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## Real-life revenge may not effectively deter norm violations

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### ABSTRACT

The current article examined the characteristics of real-life revenge acts. A demographically diverse sample of avengers described autobiographical revenge acts and the preceding offense. They rated the severity of both acts, the time before taking revenge, and motives for the timing. Independent raters also rated the severity of both acts and coded the domains. Results revealed that real-life revenge is (1) by and large equally common as revealed by lab-based studies on revenge, but (2) is usually a delayed response, and (3) although similar to offenses in severity (according to independent parties), it is dissimilar in the domain. These characteristics contradict manifestations of revenge as studied in lab research (e.g., as a response that must take place immediately and in the same domain). These discrepancies suggest that not all real-life instances of revenge are optimally suited to serve a deterrence function and that other motives may underlie more destructive revenge acts.

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Current views maintain that one of the main functions of revenge is deterrence (e.g., McCullough, Kurzban, & Tabak, 2013): Punishment may enforce a change in an offender's behavior so that the offense will not repeat itself. From this point of view, revenge is painted in a constructive light. Revenge is meant to show to an offender that her/his behavior is not accepted by the individual or the group in an effort to prevent the repetition of this behavior. Such a response can be effective, as research has shown that punishment can promote cooperation, benefiting the group in the long run (Caldwell, 1976; Fehr & Gächter, 2002; Tenbrunsel & Messick, 1999; Yamagishi, 1988; see Balliet, Mulder, & Van Lange, 2011, for a meta-analysis on this effect). This view has emanated mainly from lab research on revenge. We argue, however, that lab research sets the stage for results that identify revenge as a deterrence mechanism by operationalizing the offense and revenge act in a way that promotes norm-compliance and prevents revenge from producing potentially destructive outcomes. In this paper, we will reveal that revenge acts in real life differ on a number of key dimensions from revenge acts as they are operationalized in lab research. Crucially, in real life, revenge often lacks key characteristics that would make it suitable as a deterrence mechanism.

### Characteristics of lab-based revenge

Support for the conduciveness of revenge as a deterrence mechanism may critically depend upon lab-based revenge commonly being (1) condoned, (2) matched to the offense in terms of domain and severity, and (3) instantaneous. First, it is common in lab studies for a participant to notice that a (supposed) other participant has defected or offended in some way, and then *to be invited by the*

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This paper uses data of the LISS (Longitudinal Internet Studies for the Social sciences) panel administered by CentERdata (Tilburg University, the Netherlands). The LISS panel data were collected by CentERdata (Tilburg University, the Netherlands) through its MESS project funded by the Netherlands Organization for Scientific Research.

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*researcher* to punish the offender, making the punishment an approved act (at least by the experimenter). The fact that punishment is implicitly condoned by being part of the experimental procedure may inflate the incidence of punishment. Indeed, a cross-cultural comparison of the prevalence of punishment of norm violations (rejections of unfair offers in an ultimatum game) revealed substantial consistency in the tendency to engage in costly punishment across societies, with on average 56.5% (range: 15 – 60%) of the overall population engaging in costly sanctions against norm violators (Henrich et al., 2006). Obviously, for punishment to be an effective deterrence mechanism it needs to occur consistently (Balliet et al., 2011). Nevertheless, there are strong social norms against retribution and revenge in real life (Elster, 1990), and the actual incidence of revenge in real life has not been previously documented.

Second, the domain in which the punishment takes place often matches the domain in which the offense took place: If the offender caused a financial loss for the participant, the participant can cause a financial loss for the offender (e.g., Gollwitzer & Bushman, 2012, Study 1; Gollwitzer, Meder, & Schmitt, 2011, Study, p. 3); if the offender provided negative feedback to the participant, the participant can provide negative feedback to the offender (e.g., Eisenberger, Lynch, Aselage, & Rohdieck, 2004, Study, p. 2). As such, it is not difficult to match the offense in severity, particularly since it is often not difficult to quantify offenses and revenge acts in the lab. For example, if another participant made you lose 2 euros, it is easy to punish with a similar severity by taking away 2 euros. As per the old adage *an eye for an eye*, it is important that punishment should not be too severe to incite retaliation rather than prevent reoccurrence of an offense.

