, and then completed the manipulation check items as in Experiment 1. Subsequently, they responded to two measures. We assessed emotion regulation through expressed interest in reading newspaper articles. Participants read the three injustice-relevant and three happiness-relevant headlines (in counterbalanced order) and indicated how interested they were at that moment (1 = *not at all interested*, 11 = *very interested*) in reading the corresponding articles. We assessed self-enhancement, as in Experiment 1, by asking participants to rate themselves on 10 moral and 10 agentic traits.

## Results and discussion

### Manipulation check

As with Experiment 1, we analyzed manipulation check data via a 2 (story)  $\times$  2 (trait order)  $\times$  2 (headline order)  $\times$  2 (emotion type) ANOVA. The assessment of anger-denoting adjectives ( $\alpha = .82$ ) and contentment-denoting adjectives ( $\alpha = .87$ ) was reliable. The crucial interaction was significant,  $F(1, 151) = 42.19, p = .001$ , partial  $\eta^2 = .22$ . As intended and consistent with Experiment 1, participants who read the injustice story reported feeling angrier ( $M = 4.14, SD = 2.44$ ) than those who read the neutral story ( $M = 2.24, SD = 1.52$ ),  $t(157) = 5.90, p = .001$ , partial  $\eta^2 = .18$ . Also, participants who read the injustice story reported feeling less content ( $M = 6.35, SD = 2.11$ ) than those who read the neutral story ( $M = 8.18, SD = 1.96$ ),  $t(157) = 5.68, p = .001$ , partial  $\eta^2 = .17$ . Sex and ethnicity did not moderate manipulation check or any other results, and trait order and headline order likewise did not moderate any results. The manipulation was effective, as the injustice story induced more anger and less contentment than the neutral story.

### Anger regulation

We analyzed anger regulation data via a 2 (story)  $\times$  2 (trait order)  $\times$  2 (emotion type)  $\times$  2 (headline order) ANOVA. The assessment of the three injustice-relevant headlines ( $\alpha = .78$ ) and the three happiness-relevant headlines ( $\alpha = .71$ ) was reliable. The theoretically-relevant Story  $\times$  Emotion Regulation type interaction was significant,  $F(1, 151) = 10.80, p = .001$ , partial  $\eta^2 = .07$ . We proceeded to analyze separately interest in the injustice-relevant and the happiness-relevant articles. Angry participants ( $M = 8.57, SD = 1.91$ ) were more interested than



neutral participants ( $M = 7.62$ ,  $SD = 2.21$ ) in reading injustice-relevant articles,  $t(157) = 2.90$ ,  $p = .004$  partial  $\eta^2 = .051$ . However, angry ( $M = 6.45$ ,  $SD = 2.06$ ) and neutral ( $M = 6.82$ ,  $SD = 2.15$ ) participants did not differ significantly on interest in reading happiness-relevant articles,  $t(157) = 1.12$ ,  $p = .27$ , partial  $\eta^2 = .007$ . Angry participants expressed greater interest in newspaper articles (i.e., injustice-relevant) that would likely maintain their anger; they did not express greater interest in newspaper articles (i.e., happiness-relevant) that would likely decrease their anger.

### Self-enhancement

We analyzed anger regulation data via a 2 (story)  $\times$  2 (trait order)  $\times$  2 (emotion type)  $\times$  2 (headline order) ANOVA. The assessment of moral ( $\alpha = .92$ ) and agentic ( $\alpha = .93$ ) traits was reliable. As in Experiment 1, the trait type main effect was significant,  $F(1, 151) = 54.77$ ,  $p = .001$ , partial  $\eta^2 = .27$ : participants rated themselves higher on moral ( $M = 8.40$ ,  $SD = 1.45$ ) than agentic ( $M = 7.33$ ,  $SD = 1.91$ ) traits. Also as in Experiment 1, the Story  $\times$  Trait Type interaction was significant,  $F(1, 151) = 4.48$ ,  $p = .026$ , partial  $\eta^2 = .03$ . We proceeded with separate analyses for moral and agentic traits. Angry participants (i.e., those who read the injustice story;  $M = 8.68$ ,  $SD = 1.32$ ) rated themselves as more moral than neutral-emotion participants (i.e., those who read the neutral story;  $M = 8.05$ ,  $SD = 1.52$ ),  $t(157) = 2.45$ ,  $p = .006$  partial  $\eta^2 = .047$ . However, angry ( $M = 7.35$ ,  $SD = 1.99$ ) and neutral-emotion ( $M = 7.31$ ,  $SD = 1.84$ ) participants did not rate themselves differently on agentic traits,  $t(157) = 0.13$ ,  $p = .89$ , partial  $\eta^2 = .001$ . Once again, angry participants, relative to neutral-emotion participants, used their anger to self-enhance on moral, but not on agentic, traits.

