



Can money heal all wounds? Social exchange norm modulates the preference for monetary versus social compensation

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Compensation is a kind of pro-social behavior that can restore a social relationship jeopardized by interpersonal transgression. The effectiveness of a certain compensation strategy (e.g., repaying money, sharing loss, etc.) may vary as a function of the social norm/relationship. Previous studies have shown that two types of norms (or relationships), monetary/exchange and social/communal, differentially characterize people's appraisal of and response to social exchanges. In this study, we investigated how individual differences in preference for these norms affect individuals' perception of others' as well as the selection of their own reciprocal behaviors. In a two-phase experiment with interpersonal transgression, we asked the participant to perform a dot-estimation task with two partners who occasionally and unintentionally inflicted noise stimulation upon the participant (first phase). As compensation one partner gave money to the participant 80% of the time (the monetary partner) and the other bore the noise for the participant 80% of the time (the social partner). Results showed that the individuals' preference for compensation (repaying money versus bearing noise) affected their relationship (exchange versus communal) with the partners adopting different compensation strategies: participants tended to form communal relationships and felt closer to the partner whose compensation strategy matched their own preference. The participants could be differentiated into a social group, who tended to form communal relationship with the social partner, and a monetary group, who tended to form communal relationship with the monetary partner. In the second phase of the experiment, when the participants became transgressors and were asked to compensate for their transgression with money, the social group offered more compensation to the social partners than to the monetary partners, while the monetary group compensated less than the social group in general and showed no difference in their offers to the monetary and social partners. These findings demonstrate that the effectiveness of compensation varies as a function of individuals' preference for communal versus monetary norm and that monetary compensation alone does not heal all wounds.

Keywords: social exchange norm, interpersonal transgression, compensation, individual differences

Introduction

What would you do if you found out that your friend had been paid more than you for the same job (de Hooge et al., 2011). Compensation following social/intrapersonal exchange help to ease the tensioned social relationship and ensure social justice (Bakker et al., 1994). The exchange form of compensation, such as monetary compensation and liability, having. Different type of compensation are not equally effective in reducing the jeopardized relationship in all social contexts. For example, you did appointed more in the above example will not be happier if you paid her for getting her birthday. In a similar vein, if you break a vase in a neighbor's shop, will better to pay than than just make an apology (and learn in some contexts). What are the factors that influence the effectiveness of compensation? This question is of great social, political, and philosophical significance (Aaker, 2004), a critical social importance. Which a 'norm' exception of intrapersonal or personal compensation. For example, how the optimal amount of compensation for a holocaust to the victims of racial discrimination? Can money heal all wounds? If not, how might be the factors that influence the effectiveness of monetary/material compensation?

Obviously, the offering and exception of compensation involve a set of socioeconomic and psychological processes governed by certain social norms of social relationship. In social psychology, an individual's behavior characteristics is determined by the monetary/e change and social/communal dichotomy proposed by Hoffman and Asch (2004). The exchange and the monetary norms of people can be highly sensitive to the magnitude of the compensation, balancing the desired benefits and immediate costs in calculable ways; in contrast, the social or communal norms do not demand reciprocity with such genders and precision, but focus more on the overall pattern of social interaction, such as mutual understanding, mutual approval and long-term relationship. As for the psychological mechanisms through which the exchange/communal norms influence people's social behavior, the self-signaling theory proposed by an action choice in particular, is a good next step to the inner and outer balance (Bodner and Pleh, 2003). Viewed in this way, one may choose to reciprocate a social encounter, or not, which action could be called his/her committed social norms (e.g., exchange or communal).

The monetary/e change or social/communal dichotomy captures a subtle difference in individual's appraisal and behavior in social interaction. It is possible when an individual's preference of monetary or communal relationship influence how they perceive a specific form of compensation and how they make compensation to them in interpersonal exchange? Few studies have focused on such individual difference. Nevertheless, a hint for the answer is that they come from exchange or gifting, which has both 'holistic' and 'recipient characteristics' influence the effectiveness of gifting. For instance, some gifting exchange is plotted the effect of the match between the gifter and the recipient's desire to be rewarded or gifting appreciation (Gino and Flynn, 2011);

the exchange is plotted the effect of the relationship between the gifter and the recipient and the effect on gifting appreciation (Belk, 1976; Rind et al., 1999). Recently, a number of exchange also focused on how the degree of match between a gifter and the gifter's identity influence recipient's appreciation (Paolacci et al., 2015). To a certain extent, compensation can be viewed as a kind of 'gifting' in the context of interpersonal exchange. We thus hypothesize that individual's preference difference for social norms of monetary norms modulate their choice of a certain compensation gifter to them as well as their own choice of compensation when they have the .