In real life, people have a vastly wider range of behavioral options to execute revenge (Boon, Deveau, & Alibhai, 2009; Crombag, Rassin, & Horselenberg, 2003; Yoshimura, 2007). Previous research never compared these domains to the domains in which offenses took place to examine whether these are similar or not. If these domains do not match it is not that easy to quantify the severity of offenses and revenge acts in real life. How much harm does an insult do and (how) can it be proportionally repaid by breaking a valued object of the offender? This is particularly pertinent as theoretical literature on revenge suggests that revenge can be immoderate (Bar-Elli & Heyd, 1986; Frijda, 2007; Kim & Smith, 1993; Uniacke, 2000). This may be a direct result of offenses and revenge acts being not easily quantifiable in real life, resulting in (perceived) mismatches in severity, which may potentially cause destructive cycles of retaliation and violence (Elshout, Nelissen, & Van Beest, 2017a; Elster, 1990; Otterbein & Otterbein, 1965). The current research compares the domain and perceived severity of offenses and subsequent revenge acts as rated by both avengers and independent raters to see if they are similar in severity or not.

Third, in most lab studies, punishment is administered shortly after the offense (e.g., an offender has defected in a prisoner's dilemma game and immediately afterward, participants can punish this player by taking away some of the earnings; Carlsmith, Wilson, & Gilbert, 2008). However, revenge in real life may be delayed because there may not be an opportunity to take revenge immediately, because people need time to plan their revenge, or because they want to wait for the right moment to execute revenge. Nevertheless, a delay impairs the effectiveness of the revenge act to deter future violations as it becomes harder to link the punishment to the offense. The current research examined the time it took avengers to take real-life acts of revenge as well as reasons for a potential delay (immediate revenge not possible, needing time to plan the act, waiting for the right opportunity to take revenge).

In sum, revenge in the lab often entails immediate punishment that is similar in the domain, easy to match in severity and (implicitly) approved. This may have resulted in a constructive image of revenge as a permissible and proportional punishment mechanism that offenders can easily link to their behavior, so that they will not repeat the offense. However, this may not apply to real-life instances of revenge. In the present research, we examined the characteristics of real-life revenge, focusing on (1) the prevalence of revenge in a demographically diverse sample of participants, (2) the similarity between offenses and revenge acts in domain and severity, and (3) the time between offenses and revenge acts.

## Method

### Participants

Participants were selected from a sample of 1767 members of the CentERdata LISS panel ( $M_{\text{age}} = 51.71$  years,  $SD = 17.08$ , range: 16–89; 52.8% female), which is representative for the general Dutch population. They agreed to answer a general questionnaire on revenge that also included items that are irrelevant to the research question of the present paper.<sup>1</sup> Participants received five Euros for their participation.

A total of 597 participants (33.9%) indicated that they had never experienced feelings of revenge. For these participants, the questionnaire ended, and they received their payment. Of the remaining 1170 participants, 440 (37.6%) indicated that they had taken revenge at least once in their lives. The remaining participants indicated that they had not taken revenge, and so did not participate in the current study. Participants who had taken revenge were randomly assigned to an avenger's or non-avenger's condition. The current paper only includes the avengers.<sup>2</sup> In total, we had asked 225 participants to describe a real-life revenge act. However, because a large number of these participants did not describe an instance in which they took revenge after all (they did not fill out the open question to describe their revenge act, indicated that they thought it was too private to describe the act, only indicated "I took revenge" without describing the act, or, despite instructions, described an act in which they had not taken revenge), the final sample consisted of 139 avengers ( $M_{\text{age}} = 46.14$  years,  $SD = 17.16$ , range: 16–84; 49.6% female).<sup>3</sup>

### Materials and procedure

Participants recalled and described a situation in which they experienced feelings of revenge toward one person and took revenge on this person. First, participants described the other person's offense and indicated immediate revenge possibility ("To what extent was it possible to react at the moment of the incident?"; 1 = *not at all possible*, 7 = *completely possible*) and perceived offense severity ("How severe did you think the other person's behavior was?"; 1 = *not at all severe*, 7 = *very severe*).

