



Report

What makes revenge sweet: Seeing the offender suffer or delivering a message?

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ABSTRACT

The present article investigates the conditions under which vengeful episodes are satisfactory for the victim/avenger. Two hypotheses are tested simultaneously: (1) victims are satisfied if they see the offender suffer, even if this suffering was imposed by fate (“comparative suffering” hypothesis) and (2) victims are satisfied if the offender signals that he understands why revenge was imposed upon him (“understanding” hypothesis). A laboratory experiment is described in which the source of the offender’s suffering (revenge vs. fate) and the offender’s understanding for the cause of his suffering were varied. As an implicit measure of goal fulfillment, participants completed a lexical decision task that measured the relative accessibility of aggression-related words (compared to non-aggressive words). The results corroborate the understanding hypothesis: Participants showed higher levels of implicit goal fulfillment if they decided to take revenge and if the offender signaled understanding for the vengeful response. The findings are discussed with regard to the question what people hope to achieve when they take revenge.

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Revenge is a personal response to unjust treatment. Its goal is to achieve some sort of payback, to get even with the villain, to make the offender get what he or she deserves. But what exactly is it that needs to be got even? Many scholars agree that revenge implies a retributive principle: The quantity and quality of the revenge should be approximately proportional to the amount of harm implied in the original offense. Proportionality is a key feature and even a norm of revenge (Bies & Tripp, 1996; McLean Parks, 1997; Tripp & Bies, 1997). Revenge should fit the original offense – both in quantity and quality (Crombag, Rassin, & Horselenberg, 2003; Tripp, Bies, & Aquino, 2002). If revenge is proportional, it restores equity (Skarlicki & Folger, 1997; Walster, Walster, & Berscheid, 1978) and puts the world back into balance. But what exactly needs to be balanced in order to make revenge satisfactory?

Some authors (e.g., Frijda, 1994; Heider, 1958) argue that it is the amount of pain that needs to be balanced between the avenger and the offender. The offense caused an affective imbalance between the offender and the victim, and so revenge might aim at redressing this imbalance by making the offender suffer himself. According to Frijda (1994), the “*sense of justice derive from reflection upon comparative suffering*” (p. 274). This “comparative suffering” hypothesis has an interesting and empirically testable implication: If it is merely the amount of suffering that needs to be equalized in order to restore justice, then it should make no difference whether this suffering is administered by the avenger himself (through re-

venge), by a third person (e.g., through a legal sanction), or by fate (through accidental harm).

An alternative answer to the question what makes revenge satisfactory is based on the notion that revenge aims at delivering a message to the offender and to make him understand that what he or she did was morally reprehensible (French, 2001). According to this “understanding hypothesis”, revenge is only satisfactory if the offender acknowledges that revenge was taken against him because and in virtue of his prior unfair behavior (Gollwitzer, in press; Miller, 2001; Vidmar, 2001).

Empirically, it appears that the understanding hypothesis received more support than the comparative suffering hypothesis (Gollwitzer, Kriesch, & Schmitt, submitted for publication). In one of these experiments, participants were confronted with a very egoistic (ostensible) partner. Participants were given the opportunity to take revenge by deducting lottery tickets from their partner. Subsequently, participants could chat with their partner via computer. The message they received from their ostensible partner was experimentally manipulated. In one condition, the partner understood that taking tickets would be a punishment for his prior unfair behavior. In another condition, the partner stated that he would not understand why tickets were deducted from him. Participants experienced less anger, more satisfaction, and more deservingness in the former condition. In another experiment, Gollwitzer et al. (submitted for publication) found that seeing the offender suffer from fateful harm did not evoke perceptions of deservingness, lead to a reduction in anger, or to an increase in satisfaction.

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The present study aims at expanding this line of research. It was designed to test the comparative suffering hypothesis and the understanding hypothesis directly against each other. More importantly, this study aims to elucidate whether seeing the offender suffer or making the offender understand is related to goal achievement. Thus, instead of relying on self-reports of participants' emotional experiences after taking revenge, we will make an attempt to elucidate the motivational dynamics underlying vengeful responses to injustice.

