

## BRIEF REPORT

# Towards understanding pleasure at the misfortunes of others: The impact of self-evaluation threat on schadenfreude

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In two experiments we demonstrated that a self-evaluation threat intensifies schadenfreude. Moreover, we showed that a self-evaluation threat predicts schadenfreude in both threat-related and threat-unrelated domains and when controlling for feelings of envy and dislike towards the target and evaluations of the misfortune in terms of deservingness. These findings indicate that another's misfortune may be pleasing because it satisfies people's concern for a positive self-view and a sense of self-worth.

**Keywords:** Emotion; Schadenfreude; Self-enhancement; Self-evaluation; Social comparison.

Although schadenfreude (pleasure at the misfortunes of others) carries a negative connotation, people sometimes “cannot resist a little smile” when another person suffers a setback. Based on the many displays of schadenfreude in magazines, television shows, web logs, and interpersonal communication (e.g., in gossip), it seems

almost inherent to social being. Previous research has provided important insights into the conditions that elicit this emotion. For instance, it has been shown that schadenfreude is more readily evoked when a misfortune befalls an envied (Smith et al., 1996; Van Dijk, Ouwerkerk, Goslinga, Nieweg, & Gallucci, 2006) or disliked

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person (Hareli & Weiner, 2002; Van Dijk et al., 2006) or when a misfortune is perceived as deserved (Feather & Sherman, 2002; Van Dijk, Ouwerkerk, Goslinga, & Nieweg, 2005). We extend this previous work by providing empirical support for the notion that a self-evaluation threat intensifies pleasure at the misfortunes of others.

### Self-evaluation threat and *schadenfreude*

According to appraisal theorists, emotions are generated by cognitive evaluations (appraisals) of events and each distinct emotion is elicited by a distinctive pattern of appraisals (Roseman & Smith, 2001). Moreover, it is argued that events that satisfy one's concerns (or promise to do so) yield positive emotions, whereas events that harm or threaten these concerns elicit negative emotions. Consistent with this conceptualisation of emotions, we argue that one of the reasons why people experience *schadenfreude* is that another's misfortune satisfies their concern to view themselves positively. That is, another's misfortune can be pleasurable because it provides people with an opportunity to protect, maintain, or enhance their self-evaluation.

People's motivation to feel good about themselves is seen by many psychologists as an important human concern (e.g., Baumeister, 1994; Sedikides & Strube, 1997; Taylor & Brown, 1988; Tesser, 1988). One way people can feel good about themselves is to compare their own lot to that of less-fortunate others. Indeed, research shows that when a self-enhancement motive is activated, people engage more readily in downward social comparisons to bolster their feelings of self-worth (Collins, 1996; Sedikides & Strube, 1997; Taylor & Brown, 1988). Furthermore, Wills (1981) argued that, because of their greater need for self-enhancement, individuals who experience a self-evaluation threat are more likely to make downward comparisons, and findings of several studies corroborate this view (Aspinwall & Taylor, 1993; Gibbons, 1986).

Combining these insights from appraisal theory and research on social comparison processes,

we argue that another's misfortune can be pleasing because the self-enhancing aspect of a more favourable comparison position enables people to feel good about themselves. Hence, our first aim was to demonstrate that individuals who experience a self-evaluation threat, and therefore have a greater need to restore their self-worth, feel more *schadenfreude* following another's misfortune than those whose self is not threatened.

Recent research on group-based *schadenfreude* has also provided an indication for the hypothesised relation between self-evaluation threat and *schadenfreude*. This research showed that feelings of in-group inferiority predicted *schadenfreude* towards a successful out-group that had failed (Leach & Spears, 2008; Leach, Spears, Branscombe, & Doosje, 2003). However, threats to one's social identity cannot be merely equated with threats to the individual self, and generalising results from an intergroup to an interpersonal level of analysis should be done with caution. For instance, previous studies have shown that intergroup interactions are generally more competitive than interindividual interactions (Wildschut, Pinter, Vevea, Insko, & Schopler, 2003). Therefore, in the current research we aimed to provide the first direct support for the impact of a threat to the individual self on *schadenfreude*.