Participants then described the revenge act. They indicated to what extent their revenge was a planned act and to what extent they waited for the right moment for their act (1 = *not at all*, 7 = *completely*). Next, they indicated the time that passed between the offender's behavior and their revenge act (*I responded ...* 1 = *within 1 min*, 2 = *between 1 min and 1 hour*, 3 = *between 1 hour and 1 day*, 4 = *between 1 day and 1 week*, 5 = *between 1 day and 1 month*, 6 = *between 1 month and 1 year*, 7 = *after 1 year*). Subsequently, participants rated how severe they thought their revenge act was (1 = *not at all severe*, 7 = *very severe*).

### Coding

#### Severities

We asked three independent raters to rate the severity of all offenses and revenge acts ( $ICCs > .77$ ), using the same corresponding items as participants did. In this way, we obtained more objective severity scores. The ratings were averaged into one severity score for offenses and one for revenge acts.

#### Domains

We performed a content analysis of participants' descriptions of offenses and revenge acts. The first and second authors inductively derived 12 categories (if participants described multiple acts, the acts were first separated). To that end, the first author initially reduced each description of offense and revenge acts to one sentence and subsequently derived from each sentence a few words and combined similar words into a category, after which she sent her work to the second author, who independently categorized all the acts based on the keywords. They then met multiple times to discuss discrepancies in wording and categorization and altered the coding scheme after each

discussion. All 174 offenses could be assigned to a category and only 1 of 173 revenge acts did not fit into a specific category. One category was used only for revenge acts (reporting to authority), all others were possible for (but not always present in) both offenses and revenge acts. To examine the consistency of the categorization, an independent research assistant categorized all acts, using the coding scheme. This revealed that both categorizations of offenses ( $\kappa = .73$ ) and revenge acts ( $\kappa = .75$ ) were highly consistent, and so we retained them.

## Results

### Prevalence

Of the total sample of participants that ever experienced feelings of revenge, 37.6% reported to ever have taken revenge.

### Similarity

#### Domain

Table 1 displays the frequencies and percentages of the domains of offenses and of revenge acts. Sometimes avengers reported multiple offenses (in 26 cases) and sometimes they reported multiple revenge acts (in 28 cases). The largest number of acts was four (in which case the acts fell into four different domains), for both offenses and revenge acts. Revenge acts most often involved some kind of social exclusion or rejection. We coded for each revenge act whether it fell into the same or another category as the offense. We could only do this for the 90 avengers who reported only one offense and only one revenge act (for multiple acts, we cannot know which to pair). Only 25 of the 90 revenge acts (27.8%) fell into the same category.

#### Severity

An event (offense vs. revenge)  $\times$  rater (participants vs. raters) repeated measures ANOVA on severity revealed a main effect of event,  $F(1, 138) = 184.49, p < .001, \eta_p^2 = .57$ , and a main effect of rater,  $F(1, 138) = 126.38, p < .001, \eta_p^2 = .48$ , that were qualified by a significant interaction effect,  $F(1, 138) = 239.01, p < .001, \eta_p^2 = .68$ . This interaction indicated a self-serving bias in perceptions of severity for participants: Although the independent raters judged these same offenses and revenge acts as equally severe,  $F(1, 138) = 0.50, p = .479$ , participants judged offenses as significantly more severe than their revenge acts,  $F(1, 138) = 271.90, p < .001, \eta_p^2 = .66$  (Table 2).

#### Delay

Unlike revenge in the lab, revenge in real life seemed a delayed response. Only 14.4% ( $n = 20$ ) of the avengers took revenge within 1 min; 64.7% ( $n = 90$ ) waited at least a day before taking revenge, and 48.2% ( $n = 67$ ) waited a week or more (for all percentages, see Figure 1).

