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# Observing *schadenfreude*: Expressing pleasure at others' misfortune predicts avoidance

*Stefano Pagliaro, Marco Brambilla, Francesco Di Prinzio  
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*In two studies, we examined how individuals who express schadenfreude – that is joy at an other's suffering – are perceived by the observers. Study 1 (N = 90) showed that actors expressing schadenfreude elicit a more negative impression and more avoidance intentions than those who display a general negative behavior. Study 2 (N = 90) showed that such an effect did not depend upon participants' competition with the target of the observed schadenfreude. Together the findings showed that observing the public expression of schadenfreude has meaningful implications for social relations and interpersonal perception.*

In the daily life, we continuously witness situations that foster misfortune and pain to other people. Despite when facing these situations we may experience empathy, in particular when they happen to our relatives or friends, abundant literature has highlighted that an opposite reaction may arouse as well. Scholars have referred to such a reaction as to *schadenfreude*, literally, the malicious satisfaction and pleasure to someone else's misfortune (Leach, Spears,

Branscombe & Doosje, 2003; Smith, 2013). Although the occurrence of *schadenfreude* may be seen as inappropriate, because it violates social norms prescribing compassion (van Dijk & Ouwerkerk, 2014; Smith, Powell, Combs & Schurtz, 2009) and in this way it highlights a dark side of the human nature, researchers have identified a number of circumstances in which it does arise. For example, people are more likely to feel *schadenfreude* towards envied targets (Cikara & Fiske, 2012; van Dijk, Ouwerkerk, Goslinga, Nieweg & Gallucci, 2006), disliked individuals or groups (Hareli & Weiner, 2002), immoral targets (Brambilla & Riva, 2017a) or when they think the target deserves misfortune and pain (Feather & Sherman, 2002; van Dijk, Ouwerkerk, Goslinga & Nieweg, 2005). Likewise, individuals are more likely to experience *schadenfreude* when they gain from other's suffering and failure (Smith, Eyre, Powell & Kim, 2006).

While researchers have investigated the conditions that elicit *schadenfreude*, far less attention has been devoted to a different side of this phenomenon. How are

perceived the individuals who express *schadenfreude* in public? In the present paper, we directly deal with this question. In particular, we examine how people evaluate a social target expressing *schadenfreude* during a social interaction and whether they try to avoid a future interaction with him or her.

## 1. People's reactions to immoral targets

In the social encounters, individuals constantly look at information about the targets they are interacting with. This is functional to the understanding of the target's intention (Cuddy, Fiske & Glick, 2008), and in turn, it helps individuals to shape their own behavior towards it. In this process, the way people form impressions plays a strong diagnostic role about their future behavior (Neuberg & Fiske, 1987; Reeder & Brewer, 1979). There is a substantial agreement about the central role that information about the target's morality (rather than, for instance, its competence and sociability) when people form a global impression of others (Brambilla & Leach, 2014). According to a functional interpretation of this general finding, morality information in social interactions is highly relevant because it helps people understanding whether the intentions of the other party (that is, an individual or a group) are beneficial or harmful for them. Recent research confirmed this prominent role of moral information in guiding impression formation (Brambilla, Rusconi, Sacchi & Cherubini, 2011; Brambilla, Sacchi, Rusconi, Cherubini & Yzerbyt, 2012). In a crucial vein for the present purpose, it has been also showed that this judgment drives subsequent behavior towards the other party, in terms of approach-avoidance tendencies, and this is likely to occur because individuals feel threatened by an immoral partner of interaction (Brambilla, Sacchi, Menegatti & Moscatelli, 2016; Brambilla, Sacchi, Pagliaro & Ellemers, 2013; Iachini, Pagliaro & Ruggiero, 2015).