In this study, we tested this hypothesis by carrying out an experiment in which participants interacted with a partner (confederate) in a two-phase game with interpersonal exchange and compensation. The exchange condition is a specific call to be made in the game and how preference in communal norms of social interaction influence individual's decision (1-601.7(1.7)(ion)46.9(i)-.75(16-587.1(ho))-3-7.8(601.7(2)

had never taken part in a peer-imposed social action in the place. . None of the participants reported any history of chronic pain or mental disorder. They all gave informed consent prior to the experiment. This study was conducted in accordance with the Declaration of Helsinki and was approved by the Ethic Committee of the Department of Psychology, Peking University.

Experimental Design and Procedure

Each participant in a dyad (Partner, confederate) in a two-phase interpersonal action game. Upon arrival, the participant and confederate (Partner; one male, one female) and a third person would play an action game together in a room. To increase the believability of the social action context, the participant and confederate would decide how to divide the endowment. The confederate would also sign the role division contract and be equipped with a clipboard and a pen. The participant would be alone in the room during the experiment. The participant would always be placed in a room with 500 tokens each. This amount could increase or decrease during the action game, and the remaining one held at the end of the game would be exchanged for a monetary bonus at the end of the experiment (100 tokens amount to 1, ~\$ 0.2). The participant would in advance know the second phase of the game and the role of the participant and the partner would be explained in the second phase.

The participant then underwent calibration of noise-bearing and pain stimulation. The participant received noise stimulation as a consequence of the partner's response in the first phase. The intensity of the stimulation was calibrated individually for each participant to be bearable. Specifically, the participant pressed the earphone, the gradually increased the intensity of the noise until the participant reported 'moderate unpleasant noise level'. This intensity was used in the first phase of the experiment. To keep consistent with the paradigm of measuring compensation behavior from a perspective (Yoshida et al., 2014), the partner received electrical stimulation as the negative effect of the participant's response in the second phase of the experiment. Given that, the lack of the participant's experience of pain stimulation, the partner/he would be more likely to manipulate and clearly experience the experimental level. An intra-epidermal needle electrode was attached to the lower back of the participant for continuous electrical stimulation (Inohara et al., 2002). Participants received pain in the hold calibration and the level of pain stimulation was set corresponding to 0, 4, and 8 on a 0–10 scale (0: 'no sensation at all'; 10: 'unbearable pain'). We used the physical stimulation (noise and pain) rather than monetary loss as interpersonal harm for a number of reasons. First, we aimed to compare the effectiveness of direct compensation strategies on interpersonal emotion and reciprocal behavior. If the interpersonal harm is monetary, it does not make much sense to compensate in a non-monetary manner. Second, when measuring the participant's reciprocal/compensation behavior, it is important to make the harm and compensation orthogonal,

the direct alienation. no monetary loss would bring about behavioral measures.

The First Phase

In the first phase of the study (Figure 1), the participant would play a game with their partner's behavioral partner. The partner's identity was indicated by a number (i.e., Partner 1 or Partner 2), preventing the participant from knowing the partner's true identity. In each round of the game, one partner would randomly choose to act in the action game. The participant would choose the partner under the decision condition (Yoshida et al., 2014): if the partner committed into the action, the participant would administer a moderate unpleasant noise stimulation for 10 s. The noise stimulation was induced by a pair of earphone linked to a computer and a calibrated before the experiment. Before the noise delivery, the partner could choose to compensate the participant by either allocating 100 tokens to the participant or by bearing the noise for the participant. The participant would avoid the noise by not receiving the 100 tokens if the partner chose to bear the noise, otherwise, the participant would receive 100 tokens by bearing the unpleasant noise if the partner chose to pay money. Note that the feedback of the performance on the decision condition and partner's choice of compensation were predetermined by a computer program. In the partner's account, the partner would always pay the 100 tokens as compensation during the game. If the partner committed to the partner, the partner received 100 tokens as a reward. Specifically, the partner's choice of compensation was predetermined. Partner 1 chose monetary compensation 80% of the time (monetary condition) and Partner 2 chose noise-bearing 80% of the time (social condition). He carried out the Partner 1 as the 'monetary partner' and Partner 2 as the 'social partner'. The word 'social' implied only to signify the compensation type (i.e., bearing noise). The first phase of the study consisted of 60 trials (30 for each partner) and lasted for about 15 min. Specifically, Partner 1 (the 'monetary partner') committed to the partner in 15 trials (50%) and into the partner in the 15 trials. In the last 15 trials, the monetary partner chose monetary compensation in 12 trials and noise-bearing in 3 trials. Similarly, the social partner committed to the partner in 15 trials and into the partner in 15 trials. In contrast, the monetary partner, the social partner chose noise-bearing in 12 trials and monetary compensation in 3 trials. Note, given that the noise stimulation was presented to the participant only, paradoxically, adaptation to noise was minimal and the adverse effect of the noise stimulation was maintained only in the first phase.