We examined possible reasons for this delay by performing a multinomial logistic regression analysis on time with “within 1 min” as the reference category and with the three possible motivations (immediate revenge possibility, planning revenge, and waiting for the right moment) as predictors. The model significantly predicted time between offense and revenge,  $\chi^2(18, N = 139) = 53.56, p < .001$ , Nagelkerke  $R^2 = .33$ .

We inspected the unique effects of the predictors. Immediate possibility significantly predicted the time,  $\chi^2(6, N = 139) = 15.52, p = .017$ . The higher participants rated their immediate revenge possibility, the less often they indicated that they took revenge after a day (between 1 day and 1 week, between 1 week and 1 month, between 1 month and 1 year, after 1 year) compared to the category “within 1 min”, Exp(B)s .59-.71, Walds  $> 4.47, ps < .035$ . Planning also significantly predicted the time,  $\chi^2(6, N = 139) = 21.95, p = .001$ . The higher participants rated planning their revenge, the more

**Table 1.** Domains of offenses and revenge acts.

Domain	Examples	Offense	Revenge
Annoyance(s)	Egotism, irritating the person (e.g., loud music, parking car in front of garage)	32 (18.4%)	21 (12.2%)
Social exclusion	Ignoring, rejecting, terminating contact	25 (14.4%)	35 (20.3%)
Personal devaluation	Belittling, bullying, humiliating	24 (13.8%)	10 (5.8%)
Sabotaging	Making life miserable, trying to get someone fired, withholding information	17 (9.8%)	10 (5.8%)
Reputational damage	Gossiping, disclosing a personal secret, false accusations	15 (8.6%)	22 (12.8%)
Damaging or stealing property	Stealing money, damaging the car	13 (7.5%)	7 (4.1%)
Violence	Physical aggression (e.g., hitting, kicking), sexual violence	12 (6.9%)	22 (12.8%)
Arguing	Verbal aggression (e.g., calling names, yelling), having a conflict	12 (6.9%)	22 (12.8%)
Lying	Lying about something, denying previously made statements	11 (6.3%)	0 (0.0%)
Infidelity	Going to bed with another person than the partner	6 (3.4%)	0 (0.0%)
Violating agreement/promise	Not doing as agreed, breaking a promise	7 (4.0%)	0 (0.0%)
Reporting to authority <sup>a</sup>	Pressing charges, reporting to the boss, going to a judge	-	23 (13.4%)

*N*<sub>offenses</sub> = 174; *N*<sub>revenge</sub> = 172. Note that the *N*s do not correspond with the number of participants reporting multiple offenses and/or multiple revenge acts.  
<sup>a</sup>Unlike the other categories, this was a revenge category only.

**Table 2.** Ratings of severity.

	Offense <i>M</i> ( <i>SD</i> )	Revenge <i>M</i> ( <i>SD</i> )
Participants (avengers)	5.86 (1.35) <sub>a</sub>	2.80 (1.84) <sub>b</sub>
Raters	3.26 (0.84) <sub>c</sub>	3.32 (0.86) <sub>c</sub>

*N* = 139. Means within the same row or column with different subscripts differ significantly from each other, *ps* < .006.

often they indicated that they took revenge between 1 day and 1 week and between 1 week and 1 month compared to the category “within 1 min”,  $\text{Exp}(B)s > 1.48$ ,  $\text{Walds} > 4.20$ , *ps* < .041. Waiting for the right moment did not predict the time,  $\chi^2(6, N = 139) = 11.59$ , *p* = .072.

## Discussion

The current article aimed to gain insight into the characteristics of real-life revenge. A minority (36.7%) of the people that ever experienced feelings of revenge reported to have taken revenge at least once in their lives. Results further revealed that real-life revenge is generally dissimilar to the preceding offense in the domain, yet does seem to be similar in severity, although only if judged by independent raters. Avengers themselves considered the revenge act less severe than the preceding offense. Moreover, revenge in real life is often delayed, occurring only after a week or longer in about half the cases. Below, we discuss these results and their implications in more detail.