### Mediational analyses

Finally, we examined whether anger regulation mediated the effect of righteous anger on self-enhancement (i.e., moral grandiosity). That is, we tested Hypothesis 3: whether anger regulation (i.e., interest in reading injustice-relevant articles) mediated the effect of story condition (i.e., story-induced righteous anger) on self-enhancement (i.e., self-superiority judgments on the moral domain). We tested for this indirect effect using PROCESS (Hayes, 2013), whereby we estimated this effect over 5,000 bias-corrected bootstrapping iterations. Those who read the injustice story rated themselves higher on moral traits (est = .63, SE = .23,  $t = 2.77$ ,  $p = .006$ , 95% CI = .18 to 1.07), and the inclusion of anger regulation (est = .24, SE = .05,  $t = 4.63$ ,  $p < .001$ , 95% CI = .14 to .34) in the model reduced the direct effect of the story condition to where it was no longer significant (est = .40, SE = .22,  $t = 1.83$ ,  $p = .070$ , 95% CI = -.03-.83). Indeed, the indirect effect of story condition on moral self-enhancement via anger regulation was significant (indirect effect = .23, SE = .11, 95% CI = .07 to .51;  $R^2$  mediation effect = .03, 95% CI = .005 to .08; Kappa<sup>2</sup>: .08, 95% CI = .02 to .17). This provides evidence for mediation. The principal alternative model (i.e., the indirect effect of righteous anger on anger regulation via self-enhancement) was inferior (indirect effect = .32, SE = .15, 95% CI = .09 to .66;  $R^2$  mediation effect = .03, 95% CI = .005 to .08; Kappa<sup>2</sup>: .08, 95% CI = .02 to .15) and the direct effect remained significant when including the proposed mediator (direct effect = .63, SE = .32,  $t = 2.01$ ,  $p = .047$ ).

### Summary and testing of an alternative

The findings were consistent with all three hypotheses. As in Experiment 1, participants who experienced righteous anger (vs. a neutral emotion) engaged in moral, but not agentic, grandiosity (H1). Adding to Experiment 1, righteously angry participants chose to read newspaper articles expecting to maintain their anger (H2). Further, anger maintenance mediated the effect of righteous anger on moral grandiosity: participants' efforts to maintain, if not increase, their anger were in the service of moral self-enhancement (H3).

It is possible that participants did not actually regulate their emotions, but only indicated their preference on an ostensible impending task. We conducted a pilot study ( $N = 76$  Virginia Commonwealth University undergraduates) to test this alternative hypothesis. Participants read each of the six headlines, and then rated the extent to which they expected to feel furious, peaceful, tranquil, irritated, mad, and calm. Injustice-relevant articles led to higher levels of anticipated anger relative to happiness-relevant articles,  $t(75) = 21.62, p < .001$ . Similarly, happiness-relevant articles led to higher levels of anticipated contentment relative to the injustice-relevant articles,  $t(75) = 13.05, p < .001$ . These results rule out the alternative: participants expected the newspaper articles to induce emotions, as intended.

### General discussion

People firmly and robustly declare their allegiance to moral mandates (Bandura, 1991; Lerner, 1970) and see themselves as better-than-average on adherence to such mandates (Epley & Dunning, 2000; Sedikides & Alicke, 2012). Two experiments demonstrated that people strategically employ negative emotions, such as anger, in order to self-enhance and regulate their negative emotions (i.e., anger) in efforts to buttress their self-views as moral paragons. Specifically, participants who experienced righteous anger maintained their emotional state for the sake of moral, but not agentic, grandiosity: they expressed interest in reading injustice-relevant newspaper article, and that interest mediated the effect of righteous anger on moral self-enhancement. Participants strategically bypassed the short-term hedonic gain of anger reduction for the longer-term benefit of moral self-enhancement. The findings are consistent with the SCENT model, which consider self-enhancement strivings as tactical and role-fulfilling (Sedikides, Gaertner, and Cai, 2015; Sedikides & Strube, 1997).

