

Research article

Vertical individualism and injustice: The self-restorative function of revenge

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Abstract

In the current paper, we examine the role of vertical individualism in determining revenge behavior following an injustice. Drawing on existing theory and research, we hypothesized that victims who are more vertically individualistic will be more likely than those who are less vertically individualistic to engage in revenge following the experience of injustice as a means of restoring self-esteem. The results from three studies—employing different methodologies and operationalizations of revenge—support our reasoning. Moreover, two of the studies provide support for the proposed self-esteem maintenance mechanism underlying the relation between vertical individualism and revenge. Although much research in psychology and organizational justice has demonstrated that the experience of injustice can threaten one's identity, our data are the first to demonstrate that responding to injustice can restore people's self-esteem to homeostasis. The present studies thus demonstrate that in some instances revenge may have an intrapsychic benefit for the victim, which helps to explain why some people engage in revenge despite possible negative interpersonal consequences. We discuss implications of our findings for social and organizational justice theory and for potentially mitigating revenge reactions to injustice. Copyright © 2012 John Wiley & Sons, Ltd.

At some point in our lives, most of us have felt the urge to “get even” with someone who has treated us unfairly. Research has shown that the interpersonal consequences of revenge are generally destructive in that revenge can escalate conflict and lead to a long-lasting reciprocal chain of revenge and counter-revenge behaviors (e.g., Kim & Smith, 1993). People who endorse revenge as a conflict resolution strategy encounter difficulties in maintaining interpersonal relationships (Rose & Asher, 1999).

Research examining *intrapsychic* consequences of revenge for the avenger has however demonstrated mixed consequences. Some studies have found that taking or anticipating revenge can have positive effects for the avenger (e.g., Denzler, Förster, & Liberman, 2009; de Quervain et al., 2004; Gollwitzer & Denzler, 2009). For example, de Quervain et al. (2004) found that the dorsal striatum, the brain region that is closely related to pleasure, was activated following participants' decision to punish the offender. In other words, anticipating taking revenge was associated with positive affect. In contrast, Carlsmith, Wilson, and Gilbert (2008) reported negative intrapsychic effects. They found that, compared with victims who refrained from enacting revenge, victims who took revenge engaged in greater rumination, which resulted in greater negative affect.

To date, little research has examined when, or for whom, revenge may have beneficial intrapsychic consequences for the victim. One exception is the recent research by Gollwitzer, Meder, and Schmitt (2011) who demonstrated that revenge is

more satisfying for victims when the offender signals an understanding of their punishment. In the present research, we build on this literature by examining the possibility that revenge may, for some people, serve to restore victim self-esteem. In particular, we suggest that revenge may have a self-restorative function among people who have a strong need to outperform others, such as among those who are high on vertical individualism.

In the following sections, we first review the concept of revenge. Next, we outline the theoretical rationale underlying our prediction that individuals who are high on vertical individualism will seek revenge as a means of restoring self-esteem following the experience of injustice.

REVENGE: DEFINITION AND DISTINCTION FROM RELATED CONSTRUCTS

In the research literature, revenge is commonly defined as an “action taken in response to a perceived harm or wrongdoing by another person that is intended to inflict harm, damage, discomfort or injury to the party judged responsible” (e.g., Aquino, Tripp, & Bies, 2001, p. 53; also Stuckless & Goranson, 1992; Vidmar, 2001). Revenge is characterized by resentment, anger, and even hatred toward the harmdoer (e.g., Bies & Tripp, 1996). What triggers these emotions is the cognitive appraisal of the wrongdoing (e.g., Bies & Tripp, 1996; Bies, Tripp, &

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Kramer, 1997). That is, following a wrongdoing, victims ruminate about the offense to decide whether to hold the offender accountable. Once the offender's actions are perceived as blameworthy, the victim experiences a threat to their identity, and the emotion of anger is triggered (e.g., Bies & Tripp, 1996; Bies et al., 1997; Vidmar, 2001). In short, the experience of injustice can arouse revenge-related cognitions and emotions, which in turn activate identity-relevant concerns in the victim and ultimately trigger behaviors aimed at protecting the self.

Although the concept of revenge is well established, there is confusion about the terms revenge and retribution in both everyday language and scholarly writings, as well as between revenge and aggression. There are at least four important distinctions between revenge and retribution (for reviews, see French, 2001; Hampton, 1988; Nozick, 1981; Vidmar, 2001). First, whereas in retribution, moral limits are drawn between permissible and impermissible punishment, revenge involves no such limits to punishment, nor do acts of revenge need to be proportional to the wrongdoing. Second, revenge has a greater emotional and behavioral intensity. Third, the agent of retribution is usually a third party with no special tie to the victim, whereas revenge is quite personal and usually enacted by the victim or by someone close to the victim. Finally, acts of revenge are intended to inflict pain and suffering on the offender with the goal of elevating the victim to a superior position and demeaning the offender. Acts of retribution, in contrast, are aimed at proving the victim's equal value and asserting moral truth; as such, the retributivist is "always mindful and respectful towards the value of his wrongdoer" (Hampton, 1988, p. 137).

With regard to the distinction between aggression and revenge, Bies and Tripp (2005) conceptualized revenge as a unique form of aggression, in that it is explicitly *in response to perceived injustice*. In line with this conceptualization, research has shown that people are more likely to take revenge when an injustice has occurred than when an injustice has not occurred—as in the case of negative, but just, events or actions (e.g., Aquino, Tripp, & Bies, 2006).

REVENGE AS A MEANS OF COPING WITH INJUSTICE

Several theories of justice have been advanced in the psychological literature over the last 40 years. Although important differences among the theories exist, there is a common assumption that the experience of injustice threatens identity-relevant concerns. For example, the group value, relational, and group engagement models of procedural justice (e.g., Tyler & Blader, 2003; Tyler & Lind, 1992) argue that people care about procedural fairness because it communicates information about the quality of their relationships with others, thus shaping their social identity, which ultimately has implications for their self-esteem. Likewise, according to fairness heuristic theory (e.g., Lind, 2001), the experience of injustice is related to feelings of exploitation, rejection, and loss of identity. The link between the experience of injustice and feelings of disrespect is also central to interactional justice (e.g., Bies, 2001). In short, being treated unfairly can lead the victim to feel

inferior whereas fair treatment re-affirms one's sense of worthiness (e.g., see Miller, 2001, for a review). Empirical evidence supports the idea that the experience of injustice is associated with diminished self-worth (e.g., Brockner et al., 2003; Koper, Knippenberg, Bouhuijs, Vermunt, & Wilke, 1993; Schroth & Shah, 2000; Smith, Tyler, Huo, Ortiz, & Lind, 1998).

Given that people are motivated to maintain a positive view of the self (Tesser, 2000), victims of injustice should strive to repair the self-esteem threat that arises from the experience of injustice. Revenge may serve this function for certain people. Indeed, Vidmar (2001) proposed a six-stage model of the psychological dynamics of revenge in which he theorized that perceptions of injustice threaten victims' self-regard and that seeking revenge may return victims' self-regard toward homeostasis. Kim and Smith (1993) also suggested that the enactment of revenge can restore victims' degraded feelings of self-worth (for similar ideas in the organizational behavior literature, see Aquino & Douglas, 2003; Bies et al., 1997; Ferris, Brown, & Heller, 2009). Consistent with these ideas, evidence from social psychological research reveals that the motivation to maintain a positive self-view can lead self-threatened individuals to be defensive, hostile, antagonistic, and aggressive and to derogate and deceive others (Baumeister, Smart, & Boden, 1996).

Of course, as noted earlier, the goal of revenge is to inflict pain and suffering on the offender to elevate oneself to a superior position and demean the offender. Thus, we reasoned that revenge may serve to be an effective coping strategy primarily for people who derive self-worth from outperforming, and feeling superior to, others. As we explain below, those who are highly vertically individualistic fit such a profile.