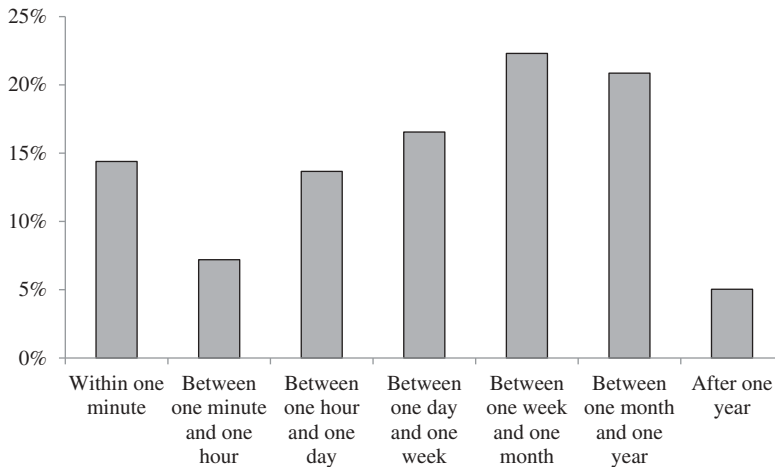
## Prevalence

According to the present findings, the proportion of avengers in the population falls within the range (15 – 60%) observed within a cross-cultural sample investigating the subset of the population that punishes norm violations across globally dispersed societies (Henrich et al., 2006). Moreover, due to linguistic biases, the present number may have underestimated the actual prevalence of revenge in real-life. The Dutch word for revenge (*wraak*) has a negative connotation, which may have resulted in people underreporting the actual prevalence of revenge in their lives due to social desirability effects. English synonyms that have milder connotations are not readily translated into Dutch for they carry a different meaning. For instance, the word *punishment* (in Dutch: *straffen*) is usually reserved within the context of parents punishing children, and phrases like *to get even* or *to get back at* (in Dutch: *terugpakken*) refer to benign acts in which people prank one another. Nevertheless, even the present findings do not reveal that revenge is particularly (un)common in real life compared to lab-based studies. Whether or not this is sufficient to guarantee the effectiveness of revenge as a deterrence mechanism for norm violations is a matter of debate. Still, it does not seem to be the case that lab studies, by implicitly condoning revenge, artificially inflate the incidence of punishment compared to what people also exhibit in real life.

## Similarity

Independent raters judged the offense and revenge act as equal in severity. As such, our research did not confirm that revenge is more severe than the preceding offense (e.g., Kim & Smith, 1993). Avengers themselves did not agree with the independent raters, believing that their revenge act was less severe than the preceding offense, suggesting a self-serving bias in perception (cf. Bar-Elli & Heyd, 1986; Chakrabati, 2005). This study did not incorporate the targets of revenge, who may be the only party that views revenge as disproportionately severe. A recent study suggests that this is indeed the case, as both avengers and targets believe that the other person’s act is worse than their own act (Elshout et al., 2017a).

Although from the viewpoint of the independent raters avengers hit back with the same severity as offenders, they did so in a different domain (more “ear for an eye” than “eye for an eye”). Only 27.8% exacted revenge in the same domain. To our knowledge, the current study is the first study that compares domains



**Figure 1.** Percentages of avengers taking revenge within different time intervals since the preceding offense.

of revenge acts and offenses. We propose that the difference in domains may be caused by outsiders' acceptability of revenge. Revenge that is equal in consequences (severity) but not in method (domain) is judged less harshly by outsiders (Tripp, Bies, & Aquino, 2002).

The findings suggest that quantifying the severity and responding proportionally, as can often be done in lab research quite easily, is not as straightforward in real life, being complicated even more by perceptual biases. Moreover, lab researchers impose restrictions on the number (often just one act) and types of domains (often similar to the offense domains) in which revenge can be taken, which does not reflect real life. Hence, the present data invite us to entertain the possibility of self-serving biases in the perceptions of the severity of punishment, which, in turn, may cause destructive cycles of retaliation.