The findings generally align with research on moral hypocrisy. This construct refers to the motivation to "appear moral in one's own and others' eyes while, if possible, avoiding the cost of actually being moral" (Batson & Collins, 2011, p. 94) or to "the tendency among people to judge others more severely than they judge themselves" (Polman & Ruttan, 2012, p. 129). Moral hypocrisy been well-documented (Batson & Collins, 2011; Lammers, Stapel, & Galinsky, 2010; O'Mara, Jackson, Batson, & Gaertner, 2011). However, the experience of righteous anger (or moral outrage) itself has been disputed as being distinct from anger and as being in the service of self-interest. For example, research has established the discriminant validity of personal anger (when the self is unfairly harmed) and empathic anger (when a related other or member of the ingroup is unfairly harmed), but not of righteous anger (when a moral standard is violated; Batson, Chao, & Givens, 2009; O'Mara et al., 2011). Righteous anger, then, often masquerades as identity-relevant personal anger. In our research, we took care for the eliciting anger condition (i.e., injustice) to be identity-relevant. In Experiment 1,

we used a tsunami scenario. Tsunamis, due to their disastrous consequences, publicity, and association with climate change (i.e., such a disaster could happen anywhere), arguably have become a universal issue; furthermore, tsunamis was an identity-relevant issue to our international sample. In Experiment 2, we used a hurricane Katrina scenario—clearly, an identity relevant issue to our sample of US citizens. Nevertheless, future research would do well to compare directly the different types of anger in order to determine the breadth of applicability of the effects of righteous anger.

Our findings have behavioral and interpersonal implications. *First*, righteously angry individuals may be likely to act on their emotion by donating money to relieve the injustice. Also, angry individuals may regulate their emotion tactically to elicit favorable reactions, such as zealots angrily affirming their views at the media. At the same time, maintaining or stoking anger may conflict with social goals such as boasting in cooperative contexts. *Second*, it is possible that the regulation of other emotions accentuates self-judgments of morality. It appears, however, that anger (albeit not righteous anger) has unique effects on moral hypocrisy: anger increases it, whereas guilt banishes it and envy reverses it (Polman & Ruttan, 2012). Nevertheless, other emotions would need to be examined in the context of our research paradigm for the links with moral hypocrisy. For example, the guiltier people feel after forgetting to take a friend to the airport, the more they may evaluate themselves as loyal and committed friends. Likewise, the more disgusted people are regarding a politician's immoral behavior, the purer they may judge their own character to be. *Third*, although in our research participants were isolated from each other and were assured anonymity and confidentiality, self-presentation is a relevant concern. Individuals may overtly express moral grandiosity at least in part to manage a positive impression on moral dimensions (Sedikides, Hoorens, & Dufner, 2015), though whether or not this self-presentational strategy is effective is an empirical question (Steinmetz, Sezer, & Sedikides, 2017). *Finally*, clinical applications are worth exploring. Individuals may hold onto negative emotional states (e.g., anger, guilt, sadness), because of the rather subtle tactical self-enhancement opportunities. For example, an individual with post-traumatic stress disorder may implicitly hold on to survivor guilt, because this means that he is honoring both his departed comrades and his commitment to keeping their memory alive.

Future research should also address the role of individual differences and age. Persons who are high on extraversion (Tamir, 2009), self-esteem (Wood, Heimpel, & Michela, 2003), and happiness (Hirt & McCrea, 2001), and low on neuroticism (Tamir, 2005), as well as younger adults (Carstensen, Fung, & Charles, 2003) may be more prone to regulating their emotions instrumentally and thus using them strategically for self-enhancement purposes. The cultural rise of individualism and narcissism (Cai, Kwan, & Sedikides, 2012; Twenge, 2017; Twenge & Campbell, 2009) and the ubiquity of social media may provide greater motivation as well as greater opportunities to express moral grandiosity. Relatedly, strategic self-enhancement via moral grandiosity may currently be fueling or exacerbating hyper-polarized political and civil discourse. Individuals on both sides of the political spectrum may feel righteous by condemning the morality of those on the other side, in part because each side is applying different moral foundations (Graham, Haidt, & Nosek, 2009). Thus, self-enhancement strivings may thus impede opportunities for effective perspective taking or intergroup dialogue.

We wish to highlight limitations of our research. We reported support for the SCENT model (i.e., H3) by conducting a reverse mediation analysis. However, complementary methods (e.g., the mediator, longitudinal designs, manipulating) are better suited to ruling out

alternative mediational paths (Fiedler, Schott, & Meiser, 2011; Lemmer & Gollwitzer, 2017). Also, the generalizability of our findings is limited by our operationalizations and settings. Future research will do well to test the replicability of our findings with alternate anger manipulations, such as in situations in which participants observe an injustice in the laboratory or in a field setting.

