

How Victims' Value Moderated Offenders' Compensation of Sharing Losses

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Sometimes, offenders compensate the victims by sharing loss for them. However, when faced with victims of different values, the willingness or amount to share may vary. The present research controlled the value of the victim and examined how it moderated offenders' sharing loss behaviors as well as their guilt feeling. The results show that when facing victims of higher value, offenders are more likely to share their loss and in higher amounts, with stronger feelings of guilt.

Keywords: compensation, sharing loss, guilt, transgression

Introduction

Compensation is the one of the most popular strategies which offenders use to restore the damaged relationships. Typically, people attribute this behavior to the sense of guilty (Yu, J. Hu, L. Hu, & Zhou, 2014). However, sometimes, the offenders do nothing or simply give a "cheap talk" (e.g., I am so sorry) to the victims in real life (Wang & McGlone, 2020). Recent studies have shown that the value of victims can affect the offender's mood and apology (e.g., Ohtsubo & Yagi, 2014).

Unlike offering direct benefits, sharing losses means the offenders volunteering to take negative consequences for the victim as a way of compensation. Usually, compensation refers to the value an offender gives up in exchange for an increase in the victim's value to make up for the offender's fault (e.g., pay off money; Lee, Kim, Hwang, & Cui, 2021), but taking the loss of the victim can have the same function. According to the Equity Theory (Adams, 1963), both decreasing the benefits of the offender and increasing of the victim could restore the relationship into balance.

The early researches explained the compensational behavior as the consequence of the offenders' guilt. As a self-conscious emotion, guilt is a negative experience mixed with anxiety and fear during the socialization process (Tracy & Robins, 2006). Most existing researches focused on how the guilt improves the offenders offering direct benefits to the victim (Yu et al., 2014). However, sharing loss, as a kind of popular compensational strategy in daily moral scenes, is rarely mentioned.

Besides guilt, value also drives offenders' compensation. According to the Theory of Evolution and Reciprocity Theory, humans develop altruistic behavior and suppress their selfish nature because they need to connect with others to obtain a better living space and long-term benefits (Schneider, 2022). Experiments in game research have shown that when there are future interactions and benefits, people tend to treat their partners more selflessly (e.g., Hurlstone et al., 2020). In this sense, the value of the victims matters. The more value the victims

have, the worthier for the offenders to restore the relationship. Correspondingly, the offender should be more favoring to share the loss for the valuable victims.

To enrich the studies on this issue, the present research controlled the value of the victims (Nelissen, 2014) and examined how it affects offenders' compensation behavior of sharing loss.

Method

Similar to the paradigm of Nelissen's (2014) study, participants' partners (victims) are given a sum of money that they have complete control in allocating how much to give to the participants (offenders). At this point, the more money the partner controls, the higher the value of the partner is. Interacting with a partner controlling five units (high value) is more beneficial to the participants than interacting with a partner controlling one unit (low value). We predict that participants would like to take more than half monetary loss as a sign of compensation to partners who suffered excessive punishment due to participants' own careless performance and feel guilt compared to the partners they have not harmed. Moreover, the higher the value of the partner to the participants, the higher the chance that the participants will share loss and in higher amounts, accompanied by more intense feelings of guilt.

Participants and Design

The experiment employed a 2 (Situation: Harm vs. Neutral) $\times$ 2 (Value: High vs. Low) between-participants design. Using a campus Bulletin Board System (BBS) for recruitment and excluding students majoring in psychology, a total of 66 participants participated in this experiment ($M_{\text{age}} = 20.12$, $SD = 1.56$), arranged among four different groups randomly (Harm-High Value, harm situation with high value partner; Harm-Low Value, harm situation with low value partner; Neutral-High Value, neutral situation with high value partner; Neutral-Low Value, neutral situation with low value partner). Five participants were eliminated due a suspect experimental process, leaving 61 participants with valid data for analysis. There were 21 participants in the Harm-High Value group (10 males and 11 females), 18 in the Harm-Low Value group (eight males and 10 females), 11 in the Neutral-High Value group (four males and seven females), and 11 in the Neutral-Low Value group (five males and six females). The study originally included larger Neutral groups; however, they were discontinued midway because all participants distributed money equally. Since this did not appear to be a fruitful avenue of research, the study focused its budget on the remaining groups.