VERTICAL INDIVIDUALISM AND REACTIONS TO INJUSTICE

According to the cross-cultural psychology literature, vertical individualism represents the blending of individualist values and achievement orientation and an emphasis on outperforming others (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis, 1996, 2001). In particular, those who are high on vertical individualism are motivated by self-enhancement values, such as achievement and power (also see Cukar, de Guzman, & Carlo, 2004). These individuals also emphasize hierarchy and accept the existence of inequalities among people. They give personal goals priority over group goals, and their behaviors are determined by personal preferences, rights, convictions, and goals. Importantly, for our research, the attainment of self-esteem from competition and outperforming others is especially relevant for those who are high *versus* low on vertical individualism (Cukar et al., 2004; Triandis, 2001). The motivation to outperform others is so central to individuals who are strongly vertically individualistic that they are likely to violate moral principles (i.e., honesty, integrity) to win (Triandis et al., 2001).

Drawing on the literature on cross-cultural psychology, justice, and revenge, we argue that the experience of injustice should threaten the strongly vertically individualistic person's

feelings of competence and superiority, which, in turn, should motivate reactions aimed at restoring positive self-regard. Given that individuals who are higher on vertical individualism derive positive self-regard from getting ahead and being the best, we hypothesized that they, more than those low on vertical individualism, should be likely to engage in revenge as a means of restoring their self-worth.

Whereas our reasoning is premised on theorizing about those with a stronger vertical individualism, less is known about the goals and the motives of individuals who are lower on vertical individualism. However, recent research suggests that these individuals endorse self-transcendent values, such as universalism and benevolence, more strongly than those high on vertical individualism (Cukar et al., 2004). This is in line with our idea that revenge should restore self-worth more among those higher on vertical individualism.

Recent research examining the roles of regulatory focus and self-activation on retaliation to authority procedural unfairness provides indirect support for our hypothesis that those high on vertical individualism should be likely to avenge injustice. Brebels, De Cremer, and Sedikides (2008) found that promotion-focused participants were more likely to retaliate against procedural unfairness from an authority figure than prevention-focused participants. They also found that when the accessibility of the independent self was high (*versus* low), both promotion-focused and prevention-focused participants reported greater retaliation intentions toward an unfair hypothetical authority figure. Given the salience of the independent self among individuals high on vertical individualism (e.g., Singelis et al., 1995), the findings of Brebels et al. support the link between vertical individualism and revenge proposed in our research. We extend their research in several ways.

First, we focus on the competitive, status-oriented aspects of the independent self, whereas Brebels et al. focused on self-attention (Study 4) and uniqueness (Study 5). Second, whereas Brebels et al. examined retaliation primarily in the context of hypothetical injustices (Studies 2–5), our focus is on revenge in the context of personally experienced injustice (Studies 1 and 3). Most importantly, we directly examine the self-restorative function of revenge, thereby providing direct evidence for our proposed mechanism.

Drawing on the preceding literatures, we tested the following predictions:

Hypothesis 1: The more strongly that people define themselves as vertically individualistic, the greater is their propensity to engage in revenge against the perpetrator of a personal injustice.

Hypothesis 2: Among individuals who are highly vertically individualistic, revenge will serve to restore self-esteem that is threatened by the injustice, whereas this will not be the case among those who are less vertically individualistic.

STUDY 1

The goal of Study 1 was to examine whether the strength of people's vertical individualism is associated with greater revenge following the experience of injustice. To examine

responses to a wide range of offenses and across different age groups, we used two independent samples. In Sample 1, we examined undergraduate students' motivations to avenge an injustice. In Sample 2, we examined working adults' self-reported revenge behavior following a workplace injustice. An additional goal was to demonstrate the unique, or incremental, effect of vertical individualism on revenge over and above several known contextual and demographic predictors. Therefore, we measured and controlled for the effect of a number of potential third variables. The first was participants' perceptions of offense severity, given evidence demonstrating a positive relation between offense severity and revenge (e.g., McCullough et al., 1998). Second, we controlled participant gender in light of evidence that North American culture (where the current research was conducted) promotes the development of independence and autonomy in men and interdependence and relatedness in women (e.g., Cross & Madson, 1997). Research has also shown that men have more positive attitudes toward revenge than women (e.g., Stuckless & Goranson, 1992). Finally, to minimize the role of contextual factors, we controlled for the time since the offense occurred and the nature of the participant's relationship with the offender.

Method

Participants

Sample 1 Sixty-seven undergraduate students (20 men and 47 women; $M_{age} = 19.75$, $SD = 1.13$) from a mid-sized Canadian university participated for course credit.

Sample 2 A random sample of 2000 alumni from a mid-sized Canadian university was invited by email to participate in a two-part survey examining injustice in the workplace. One hundred employees (36 men and 64 women; $M_{age} = 33.03$, $SD = 8.17$) provided useable data.¹ Thirty-two percent had completed a post-graduate or professional degree, and 35% were in a management position. Of those in a management position, 34% were entry level, 46% middle level, and 20% upper level. Fifty-two percent of respondents were employed in the private sector, and 21% were members of a union.

Time 1: Vertical Individualism

In both samples, we assessed vertical individualism using the eight-item scale of Singelis et al. (1995; also Triandis, 1996) (e.g., "It is important that I do my job better than others" and "When another person does better than I do, I get tense and aroused"; 1 = *strongly disagree*, 7 = *strongly agree*). Students completed the measure in an online mass testing, occurring approximately 1 month prior to the study ($\alpha = .85$). Employee

¹One hundred and eighty-eight employees completed Part 1 of the survey; of these, 100 also completed Part 2. No significant differences in respondent demographics were found when comparing those who completed Parts 1 and 2 and those who completed Part 1 only. However, participants who completed Part 1 only had a significantly stronger vertical individualism ($M = 3.71$, $SD = 1.14$) than those who completed both parts ($M = 3.31$, $SD = .98$), $t(185) = 2.62$, $p < .05$. This difference should make it more difficult to detect the predicted effects.

participants completed the measure 1 week prior to reporting on the offense ($\alpha = .78$).

Time 2: Offense Description

Participants were asked to describe a time when they were treated unfairly by another person (Sample 1) or someone with whom they currently work (Sample 2). After describing the offense, participants completed a series of measures.²

Students' reports included incidents of rejection, betrayal, or insult (79%), discrimination (7.5%), physical assault (6%), merit violation (4.5%), and termination from extracurricular activity (3%). Employees' reports included incidents of having been victim to disrespectful or insulting treatment, public criticism, and discriminatory or unfair remarks (71%), having been lied to or having information withheld by another (11%), and losing a promotion to another perceived to be less deserving (5%). (Because of a technical problem, 13% of the latter accounts were transmitted incompletely and could not be coded.)

Time 2: Revenge

In Sample 1, we assessed revenge motivation using the five-item revenge subscale of the Transgression-Related Interpersonal Motivations (TRIM) inventory of McCullough et al. (1998) (e.g., "I'm going to get even" and "I wish something bad would happen to him/her"; 1 = *strongly disagree*, 7 = *strongly agree*). The TRIM inventory has been used in numerous studies on revenge motivation, and it demonstrates good reliability ($\alpha = .87$).

In Sample 2, we assessed revenge behavior using the following two items adapted from the TRIM inventory (1 = *not at all*, 7 = *very much*): "To what extent have you done something to get even with the offender?" and "To what extent have you done something to hurt the offender?" ($\alpha = .73$).