The expression of *schadenfreude* represents a strongly immoral behavior, which signals scarce empathy towards the others and violates the most common social norms prescribing caring and compassion (Smith et al., 2009). Although evidence about people's reactions to *schadenfreude* is scant, a relevant exception is represented by a recent set of studies by Gromet, Goodwin and Goodman (2016). In their studies, Gromet and colleagues asked participants to read a scenario depicting an episode of *schadenfreude*, and evaluate both the actor (that is, the person expressing *schadenfreude* after causing harm to the victim) and an observer (that is, a third person who played no role in causing the harm to the victim but witnessed the *schadenfreude*). The authors showed that both the perpetrator and the observer of *schadenfreude* were morally condemned, judged as immoral and evil. Moreover, participants reported to be more comfortable when taking them at distance, on the basis of a general measure of social distance.

Here we elaborated on this reasoning by looking at the way in which people react to someone expressing *schadenfreude* in terms of impression formation and

behavioral intentions. In the studies reported below, participants were asked to read an immersive scenario, depicting a job interview they were taking part in. They were then faced with an episode of *schadenfreude*, and subsequently asked to evaluate the author of this behavior in terms of global impression. Finally, they were asked to indicate to what extent they would like to interact (or avoid) this person. We aimed at showing that expressing *schadenfreude* affects both the global impression and the subsequent behavioral intentions to approach or avoid such a person. We further aimed to disentangle whether the effect of *schadenfreude* is peculiar, and different from that of a more general negative behavior (Study 1). We also set out to investigate whether or not it depends upon the negative interdependence between the victim and the evaluator (Study 2).

## 2. Study 1

Study 1 aimed to provide a first evidence about the way in which individuals react to observed *schadenfreude*. We aimed to show that witnessing *schadenfreude* induces a negative reaction in terms of impression formation and behavioral tendencies. In particular, we hypothesized that witnessing an episode of *schadenfreude*, compared to a control condition and a general negative behavior condition, would elicit a more negative impression toward the person expressing such a malicious joy (Hp1)<sup>1</sup>, and a more pronounced avoidance tendency (Hp2). In line with previous research (Brambilla et al., 2013; Iachini et al., 2015), we further hypothesized that the effect of *schadenfreude* on avoidance tendencies would be mediated by the impression formed toward the target person expressing *schadenfreude* (Hp3).

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<sup>1</sup> We further assessed in both the studies presented here the evaluation of the target in terms of separate evaluative dimensions (that is, morality, competence, and sociability): and indeed, we aimed to test that observing *schadenfreude* impacted directly on the moral evaluation of the schadenfroh. Nevertheless, the three evaluations were strongly correlated in these two studies (Study 1:  $.63 < r_s < .73$ ; Study 2:  $.40 < r_s < .56$ ), and Exploratory Factor Analyses yielded a 1-factor solution in Study 1 (explaining 63% of variance) and a 2-factor solution in Study 2 (explaining 63.85% of variance). Based on this empirical evidence, we relied on the bulk of findings about the prominent role of moral (vs. competence and sociability) information in the formation of a global impression about an unknown target (e.g., Brambilla et al., 2011, 2012) and on the subsequent behavior toward them (e.g., Brambilla et al., 2013; Iachini et al., 2015). Thus, since our data did not allow us to disentangle the specific role of moral evaluation without confounding it with competence and sociability, we decided to use the measure of global evaluation.

## 2.1. Method

### 2.1.1. Design and participants

An a priori power analysis was conducted for sample size estimation (using GPower 3.1; Faul, Erdfelder, Lang & Buchner, 2007). With an alpha = .05 and power = .90, the projected sample size needed to detect a large effect size ( $f = .40$ ) is  $N = 84$  for a between-groups comparison (ANOVA one-way with 3 groups). Ninety undergraduates from a medium-size university voluntarily took part in this study (58 women; mean age = 22.97;  $SD = 2.77$ ). They were randomly assigned to one of three conditions resulting from a single factor design (*Condition*: Control vs. *Schadenfreude* vs. Negative Behavior). Each session lasted approximately fifteen minutes, after which participants were thanked and fully debriefed.