In the before-mentioned studies on group-based *schadenfreude* an out-group's misfortune occurred in the same domain as the in-group's inferiority (i.e., sports or university contests). Our second aim was to demonstrate that people use the self-bolstering properties provided by another's misfortune, even if this misfortune occurs in a domain unrelated to the self-evaluation threat. This would be in line with Allport's (1943), p. 466) notion of "fluid compensation", that is, "mental health and happiness . . . does not depend upon the satisfaction of this drive or that drive, it depends rather upon the person finding some area of success somewhere" and Steele's (1988) self-affirmation model, in which it is argued that people can adapt to self-threats through actions that affirm their general self-integrity even when these adaptations do nothing

to resolve the provoking threat itself. The fluidity of compensation and self-affirmation processes suggests the existence of a flexible-self system for protecting, maintaining, or enhancing self-worth, rather than for resolving specific self-evaluation threats (see also, Beauregard & Dunning, 1998; Tesser, 2000).

### Present research

The present research aimed to extend previous studies on schadenfreude by demonstrating that a self-evaluation threat: (a) intensifies schadenfreude; and (b) increases schadenfreude in both threat-related and threat-unrelated domains. For this purpose, we conducted two experiments in which participants were confronted with a self-evaluation threat by providing them with negative feedback on a self-relevant task. Subsequently, a threat-related (Experiment 1) or threat-unrelated (Experiment 2) misfortune happened to another person and participants' reactions towards this misfortune were assessed and compared to a condition in which they received either positive feedback (Experiment 1) or no feedback (Experiment 2). As envy (Smith et al., 1996; Van Dijk et al., 2006) and dislike (Hareli & Weiner, 2002) towards a target and deservingness of the misfortune (Feather & Sherman, 2002; Van Dijk et al., 2005) has been shown to affect schadenfreude, these variables were controlled for, enabling a more stringent test of the impact of a self-evaluation threat on schadenfreude.

## EXPERIMENT 1

### Method

*Participants, design, and procedure.* Participants were 130 undergraduates (76 women, 54 men), who were randomly assigned to one of the two Self-evaluation Threat conditions (negative feedback, positive feedback). Participants were told that they would take part in two unrelated studies. In the first study, self-evaluation threat was manipulated, whereas in the second one schadenfreude was initiated.

*Self-evaluation threat manipulation and manipulation check.* To manipulate self-evaluation threat, participants were provided with either negative or positive feedback on a self-relevant task using a task developed by Ouwerkerk, de Gilder, and de Vries (2000). It was explained that they had to complete a task that assessed their "Inconsistent Rules Processing Ability". To increase the relevance of this task, participants were led to believe that performance on the task had been shown to correlate strongly with the capacity for analytic thinking and intellectual abilities in general. After completing this task, participants received either negative or positive feedback on their performance. In the negative-feedback (positive-feedback) condition participants were led to believe they had scored among the worst (best) 10% of the student population. Hereafter, they completed the manipulation check and responded to the following items: "I am satisfied about my performance" and "I believe that, in comparison with others, my performance was actually not that bad" ( $M = 4.83$ ,  $SD = 1.87$ ;  $r = .87$ ).

*Target and misfortune information.* As in previous research (Van Dijk et al., 2005, 2006), we presented participants with two written interviews. In the first interview, either a male or female target person was described as a high-potential in terms of achievement and likelihood to get a good job. Before participants read the second interview they completed measures that assessed their feelings towards the target. Next, participants read an interview with the student's supervisor that allegedly was conducted three months after the interview with the student. From this interview participants learned that the student recently had suffered a setback, as the supervisor remarked that the student had given a very poor presentation of his or her thesis, and had to rewrite major parts of it. Consequently, the student was about to suffer a serious delay in his or her studies. We then assessed participants' reactions to this misfortune. Upon completing these questions, they were fully debriefed and thanked for their participation.