In the second phase, the participant answered questions about the partner's compensation behavior. The participant would be asked whether each of the partner had a preference for the type of compensation and how the partner experienced the pain. The participant would be discarded because they did not answer the questionnaire. The participant general preference for the type of compensation (paying money vs. bearing noise) was measured by the questionnaire (whether the partner preferred paying money or bearing noise and whether the partner preferred bearing noise for the partner). The difference between the preference score (paying money minus bearing



FIGURE 1 | The task in the first phase. Each trial began with a fixation and then a cue indicating which partner was paired with the participant for the current trial. The participant was told that his/her partner had to quickly estimate the number of dots on the screen by pressing a corresponding button to indicate whether his/her estimation was more or less than a number (randomly chosen from 19, 20, and 21) which appeared on the next screen. The outcome of the estimation (correct versus incorrect) was communicated to the participant on the next screen. After a correct performance, the partner received 100 monetary tokens as a

... and Moreover, during the performance of the task, the participants were informed in (i.e., how the presence of communal ... the exchange ... of social interaction in ... social relationship and reciprocal behavior), ... the ... to balance the sequence of ... and

The Second Phase

In the second phase of the study (Figure 2), the role of the participant and the partner were reversed, the participant was informed that the partner ... the ... of the ... change The participant ... when told that in each round, his/her partner had to bear a pain stimulation if he/she (i.e., the participant) earned income ... The intention of the electrical stimulation for the partner was randomly chosen from three levels (none/low/high) for each round of the game. The level of pain stimulation delivered to the partner in financial ... was communicated to the participant. After pain delivery, the participant decided how many monetary tokens (between 0 and 100) he/she would like to offer to the partner as compensation. Note, the participant could compensate the partner only by allocating money. The participant was allowed that he/she would get 100 tokens as a reward (and the partner would not receive pain stimulation) if he/she made a correct estimation. The participant allocated a ... to pay 100 tokens in each round. Unbeknownst to the participant, the feedback of the performance was predetermined. Specifically, the level 72 ... (36 for each partner) in the second phase of the study. For the

... action ... each partner, the level 18 ... in which the participant ... (...) and 18 ... in which the participant For the ... round, the level 18 ... in which the partner had to receive high pain stimulation, ... of low pain stimulation, and another ... of no pain stimulation. On average, the participant could make \$45 (~\$8; \$40 for high ... and about \$5 for ...).

Before the participant left the lab, he/she answered a set of open questions such as, 'What do you think about this partner?' and, 'Do you have any suggestion for improving the interaction?' This was to make sure that the participant was not suspicious of the experimental setup. No participant expressed suspicion of the experimental setup or the ... of the game.

Results

The First Phase

In the first phase of the study, the participant held the large ... regarding ... whom they preferred to form the social ... exchange relationship. To quantify this ... the ... a ... for ... exchange relationship preference by ... the perceived exchange relationship value for the social partner formed for the monetary partner. Figure 3A illustrates the distribution of this ... of the participant. The individual difference more likely ... from the participant



FIGURE 2 | The task in the second phase. Each trial began with a cue indicating which of the two partners had been chosen for that particular round. The next screen presented the pain-level of the current trial (none/low/high). Then the participant performed the dot-estimation task. The outcome of the performance was communicated to both the participant and the partner on the next screen. After a correct performance, the participant received 100 monetary tokens as a reward, and the next round began. After an incorrect performance, the partner had to bear pain stimulation. Finally, the participant indicated the amount of monetary tokens (out of 100) he/she would be willing to pay out of his/her own pocket to compensate the partner.