### Delay

Only 14.4% of avengers took revenge immediately. The majority of avengers took revenge after at least a day had passed and the largest group took revenge between 1 week and 1 month after the offense. The delay was influenced by (low) immediate revenge possibility and planning tendencies. The results on time between the offense and revenge act are in line with theoretical reflections on revenge arguing that revenge usually takes place after some time has passed (Frijda, 2007; Kim & Smith, 1993), in part because it requires planning (Bar-Elli & Heyd, 1986).

In lab research, revenge acts usually take place right after the offense, in line with its supposed role as a deterrence mechanism. However, the current findings suggest that revenge is typically delayed, which makes it poorly geared toward deterring future offenses as this requires a certain level of instantaneousness for the offense to be associated with the punishment.

### Implications

The results suggest that revenge in real life manifests itself differently from revenge as it is modeled in the lab. Obviously, this does not discredit lab studies on revenge as they seek to understand the boundary conditions under which revenge functions as a deterrence mechanism for norm violations. That is, lab studies have consistently shown that, given an opportunity to punish norm violations, groups thrive on multiple dimensions (Caldwell, 1976; Fehr & Gächter, 2002; Tenbrunsel & Messick, 1999; Yamagishi, 1988). However, the boundary conditions for revenge to serve this function, such as making it an immediate response in a single, similar domain as the preceding offense, are not apparent in many real-life instances of



revenge. Real-life revenge, therefore, is in many instances not optimally geared toward serving as a deterrence mechanism.

At this point, we can only speculate about the reason(s) for this apparent mismatch between the characteristics of real-life revenge from the “stylized” characteristics that enable revenge to serve as a deterrence mechanism. Obviously, there is no need for an overlap between presumed function and conscious motives for a particular behavior, but it may be the case that certain motives that serve as the proximate drivers for revenge allow certain acts of revenge to go unchecked by their consequences. That is, to the extent that revenge serves a deterrence function, it should be immediate and proportional in severity. However, previous studies have revealed different motives as proximal drivers for revenge to which these restrictions may not apply (e.g., Crombag et al., 2003; Elshout, Nelissen, & Van Beest, 2015b; Yoshimura, 2007). Specifically, recent studies suggest that what sets real-life revenge apart from revenge as it is studied in the lab is that it is personal. The offense – often committed by a friend (Elshout, Nelissen, Van Beest, Elshout, & Van Dijk, 2017) – induces a self-threat (Elshout et al., 2015b; Zdaniuk & Bobocel, 2012). To the extent that real-life revenge is not so much focused on deterrence, but on restoring oneself (i.e., restoring self-esteem or a sense of power), the act of revenge does not need to be instantaneous nor proportional, especially if there is no concern to maintain any future exchange with the offender (Elshout et al., 2015b). With this difference in focus, real-life revenge may have entirely different characteristics than revenge as modeled in lab research. This may also explain why revenge is sometimes disruptive, involving acts that do not provide opportunities to deter norm violations or generally change the future behavior of the offender, as in the case of honor killings and school shooting (see, for example, Harter, Low, & Whitesell, 2003).

### **Future directions**

The participants in this study came from a nationally representative Dutch panel. As such, the sample was diverse. Of course, the sample is still a West-European sample. There may be cultural differences in the results. For example, the incidence of revenge may depend on the extent to which the culture disapproves or approves of revenge. In honor cultures, revenge may even be expected in some cases, and it may be seen as unmanly to not take revenge (Miller, 1998). More research is needed to examine whether there are indeed differences across cultures in the incidence and characteristics of revenge.

The current study focused on certain characteristics of real-life revenge (time, (dis)similarity) that could be – and indeed were – different from what has been suggested by lab research on revenge. However, this does not mean that these are the *only* characteristics on which real-life revenge differs from operationalizations in the lab. Other important characteristics may still be identified. Indeed, a recent study identified 69 separate characteristics of revenge (Elshout, Nelissen, & Van Beest, 2015a).

Perhaps, the present findings may provide leads to future lab-studies to find ways to operationalize revenge in ways that are less restricted. Considering the characteristics of real-life revenge, this would at least require the option to take time to plan one’s act of revenge and to allow the act to take place in a different domain. In that way, experimental research may contribute to our understanding of the factors that elicit “maladaptive” manifestations of revenge.