*Reactions towards target and misfortune.* When not specified otherwise, we assessed all variables by statements, and asked participants to specify their (dis-)agreement with each given statement (1 = *strongly disagree*; 7 = *strongly agree*). Participants' reactions towards the target involved four statements to assess *envy* (e.g., I am jealous of ...<sup>1</sup>; I feel less good when I compare my results with those of ...;  $M = 3.26$ ,  $SD = 1.23$ ; Cronbach's  $\alpha = .77$ ); four statements assessed *dislike* (e.g., I hate ...; I dislike ...;  $M = 3.03$ ,  $SD = 1.34$ ;  $\alpha = .84$ ).

The assessment of participants' reactions towards the misfortune involved five statements measuring *schadenfreude* (e.g., I enjoy what happened to ...; I couldn't resist a little smile; I feel schadenfreude<sup>2</sup>;  $M = 2.94$ ,  $SD = 1.39$ ;  $\alpha = .88$ ); three statements measuring *sympathy* (e.g., I commiserate with ... about what happened;  $M = 3.82$ ,  $SD = 1.15$ ;  $\alpha = .72$ ); and two statements that assessed *misfortune deservingness* (e.g., I find what happened to ... is deserved;  $M = 3.19$ ,  $SD = 1.35$ ;  $r = .80$ ).

## Results and discussion

*Manipulation check.* An analysis of variance (ANOVA) with Self-evaluation Threat (negative feedback, positive feedback), target's Gender and participant's Gender as independent variables and performance evaluation as dependent variable yielded a significant main effect of Self-evaluation Threat only,  $F(1, 126) = 100.43$ ,  $p < .001$ ,  $\eta_p^2 = .44$ . As intended, participants evaluated their performance less positively after negative feedback ( $M = 3.51$ ,  $SD = 1.61$ ) than after positive feedback ( $M = 6.03$ ,  $SD = 1.16$ ). No other main or interaction effects were obtained,  $F_s < 1$ ,  $p_s > .46$ . This indicates that our manipulation of self-evaluation threat was successful and independent of both target's

gender and participant's gender. Furthermore, additional analyses showed that participants' reactions in terms of envy, dislike, and deservingness of the misfortune were independent from our self-evaluation threat manipulation,  $F_s < 1$ .

*Schadenfreude and sympathy.* An ANOVA with Self-evaluation Threat, target's Gender, and participant's Gender as independent variables and schadenfreude as dependent variable yielded the expected main effect of Self-evaluation Threat only,  $F(1, 122) = 4.08$ ,  $p < .05$ ,  $\eta_p^2 = .03$ .<sup>3</sup> Participants experienced more schadenfreude towards the misfortune of the student after negative feedback ( $M = 3.19$ ,  $SD = 1.50$ ) than after positive feedback ( $M = 2.71$ ,  $SD = 1.26$ ). No other main or interaction effects were found,  $F_s < 1.09$ ,  $p_s > .29$ . Next, we simultaneously entered envy, dislike, and deservingness as covariates in the analysis, enabling us to test the additional explanatory value of our self-evaluation threat manipulation. Results showed a positive relation between dislike and schadenfreude,  $F(1, 119) = 51.59$ ,  $p < .001$ ,  $\eta_p^2 = .30$ , and between deservingness and schadenfreude,  $F(1, 119) = 3.92$ ,  $p = .05$ ,  $\eta_p^2 = .03$ . Results revealed no significant relation between envy and schadenfreude ( $F = 1.17$ , *ns*). More importantly, the expected main effect of Self-evaluation Threat was still significant when controlling for these covariates,  $F(1, 119) = 5.73$ ,  $p < .05$ ,  $\eta_p^2 = .05$ .<sup>4</sup>

Similar analyses on sympathy yielded a marginally significant three-way interaction between Self-evaluation Threat, target's Gender, and participant's Gender,  $F(1, 122) = 3.39$ ,  $p < .07$ . Inspection of the means indicated that after positive feedback female participants had more sympathy with female targets than male participants. These different findings for sympathy and

<sup>1</sup> Depending upon conditions the name Marleen or Mark was used in the statements.

<sup>2</sup> We used the term "leedvermaak", which is the Dutch word for schadenfreude.