Control Variables

As noted earlier, we controlled for the possible effects of gender, time since the offense occurred, offense severity, and the nature of the participant's relationship with the offender. We used two items to assess offense severity (at Time 2): "How severe would you rate the offense?" (1 = *not at all severe*, 7 = *very severe*) and "How painful is the offense to you right now?" (1 = *not at all painful*, 7 = *very painful*) ($\alpha = .71$ and $.69$ for Samples 1 and 2, respectively).³

Students identified the offender as same-sex friend (22%), opposite-sex friend (21%), romantic partner (15%), family member (12%), classmate (8%), co-worker (7%), supervisor (3%), roommate (3%), and other (9%). Employees identified the offender as male supervisor (33%), same-sex co-worker

(22%), female supervisor (21%), opposite-sex co-worker (18%), and other (6%).⁴

Results and Discussion

Table 1 presents the descriptive statistics and intercorrelations among the study variables for Samples 1 and 2. In support of our primary hypothesis, we found a significant positive relation between vertical individualism and revenge motivation among students and between vertical individualism and revenge behavior among employees. For each sample, we then conducted a hierarchical multiple regression analysis to examine whether vertical individualism has incremental predictive power (Table 2). As shown, vertical individualism was significantly positively associated with revenge motivation and revenge behavior even after statistically controlling other known predictors.⁵ Thus, these variables do not account for the effect of interest; rather, participants' individualism has an *incremental* effect on revenge.

Having demonstrated the association of interest across two independent samples, in Study 2, we sought to provide an initial test of the idea that revenge serves to restore self-esteem among those with a stronger vertical individualism.

STUDY 2

Participants read a vignette depicting a workplace injustice assuming the role of the victim and reported their revenge motivation. We had several goals. First, we aimed to replicate the effect observed in Study 1 with a standardized injustice, which allowed us to explicitly control contextual factors that were allowed to vary in Study 1 (e.g., offense type, severity, relationship with offender, time since offense). Second, we conducted a preliminary test of our theoretical assumptions regarding the role of self-esteem threat in motivating revenge reactions among strongly vertically individualistic participants. To do so, we examined whether the relation between vertical individualism and revenge is mediated by victims' diminished feelings of self-worth following the injustice.

Method

Participants

Seventy-six undergraduate students from a mid-sized Canadian university (34 men and 42 women; $M_{\text{age}} = 19.04$, $SD = 1.30$) participated for course credit.

Procedure

Time 1: Vertical Individualism Vertical individualism was assessed in the same way as in Study 1 (Sample 1).

²In all of the studies, we ensured that participants left the session feeling positively. Specifically, in Study 1 (both samples), participants completed a positive mood induction prior to the debriefing. In Studies 2 and 3, participants received an extensive debriefing and explanation of the deceptions.

³According to cross-cultural research (e.g., Markus & Kitayama, 1991; Triandis, 1989), Western culture promotes the development of independence more than Eastern culture. Although the majority of our samples were of Caucasian descent, we conducted auxiliary analyses controlling for ethnicity in all the studies, and the results are unchanged.

⁴Note that none of the control variables examined in Studies 1–3 moderate the primary effect of interest.

⁵As suggested by Tabachnick and Fidell (1996), we looked for outliers in the primary analysis (standardized residuals greater than 3). Two cases met this criterion.

Table 1. Study 1: descriptive statistics and intercorrelations for Samples 1 and 2

Variable	Sample 1		Sample 2		1	2	3	4	5
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
1. Vertical individualism	4.04	1.15	3.31	0.98	—	.20*	.05	-.02	-.05
2. Revenge	2.00	1.36	1.40	0.86	.28*	—	.02	-.11	.18
3. Time since offense	29.37	18.61	6.22	10.10	-.06	.10	—	.05	.02
4. Participant gender	0.71	0.46	0.64	0.48	-.20	-.25*	-.13	—	.12
5. Offense severity	4.02	1.37	3.84	1.46	-.06	.02	.10	-.09	—

Note. $N=66$ (Sample 1) and $N=100$ (Sample 2). Descriptive statistics and intercorrelations are presented below (Sample 1) and above (Sample 2) the diagonal. Participant gender is dummy coded (men=0, women=1). Offender identity is coded categorically; therefore, it is not included in the table. Time since offense occurred reflects days in Sample 1 and months in Sample 2. The continuous variables are measured on 7-point scales; higher scores reflect more of the construct. Cronbach's α reliabilities are presented in the Method section of Study 1.

* $p < .05$.

** $p < .01$.

Table 2. Study 1: standardized regression coefficients for the hierarchical regression analysis predicting revenge motivation (Sample 1) and revenge behavior (Sample 2) from vertical individualism

Predictor	Sample 1		Sample 2	
	Step 1	Step 2	Step 1	Step 2
Time since offense	.05	.07	.04	.02
Who was the offender	.20	.20	.12	.14
Participant gender	-.23	-.18	-.02	-.03
Offense severity	.08	.07	.23*	.24*
Vertical individualism		.25*		.24*
R^2	.11	.16*	.08	.14*
ΔR^2		.06*		.06*
ΔF	1.81	4.13	2.11	5.92

Note. $N=66$ (Sample 1) and $N=98$ (Sample 2). Participant gender is dummy coded (men=0, women=1). Higher scores on continuous measures reflect more of the construct. Time since offense reflects days in Sample 1 and months in Sample 2.

* $p < .05$.

Time 2: Main Study Upon arrival to the lab, participants read a vignette depicting a workplace injustice and assumed the role of the victim. The scenario was adapted from Sommers, Schell, and Vodanovich's (2002) organizational revenge scale. Participants were asked to imagine themselves as an employee who had been employed at a manufacturing company for the past 25 years. In the scenario, it was reported that the company made record profits last year and that there was a 25% increase in pay among management. Although the company promised that no plant closures would occur in the next 5 years, the company just announced that the plant would close within the year, with most of the work being transferred to a plant in Mexico. Additionally, half of the employees would be terminated and the other half—which included themselves—would be transferred to the Mexico plant for less pay and benefits. Using Bies and Tripp's (1996) terminology, the company formally breached a contract; hence, the injustice arose from a rule violation. After reading the scenario, participants completed several measures.

Time 2: Measures

Perceived Injustice Check To check whether the offense was perceived as unfair, participants were asked, "To what

extent were the events described in the scenario unfair?" (1 = *not at all unfair*, 7 = *very unfair*).

Revenge Motivation Revenge motivation was assessed with five items adapted from the TRIM inventory (e.g., "Following the offense described above, I would want:" "to see them (referring to management) hurt and miserable" and "to get even").

Self-Esteem Threat To examine whether the offense would threaten participants' feelings of self-worth, they were asked, "To what extent would the incident described in the scenario diminish your: (a) sense of competence? (b) sense of self-worth? (c) status in the organization? (d) sense of control? (e) reputation?" (1 = *not at all*, 7 = *very much*).

Control Variables As in Study 1, we controlled for the effects of perceived offense severity ("How severe would you rate the incident described in the scenario", 1 = *not at all severe*, 7 = *very severe*) and participant gender.

Results and Discussion

Table 3 shows the descriptive statistics and intercorrelations among the study variables. As expected, participants perceived the injustice described in the scenario as quite unfair ($M=6.45$, $SD=.70$). Vertical individualism was not significantly correlated with participants' perceptions of injustice, indicating that participants perceived the offense similarly regardless of vertical individualism. Consistent with past theorizing (Cross &

Table 3. Study 2: descriptive statistics and intercorrelations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Vertical individualism	3.92	1.17	(.86)					
2. Revenge	3.45	1.57	.30**	(.92)				
3. Self-esteem threat	3.82	1.18	.27*	.40**	(.73)			
4. Participant gender	0.55	0.50	-.36**	-.19	-.01	—		
5. Perceived injustice	6.45	0.70	.13	.14	.03	.16	—	
6. Offense severity	5.87	1.06	.17	.04	.07	.01	.44**	—

Note. $N=76$. Participant gender is dummy coded (men=0, women=1). The continuous variables are measured on 7-point scales; higher scores reflect more of the construct. Cronbach's α reliabilities are shown on the diagonal.

* $p < .05$.

** $p < .01$.

Madson, 1997), vertical individualism was however significantly correlated with gender, such that male participants scored higher on vertical individualism than female participants.