### **Conclusion**

This article provided insight into the characteristics of real-life revenge. Taken together, the study showed that revenge takes place after some time and that, although it is similar in severity (according to independent parties), it is dissimilar in the domain. These characteristics set revenge in real life apart from revenge as it is studied in the lab, in which it is an immediate response that is matched in domain and severity to the offense. These discrepancies suggest that not all real-life instances of revenge are optimally suited to serve a deterrence function and that other motives may underlie more destructive revenge acts.

## Notes

1. The data and codebook of the full questionnaire are available on the LISS data archive website: [https://www.dataarchive.lissdata.nl/study\\_units/view/408](https://www.dataarchive.lissdata.nl/study_units/view/408). Click on “Data, Documentation & Publications”, which contains (1) the codebook with all materials (and routings) of the study in English, (2) the codebook with all materials in the original language (Dutch), and (3) the data file. The codebooks provide all the information needed for an independent researcher to reproduce the reported methodology. As with all LISS panel data, the codebooks are available to everyone (one can simply click on “download”); however, to obtain access to the data file, one first has to complete a statement agreeing, amongst other things, to respect privacy rules and to use the data for scientific or policy-relevant research, available here: <https://statements.centerdata.nl/liss-panel-data-statement>.
2. The non-avengers were included in another paper, which focused on situational precursors of revenge (Elshout et al., 2017).

## Data availability statement

The data described in this article are openly available in the Open Science Framework at [https://www.dataarchive.lissdata.nl/study\\_units/view/40.8](https://www.dataarchive.lissdata.nl/study_units/view/40.8) (click on “Data, Documentation & Publications” for the codebook with all materials and routings).

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## Disclosure statement

No potential conflict of interest was reported by the authors.