### 2.1.2. Procedure

Participants were asked to anonymously answer a paper-and-pencil questionnaire. After providing some demographic information, participants were asked to read a fictitious scenario, trying to imagine the described situation as real as they can. The scenario described a fictitious job interview, and was adapted from previous research (Brambilla & Riva, 2017b). In the *Schadenfreude condition*, each participant was asked to imagine to take part in this relevant job selection, together with a second and rival candidate called «Michele S.». The participant was then advised that a further job selection have to be performed, independent from the one they were involved in: a third candidate, «Paolo D. B.» was taking part in this second, independent job selection. Before starting the interview, the candidates knew that Paolo D. B. had a car accident when travelling, and this did not allow him to take part in the selection. Hearing that, Michele S. started to laugh out loud declaring to be glad about what happened to Paolo D. B., and not being able to hold his own satisfaction. Moreover, after a couple of minutes Michele S., shooting a laugh, told participant to be happy and euphoric for the situation happened to Paolo D. B. In the *Negative Behavior condition* the described job interview was identical, but this time the candidate Michele S. behaved in an ostensible counter-normative way. Participants read that in the waiting room smoking and eating was not allowed. Before starting his interview, Michele S. started smoking and eating a snack. Finally, in the *Control condition* the situation described was identical, but the candidate Michele S. neither showed any reaction to what had happened to Paolo D. B., nor behaved in a counter-normative way by smoking and eating in the waiting room.

Manipulation of *schadenfreude* was checked by means of four items. We asked participants to recall to what extent Michele S. was «happy about what had happened to Paolo D. B.», «amused about what had happened to Paolo D. B.», «he

could not resist the smile thinking about what happened to Paolo D. B.», «he enjoyed thinking about what has happened» ( $\alpha = .94$ ; Van Dijk, Van Koningsbruggen, Ouwerkerk & Wesseling, 2011). We further checked whether participants correctly understood the situation described in the scenario by asking them to recall whether, in the fictitious job selection, they were in competition with Paolo D. B. Almost 94% of participants correctly recalled this information.

Subsequently, participants were asked to indicate their *global impression* towards Michele S. on a scale ranging from 1 (= *completely negative*) to 9 (= *completely positive*). Next, participants were asked to indicate their *behavioral intentions* towards Michele S. by means of seven items (e.g., I would like to: *cooperate with the target, avoid him, have nothing to do with him, keep him at a distance* –  $\alpha = .90$ ; Brambilla et al., 2013). Positive items were reverse scored to create an index reflecting negative behavioral intentions (i.e., desire to avoid) towards the target. This measure allowed to assess a series of behavioral avoidance intentions that are highly ecological, and connected to real life.

## 2.2. Results

Differences in the degrees of freedom are due to instances of missing data.

### 2.2.1. Manipulation check

A one-way Analysis of Variance (ANOVA) yielded a significant effect on the manipulation check index,  $F(2,86) = 31.00$ ,  $p < .001$ , partial  $\eta^2 = .42$ . A *post hoc* pairwise analysis confirmed that participants correctly reported that Michele S. expressed more *schadenfreude* in the experimental condition ( $M = 5.03$ ;  $SD = 1.95$ ) than in the control condition ( $M = 2.23$ ;  $SD = 1.37$ ;  $p < .001$ ) and in the negative behavior condition ( $M = 2.32$ ;  $SD = 1.28$ ;  $p < .001$ ). No differences emerged with regards the two latter conditions ( $p = 1$ ).

### 2.2.2. Global impression

A one-way ANOVA showed a significant effect of condition on the global impression towards Michele S.,  $F(2,80) = 27.73$ ,  $p < .001$ , partial  $\eta^2 = .41$ . In line with Hp1, a Bonferroni *post hoc* pairwise comparison showed that the target was evaluated more positively in the control condition ( $M = 5.31$ ;  $SD = 1.37$ ) than when he expressed *schadenfreude* ( $M = 2.36$ ;  $SD = 1.47$ ;  $p < .001$ ) and in the negative behavior condition ( $M = 3.15$ ;  $SD = 1.80$ ;  $p < .001$ ). Although in the predicted direction, the difference between these two latter conditions was not significant ( $p = .19$ ).