In support of our primary hypothesis, we found a significant positive relation between vertical individualism and revenge motivation; the higher the participants' vertical individualism, the greater their revenge motivation. We then conducted a hierarchical multiple regression analysis to examine whether vertical individualism has incremental predictive power. As shown in the Table 4, the effect of individualism remains significant after statistically controlling for several known predictors.

Finally, as shown in Table 3, there was a significant positive relation between vertical individualism and self-esteem threat arising from the offense; the higher participants' vertical individualism, the more they indicated diminished feelings of self-worth resulting from the offense. Additionally, self-esteem threat was significantly correlated with revenge motivation, such that the greater participants' anticipated self-esteem threat, the greater their revenge motivation.

Mediation of the Relation Between Vertical Individualism and Revenge Motivation

We used a bias-corrected bootstrap mediation model to assess the mediating role of self-esteem threat (Preacher & Hayes, 2004). In our analyses, we used the conventional 5000 bootstrap resamples with a 95% confidence interval. As predicted, self-esteem threat mediated the effect of vertical individualism on revenge motivation, 95% confidence interval for the indirect effect [0.02 - 0.24], $p < .05$ (Figure 1).

Although the mediation analysis provides preliminary evidence for our theorizing about the role of self-esteem, it does not demonstrate that engaging in revenge restores self-esteem among individuals who are higher on vertical individualism. We addressed this issue in Study 3. We also moved to a high-impact paradigm in which we observed participants' behavior following unfair treatment.

STUDY 3

In Study 3, we focused on one of the most potentially destructive ways to enact revenge, namely, physical aggression (e.g., Bies & Tripp, 1996). In a first phase of the study, participants

Table 4. Study 2: standardized regression coefficients for the hierarchical regression analysis predicting revenge from vertical individualism

Predictor	Step 1	Step 2
Participant gender	-.19	-.09
Offense severity	.04	-.01
Vertical individualism		.26*
R^2	.04	.10*
ΔR^2		.06*
ΔF	1.37	4.69

Note. $N=76$. Participant gender is dummy coded (men=0, women=1). Higher scores on continuous measures reflect more of the construct. * $p < .05$.

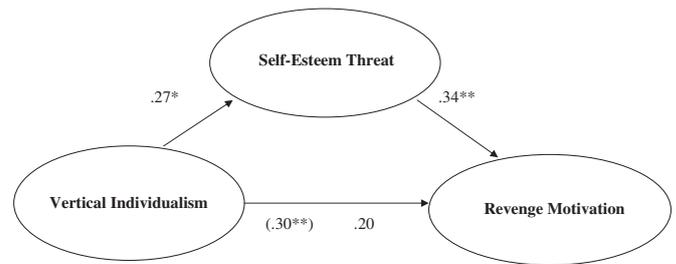


Figure 1. Study 2: diagram depicting the mediating role of self-esteem threat in the link between vertical individualism and revenge motivation. The numbers on the path are β obtained from the bootstrapping analysis. The direct effect of vertical individualism on revenge motivation is given inside the parentheses; the indirect effect (controlling for self-esteem threat) is given outside the parentheses. $N=76$. * $p < .05$. ** $p < .01$

were treated unfairly, ostensibly by a fellow participant. Participants were then provided with a subtle opportunity to engage in revenge by administering noise blasts to the perpetrator, under the guise of an unrelated study on learning. We predicted that the stronger participants' vertical individualism, the more often they would aggress against the perpetrator. Additionally, to rule out the possibility that those high on vertical individualism would harm the other participant more often within this paradigm in the absence of a prior injustice, we included a control condition, in which participants did not experience the injustice in Phase 1. We did not expect greater aggression as a function of vertical individualism in the control condition.

In Study 3, we also sought to expand our examination of the incremental effect of vertical individualism on revenge behavior over and above known *dispositional* predictors of revenge. Thus, we controlled for several variables that have been negatively associated with revenge, namely, moral identity (Reed & Aquino, 2003), agreeableness, extraversion, and conscientiousness (McCullough, Bellah, Kilpatrick, & Johnson, 2001) as well as variables shown to relate positively with revenge, namely, neuroticism (McCullough et al., 2001) and trait self-esteem (Burton, Mitchell, & Lee, 2005).

Assessment of Underlying Mechanism

As outlined earlier, we argued that the experience of injustice can threaten people's positive self-regard and that people will be motivated to restore self-worth. Although there is prior empirical support for the idea that perceived injustice threatens victims' self-worth, to our knowledge, researchers have not yet examined whether responding to injustice in fact *restores* victims' self-worth. Thus, a goal of Study 3 was to test this possibility, as well as to replicate prior findings regarding the effect of injustice on self-worth.

To do this, we assessed participants' self-esteem at three points: at the outset (for baseline assessment), following the experience of injustice, and following their treatment of the perpetrator. We expected that participants' feelings of self-regard should decrease following the experience of injustice, and, more novel, self-regard should increase following their response. We also assessed participants' self-esteem levels in the control condition, where we did not expect the same fluctuations in self-esteem.

Given that the need for positive regard is both universal and fundamental, we expected all victims—regardless of the strength of their vertical individualism—to experience self-esteem threat following the injustice and consequently that everyone should be motivated to restore feelings of positive self-regard. However, we expected that people's vertical individualism would influence the *manner* in which they attempt to restore self-regard. In particular, the stronger the victims' vertical individualism, the more likely they would be to seek revenge as a means of restoring their feelings of self-worth.

Method

Participants and Design

Eighty-one undergraduate students from a mid-sized Canadian university (32 men and 49 women; $M_{\text{age}} = 18.79$, $SD = 1.21$) participated for course credit. The data from five participants who expressed suspicions regarding aspects of the study were excluded. Participants were randomly assigned to condition (injustice *versus* control).

Procedure

Time 1: Vertical Individualism Individualism was assessed as before.

Time 2: Main Study A random sample of participants was invited by email to participate in two ostensibly unrelated studies. To reduce suspicion that the two studies were related, participants were asked to sign a separate informed consent for each, and the studies were conducted by different experimenters in different rooms.

Participants were told that the purpose of Phase 1 was to investigate group *versus* individual decision making. They were led to believe that half of the participants—including themselves—were randomly assigned to work on a time-pressured, decision-making task with a partner, whereas the other half would work on the same task alone. We used an in-basket task, which is an involving role-playing exercise in which participants are asked to imagine themselves as the manager of a company. In the present study, participants made a decision about how to handle a complaint letter from a client. Participants had 10 minutes to generate a list of possible solutions and to resolve it through consensus (all were able to do this). Before participants began the in-basket task, they completed a measure of self-esteem (Measures section).

Once participants resolved the in-basket task, they were taken to individual lab rooms and asked to evaluate each other's performance using a seven-item questionnaire. In the injustice condition, the experimenter then ostensibly exchanged the evaluations, enabling us to impose unfair interpersonal treatment (e.g., Bies, 2001; Greenberg, 1993). In the injustice condition, participants received a pre-determined evaluation that was interpersonally insensitive and non-normatively harsh (e.g., their partner rated them to be unlikable and incompetent and to have put forth relatively less effort into the group task). Past research has demonstrated that such treatment is perceived as unjust because it is unexpected and can deprive people of something they believe they are entitled to,

namely respectful treatment (e.g., Miller, 2001). In the control condition, participants were also asked to evaluate each other's performance but were told that the evaluations would be anonymous. Thus, participants did not receive any performance feedback in the control condition. Next, participants completed the self-esteem measure again, as well as two items to assess perceived injustice (Measures section).