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## References

- Balliet, D., Mulder, L. B., & Van Lange, P. A. M. (2011). Reward, punishment, and cooperation: A meta-analysis. *Psychological Bulletin*, *137*, 594–615. doi:10.1037/a0023489
- Bar-Elli, G., & Heyd, D. (1986). Can revenge be just or otherwise justified? *Theoria*, *52*, 68–86. doi:10.1111/j.1755-2567.1986.tb00100.x
- Boon, S. D., Deveau, V. L., & Alibhai, A. M. (2009). Payback: The parameters of revenge in romantic relationships. *Journal of Social and Personal Relationships*, *26*, 747–768. doi:10.1177/0265407509347926
- Caldwell, M. D. (1976). Communication and sex effects in a five-person prisoner's dilemma game. *Journal of Personality and Social Psychology*, *33*, 273–280. doi:10.1037/0022-3514.33.3.273
- Carlsmith, K. M., Wilson, T. D., & Gilbert, D. T. (2008). The paradoxical consequences of revenge. *Journal of Personality and Social Psychology*, *95*, 1316–1324. doi:10.1037/a0012165
- Chakrabati, A. (2005). The moral psychology of vengeance. *Journal of Human Values*, *11*, 31–36. doi:10.1177/097168580401100103
- Crombag, H., Rassin, E., & Horselenberg, R. (2003). On vengeance. *Psychology, Crime, & Law*, *9*, 333–344. doi:10.1080/1068316031000068647
- Eisenberger, R., Lynch, P., Aselage, J., & Rohdieck, S. (2004). Who takes the most revenge? Individual differences in negative reciprocity norm endorsement. *Personality and Social Psychology Bulletin*, *20*, 787–799. doi:10.1177/0146167204264047
- Elshout, M., Nelissen, R. M. A., & Van Beest, I. (2017a). Your act is worse than mine: Perception bias in revenge situations. *Aggressive Behavior*, *43*, 553–557. doi: 10.1002/ab.21713
- Elshout, M., Nelissen, R. M. A., & Van Beest, I. (2015a). A prototype analysis of vengeance. *Personal Relationships*, *22*, 502–523. doi:10.1111/perc.12092
- Elshout, M., Nelissen, R. M. A., & Van Beest, I. (2015b). Vengeance is self-focused: Comparing vengeful to anger-driven responses. *Cognition and Emotion*, *29*, 1239–1255. doi:10.1080/02699931.2014.976181
- Elshout, M., Nelissen, R. M. A., Van Beest, I., Elshout, S., & Van Dijk, W. W. (2017). Situational precursors of revenge: Social exclusion, relationship type, and opportunity. *Personal Relationships*, *24*, 291–305. doi:10.1111/perc.12185
- Elster, J. (1990). Norms of revenge. *Ethics*, *100*, 862–885. doi:10.1086/293238
- Fehr, E., & Gächter, S. (2002). Altruistic punishment in humans. *Nature*, *415*, 137–140. doi:10.1038/415137a
- Frijda, N. H. (2007). *The laws of emotion*. Mahwah, NJ: Erlbaum.
- Gollwitzer, M., & Bushman, B. J. (2012). Do victims of injustice punish to improve their mood? *Social Psychological and Personality Science*, *3*, 572–580. doi:10.1177/1948550611430552
- Gollwitzer, M., Meder, M., & Schmitt, M. (2011). What gives victims satisfaction when they seek revenge? *European Journal of Social Psychology*, *41*, 364–374. doi:10.1002/ejsp.782
- Harter, S., Low, S. M., & Whitesell, N. R. (2003). What have we learned from Columbine: The impact of the self-system on suicidal and violent ideation among adolescents. *Journal of School Violence*, *2*, 3–26. doi:10.1300/J202v02n03\_02
- Henrich, J., McElreath, R., Barr, A., Ensminger, J., Barrett, C., Bolyanatz, A., ... Ziker, J. (2006). Costly punishment across human societies. *Science*, *312*, 1767–1770. doi:10.1126/science.1127333
- Kim, S. H., & Smith, R. H. (1993). Revenge and conflict escalation. *Negotiation Journal*, *9*, 37–43. doi:10.1111/j.1571-9979.1993.tb00688.x
- McCullough, M. E., Kurzban, R., & Tabak, B. A. (2013). Cognitive systems for revenge and forgiveness. *The Behavioral and Brain Sciences*, *36*, 1–15. doi:10.1017/S0140525X11002160
- Miller, W. I. (1998). Clint Eastwood and equity: Popular culture's theory of revenge. In A. Sarat & T. R. Kearns (Eds.), *Law in the domains of culture* (pp. 161–202). Ann Arbor: University of Michigan Press.
- Otterbein, K. F., & Otterbein, C. S. (1965). An eye for an eye, a tooth for a tooth: A cross-cultural study of feuding. *American Anthropologist*, *67*, 1470–1482. doi:10.1525/aa.1965.67.6.02a00070
- Tenbrunsel, A. E., & Messick, D. M. (1999). Sanctioning systems, decision frames, and cooperation. *Administrative Science Quarterly*, *44*, 684–707. doi:10.2307/2667052
- Tripp, T. M., Bies, R. J., & Aquino, K. (2002). Poetic justice or petty jealousy? The aesthetics of revenge. *Organizational Behavior and Human Decision Processes*, *89*, 966–984. doi:10.1016/S0749-5978(02)00038-9
- Yamacke, S. (2000). Why is revenge wrong? *The Journal of Value Inquiry*, *34*, 61–69. doi:10.1023/A:1004778229751
- Yamagishi, T. (1988). Seriousness of social dilemmas and the provision of a sanctioning system. *Social Psychology Quarterly*, *51*, 32–42. doi:10.2307/2786982
- Yoshimura, S. (2007). Goals and emotional outcomes of revenge activities in interpersonal relationships. *Journal of Social and Personal Relationships*, *24*, 87–98. doi:10.1177/02654
- Zdaniuk, A., & Bobocel, D. R. (2012). Vertical individualism and injustice: The self-restorative function of revenge. *European Journal of Social Psychology*, *42*, 640–651. doi:10.1002/ejsp.1874