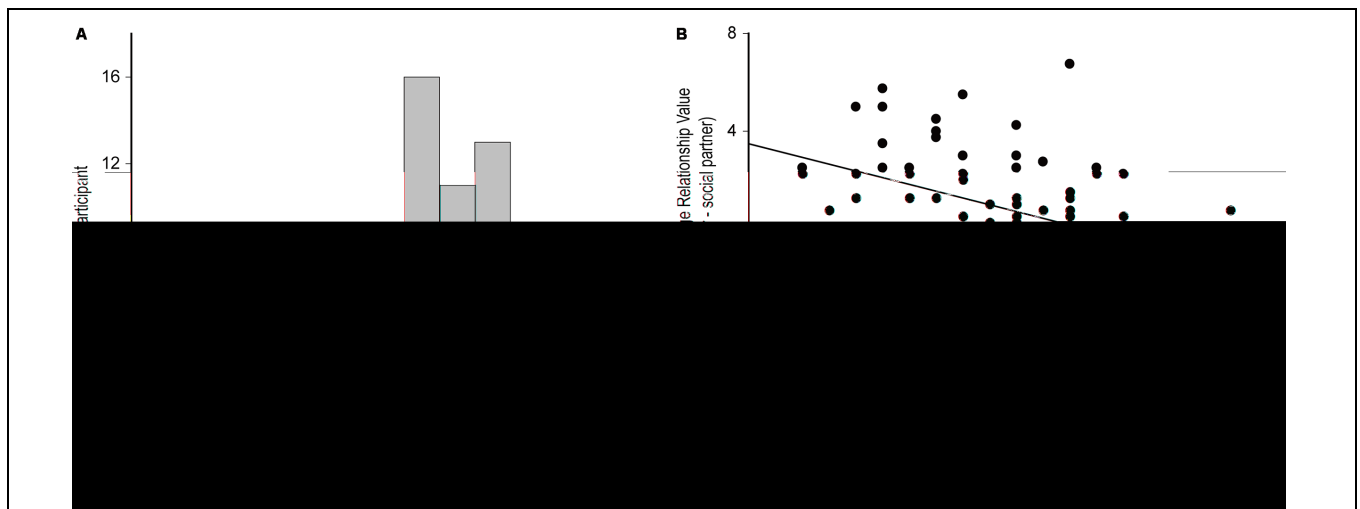


FIGURE 3 | Individual differences in the preference of compensation and social relationship (exchange versus communal). (A) The frequency distribution of the difference in participants' exchange relationship value toward the monetary partner versus social partner. (B) The correlation between the difference in exchange relationship value (the monetary partner minus social partner) and the difference in preference for the two compensation types (paying money versus bearing noise).

preference for compensation type, as indicated by a significant correlation between the difference of participants' choice preference for each compensation type in general (paying money minus bearing noise) and their difference in exchange relationship value toward the monetary and social partner, $r = -0.45, p < 0.001$ (Figure 3B).

Then, before we carried out the analysis, we categorized the participants into two groups by median-splitting the participants according to the exchange relationship preference score. This resulted in a low-choice group (i.e., the monetary group; $n = 37$) who had a high exchange relationship with the partner bearing the noise and a low exchange relationship with the partner compensating money, and a high-choice group (i.e., the social group; $n = 37$) who had a high exchange relationship with the partner compensating money and a low exchange relationship with the partner bearing the noise.

Then we explored whether the individual difference in exchange relationship value influenced the participants' perceived social distance (i.e., comfort level) with each partner. We carried out repeated measures ANOVA with group (monetary vs. social) as a between-subject factor and the partner compensation type (paying money vs. bearing noise) as a within-subject factor. The main effect of partner compensation type was significant $F(1,72) = 36.89, p < 0.001, \eta_p^2 = 0.34$. That is, in general, the participants felt closer to the partner who compensated by bearing the noise (6.5 ± 0.2) than to the partner who compensated by paying money (4.0 ± 0.2). More importantly, the interaction between participant group and partner compensation type was significant $F(1,72) = 28.49, p < 0.001, \eta_p^2 = 0.28$ (Figure 4). Specifically, for the monetary group, the partner compensation type did not influence feeling of closeness, $t(36) < 1, p > 0.1$; but for the social group, the closeness with the partner bearing the noise was significantly