Participants completed Phase 2 (adapted from Bushman, 1995) with a different experimenter (blind to experimental condition) in separate lab rooms, each equipped with a computer. They were told that the researchers were examining how aversive stimuli affect learning. Specifically, under the guise of a learning experiment, participants were led to believe that they were randomly assigned to the "teacher" role and the other participant a "learner" role. In fact, all participants were assigned to the teacher role, and the learner's responses were pre-programmed. Ostensibly, the role of the learner was to answer 10 verbal analogy questions on the computer. The teacher would be informed, via the computer, whether the learner answered the question correctly or incorrectly. If the learner answered a question correctly, the teacher was to acknowledge the correct response by pressing the "C" key on the keyboard. If the learner answered a question incorrectly, the teacher was to decide whether the learner should receive a burst of noise (which sounded like radio static), and, if so, for how long. Participants had the option of choosing a noise that ranged from 60 dB (level 1) to 105 dB (level 10); a level of 0 (no noise) was also provided to allow for a non-aggressive response. Participants could administer a blast of noise by holding down the "I" key on the keyboard for as long as they wanted to administer the noise. After this phase, they completed the self-esteem measure again.

Finally, we used a funneled-debriefing procedure advocated by Bargh and Chartrand (2000), in which participants were asked increasingly specific questions to assess, as naturally as possible, their possible suspicions regarding the manipulation of unfair treatment, or the relation between the purported studies.

Measures

Perceived/Expected Injustice Checks Two bi-polar items, rated on a scale from 1 to 7, assessed whether participants perceived their partner's evaluation as unfair and negative: "To what extent was your partner's evaluation of you:" fair-unfair, positive-negative ($\alpha = .76$). Given that participants did not receive the performance feedback in the control condition, we re-worded the two items to assess their expectations: "To what extent do you think your partner's evaluation of you was:" fair-unfair, positive-negative ($\alpha = .79$).

Revenge Our paradigm enabled two operationalizations of revenge. The first was the *frequency* with which participants chose to administer a blast of noise to the learner in response to the seven incorrect responses. This measure assessed the number of opportunities participants took to hurt the offender and ranged from 0 to 7 ("0" = no noise blasts delivered, "7" = a noise blast delivered for each of the incorrect trials). The second measure more closely reflected aggression *intensity* and

Table 5. Study 3: descriptive statistics and intercorrelations among the study variables (across experimental condition)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Vertical individualism	3.81	0.97	(.80)										
2. Aggression frequency	6.32	1.48	.09	—									
3. Aggression intensity	0.02	0.90	.03	.48**	—								
4. Participant gender	0.60	0.49	-.14	.05	.05	—							
5. Partner evaluation	5.46	0.49	-.15	.06	.04	-.09	(.76)						
6. Moral identity	5.22	0.74	.18	.12	.05	.00	-.05	(.80)					
7. Self-esteem	6.67	1.43	-.05	-.05	-.01	-.20	.26*	-.20	(.89)				
8. Agreeableness	3.80	0.61	-.11	-.02	.06	.12	.14	.62**	-.09	(.83)			
9. Consciousness	3.47	0.61	.13	.12	-.10	.09	.09	.29*	.17	.23*	(.84)		
10. Extraversion	3.22	0.83	.09	.03	.03	.17	.18	.36**	.23*	.45**	.23*	(.91)	
11. Neuroticism	3.04	0.81	.15	.06	.02	.42**	-.22	.05	-.62**	.00	-.14	-.20	(.89)

Note. $N=76$. Participant gender is dummy coded (men=0, women=1). Higher scores on the continuous variables reflect more of the construct. Cronbach's α reliabilities are shown on the diagonal.

* $p < .05$.

** $p < .01$.

was formed by combining participants' standardized noise level and duration scores for each trial.

Changes in Self-Esteem We assessed changes in participants' self-esteem levels during the course of the study using Heatherton and Polivy's (1991) State Self-Esteem Scale. The State Self-Esteem Scale has been shown to be sensitive to manipulations designed to temporarily alter self-esteem in three domains: performance, social, and appearance. Given that we elicited perceptions of unfairness in the context of performance feedback, we expected that participants' performance self-esteem would be most influenced by the injustice. Consequently, we measured changes in participants' performance state self-esteem (PSSE), defined as "the extent to which people feel their performance is worthy" (Heatherton & Polivy, 1991, p. 907).

As noted earlier, to examine fluctuations in participants' PSSE, we measured it three times. Each time, participants completed the items as pertained at that moment. The PSSE scale contains seven items (e.g., "I am confident in my abilities," $\alpha = .89, .90$, and $.90$ for Times 1, 2, and 3, respectively).

Control Variables As noted earlier, we controlled for the role of dispositional predictors previously related to revenge. In mass testing, we included validated measures of moral identity (Aquino & Reed, 2002; 10-item scale; 1 = *strongly disagree*, 7 = *strongly agree*), self-esteem (Rosenberg, 1965; 10-item scale; 1 = *strongly disagree*, 9 = *strongly agree*), and agreeableness, conscientiousness, extraversion, and neuroticism (Goldberg, 1999; 12 items per construct; 1 = *very inaccurate*, 7 = *very accurate*).

We also controlled several non-dispositional variables. First, characteristics of the offender have been shown to influence revenge (e.g., Bradfield & Aquino, 1999). Thus, we used participants' evaluations of their partners as a control variable, to rule out idiosyncratic differences in participants' perceptions of their partners prior to the offense. As noted earlier, the partner evaluation contained seven items, which were combined to create a composite "partner evaluation." Second, we controlled participant gender. Table 5 presents the descriptive statistics and intercorrelations among the study variables.

Results and Discussion

Perceived/Expected Injustice

As noted earlier, to verify the success of our manipulation, we assessed participants' *perceptions* of injustice in the injustice condition and *expectations* of injustice in the control condition. Although the items differ somewhat, we nevertheless conducted a hierarchical regression analyses to examine the two-way interaction between vertical individualism and condition on perceived/expected injustice.

As expected, the main effect of condition emerged, $\beta = .87$, $p < .001$, such that participants perceived/expected their partner's evaluation to be more unjust in the injustice condition ($M = 5.62$, $SD = 1.23$) than in the control condition ($M = 2.09$, $SD = 0.60$). This finding corroborates our assumption that the evaluation in the injustice condition violated participants' expectations—that is, in the absence of unfair treatment (control condition), participants expected that their partner would evaluate them quite fairly. This is consistent with prior theorizing in the social and organizational justice literatures (e.g., Bies, 2001; Miller, 2001). It has been long argued that people expect others to adhere to informal norms of ethical conduct in their interactions with others and that the violation of such codes of conduct can lead to perceived unfairness. Neither the main effect of vertical individualism nor the interaction between vertical individualism and condition reached significance. Thus, vertical individualism was not associated with perceived/expected unfairness.⁶

Does Individualism Predict Aggression Frequency and Intensity?

We conducted two regression analyses to examine the two-way interaction between vertical individualism and condition on the two aggression indices: frequency and intensity. As recommended by Aiken and West (1991), the vertical individualism variable was centered before computing the interaction

⁶Given that the items were different across the two conditions, we also conducted within-condition correlations with vertical individualism, and the results are the same.

terms. Condition was dummy coded (control condition = "0", injustice condition = "1").

A significant interaction between vertical individualism and condition emerged on aggression frequency, $\beta = .45, p < .05$. No other significant effects emerged. We followed up the significant interaction by testing the simple slopes between the predictor and criterion at +1 and -1 standard deviations around the mean on the moderator (vertical individualism) (Dawson & Richter, 2006). As expected, vertical individualism significantly predicted frequency of noise blasts in the injustice condition, *slope gradient* = 0.54, $t(75) = 2.31, p < .05$, but not in the control condition, *slope gradient* = -0.35. The stronger participants' vertical individualism, the more often they delivered a blast of noise to their partner following the injustice. In other words, the stronger participants' vertical individualism, the more opportunities they took to hurt someone who had previously treated them unfairly. Given that vertical individualism did not predict aggression frequency in the absence of prior injustice (control condition), the data indicate that the effect observed in the injustice condition was a response to the experience of injustice, rather than reflecting a general tendency of those who are strongly vertically individualistic. For the aggression intensity measure, the pattern of the two-way interaction was the same; however, it did not attain statistical significance, $\beta = .13, p > .10$.