### Coda

Books like *To Kill a Mockingbird* or *Oliver Twist* and films like *12 Years a Slave* or *Spotlight* elicit negative emotionality (i.e., righteous anger), yet are popular and highly regarded. Why might individuals dwell on experiences that put them in a prolonged negative emotional state? Moral self-enhancement is one reason why. Anger makes one a better person (in one's own eyes). People prioritize feeling good about themselves over merely feeling good, thus appearing to be able to find self-enhancement opportunities in the unlikeliest of places: negative emotions.

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## Appendix 1. Stories used in Both Experiments

### 1. Stories used in Experiment 1

#### Villagers Not Receiving Tsunami Aid (Experiment 1)

Until recently, 21-year-old Alqausar considered himself to be lucky. Although he had lost six of his seven siblings and both his parents to the December tsunami, Alqausar expected to find no family survivors upon returning from his university in Jakarta, Indonesia. “It was a miracle that I found my grandparents and youngest sister. But now,” he says with obvious anger, “our corrupted government ignores our pleas. So I may lose them too.”

Despite the millions of dollars that have been donated to relief funds from around the globe, villagers in Indonesia have received nothing. “We have not seen any effort by our government to help the village survivors of the tsunami,” Alqausar explained.

We live nearest the ocean and have experienced the greatest physical, emotional, and psychological devastation. Yet, the government has only paid attention to the wealthy. Only the rich are receiving medical attention and food while we lose five people each day to sickness.

Although controversial local governor Nuryanti contends that the government has been addressing villagers’ needs, hundreds of his constituents accuse Nuryanti of leading the unjust disbursement of relief funds and bribing the local police. Alqausar, himself, has “witnessed Nuryanti riding in the government trucks that come to the villages only to dump wastes from the wealthier towns ... polluting the underground water system and poisoning the land.” On numerous occasions, Nuryanti has been spotted selling thousands of dollars worth of donated food and other supplies on the black market. “But the police do nothing. They do not care for us as well.”

As a result of the government corruption and neglect, each day five to eight villagers die from malnutrition or sickness. The once “lucky” Alqausar can only watch and wait each day for his ailing grandparents and deteriorating six-year-old sister to receive medical attention.

The remaining members of my family are really suffering. I might be completely alone before long. How can the government ignore us like this? How can they profit at the expense of the poor? What sort of people are they?

#### Shopping for Dinner (Experiment 1)

As Sara steps out of her class ready to go back to her apartment for dinner, she remembers that she has to go to shopping for herself and her roommate. Driving to the neighborhood market, Sara parks and walks into the store, hoping to get back to her apartment soon to eat. She pulls out the list that she made to see what she needs.

Sara stops for some oranges for her roommate, Theresa. Both were hoping that they would help Theresa’s cold go away quicker. She chooses some other fruits and vegetables as well. Next Sara looks for Theresa’s favorite cheese. But Sara stands there for several minutes trying to figure out which one



to get. Finally, she selects one with a cute female cow on the front of the package. *It can't be too bad if it's cute*, thinks Sara to herself.

Moving along quickly, Sara stops for some tea for herself. *Maybe jasmine tea— that sounds soothing. I wish they had...* “Oh!” Sara exclaims as she reaches for a package of peach tea. Satisfied, Sara finds some crackers for herself to share with Theresa and her cheese. *She won't mind sharing*. Walking to the paper goods aisle, Sara looks for toilet paper for Theresa.

*That's it*, Sara thinks as she crosses off the last item on her list. She makes her way slowly to the checkout lanes, as her hunger has subsided a bit. Looking at the cookies in the same aisle, she reminds herself of her new year's resolution to stay away from baked goods. Sara turns her cart down the main aisle, looking for the shortest checkout lane.

While putting her groceries onto the conveyor belt, Sara picks up a gossip magazine. She skims some articles and photos of celebrities, then notices that the clerk is ready for her. She waits as he scans all the items. He asks her if she prefers paper or plastic bags. Finally, he finishes ringing up all her items, she pays him in cash, and she heads back to her car with her cart.

## 2. Stories used in Experiment 2

### Hurricane Katrina Victims not Receiving Aid (Experiment 2)

Just last month, 21-year-old Alex moved to Richmond to stay with distant relatives. Alex and his family lived in the lower 9th ward neighborhood of New Orleans when hurricane Katrina hit on August 29, 2005. Alex's story is a shocking one amidst many shocking stories.