### 2.2.3. Behavioral tendencies

The ANOVA showed a significant effect of condition on the behavioral tendencies towards Michele S.,  $F(2,87) = 20.17$ ,  $p < .001$ , partial  $\eta^2 = .32$ . In line with Hp2, the Bonferroni *post hoc* pairwise comparison showed that participants showed a stronger tendency to avoid the target when he expressed *schadenfreude* ( $M = 6.17$ ;  $SD = 1.37$ ) than in the negative behavior ( $M = 4.31$ ;  $SD = 2.02$ ;  $p < .001$ ) and in the control condition ( $M = 3.46$ ;  $SD = 1.75$ ,  $p < .001$ ). The difference between these two latter conditions was not significant ( $p = .17$ ).

### 2.2.4. Mediation analyses

We then tested for the mechanisms underlying the effect of observed *schadenfreude* on behavioral avoidance tendencies. To check our hypotheses, we created two dummy coded contrasts, and subsequently performed two separate mediation analyses. The first contrast compared the control condition (= 0) with the *schadenfreude* condition (= 1), and the negative behavior condition coded as «0». The second contrast compared the control condition (= 0) with the negative behavior condition (= 1), and *schadenfreude* condition coded as «0». To estimate the indirect effect, we followed Preacher and Hayes (2004) and used bootstrapping (with 1,000 resamples) to compute 95% confidence intervals.

With regards to the first contrast, the whole model (PROCESS model number 4) proved to be significant,  $F(2,81) = 46.02$ ,  $p < .001$ ,  $R^2 = .53$ . The bootstrapping procedure provided indication of significant indirect effect ( $b = 1.60$ ; 95% CI: LL = 0.9555; UL = 2.3892), while the direct effect disappeared, ( $b = -.14$ ; 95% CI: LL = -0.9192; UL = 0.6397). Thus, the effect of observed *schadenfreude* on behavioral tendencies to avoid the target was fully mediated by the global impression toward him, as suggested by Hp3.

A different pattern emerged with regards to the second contrast. Again the whole model proved to be significant,  $F(2,81) = 51.91$ ,  $p < .001$ ,  $R^2 = .56$ . Nevertheless, despite both the independent variable and the supposed mediator had a significant and unique impact on the behavioral tendencies to avoid the target, there was no indication of an indirect effect ( $b = .56$ ; 95% CI: LL = -0.0604; UL = 1.1888), while the direct effect remained significant ( $b = .81$ ; 95% CI: LL = 0.1328; UL = 1.4922).

Thus, the mediation analyses showed that the effect of observed *schadenfreude* on the behavioral intentions to avoid the target expressing *schadenfreude* is mediated by the impression people form towards him.

### 3. Study 2

Study 1 provided the first support to the idea that observing someone who expresses *schadenfreude* is detrimental for both the impression that we form about them and our willingness to approach them in the future. It further ruled out an alternative explanation in terms of negative valence of the observed behavior. Nevertheless, it did not disentangle whether the negative interdependence with the victim – that is, the competition – plays a role in the way we react to someone exhibiting *schadenfreude* towards them. This is why in Study 2 we compared the experimental condition already adopted in Study 1 – that is, a situation in which the participant was not in competition with the victim – with a further experimental condition, in which participants were directly in competition with the target of the observed *schadenfreude*.

If (negative) interdependence with the target attenuates the effect of the observed *schadenfreude*, then we should anticipate that in this condition the individual expressing *schadenfreude* would be evaluated more positively and approached more than in the *schadenfreude without competition* condition (Hp 4a). On the contrary, if observing *schadenfreude* is sufficient *per se* to guide impression formation and avoidance tendencies towards the individual expressing it, then we should anticipate no significant difference between *schadenfreude without competition* and *schadenfreude with competition* conditions in terms of impression formation and behavioral tendencies (Hp 4b). Study 2 aimed to test these competitive hypotheses.

### 3.1. Method

#### 3.1.1. Design and participants

We adopted a single factor between participants design with three condition (*Condition*: Control vs. *Schadenfreude* without competition vs. *Schadenfreude* with competition). The a priori power analysis for sample size estimation was thus identical to that of Study 1. Ninety undergraduates (55 women; mean age = 22.94, *SD* = 2.82) were randomly assigned to one of the three conditions. Each session lasted approximately fifteen minutes, after which participants were thanked and fully debriefed.