We followed up with a hierarchical multiple regression analysis to examine whether vertical individualism has incremental predictive power. The interactive effect of individualism and condition on aggression frequency remains significant after statistically controlling for the alternative dispositional and contextual predictors $\beta = .44, p < .05$.

Fluctuations in Self-Esteem

A $3 \times 2 \times 2$ mixed-design ANOVA was used to examine the effects of time (Time 1 versus Time 2 versus Time 3), condition (injustice versus control), and vertical individualism (low versus high) on participants' PSSE. For this analysis, a median split (median = 3.88) was employed to categorize participants as being either low or high on vertical individualism. No main effects for condition and individualism were found, $F(1, 69) = 1.26, p > .10$ and $F(1, 69) = 1.55, p > .10$, respectively. A significant main effect for time emerged, $F(2, 138) = 5.41, p < .05$. However, this effect was qualified by the expected two-way interaction between time and condition, $F(2, 138) = 6.48, p < .05$. Specifically, in the injustice condition, participants' PSSE scores decreased at Time 2—following the offense—and then increased at Time 3—following the opportunity to aggress against their partner ($M_{\text{Time}1} = 5.30$ vs. $M_{\text{Time}2} = 5.12$ vs. $M_{\text{Time}3} = 5.52$; $SDs = 0.79, 1.14, \text{ and } 0.86$, respectively). In contrast, in the control condition, participants' PSSE increased at Time 2—following the initial interaction with their partner—and then decreased slightly at Time 3 ($M_{\text{Time}1} = 5.21$ vs. $M_{\text{Time}2} = 5.71$ vs. $M_{\text{Time}3} = 5.64$; $SDs = 1.01, 0.85, \text{ and } 0.93$, respectively).

We examined whether the fluctuations in self-esteem in the injustice condition were different as a function of vertical individualism. Neither the two-way interaction between time and vertical individualism nor the two-way interaction between vertical individualism and condition reached significance, $F_s < 1$.

Thus, as expected, all participants experienced similar fluctuations in self-esteem following critical phases of the study.

Does Greater Aggression Frequency Restore Self-Esteem Among Those High on Vertical Individualism?

As noted earlier, we expected that people's vertical individualism would influence the manner in which they attempt to restore feelings of positive self-regard following injustice. Specifically, we reasoned that—for individuals with a stronger vertical individualism—more aggression would be associated with greater restoration of self-regard. To examine this hypothesis, we conducted a two-way interaction between aggression frequency and vertical individualism on change in self-esteem from Time 2 (following the injustice) to Time 3 (following the opportunity to aggress) in the injustice condition. To capture increases in self-esteem from Times 2 to 3, in the regression analysis, we controlled for self-esteem levels at Time 2.

The analysis revealed a non-significant effect of vertical individualism. A main effect of aggression frequency emerged, such that the more opportunities individuals took to hurt their partner, the greater their self-esteem afterward, relative to Time 2, $\beta = .49, p < .05$. As expected, the results also revealed a significant interaction between vertical individualism and aggression frequency on self-esteem change, $\beta = .31, p = .05, R^2$ for the full model = 0.67, $p < .05$ (Figure 2). We followed up the interaction by testing the simple slopes between the predictor and the criterion at +1 and -1 standard deviations around the mean on the moderator (aggression frequency). The results revealed a significant relation between aggression frequency and self-esteem increase among victims with stronger vertical individualism, *slope gradient* = 0.35, $t(41) = 2.57, p < .05$, but not among those with weaker individualism, *slope gradient* = 0.14. The more opportunities that individuals with stronger vertical individualism took to hurt their partner (who had earlier transgressed against them), the greater the increase in self-esteem.

GENERAL DISCUSSION

The results of three studies reveal a robust association between vertical individualism and revenge against the perpetrator of a

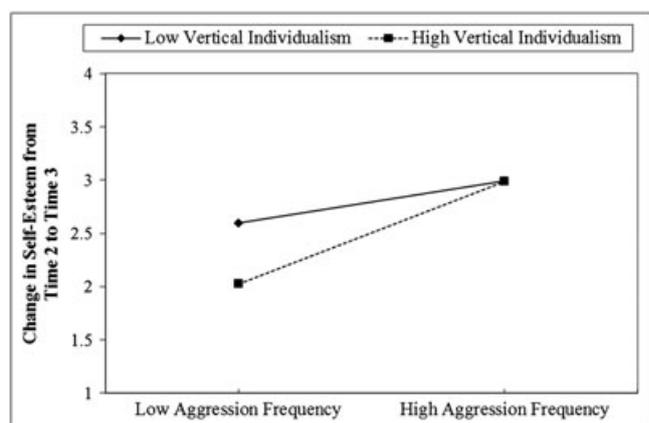


Figure 2. Change in self-esteem from Times 2 to 3 as a function of aggression frequency and vertical individualism (Study 3)

personal injustice, such that the stronger people's vertical individualism, the more likely they are to seek revenge. The findings from two studies also revealed support for the self-esteem maintenance framework that underlies our primary hypothesis. In particular, in Study 2, we found that participants had diminished feelings of self-worth after imagining an injustice, and this mediated the relation between vertical individualism and revenge. In Study 3, we found more directly that the experience of injustice threatened people's self-worth and that those with stronger vertical individualism restored self-esteem through revenge. The more opportunities these individuals took to hurt the offender, the greater the restoration of positive self-regard.

Interestingly, as depicted in Figure 2, we found in Study 3 that taking *fewer* opportunities to hurt the person who previously treated them unfairly resulted in greater increase in self-esteem among individuals with a weaker vertical individualism than among individuals with a stronger vertical individualism. This finding provides preliminary support for the idea that among individuals with a weaker vertical individualism, choosing to refrain from taking revenge served to enhance feelings of self-regard, consistent with prior research demonstrating that these individuals more strongly endorse benevolence (Cukar et al., 2004). Given our focus in the present research, future research is needed to better understand why refraining from revenge may serve to restore feelings of self-worth among individuals who are weakly vertically individualistic.

Several strengths of the current research are noteworthy. First, we examined the relation between vertical individualism and revenge across time, with multiple methodologies and with multiple measures of revenge. As such, we provide strong converging evidence for our primary finding, while reducing artifacts that may be associated with any particular methodology. Second, we observed our primary effect in both student and working adult samples, which enhances generalizability. In addition, in all of the studies, we controlled for the effects of variables that have been theoretically or empirically linked to vertical individualism, revenge, or both. Thus, we demonstrated the unique effect of vertical individualism on revenge beyond that of other important situational and dispositional variables, enhancing internal validity.

Finally, across the studies, we examined people's reactions to various kinds of unfair treatment, such as procedural violations (Studies 1 and 2), distributive violations (Study 1), and violations of interpersonal codes of conduct (Studies 1 and 3). Thus, our findings are not specific to a particular operationalization of injustice.

THEORETICAL IMPLICATIONS FOR UNDERSTANDING VICTIMS' REACTIONS TO INJUSTICE

A key theoretical implication of our research concerns the central role of self-esteem threat in the experience of injustice and in shaping reactions to injustice. Our finding that injustice diminished people's feelings of positive self-regard corroborates the idea that the experience of injustice can threaten victims' self-worth. Especially novel, the current research suggests that victims respond to injustice in a manner that restores or affirms

their feelings of self-regard. For strongly vertically individualistic individuals, affirmation was achieved through revenge. Thus, the current research provides empirical support for several past psychological theories of revenge, which incorporate the concept of self-esteem threat (e.g., Kim & Smith, 1993; Vidmar, 2001). Similarly, it supports research in organizational behavior that has incorporated the concepts of self-esteem, and identity-threat, in research examining the relation between various forms of workplace mistreatment and workplace deviance or other forms of retaliation (Aquino & Douglas, 2003; Ferris et al., 2009).