Alex and his family weren't supposed to be in New Orleans. He, his parents, grandmother, and five siblings had talked of moving to Chicago. But his parents did not want to uproot the family. When the hurricane warning came, the family planned to evacuate to Baton Rouge, but Alex's grandmother May needed home nursing care for her diabetes. They were promised that an ambulance would evacuate her the day before Katrina hit. However, the family waited all day and no one came, so they stayed, put blankets and boards on the windows of their house, and prayed.

Katrina tore the roof off their house, and the bottom floor flooded with about two feet of water. The family ended up huddled in the kitchen sharing one flashlight. When the worst of the storm was over, they had all survived. But unbeknownst to them, the nightmare was just beginning.

“We were so happy that we survived the worst of the storm, but we didn't have anything, and we were especially concerned about Grandma,” said Alex. The children tried to bail water out of the kitchen, while their grandmother was placed on the kitchen table to keep her dry. Then the cell phone died and they were cut off from others. Alex's younger brother, Terry, went to try to get help, but he never returned. Alex's grandmother went downhill fast, and slipped into a diabetic coma six days after Katrina. Once again, Alex's family was given false hopes by the broken promises of city officials. They said they would return the next day with insulin, food, fresh water, and some cash to buy food. However, their poorer neighborhood never saw those city officials again. “I think they just focused on the wealthier neighborhoods,” Alex said grimly. Neighbors said that it got worse for the family: According to them, Alex's sister Angela was sexually assaulted by a New Orleans off-duty police officer, while trying to visit neighbors to borrow fresh water. However, the family refuses to talk about it.

To make matters worse, Alex saw the corruption firsthand. Emergency rations that should have given away to those in need were sold by some city officials at exorbitant prices. “I recognized one guy who worked for the city, and he was selling gallons of water for \$50 and loaves of bread for \$20. We had no more cash, so we continued to go hungry.”

The last straw was when the city failed to get the power back on or help with the flooding. “We finally gave up waiting for things to turn back on. My family all got sick from drinking the contaminated water. We saw dead pets floating in the water, but what could we do?” It got even worse: city officials started dumping toxic waste from other neighborhoods into Alex's neighborhood.

Alex's grandmother died eight days after the hurricane. The rest of the family reluctantly walked out of town, forced to leave their grandmother's body wrapped in sheets and still in the dark about Terry's whereabouts. “We walked and walked down that road, tears streaming down our faces,” said Alex. “It didn't have to be this way. Why didn't the city officials or police care about us? Why did they try to profit off the misery of others?”

### Shopping for Dinner

As Sara steps out of her class ready to go back to her apartment for dinner, she remembers that she has to go to shopping for herself and her roommate. Driving to the neighborhood market, Sara pulls into the parking lot and notices that the market is pretty crowded this afternoon. She circles around a little bit, parks her car, and walks into the store. She hopes the crowd won't slow her down too much, so she can get back to her apartment soon to eat. She pulls out the list that she made to see what she needs.

Sara stops for some oranges for her roommate, Theresa. Both were hoping that they would help Theresa's cold go away quicker. A bug seems to be going around lately. Sara chooses some other fruits and vegetables as well, including several items to make a salad. Next Sara looks for Theresa's favorite cheese. But Sara stands there for several minutes trying to figure out which one to get. Finally, she selects one with a cute cow on the front of the package. *It can't be too bad if it's got a cute picture*, thinks Sara to herself.

Moving along quickly, Sara stops for some tea for herself. *Maybe jasmine tea— that sounds soothing. I wish they had...* "Oh!" Sara exclaims as she reaches for a package of peach tea. One of her favorites. Satisfied, Sara finds some crackers for herself to share with Theresa and her cheese. *She won't mind sharing.* Walking to the paper goods aisle, Sara looks for toilet paper and paper towels.

After finding the paper towels and comparing prices to get a good deal on a package of three rolls of paper towels, Sara grabs some orange juice and some milk. She decided between the no pulp and pulp versions of orange juice and notices that there seem to be more options than before.

*That's it*, Sara thinks as she crosses off the last item on her list. She makes her way slowly to the checkout lanes, but enjoys a free sample of salsa along the way. That helps her hunger to subside a little bit. On the way to the front of the store, she passes an aisle full of cookies. She reminds herself of her new year's resolution to stay away from baked goods. Sara reaches the front of the market and looks for the shortest checkout lane.

While putting her groceries onto the conveyor belt, Sara picks up a gossip magazine. She skims some articles and photos of celebrities, then notices that the clerk is ready for her. She waits as he scans all the items. He asks her if she prefers paper or plastic bags. Finally, he finishes ringing up all her items, she pays him in cash, and she heads back to her car with her cart.