According to a motivational priming model proposed by Förster, Liberman, and Higgins (2005), motivational states such as needs, intentions, or goals enhance the accessibility of motivation-related concepts (cf. Anderson, 1983; Bruner, 1957; Higgins & King, 1981; Wyer & Srull, 1989), because these concepts are conducive to successful goal-pursuit (e.g., Förster & Denzler, 2006; P. Gollwitzer, 1996; P. Gollwitzer & Moskowitz, 1996; Kuhl, 1987; Kuhl & Kazén-Saad, 1988; P. Goschke & Kuhl, 1993). Hence, accessibility of goal-related constructs is increased before goal fulfillment. What happens to activated knowledge after goals have been fulfilled? From a functional point of view (Förster & Liberman, 2006; Liberman & Förster, 2005) heightened accessibility of goal-related concepts loses its functionality after goal fulfillment and could even interfere with other unrelated goals. Therefore, a reduction or even inhibition of accessibility of motivation-related concepts after goal fulfillment is assumed (e.g., Förster et al., 2005; Liberman & Förster, 2000; Marsh, Hicks, & Bink, 1998; Marsh, Hicks, & Bryan, 1999; Zeigarnik, 1927). Note that goal fulfillment obviously involves processing goal-related constructs, but nevertheless decreases their accessibility instead of increasing it, as would be predicted in models of semantic priming.

Denzler, Förster, and Liberman (2009) applied this model to aggression. They showed that engaging in vengeful actions has beneficial effects for the avenger. They demonstrated that stabbing a voodoo doll (representing the offender) or visualizing revenge enhances the latency for detecting aggression-related target words in a lexical decision task (LDT). Furthermore, Denzler et al. (2009) were able to show that such vengeful activities or visualizations have to be goal-specific: When participants were instructed to take revenge against the offender, aggression-related cues became less accessible. However, when they were instructed to visualize hitting a punching bag, aggression-related cues became even more accessible than before. In these studies, the reduced cognitive accessibility of goal-related concepts (i.e., aggression-related target words) was used as an indicator of goal fulfillment (cf. Förster et al., 2005; Liberman, Förster, & Higgins, 2007).

The present study adopts this logic: If a decrease in the cognitive accessibility of aggression-related words indicates goal fulfillment, it is possible to investigate the conditions under which such a decrease is in fact observable. If the comparative suffering hypothesis (Frijda, 1994) was correct, then the accessibility of aggression-related words should decrease irrespective of whether participants make the offender suffer (by taking revenge) or merely see the offender suffer (by fateful harm). On the other hand, if the understanding hypothesis was correct, then the accessibility of aggression-related words should decrease only when the offender signals understanding for his suffering, that is, when he relates his suffering to his prior unfair behavior.

Method

Sample

The sample consisted of German university students that were recruited in classes and on campus. One-hundred and sixteen students from different disciplines (excluding psychology) agreed to

take part in the experiment. After having been debriefed and interviewed, four participants expressed having had doubts about the existence of the ostensible other participant. These cases were omitted from further analyses. This reduced the sample to $N = 112$ participants. Women were slightly overrepresented (63%). Ages ranged between 19 and 36 ($M = 22.0$; $SD = 3.0$ years).

Procedure

The first part of the study belonged to an unrelated experiment that investigated participants' performance in a stock-market game. This game was administered via computer and lasted for approximately 30 minutes. Participants were told that their computer was connected to the computer of a second participant in another room, who was working on the same task independently. After the final round of the stock-market game, participants were informed about the amount of money they made in the stock-market game. Additionally, they saw how much money the ostensible other participant made. This amount was pre-programmed to be roughly equal to the amount of money the real participant made. Then, participants were told that both players would receive a total amount of 10 Euros, which should be distributed according to their respective performance in the game. Both players were asked to make a proposal how the 10 Euros should be distributed between them. The vast majority ($N = 103$) decided to divide the 10 Euros equally between them and the other player ($M = 49.4\%$). Eight participants (7%) proposed to keep more than 75% of the 10 Euros. Another participant decided to keep only 25% for himself. These nine participants were omitted from further analyses.

Provocation

After participants typed their own proposal into a box, the computer screen displayed the ostensible partner's allocation proposal. The partner proposed to keep 90% of the money for himself. The computer then calculated the average distribution, which left approximately 25% (i.e., 2.50 Euros) for the real participants and 75% for the other participant. Similar provocations had been used by Batson, Bowers, Leonard, and Smith (2000) and Gollwitzer et al. (submitted for publication). The experimenter read out the final distribution and disbursed the money.

Lexical decision task at time-1

Immediately after they received their money, participants were asked to do a "reading speed test". All instructions were presented on the computer screen. Participants were informed that they would be presented a number of letter strings for which they had to decide whether they constituted German words or non-words. Participants were told to press a marked key on the left side of the keyboard if the letter string was a German word, and to press a marked key on the right side of the keyboard if it was not a word. Three sets of stimulus words were used, and they were fully adapted from Denzler et al. (2009); see also Mussweiler & Förster, 2000). One set consisted of aggression-related words such as ANGRIF (attack), HASS (hatred), and GEWALT (violence). A second set consisted of non-aggressive words such as GEBIRGE (mountains), BAUEN (build), or KLEID (dress). A third set consisted of non-words such as BELSINKI, SHANKELN, or GRUMPF.