#### 3.1.2. Procedure

The procedure was almost identical to the one adopted in Study 1. The *control* and *schadenfreude without competition* conditions were identical to Study 1. The relevant exception was relative to the *schadenfreude with competition* condition, in which the target of *schadenfreude* was presented as a competitor in the job selection

participants were asked to imagine. We checked the effectiveness of our manipulation by asking participants to recall the behavior of Michele S. on the same four items ( $\alpha = .96$ ) and to recall whether, in the fictitious job selection, they were in competition with Paolo D. B., the guy who was the target of the *schadenfreude*. Almost 93% of participants correctly recalled this information. Participants were then asked to indicate their *global impression* and to indicate their *behavioral intentions* towards Michele S. as in Study 1 ( $\alpha = .89$ ).

## 3.2. Results

Differences in the degrees of freedom are due to instances of missing data.

### 3.2.1. Manipulation check

A one-way ANOVA on the manipulation check index showed a reliable effect  $F(2,87) = 14.09, p < .001$ , partial  $\eta^2 = .25$ . A Bonferroni *post hoc* test showed that participants correctly reported that Michele S. expressed more *schadenfreude* in the *schadenfreude* without competition ( $M = 5.00; SD = 2.29$ ) than in the control one ( $M = 2.18; SD = 1.62$ ),  $p < .001$ . Participants further correctly reported that Michele S. expressed more *schadenfreude* in the *schadenfreude* with competition ( $M = 4.05; SD = 2.30$ ) than in the control one,  $p = .002$ . As expected, no differences emerged between the two experimental conditions,  $p = .25$ .

### 3.2.2. Global impression

A one-way ANOVA on the global impression towards Michele S. showed a significant effect of condition,  $F(2,84) = 20.85, p < .001$ , partial  $\eta^2 = .33$ . In line with our hypothesis 4b, a Bonferroni post-hoc test showed that, compared to the control condition ( $M = 4.52; SD = 1.41$ ), participants formed a worse impression towards Michele S. in both the *schadenfreude* without competition ( $M = 2.17; SD = 1.26; p < .001$ ) and the *schadenfreude* with competition ( $M = 3.03; SD = 1.52; p < .001$ ) conditions. Even the differences between the two experimental conditions reached significance,  $p = .02$ .

### 3.2.3. Behavioral tendencies

We performed a similar one-way ANOVA on participants' behavioral tendencies towards the person who expressed *schadenfreude*. The analysis showed a significant effect of condition,  $F(2,87) = 15.55, p < .001$ , partial  $\eta^2 = .26$ . Confirming Hp 4b, a

Bonferroni *post hoc* test showed that, compared to the control condition ( $M = 3.72$ ;  $SD = 1.78$ ), participants showed a stronger tendency to avoid the target both in the *schadenfreude* without competition ( $M = 6.07$ ;  $SD = 1.73$ ;  $p < .001$ ) and the *schadenfreude* with competition ( $M = 5.60$ ;  $SD = 1.69$ ;  $p < .001$ ) conditions. No differences emerged between the two experimental conditions,  $p = .30$ .

### 3.2.4. Mediation analyses

To check our hypotheses, we created two dummy coded contrasts. The first contrast compared the control condition (= 0) with the *schadenfreude* without competition condition (= 1), and *schadenfreude* with competition condition coded as «0». The second contrast compared the control condition (= 0) with the *schadenfreude* with competition condition (= 1), and *schadenfreude* without competition condition coded as «0».

With regards to the first contrast, the whole model (PROCESS model number 4) proved to be significant,  $F(2,84) = 30.23$ ,  $p < .001$ ,  $R^2 = .20$ . The bootstrapping procedure (with 1,000 resamples) provided indication of significant indirect effect ( $b = 1.19$ ; 95% CI: LL = 0.6847; UL = 1.8619), while the direct effect disappeared ( $b = .22$ ; 95% CI: LL = -0.5705; UL = 1.0044). This pattern mirrored the one emerged in Study 1.