The experiment was completed by a participant and a partner (fake participant). To minimize suspicion from participants towards the experiment, "fake participant" would either wait by the entrance of the laboratory or show up afterwards rather than wait in the laboratory. To eliminate gender interference, there were two "fake participants", one of each gender for alternate use to ensure the same number of partners of either gender. Since all fake participants were strangers, there was no interference from relational closeness (Niven, Henkel, & Hanratty, 2019). To ensure that sharing monetary loss was the only means for participants to restore relationships with their partners, any other kind of communication (such as encouragement and apologies) was prohibited. The experiment required silence throughout, which participants and partners kept in separate small cubicles to complete the experiment.

Task and Procedure

We used the perceptual task of diagrams of neighboring points (Gino, Norton, & Ariely, 2010). In this task, a square appears in the center of a screen filled with red dots (constantly at 20) separated by a diagonal line in

the middle. The red dots appear for three seconds before disappearing. The goal of this task is to judge, after the red dots disappeared, whether there were more red dots on the left (press the “F” button) or on the right (press the “J” button) within five seconds. As the number of red dots on both the right and left was very close in the difficulty diagrams (same or different by no more than two), it was simply impossible for the participants to get a good grasp to judge in the three seconds of screen time. Therefore, the answers could be manipulated. After each one answered, participants were given fake feedback about whether the answer was right or wrong. At the end of each round, participants also received fake feedback about the overall performance. The task was done on a computer with E-prime 1.0 programming.

Our experiment contained four rounds, each with 30 pictures to judge; the rules were different for each round. At the beginning of the experiment, the experimenter would tell the participants that if they were serious and focused on answering the questions, they would not perform badly, and that too many wrong answers would generally due to carelessness, which would encourage participants to attribute their poor performance to their own oversight rather than bad cognitive abilities (Nelissen & Zeelenberg, 2009). Then, experimenters would provide the interaction rules in each round to ensure that participants understood how to interact with their partners, especially in the last round where the partners controlled over the allocation of the reward. After making sure participants completely understand, the experiment began.

Round 1—Practice: The first round consisted of practice, in which the results of participants' performance would not lead to any punishment or reward. After completing the neighboring points judgment for 30 pictures, a screen would load showing the simulated result calculation and display the results for both the participants and the partners. For all four groups, the results of the first round indicated that the participant had 16 right and 14 wrong answers whereas the partner had 15 right and 15 wrong answers. The purpose of these results was to suggest the participant's (his/her) abilities were about the same or slightly better than the partner's abilities.

Round 2—Harm: In this round, for each wrong answer (e.g., the participant was wrong and the partner was right), the other would have his or her hand been hit once, that is, the partner paid the price for the participant's mistake, and vice versa, equivalent to being the “scapegoat”. There was no punishment when both the participants and partners were right or wrong. In the Harm-High Value and Harm-Low Value groups, the participant had 13 right and 17 wrong answers, whereas the partner had 18 right and 12 wrong answers. Among the wrong answers, the participant had seven wrong and the partner had two wrong. Therefore, the partner would be hit seven times, and the participant two. In the Neutral-High Value and Neutral-Low Value groups, both the participant and the partner had 16 right and 14 wrong answers and would be hit twice. After presenting the results, the experimenter would proceed to the front and began hitting the hands, starting with the participants to ensure that they recognized the authenticity of the punishment, followed by hitting the partner's hands. The hands were hit on the inner side of the palm at the bottom of the thumb, to generate apparent pain that is fast to recover from without causing any substantial harm to the participants.