<sup>3</sup> As previous research (Van Dijk et al., 2005, 2006) showed significant effects of participant's gender and/or target's gender on schadenfreude and sympathy these factors were included in the analyses.

<sup>4</sup> Additional analyses of covariance, in which the covariates were entered independently rather than simultaneously, showed the same pattern of results.

schadenfreude together with their moderately negative correlation ( $r = -.34, p < .001$ ) supports the notion that schadenfreude and (lack of) sympathy are distinct emotional reactions to the misfortunes of others (Heider, 1958).

There might be several aspects of our research that prevented finding a significant relation between envy and schadenfreude. For instance, contrary to earlier studies supporting a relation between envy and schadenfreude, we did not systematically vary the achievements of the target of schadenfreude, thereby possibly reducing the variation in envy reactions towards the target. Furthermore, the cause of the self-evaluation threat was the negative feedback participants received on a self-relevant task. As the achievements of the target were not the main source of threat, this target may have elicited less strong feelings of envious hostility, which are typically part of envy proper. Moreover, it might be the case that schadenfreude has a stronger relationship with more malicious forms of envy than with more benign ones. Our assessment of envy in relatively benign terms (e.g., hostility was not included in our measure) might also have prevented finding a relation between envy and schadenfreude.

In this first experiment self-evaluation threat was manipulated by providing participants with either negative or positive feedback on a self-relevant task. However, whereas negative feedback poses a threat to one's self-evaluation, positive feedback may not only result in a situation in which such threat is absent, but can also provide an opportunity for self-enhancement. Consequently, it might be premature to conclude on the basis of our findings that a self-evaluation threat intensifies schadenfreude—the effects of the manipulation may also have been caused by self-enhancement following positive feedback. We addressed this issue in our second experiment by contrasting a negative-feedback with a no-feedback condition.

Furthermore, in the first experiment another's misfortune occurred in a domain that was related to the manipulation of self-evaluation threat. That is, feedback was

provided on a task that was allegedly related to analytic thinking and intellectual abilities in general and the misfortune occurred in the domain of academic achievements. To test whether self-evaluation threat also intensifies schadenfreude in a threat-unrelated domain, we confronted participants in Experiment 2 with a misfortune that was unrelated to our self-evaluation threat manipulation.

## EXPERIMENT 2

### Method

*Participants, design, and procedure.* Participants were 75 undergraduates (39 women, 36 men), who were randomly assigned to one of the two Self-evaluation Threat conditions (negative feedback, no feedback). The experimental procedure was similar to that of Experiment 1.

*Self-evaluation threat manipulation and manipulation check.* To manipulate self-evaluation threat we used the same task as in Experiment 1. In the negative-feedback condition, feedback indicated that the participant had a score among the worst 10% of the student population. In the no-feedback condition, participants did not receive any feedback after they completed the task, but immediately continued with the second, supposedly unrelated, study. The effectiveness of the manipulation was assessed using the same two statements as in Experiment 1 ( $M = 4.34, SD = 1.78; r = .86$ ).

*Target and misfortune information.* After completing the first part of the study, participants were asked to read a news article in which a narrator tells about a misfortune suffered by a student that allegedly had appeared in a national students' magazine. The core of the article describes a student who rented an expensive car to "make an entrance" at a student party. After arriving, while trying to park his rented car, he drove it into the canal. Consequently, the car had

to be towed out of the canal by the fire brigade and appeared severely damaged.<sup>5</sup>

*Reactions towards target and misfortune.* After participants learned about the misfortune, *schadenfreude* ( $M = 3.72$ ,  $SD = 1.38$ ; five statements,  $\alpha = .85$ ), *sympathy* ( $M = 3.40$ ,  $SD = 1.37$ ; three statements,  $\alpha = .76$ ), *dislike* ( $M = 4.81$ ,  $SD = 1.54$ ; two statements,  $r = .68$ ), and *misfortune deservingness* ( $M = 5.03$ ,  $SD = 1.43$ ; two statements,  $r = .64$ ) were assessed in similar ways as in Experiment 1.<sup>6</sup>