A different pattern emerged with regards to the second contrast. Again the whole model was significant,  $F(2,84) = 31.59$ ,  $p < .001$ ,  $R^2 = .43$ . When considering the impact of the global impression on avoidance tendencies we found a significant effect ( $b = -0.76$ ; 95% CI: LL = -0.9535; UL = -0.5612). Nevertheless, when considering both the contrast (the IV) and the global impression (the mediator) as joint predictors of avoidance tendencies, the bootstrapping procedure showed that neither the direct effect ( $b = .48$ ; 95% CI: LL = -0.2153; UL = 1.1837) nor the indirect effect ( $b = 0.24$ ; 95% CI: LL = -0.2261; UL = 0.8563) were reliable.

The mediation analyses confirmed the pattern emerged in Study 1, and further suggested that the negative interdependence between the target of the *schadenfreude* and the observer did not impact upon this latter's reaction.

## 4. General discussion

Two studies consistently showed that observing someone who expresses *schadenfreude* is detrimental for both the impression that we form about this person and our willingness to approach him. In Study 2 we elaborated on this process, and found support to the fact that observing *schadenfreude* is sufficient *per se* to guide impression formation and avoidance tendencies towards the individual expressing it, regardless the negative interdependence with the target of the observed *schaden-*

*freude*. These latter finding illustrates that the observation of an episode of *schadenfreude* has a strong and direct effect on individual reactions: in fact, compared to previous literature based on the expression (vs. observation) of *schadenfreude*, our studies showed that the negative interdependence with the target did not exacerbate individual's reaction. Moreover, in both studies we provided evidence that the impression people form towards the perpetrator mediates the behavioral reaction to observed *schadenfreude*.

Despite the consistency among the studies, this represents a first attempt to investigate how individuals react to observed *schadenfreude*. As such, it needs to be extended in future research that tests other aspects of the phenomenon. One of these aspects that is worth noting is relative to the fact that we focused on this global impression measure by assuming that it reflects in particular a *moral* evaluation of the target. Indeed, abundant literature shows that this is likely to be the case, since the moral dimension has a prominent role in the impression formation process (Brambilla & Leach, 2014). Nevertheless, future studies could be set out to investigate the individual's reaction towards someone who expresses *schadenfreude* in terms of other important evaluative dimensions, such as competence or sociability (Leach, Ellemers & Barreto, 2007). Considering the literature on the evaluative bases of impression formation, we are inclined to believe that morality should emerge as the most important determinant of individual's reaction to *schadenfreude*, but this is a speculation that needs to be verified, for instance by varying the context in which the *schadenfreude* takes place. In this paper, we could not disentangle this speculation, considering the overlaps between the evaluations of morality, competence and sociability.

Furthermore, we directly dealt with a specific set of behavioral intentions that speak about avoidance, but it is likely that people react in different ways to observed *schadenfreude* as well. For example, do they voice their disagreement with what they are observing? Does this depend upon the context in which they witness the *schadenfreude*? In addition, how this affects their reaction, for example in terms of self-esteem? Finally, it is worth noting that in the scenarios we presented to participants they were somewhat in competition with the *schadenfrob*, considering that they were applying for the same job position. This is a further aspect that need ad hoc inquiry in future studies.

More research is requested to investigate the boundary conditions that may moderate individual's behavioral reaction. Nevertheless, on the overall the present research confirms that *schadenfreude* is a truly relevant phenomenon, to the point that even just observing it produces important consequences in terms of social interactions.

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### Observing *schadenfreude*: Expressing pleasure at others' misfortune predicts avoidance

In two studies, we examined how individuals who express *schadenfreude* – that is joy at an other's suffering – are perceived by the observers. Study 1 (N = 90) showed that actors expressing *schadenfreude* elicit a more negative impression and more avoidance intentions than those who display a general negative behavior. Study 2 (N = 90) showed that such an effect did not depend upon participants' competition with the target of the observed *schadenfreude*. Together the findings showed that observing the public expression of *schadenfreude* has meaningful implications for social relations and interpersonal perception.

*Keywords:* *schadenfreude*, impression formation, avoidance.

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