Round 3—Compensation: At the beginning, both the participants and their partner received ¥15. Each wrong answer in this round would cause an amount of monetary loss to oneself. For every pair of wrong answers from both the participant and the partner, the loss was ¥1, which was allocated by the participant before the beginning of Round 3. For example, if the participant decided to lose ¥0.6 for each of his/her wrong answers, then the partner would only lose $¥0.4 = ¥1 - ¥0.6$. During the experiment, to prevent participants from making a deduction, this part used algebraic expressions of a and $1-a$. The allocation session was arranged before the neighboring points judgment task to prevent participants from sharing loss based on his/her results in this round and hence

interfering in the experiment. There was no punishment in Round 3.

Round 4—Value of the partner: The interaction in Round 4 was similar to Round 3, except that the participants and their partners were earning money for right answers rather than losing for wrong. There was no pre-reward in the beginning and the partner was in control of the allocation. In the high value groups, the total amount the partner could allocate was ¥5, and the total amount was ¥1 in the low value groups.

At the end of each round, participants would rank their guilt, happiness, fear, sadness, anger, and shame in a simple seven-point scoring scheme (1 = not at all, 7 = very strong). In addition, participants would also rank the difficulty questions (1 = very easy, 7 = very difficult), self-performance (1 = very abnormal, 5 = extraordinary performance), and partner performance (1 = very abnormal, 5 = extraordinary performance). The experiments recorded emotions other than guilt to prevent participants from guessing the intent of the experiment. The difficulty of the questions and performance levels were recorded to confirm that the offenders attributed the mistakes made in Round 2 to careless performance rather than the difficulty of the task.

In an actual situation, the experiment process would automatically stop at Round 3. After the participants had recorded their emotions and performance, the experimenter would proceed to the front and explain the whole experiment. Every participant received ¥10 in the end. The participants only had to believe in the existence of Round 4, to prime the participants to recognize the future value of the victims. By the time the allocation behavior was completed in Round 3, the experiment already collected the data of sharing loss and guilt, and the experiment could stop here.

The Institutional Ethics Review Board of the School of Psychology, Southwest University approved the study protocol. All participants provided written informed consent before the experiment.

Results

Rate of compensation: Rate of compensation refers to the percentage of participants in each group who bear more than five jiao monetary losses for the partners (for convenience, the amounts expressed below are in units of jiao, ¥1 = 10 jiao). In the Harm-High Value group, 90.4% of the participants provided compensation by sharing more than half of the loss, whereas in the Harm-Low Value group, only 50% of the participants did. Considering the consistent harm behavior in both groups, the 40.4% more compensation made by participants in the Harm-High Value group was in fact due to the increase in the partners' value. The rate of compensation was 0 in both the Neutral-High Value and Neutral-Low Value groups.

Amount of compensation: A 2 (Situation: Harm vs. Neutral) $\times$ 2 (Value: High vs. Low) ANOVA analysis was performed on the amount of money participants allocated to partners in Round 3. The results showed a significant interaction effect, $F(3, 58) = 6.29, p < 0.05, \eta_p^2 = 0.019$; the main effect of Situation, $F(1, 60) = 55.27, p < 0.01, \eta_p^2 = 0.492$; and the main effect of Value, $F(1, 60) = 10.02, p < 0.01, \eta_p^2 = 0.150$. The reward participants left for the partners in the two Harm groups ($M = 5.92, SD = 0.70$) was significantly higher than in the two Neutral groups ($M = 4.86, SD = 0.35$), $t(59) = 7.84, p < 0.01$. Subsequently, data analyses of the Harm groups showed that the money the offenders left to their high-value partners ($M = 6.29, SD = 0.64$) was significantly higher than that left to low-value partners ($M = 5.50, SD = 0.51$), $t(37) = 4.16, p < 0.01$, indicating that value indeed affects compensation behavior in the harm groups and that offenders provide more compensation to victims who could bring them more benefits in the future. In the Neutral groups, almost all participants chose to share the reward equally (five jiao each); value had no impact on allocation.