## Results and discussion

*Manipulation check.* An ANOVA with Self-evaluation Threat (negative feedback, no feedback) and participant's Gender as independent variables and performance evaluation as dependent variable yielded a significant main effect of Self-evaluation Threat only,  $F(1, 71) = 24.55$ ,  $p < .001$ ,  $\eta_p^2 = .26$ . As intended, participants evaluated their performance less positively after negative feedback ( $M = 3.47$ ,  $SD = 1.81$ ) than after no feedback ( $M = 5.23$ ,  $SD = 1.24$ ). No other main or interaction effects were found,  $F_s < 1.38$ ,  $p_s > .24$ . This indicates that our manipulation of self-evaluation threat was successful and independent of participant's gender. Furthermore, additional analyses showed that participants' reactions in terms of dislike and deservingness of the misfortune were independent from our self-evaluation threat manipulation,  $F_s < 2.46$ ,  $p_s > .12$ .

*Schadenfreude and sympathy.* An ANOVA with Self-evaluation Threat and participant's Gender as independent variables and *schadenfreude* as dependent variable yielded the expected main effect of Self-evaluation Threat only,  $F(1, 71) = 4.04$ ,  $p < .05$ ,  $\eta_p^2 = .05$ . Participants took more pleasure in the target's misfortune after negative feedback ( $M = 4.04$ ,  $SD = 1.29$ ) than after no feedback

( $M = 3.40$ ,  $SD = 1.18$ ). No other main or interaction effects were found,  $F_s < 2.31$ ,  $p_s > .13$ . Next, we simultaneously entered dislike and misfortune deservingness as covariates in the analysis. Results showed that *schadenfreude* was significantly associated with more perceived deservingness of the misfortune,  $F(1, 69) = 15.97$ ,  $p < .001$ ,  $\eta_p^2 = .19$ , whereas *schadenfreude* was not significantly associated with dislike toward the target,  $F = 1.87$ , *ns*. As dislike was assessed after misfortune information was provided, this information might have influenced dislike towards the target, thereby obscuring the expected relationship between (pre-misfortune) dislike and *schadenfreude*. More importantly, the expected main effect of Self-evaluation Threat was still significant when controlling for these covariates,  $F(1, 69) = 4.33$ ,  $p < .05$ ,  $\eta_p^2 = .06$  (see Footnote 4).

Similar analyses on sympathy yielded a marginally significant main effect of Gender only,  $F(1, 71) = 3.67$ ,  $p = .059$ ,  $\eta_p^2 = .05$ . Female participants tended to experience more sympathy towards the target ( $M = 3.68$ ,  $SD = 1.23$ ) than male participants ( $M = 3.08$ ,  $SD = 1.23$ ). No other main or interaction effects were found,  $F_s < 1.86$ ,  $p_s > .17$ . These findings, together with the fact that sympathy was not significantly correlated with *schadenfreude* ( $r = -.11$ , *ns*), further support the notion that *schadenfreude* and sympathy are distinct emotional reactions towards the plight of others.

Since in our second experiment we contrasted a condition in which negative feedback was provided with a no-feedback condition, it seems unlikely that the results of our first experiment were caused by an opportunity for self-enhancement provided by positive feedback. Hence, these results demonstrate that a self-evaluation threat posed by negative feedback intensifies *schadenfreude*. Moreover, they show that self-evaluation threat also intensifies *schadenfreude* in a threat-unrelated domain.

<sup>5</sup> Since Experiment 1 did not yield a significant effect of the target's gender on *schadenfreude* and in order to limit the number of factors in our analyses, all participants were presented with a male target.

<sup>6</sup> Envy towards the target was not assessed.

## GENERAL DISCUSSION

Results of two studies show that self-evaluation threat intensifies schadenfreude in both threat-related and threat-unrelated domains and when controlling for envy and dislike towards the target and deservingness of the misfortune.