The first ten trials served as practice trials that included five non-aggressive and five non-words; these words were different from those used in the 56 test trials. Test trials consisted of 14 aggressive words (seven words, each shown twice), 14 non-aggressive words (seven words, each shown twice), and 28 non-words (14 words, each shown twice). Words were presented in random order. The number of errors, that is, stimuli that were falsely clas-

sified as a word or a non-word, was small ($M = 2.03$; $SD = 1.71$); however, only correct responses were used for subsequent analyses. The mean response latency was $M = 746.31$ milliseconds ($SD = 166.98$) for aggressive words, $M = 722.16$ ($SD = 143.92$) for non-aggressive words, and $M = 833.56$ ($SD = 171.02$) for non-words. Two participants were omitted from further analyses because they had extremely high latencies (three or more standard deviations above the mean). This reduced the dataset to $N = 101$ cases.

Revenge vs. fate

After participants had completed the LDT, they were instructed that the present experiment would soon be over for them, but that participants in the other room (including their ostensible partners) might be asked to stay for another 30 minutes (without additional payment) and complete another task, which was described as tedious and unpleasant (they would be asked to watch unpleasant pictures and write down what they saw on these pictures). In the “fate” condition ($n = 24$), participants were told that their partners had been selected by chance to complete the unpleasant task. All other 77 participants were told that they could decide whether their partners should complete the unpleasant task. Thirty-four per cent ($n = 26$) made use of this option. These participants constituted the “revenge” condition. The remaining 51 participants decided not to take revenge; they constituted the “no revenge” condition.

Understanding

At that point, participants learned that they would now have the opportunity to send a short message to the other person. Participants were told that if they wanted to do so, they could simply type it into a chat window that opened on the computer screen. Soon after, all participants received a message from their ostensible partner. In the “understanding” condition ($n = 65$), this message read as follows: “Saw that I have to look at these gross pictures. . . well, maybe that’s the price I have to pay for making such an unfair distribution proposal.” In the “no understanding” condition ($n = 36$), this message read as follows: “Saw that I have to look at these gross pictures . . . what a bummer! don’t know why I have to do this”.

Lexical decision task at time-2

After messages were exchanged, participants were asked to complete the LDT for a second time. The mean response latency was $M = 739.24$ milliseconds ($SD = 143.15$) for aggressive words, $M = 698.69$ ($SD = 146.21$) for non-aggressive words, and $M = 783.64$ ($SD = 167.35$) for non-words. No participant had extreme latencies this time. Again, the number of errors was small ($M = 2.23$; $SD = 1.84$); however, only correct responses were used for subsequent analyses.

Finally, participants were probed for suspicion, thanked and partly debriefed. All participants received 5 Euros for their participation in the end. They were asked to leave their postal or e-mail address so that full debriefing could be sent to them as soon as the study was finished. All participants agreed to leave their e-mail address, and all participants received a complete debriefing via e-mail within one week.

Results

In a first step, latencies were log-transformed in order to reduce the skewness of the resulting distribution (see Fazio, 1990). In a

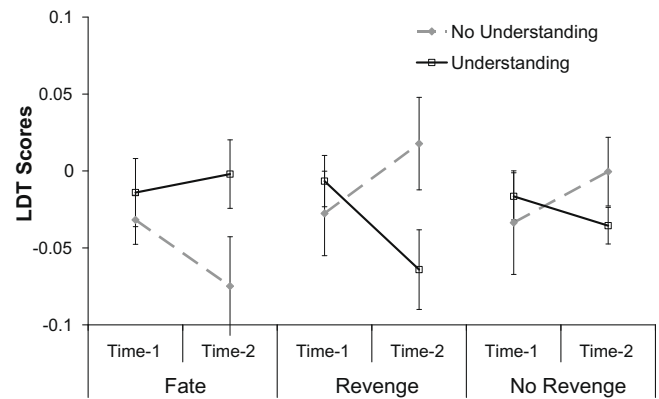


Fig. 1. Relative accessibility to aggression-related words compared to non-aggressive words (LDT scores) by experimental conditions and occasions of measurement. Vertical lines denote standard errors of means.