Guilt: Although participants in the Harm groups did not necessarily share more loss for their partners, 100%

of the participants felt guilty. In the Round 1 task, none of the participants had emotions of guilt, indicating that the perceptual task did not itself provoke guilt. A 2 (Situation: Harm vs. Neutral) $\times$ 2 (Value: High vs. Low) ANOVA analysis was performed on participants' scores for guilt in Round 2, with results showing a significant interaction effect, $F(3, 58) = 14.51, p < 0.01, \eta_p^2 = 0.203$; the main effect of Situation, $F(1, 60) = 134.71, p < 0.01, \eta_p^2 = 0.703$; and the main effect of Value, $F(1, 60) = 14.51, p < 0.01, \eta_p^2 = 0.203$. The same analysis for participants' scores for guilt in Round 3 indicated that there was only a main effect of Situation, $F(1, 60) = 16.33, p < 0.01, \eta_p^2 = 0.223$. The Neutral groups did not generate any guilt from beginning to end. According to the results from a subsequent examination, the guilt in the Harm-High Value group in Round 2 ($M = 4.67, SD = 1.11$) was much stronger than that in the low value-harm group ($M = 2.94, SD = 0.80$), $t(37) = 4.16, p < 0.01$. However, in Round 3 (after the compensation), this difference was no longer significant. The degree of guilt and the amount of compensation were not correlated in any case.

Task difficulty and performance: There was no difference observed in any of the participants' evaluation of task difficulty and performance in Rounds 1 and 2. Only participants in the harm groups considered that their own performance level significantly dropped, $t(38) = 7.57, p < 0.01$ and that their partner's performance level significantly increased, $t(38) = -13.59, p < 0.01$ in Round 2. Partner value had no effect on the difficulty or performance levels. Since the task in Round 3 stopped halfway, the results were not included for analysis. These results showed that the offender participants interpreted the "harming behavior" exhibited in Round 2 as due to their "careless performance" rather than the increased task difficulty; hence manipulation of the "harming incident" in Experiment 1 was successful.

Discussion

Similar with offering direct benefits, sharing loss for the victim also balanced the damaged relationship. As a typical prosocial behavior, sharing loss is not only motivated by the victims' conscience, but also the human's nature of pursuing benefits (Santos, Pacheco, & Santos, 2021). It is robust to conclude that guilt itself was not enough to guarantee that offender to take negative outcomes for the victim. Ohtsubo and Yagi (2014) also found a similar result.

The higher value of victim would significantly increase the likelihood of the offender sharing loss for the victim. According to the result, 86% of the participants in the high Harm High Value group shared more than half of the money loss, 30% higher than the compensation rate in the Harm Low Value group. If sharing loss was purely out of offenders' conscience, there should be no such difference in the rate of sharing loss. Thus, it is easy to conclude that the increased behavior of sharing loss was aiming at securing future benefits, rather than comforting the victims. Ironically, apologizing in a cost way is usually perceived as sign of sincerity on the perspective of the victim (Ohtsubo & Higuchi, 2022).

Besides increasing the likelihood of sharing loss, the higher value of the victims also motivated the offenders to bear a larger amount of loss. When facing the victims who can allocate a larger amount of money, the offending participants divided more loss of money (only the participants who shared more than half) to themselves and leaving a smaller amount to their partner. In the meanwhile, the participants of Harm High Value groups also reported higher guilty feeling after watching their partner being punish in Round 2. This result is consistent Nelissen's (2014) research which found that the victims' value could modify the guilt of the offender, intensifying its feeling when restoring a more valuable relationship. Base on the above comparison between high vs. low value, the present research seems to support the idea that the higher the guilt is, the higher the amount of

compensation (Yu et al., 2014).

However, the further examination on the correlation between the guilt and the amount of sharing loss did not reach a significant result. Some participants who bore a large amount of loss only reported a relatively low level of guilt while some did the opposite. The perception of the partners' utility value happens before the feeling of guilt and sharing loss. Thus, the irrelevance of guilt and sharing loss may indicate that the offenders' emotional and behavioral reaction toward utility value may depend on two different processes on which different people put different weight.

In sum, the present research found that the offenders are more willing to share loss and share a larger amount for the victim of higher value and instrumentality. For higher dependence victims, however, offenders only feel more intense guilt, but do not behave differently.

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