Interestingly, by extension, the present results also suggest that victims' reactions to injustice should differ depending on the source of their self-esteem. Among people who derive positive self-regard from their interconnections with others, self-threat may be best resolved through prosocial responses, such as *forgiveness*. By considering the sources of people's feelings of self-regard, researchers may come to better understand how victims will cope with the threat to self-esteem that arises from the experience of injustice. The idea that both antisocial responses, such as revenge, and prosocial responses, such as forgiveness, can derive from a common motive is consistent with recent theorizing outside the justice literature. Smart Richman and Leary (2009) proposed a multi-motive model of reactions to interpersonal rejection. They theorized that interpersonal rejection can result in both prosocial and antisocial responses, depending on one's construal of the rejection event.

Our data also contribute to the literature examining intrapsychic consequences of enacting revenge (Carlsmith et al., 2008; Denzler et al., 2009; de Quervain et al., 2004; Gollwitzer & Denzler, 2009; Gollwitzer et al., 2011). Given that revenge resulted in increases in self-esteem among those who are strongly vertically individualistic, our findings corroborate prior research demonstrating that there may be intrapsychic benefits to revenge (e.g., Gollwitzer et al., 2011).

In light of our findings, in future research, it will be important to examine whether avengers' feelings of self-worth would remain in a state of homeostasis in the days or weeks following their behavior. Research has shown that taking revenge increases rumination about the offender, which can result in negative affective consequences (Carlsmith et al., 2008). Still, it is possible that individual difference factors moderate the extent to which negative consequences result from prolonged rumination. For example, given that individuals with stronger vertical individualism derive their self-worth from feelings of superiority and achievement, it is possible that ruminating in the weeks following revenge may reinforce feelings of superiority and achievement, resulting in positive long-term intrapsychic consequences. Indeed, it would be of interest to examine whether such individuals recruit memories of their revenge behavior in situations where they wish to bolster feelings of positive self-regard.

IMPLICATIONS FOR MITIGATING REVENGE

Although our research demonstrates that in some instances revenge may have intrapsychic benefit for the victim, the

interpersonal consequences of revenge are generally destructive, as discussed in the introduction. Thus, those who enact revenge may do so at the expense of their interpersonal relationships. For victims to thrive both intrapsychically and interpersonally in the face of injustice, interventions that minimize or circumvent revenge are needed. Given our findings that revenge serves to restore self-esteem among those with stronger vertical individualism, interventions aimed at restoring victims' self-esteem to homeostasis following injustice may serve to mitigate revenge.

One strategy that may restore victims' self-worth following injustice is the psychological process of self-affirmation. According to the self-affirmation theory (e.g., Steele, 1988; Steele, Spencer, & Lynch, 1993), when individuals are presented with self-threatening information, they are motivated to reduce the threat and maintain an image of self-integrity. One way they can reduce self-threatening information is by "affirming some other aspect of the self that reinforces overall self-adequacy" (p. 885, Steele et al., 1993). In line with the self-affirmation theory, research has shown that self-affirmation reduces perceptions of self-threat and can attenuate negative perceptions and behaviors that would otherwise ensue (e.g., Fein & Spencer, 1997; Steele et al., 1993).

A few studies (e.g., Petzall, Parker, & Stoeberl, 2000; Weisenfeld, Brockner, & Martin, 1999) have made this important link between the literatures on self-affirmation and justice. For example, Weisenfeld et al. (1999) showed that participants who witnessed the unfair layoff of a confederate and who engaged in self-affirmation reported feeling less negatively than did participants who witnessed the unfair layoff but who did not engage in self-affirmation. In light of the Weisenfeld et al. findings, self-affirmation might mitigate the effect we demonstrate here—the tendency for victims with strong vertical individualism to engage in revenge. A useful avenue for future research will be to examine whether revenge can be mitigated *via* manipulations to affirm the self, in particular, manipulations to restore achievement needs among individuals who are strongly vertically individualistic.

Of course another, perhaps seemingly more obvious, strategy to mitigate the revenge tendencies might be to encourage offenders to apologize. Although it is often said in both the research literature and the popular press that interpersonal apologies are an effective means by which an offender can mitigate revenge, the evidence is in fact mixed. Indeed, apology can sometimes have a deleterious effect (e.g., Conlon & Ross, 1997; Skarlicki, Folger, & Gee, 2004). Recent research by Fehr and Gelfand (2010) demonstrates that apologies are most likely to inspire prosocial responses from victims when the content matches victims' self-views. Of particular relevance to the current research, they showed that victims who emphasize the independent self were more likely to forgive when the apology focused on compensating the victim for the wrongdoing (e.g., by offering to fix the wrongdoing) than when it did not. Given Fehr and Gelfand's findings, it is possible that an interpersonal apology that focuses on reaffirming the victim's status could be effective in mitigating revenge because it restores his or her self-worth.

CONCLUSION

Our research demonstrates that engaging in revenge can restore self-esteem, particularly among individuals with a stronger vertical individualism. Thus, our findings contribute to social and organizational justice theory by illuminating the central role of self-esteem maintenance in determining victims' reactions to injustice. Together with other recent findings (e.g., Gollwitzer et al., 2011), our data indicate that, for some people, revenge may have intrapsychic benefits. Further investigation into when, and for whom, revenge may have both positive and negative consequences for the avenger will enhance researchers' understanding of why people sometimes choose to engage in revenge.

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REFERENCES

- Aiken, L. S., & West, G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.
- Aquino, K., & Douglas, S. (2003). Identity threat and antisocial behavior in organizations: The moderating effects of individual differences, aggressive modeling, and hierarchical status. *Organizational Behavior and Human Decision Processes*, *90*, 195–208.
- Aquino, K., & Reed, A., II. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, *83*, 1423–1440.
- Aquino, K., Tripp, T. M., & Bies, R. J. (2001). How employees respond to personal offense: The effects of blame attribution, victim status, and offender status on revenge and reconciliation in the workplace. *Journal of Applied Psychology*, *86*, 52–59.
- Aquino, K., Tripp, T. M., & Bies, R. J. (2006). Getting even or moving on? Power, procedural justice, and types of offense as predictors of revenge, forgiveness, reconciliation, and avoidance in organizations. *Journal of Applied Psychology*, *91*, 653–668.
- Bargh, J. A., & Chartrand, T. L. (2000). The mind in the middle: A practical guide to priming and automaticity research. In H. T. Reis, & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 253–285). Cambridge: Cambridge University Press.
- Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review*, *103*, 5–33.
- Bies, R. J. (2001). Interactional (in)justice: The sacred and the profane. In J. Greenberg, & R. Cropanzano (Eds.), *Advances in organization justice* (pp. 89–118). Stanford, CA: Stanford University.
- Bies, R. J., & Tripp, T. M. (1996). Beyond distrust: "Getting even" and the need for revenge. In R. M. Kramer, & T. R. Tyler (Eds.), *Trust in organizations* (pp. 246–260). Newbury Park, CA: Sage.
- Bies, R. J., & Tripp, T. M. (2005). The study of revenge in the workplace: Conceptual, ideological, and empirical issues. In S. Fox, & P. E. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets* (pp. 65–81). Washington, DC: American Psychological Association.
- Bies, R. J., Tripp, T. M., & Kramer, R. M. (1997). At the breaking point: Cognitive and social dynamics of revenge in organizations. In R. A. Giacalone, & J. Greenberg (Eds.), *Antisocial behavior in organizations* (pp. 18–36). Thousand Oaks, CA: Sage.
- Bradfield, M., & Aquino, K. (1999). The effects of blame attributions and offender likableness on forgiveness and revenge in the workplace. *Journal of Management*, *25*, 607–631.