second step, log-transformed latencies for aggressive words were subtracted from log-transformed latencies for non-aggressive words. Thus, a positive value on the resulting difference variable (which will subsequently be referred to as LDT scores) indicates that aggressive words are relatively more accessible than non-aggressive words. Latencies for non-words were not analyzed. LDT scores were submitted to a 3 (fate, revenge, and no revenge) \times 2 (understanding: yes/no) \times 2 (occasion of measurement: after provocation, after exchanging messages) mixed analysis of variance.¹ Mean values are depicted in Fig. 1. LDT scores did not differ between experimental conditions at time-1 ($p \geq .35$). The only significant effect was the three-way interaction between occasion of measurement, revenge vs. fate, and understanding ($F[2,95] = 3.61$, $p = .03$, $\eta_p^2 = .07$). The main effects of revenge, understanding, and occasion of measurement were non-significant (p 's $\geq .68$); neither were the three two-way interactions (p 's $\geq .15$). In order to facilitate the interpretation of the three-way interaction, we tested the two-way interaction between occasion of measurement and understanding for each condition on the revenge factor (that is, revenge, no revenge, and fate), separately.

The two-way interaction between occasion of measurement and understanding was only significant in the revenge condition ($F[1,24] = 5.69$, $p = .03$, $\eta_p^2 = .19$). More precisely, LDT scores marginally significantly decreased among avengers who received an understanding message ($t[12] = 1.84$; $p = .09$; $d' = 0.51$). On the other hand, LDT scores increased among avengers who received a no-understanding message ($t[12] = -1.53$; $p = .15$; $d' = 0.42$), although this latter effect was non-significant.

The two-way interaction between occasion of measurement and understanding was neither significant in the no revenge condition ($F[1,49] = 2.12$, $p = .15$, $\eta_p^2 = .04$) nor in the fate condition ($F[1,22] = 2.04$, $p = .17$, $\eta_p^2 = .09$). Thus, among non-avengers and among those who learned that the offender would suffer from fate, the relative accessibility of aggression-related words did neither increase nor decrease.

Discussion

What is the goal of revenge and what makes revenge satisfactory? According to the “comparative suffering” hypothesis (Frijda, 1994; Heider, 1958), the goal of revenge is fulfilled as soon as the

¹ Results were the same in a covariance analysis in which LDT scores at time-2 was the dependent variable and LDT scores at time-1 were entered as a covariate: The main effect of revenge vs. fate remained significant in this model ($p = .005$). We decided to report the results of the mixed model since mean scores are much better interpretable.

offender suffers at least to an equal degree as the victim had suffered him- or herself from the offender's unfair behavior. According to the "understanding" hypothesis (French, 2001; Gollwitzer, *in press*; Miller, 2001; Vidmar, 2001), however, the goal of revenge is fulfilled if the offender understood *why* revenge was taken on him. More precisely, the offender has to signal that he realizes that the penalty is visited on him *because* he behaved unjustly and in virtue of the *wrongness* of his unjust behavior (Nozick, 1981).

The main dependent variable in this research was an indirect measure of goal fulfillment, which is based on the notion that goal-related concepts become less cognitively accessible after the goal is fulfilled (Förster & Liberman, 2006; Förster et al., 2005; Liberman et al., 2007). Goal-related concepts were words that are associated with aggression (cf. Denzler et al., 2009).

The findings from our study suggest that seeing the offender suffer from fate does not seem to be related to goal fulfillment. Thus, the comparative suffering hypothesis was not supported. Second, a decrease in LDT scores was only observable when participants took revenge *and* when the offender signaled understanding for this response. This corroborates the understanding hypothesis. When avengers received a message in which the offender did not seem to understand why revenge was taken on him, LDT scores even increased, although this increase was not statistically reliable. This pattern of results is in line with earlier findings in which the understanding hypothesis received more support than the comparative suffering hypothesis (Gollwitzer et al., *submitted for publication*).

The present study aimed to provide more insight into the motivational dynamics of taking revenge, and the conditions under which the goals of revenge are fulfilled. Our findings suggest that the goal of delivering a message to the offender is more important for avengers than merely seeing the offender suffer. Before discussing the implications of these findings on a broader level, it seems worthwhile to discuss some potential limiting factors of the study's design.

First, the most critical factor of the present study is that taking revenge vs. not taking revenge was not experimentally manipulated; rather, participants decided for themselves whether or not they would take revenge. The quasi-experimental nature of this factor principally weakens the internal validity of our design. One might argue that preexisting interindividual differences might account for the obtained effects. For example, if people scoring high on trait-anger (Spielberger et al., 1985) were more likely to take revenge than people scoring low on trait-anger, then all effects including a difference between avengers and non-avengers could alternatively interpreted as differences between more vs. less anger-prone people. Revenge would have no causal role in this case. Previous research, however, suggests that the likelihood of taking revenge is not primarily a function of a person's personality: Gollwitzer et al. (*submitted for publication*) found that avengers and non-avengers did not differ on a large number of justice- and anger-related personality measures. In line with that argument, Gollwitzer (2007) found that the decision of taking vs. not taking revenge is more likely a function of contextual characteristics (e.g., the perceived likelihood that justice can be effectively reestablished) than a function of stable interindividual differences.