Our findings provide the first empirical demonstration that a threat to the individual self intensifies schadenfreude and support our contention that the misfortunes of others can satisfy people's concern for a positive self-view. In a recent study (Van Dijk, Wesseling, Ouwerkerk, & Van Koningsbruggen, 2010) we demonstrated that autobiographical accounts of occasions in which people felt schadenfreude were associated with a boost in self-esteem. This corroborates the notion that the misfortunes of others can be pleasing because they offer an opportunity to protect, maintain, or enhance one's self-evaluation.

A second aim of the present research was to demonstrate that another's misfortune could also serve a self-enhancement function when the misfortune occurs in a domain unrelated to the self-evaluation threat. Our first experiment showed that individuals experienced more schadenfreude towards the academic failure of another person when their self-evaluation was undermined in the threat-related domain of intellectual abilities. However, our second experiment demonstrated that after such a self-threat schadenfreude was also intensified when another person suffered a misfortune in a threat-unrelated domain. The finding that a self-evaluation threat intensified schadenfreude in both threat-related and threat-unrelated domains is consistent with the work of scholars who advocate the existence of a flexible-self system for protecting, maintaining, or enhancing self-worth (e.g., Allport, 1943; Beauregard & Dunning, 1998; Steele, 1988; Tesser, 2000).

It is important to note that we do not claim that misfortunes in any domain will serve a self-enhancement function. Consistent with the before mentioned scholars, we suggest that the self-relevance of the domain is an important

determinant of the extent to which misfortunes protect, maintain, or enhance self-evaluation. That is, we hypothesise that misfortunes of others will only bolster self-worth if they occur in domains that are appraised as relevant and important to the individual self. In our present research it is likely that participants appraised both misfortunes as failures in a self-relevant domain. In our first experiment the misfortune concerned an academic failure, a domain very likely to be relevant and important to our (student) participants. In our second experiment the misfortune (a mild car accident) might have been appraised as a painful embarrassment in front of peers, a situation also likely to be regarded as self-relevant and important. As, in our present research, we neither assessed nor manipulated the self-relevance of the domain, this hypothesis could be tested in future studies.

The present findings also showed that a self-evaluation threat intensified schadenfreude when we controlled for envy and dislike towards the target and deservingness of the misfortune, thereby demonstrating that self-evaluation threat is an important additional predictor of schadenfreude. Moreover, our manipulation of a self-evaluation threat did not have an effect on either dislike, envy, or deservingness, which excludes the possibility that, at least in our studies, these variables mediated the impact of self-evaluation threat on schadenfreude. Future studies could address the conditions under which these variables do or do not mediate the impact of self-threats on schadenfreude.

Experiment 1 showed that the more a target was disliked and the more a misfortune was appraised as deserved the more schadenfreude was elicited, thereby replicating earlier work on schadenfreude (Feather & Sherman, 2002; Hareli & Weiner, 2002; Van Dijk et al., 2005, 2006). Experiment 1 did not show a relation between envy and schadenfreude, a relation that has been found in earlier research (Smith et al., 1996; Van Dijk et al., 2006). It is important to emphasise that we do not argue that envy is not a determinant of schadenfreude or that, under no circumstances, can it mediate

the impact of self-threats on schadenfreude. As we discussed earlier, there might be several aspects of our research that prevented finding this relation. Future research could address the question of when and when not envy predicts schadenfreude (e.g., is malicious envy a stronger predictor of schadenfreude than benign envy?). This constitutes an important line of future studies, as currently scholars tend to differ in their views on whether there is a relation between envy and schadenfreude (e.g., Smith et al., 1996; Van Dijk et al., 2006) or not (e.g., Feather & Sherman, 2002; Hareli & Weiner, 2002).

### Closing remarks

Combining our research with previous work on schadenfreude suggests that schadenfreude is a multi-determined emotion. The current available empirical evidence indicates that it can be evoked by dislike and envy towards the target, evaluation of the misfortune in terms of deservingness, and a self-evaluation threat. Which of these determinants will provide the most powerful explanation of schadenfreude will, in our view, be dependent upon the specific context of the situation. Therefore, an important agenda for future research on schadenfreude should include a systematic investigation of the exact conditions under which the different determinants independently or interactively evoke the multi-faceted feeling of pleasure at the misfortunes of others.

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