- Brebels, L., De Cremer, D., & Sedikides, C. (2008). Retaliation as a response to procedural unfairness: A self-regulatory perspective. *Journal of Personality and Social Psychology, 95*, 1511–1526.
- Brockner, J., Heuer, L., Magner, N., Folger, R., Umphress, E., Van den Bos, K., ... Siegel, P. (2003). High procedural fairness heightens the effect of outcome favorability on self-evaluations: An attributional analysis. *Organizational Behavior and Human Decision Processes, 91*, 51–68.
- Burton, J. P., Mitchell, T. R., & Lee, T. W. (2005). Negative reactions to injustice: The role of self-esteem and social influences. *Journal of Business and Psychology, 20*, 131–170.
- Bushman, B. J. (1995). Moderating role of trait aggressiveness in the effects of violent media on aggression. *Journal of Personality and Social Psychology, 69*, 950–960.
- Carlsmith, K. M., Wilson, T. D., & Gilbert, D. T. (2008). The paradoxical consequences of revenge. *Journal of Personality and Social Psychology, 95*, 1316–1324.
- Conlon, D. E., & Ross, W. H. (1997). Appearances do account: The effects of outcomes and explanations on disputant fairness judgments and supervisory evaluations. *International Journal of Conflict Management, 8*, 5–31.
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin, 122*, 5–37.
- Cukar, C. S., de Guzman, M. R., & Carlo, G. (2004). Religiosity, values, and horizontal and vertical individualism–collectivism: A study of Turkey, the United States, and the Philippines. Faculty Publications, Department of Psychology. Paper 377. Retrieved from <http://digitalcommons.unl.edu/psychfacpub/377>
- Dawson, J. F., & Richter, A. W. (2006). Probing three-way interactions in moderated multiple regression: Development and application of a slope difference test. *Journal of Applied Psychology, 91*, 917–926.
- Denzler, M., Förster, J., & Liberman, N. (2009). How goal-fulfillment decreases aggression. *Journal of Experimental Social Psychology, 45*, 90–100.
- Fehr, R., & Gelfand, M. J. (2010). When apologies work: How matching apology components to victims' self-construals facilitates forgiveness. *Organizational Behavior and Human Decision Processes, 113*, 37–50.
- Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality and Social Psychology, 73*, 31–44.
- Ferris, D. L., Brown, D. J., & Heller, D. (2009). Organizational supports and organizational deviance: The mediating role of organization-based self-esteem. *Organizational Behavior and Human Decision Processes, 108*, 279–286.
- French, P. A. (2001). *The virtues of vengeance*. Lawrence, KS: University Press of Kansas.
- Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.), *Personality psychology in Europe* (Vol. 7, pp. 7–28). Tilburg: Tilburg University Press.
- Gollwitzer, M., & Denzler, M. (2009). What makes revenge so sweet: Seeing the offender suffer or delivering a message? *Journal of Experimental Social Psychology, 45*, 840–844.
- Gollwitzer, M., Meder, M., & Schmitt, M. (2011). What gives victims satisfaction when they seek revenge? *European Journal of Social Psychology, 41*, 364–374.
- Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 79–103). Hillsdale, NJ: Erlbaum.
- Hampton, J. (1988). Forgiveness, resentment and hatred. In J. G. Murphy, & J. Hampton (Eds.), *Forgiveness and mercy* (pp. 35–87). New York: Cambridge University Press.
- Heatherton, T. F., & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology, 60*, 895–910.
- Kim, S. H., & Smith, R. H. (1993). Revenge and conflict escalation. *Negotiation Journal, 9*, 37–43.
- Koper, G., Knippenberg, D. V., Bouhuijs, F., Vermunt, R., & Wilke, H. (1993). Procedural fairness and self-esteem. *European Journal of Social Psychology, 23*, 313–325.
- Lind, E. A. (2001). Fairness heuristic theory: Justice judgments as pivotal cognitions in organizational relations. In J. Greenberg, & R. Cropanzano (Eds.), *Advances in organizational justice* (pp. 56–88). Lexington, MA: New Lexington.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253.
- McCullough, M. E., Bellah, C. G., Kilpatrick, S. D., & Johnson, J. L. (2001). Vengefulness: Relationships with forgiveness, rumination, well-being, and the Big Five. *Personality and Social Psychology Bulletin, 27*, 601–610.
- McCullough, M. E., Rachal, K., Sandage, S. J., Worthington, E. L., Jr., Brown, S. W., & Hight, T. L. (1998). Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology, 75*, 1586–1603.
- Miller, D. (2001). Disrespect and the experience of injustice. *Annual Review of Psychology, 52*, 527–553.
- Nozick, R. (1981). *Philosophical explanations*. Cambridge, MA: Harvard University Press.
- Petzall, B. J., Parker, G. E., & Stoerber, P. A. (2000). Another side to downsizing: Survivors' behavior and self-affirmation. *Journal of Business and Psychology, 14*, 593–603.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*, 717–731.
- de Quervain, D. J.-F., Fischbacher, U., Treyer, V., Schellhammer, M., Schnyder, U., Buck, A., ... Fehr, E. (2004). The neural basis of altruistic punishment. *Science, 305*, 1254–1258.
- Reed, A., II., & Aquino, K. F. (2003). Moral identity and the expanding circle of moral regard toward out-groups. *Journal of Personality and Social Psychology, 84*, 1270–1286.
- Rose, A. J., & Asher, S. R. (1999). Children's goals and strategies in response to conflicts within a friendship. *Developmental Psychology, 35*, 69–79.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Schroth, H. A., & Shah, P. P. (2000). Procedures: Do we really want to know them? An examination of the effects of procedural justice on self-esteem. *Journal of Applied Psychology, 85*, 462–471.
- Singelis, T. M., Triandis, H. C., Bhawuk, D. P. S., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-Cultural Research, 29*, 240–275.
- Skarlicki, D. P., Folger, R., & Gee, J. (2004). When social accounts backfire: The exacerbating effects of a polite message or an apology on reactions to an unfair outcome. *Journal of Applied Social Psychology, 4*, 322–341.
- Smart Richman, L., & Leary, M. R. (2009). Reactions to discrimination, stigmatization, ostracism, and other forms of interpersonal rejection: A multimotive model. *Psychological Review, 116*, 365–383.
- Smith, H. J., Tyler, T. R., Huo, Y. J., Ortiz, D. J., & Lind, E. A. (1998). The self-relevant implications of the group-value model: Group membership, self-worth, and treatment quality. *Journal of Experimental Social Psychology, 34*, 470–493.
- Sommers, J. A., Schell, T. L., & Vodanovich, S. J. (2002). Developing a measure of individual differences in organizational revenge. *Journal of Business and Psychology, 17*(2), 207–222.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 261–302). New York: Academic Press.
- Steele, C. M., Spencer, S. J., & Lynch, M. (1993). Self-image resilience and dissonance: The role of affirmational resources. *Journal of Personality and Social Psychology, 64*, 885–896.
- Stuckless, N., & Goranson, R. (1992). The vengeance scale: Development of a measure of attitudes toward revenge. *Journal of Social Behavior and Personality, 7*, 25–42.
- Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed.). New York: Harper Collins.
- Tesser, A. (2000). On the confluence of self-esteem maintenance mechanisms. *Personality and Social Psychology Review, 4*, 290–299.
- Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review, 96*, 506–520.
- Triandis, H. C. (1996). The psychological measurement of cultural syndromes. *American Psychologist, 51*, 407–415.
- Triandis, H. C. (2001). Individualism–collectivism and personality. *Journal of Personality, 69*, 907–924.
- Triandis, H. C., Carnevale, P., Gelfand, M., Robert, C., Wasti, A., Probst, T., ... Schmitz, P. (2001). Culture and deception in business negotiations: A multilevel analysis. *International Journal of Cross Cultural Management, 1*, 73–90.
- Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review, 7*, 349–361.
- Tyler, T. R., & Lind, E. A. (1992). A relational model of authority in groups. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 115–191). San Diego: Academic Press.
- Vidmar, N. (2001). Retribution and revenge. In J. Sanders, & V. L. Hamilton (Eds.), *Handbook of justice research in the law* (pp. 31–63). New York: Kluwer Academic.
- Weisenfeld, B. M., Brockner, J., & Martin, C. (1999). A self-affirmation analysis of survivors' reactions to unfair organizational downsizing. *Journal of Experimental Social Psychology, 35*, 441–460.