Furthermore, one might argue that avengers differ from non-avengers with regard to emotional experiences (e.g., the amount of anger and moral outrage) towards the provocation. This might be true, but it does not weaken the reliability of our findings. First, we found that LDT scores did not differ significantly between avengers, non-avengers, and participants in the fate condition at time-1. Second, even if such differences were present, they would not necessarily affect any changes in LDT scores between time-1 and time-2. Thus, the effect that taking revenge only led to goal fulfillment when the offender understood the message cannot be ex-

plained by individual differences between avengers and non-avengers.

A second methodological issue is related to the understanding manipulation. The two messages were supposed to differ from each other only with regard to how much the offender acknowledged that punishment would be a response to his prior unfair behavior. However, what a message objectively contains does not necessarily predict how the message is received (Schmitt, Gollwitzer, Förster, & Montada, 2004). In the present study, we did not include a manipulation check for testing the construct validity of our understanding manipulation. Previous studies, however, suggest that the manipulation was effective (Gollwitzer et al., *submitted for publication*): Participants who received the understanding message reported that the offender admitted his fault; other elements which might be part of a "full apology", however, were not present from participants' point of view. The understanding message did not convey a statement of remorse, nor a promise to behave better in the future, nor an offer for compensating the victim. The offender simply constructed a relation between his or her prior behavior and his or her punishment. Obviously, this "minimal understanding" was effective and sufficient: It decreased its relative accessibility to aggression-related words among avengers in this condition. In other words: The goal of revenge was fulfilled as soon as the offender understood why he or she has been punished. A full apology is not necessary here.

On a broader level, our findings corroborate the notion that revenge aims at delivering a message between the victim/avenger and the offender, and that revenge is only effective if this message is understood (French, 2001). In other words, revenge is not a goal in itself, but rather a means to achieve a higher-order goal (Gollwitzer, *in press*). This notion is not new; in fact, it has been put forth by many scholars who addressed the question why people take revenge. Fritz Heider (1958) spoke of revenge as a way to exert behavior control over the offender, to change his "belief-attitude structure" (p. 267). On a societal level, one important function of vengeful behavior between groups is to prevent or avoid future harm by suggesting that one has the will and the power to retaliate swiftly (cf. Chagnon, 1988; Marongiu & Newman, 1987). The message of revenge in that kind would be something like "Never do this again to me". Understanding this message requires that the targets of revenge understand why revenge was imposed upon them; thus, understanding in the sense of relating the vengeful response to one's prior unfair behavior is a minimal condition, a prerequisite for delivering the message effectively (Miller, 2001).

The notion that revenge is a means to achieve a higher-order goal is furthermore consistent with action-theoretical approaches to aggressive behavior (e.g., Montada, 2007; Tedeschi & Felson, 1994). Most aggressive behaviors aim at achieving higher-order goals (such as demonstrating power, influencing others, asserting and defending social identities, reestablishing justice etc.; see also Bushman & Anderson, 2001; Gollwitzer, 2007). Finally, research on laypersons' attitudes toward punitive sanctions for criminal offenses likewise suggests that punishment usually serves a multitude of higher-order goals (Darley & Pittman, 2003; Orth, 2003; Oswald, Hupfeld, Klug, & Gabriel, 2002; Robinson & Darley, 1995). For all these goals or functions to be effective, it is important that the offender actually gets the message: Revenge, aggression, and punishment are imposed upon him or her as a response to his or her prior unfair behavior. To what extent, however, a simple understanding message is sufficient in reducing negative feelings among victims of violent crimes remains an empirical question. Recent research in the retributive justice literature (Gromet & Darley, 2006; Wenzel & Thielmann, 2006) suggests that punishment forms that allow for a direct communication between the victim and the offender (such as restorative practices; cf. Braithwaite, 2002) are sometimes preferred over more traditional forms of pun-

ishment (such as incarceration). Future research should address the question under which circumstances (e.g., qualitative or quantitative differences in unfair behavior) a simple understanding message is sufficient for enhancing victims' perception that justice has been reestablished and that the goal of revenge has been fulfilled. The present study has made a first attempt to show that at least in the context of minor transgressions, revenge is satisfactory when the message has been effectively delivered.

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