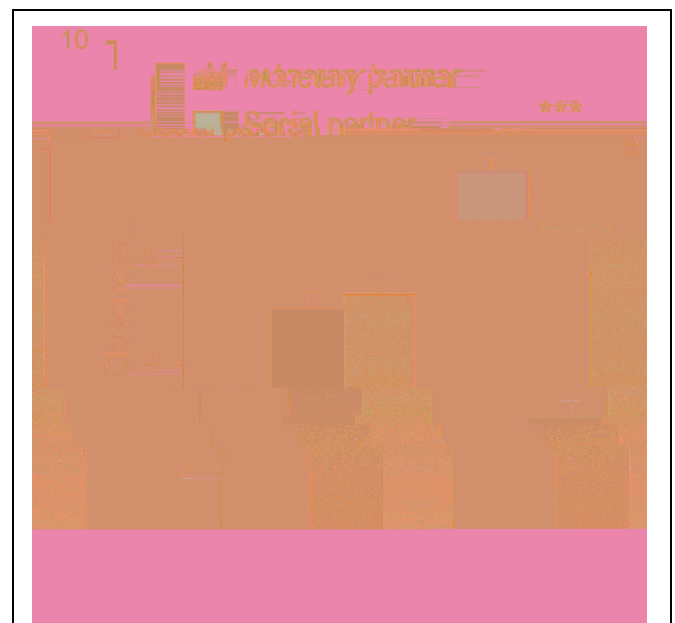


FIGURE 4 | The closeness ratings as a function of the participant subgroup (monetary versus social) and the partner compensation type (monetary versus social). Larger score means closer interpersonal relationship. Error bars indicate standard errors. The asterisks denote the significance level of the simple effect *** $p < 0.001$.

higher than that with the monetary partner, $t(36) = 12.60, p < 0.001$.

The Second Phase

The second phase of the study provided a further opportunity to examine how participants' own compensation behavior could

be modulated by the relationship for med in each pain condition. To this end, we performed a repeated measures ANOVA on the monetary token that the participant allocated to the partner as compensation, with participant group (monetary vs. social) as a between-subject factor, and the pain condition (none vs. high) as a within-subject factor. The interaction between pain condition and participant group was marginally significant ($F(2,144) = 2.95, p = 0.056, \eta_p^2 = 0.04$) (Figure 5). Specifically, in the no pain condition, the interaction between participant group and the partner's compensation type was significant ($F(1,72) = 5.47, p < 0.05, \eta_p^2 = 0.07$). For the monetary group, the amount of compensation did not differ between the two partners (6.6 ± 2.8 for the monetary partner, 7.4 ± 3.5 for the social partner), $t(36) = 1.14, p > 0.1$; for the social group, more compensation was offered to the social partner (22.1 ± 3.5) than to the monetary partner (14.4 ± 2.8), $t(36) = 2.70, p < 0.05$. At the low pain level, the interaction between participant group and the partner's compensation type was also significant ($F(1,72) = 10.43, p < 0.01, \eta_p^2 = 0.13$). For the monetary group, the amount of compensation did not differ between the two partners (29.2 ± 3.6 for the monetary partner, 28.4 ± 4.3 for the social partner), $t(36) < 1, p > 0.1$; for the social group, more compensation was offered to the social partner (48.5 ± 4.3) than to the monetary partner (38.2 ± 3.6), $t(36) = 3.49, p < 0.01$. In the high pain condition, the interaction between participant group and the partner's compensation type was not significant ($F(1,72) < 1, p > 0.1$). As can be seen from Figure 5, this interaction was primarily driven by the lack of differential

compensation for the monetary and the social partner by the social group in the high pain condition. In fact, the participants made the high compensation (about 70 tokens out of 100) to both partners when they knew the causal relationship between the partner's pain level and the collapsed relationship. If the pain level were collapsed, the interaction between the participant group and the partner's compensation type was also significant ($F(1,72) = 5.93, p < 0.05, \eta_p^2 = 0.08$). Pairwise comparison with Bonferroni correction showed that for the social group, the allocation was higher to the social partner ($37.2(48.4(e)7.9(en)70T423.f0.56822 4.5 D01.)-26(031)$)

for this matching process? A possible explanation appeals to the individual's self-evaluation motivation (Schnur et al., 1989, 1994). This account proposes that people prefer to be in the same role as a third person else. This motivation may incline individuals to prefer to be placed in the same role in which the third person is. Thus, passing money to individual from the social group may pose a conflict with the individual's self-evaluation motivation. This conflict may weaken the effect of compensation. This explanation is line with the evidence on giving and receiving: the matching between givers' and the recipients' characteristics can increase the effectiveness of giving (Kube et al., 2012; Paolacci et al., 2015).

However, we did not find a significant increase in the amount of money on individual from the monetary group, which may have resulted from the small amount of money used in the experiment. One-handed points of broken eighth amounted to \$ 0.2, which may not be adequate enough to motivate the individual. It has been shown that the intensity of the information plays a key role in determining the effectiveness of the information on social behavior (Gneezy and Rabinichini, 2000; Heugan and Aiel, 2004). Future studies should match the objective value of the monetary compensation (passing money to the being noise). Another limitation of the experiment is that we did not directly measure giving in the second phase of the task. It will an open and important question as to whether the communal/e change relationship mediated the decrease in one's feeling of guilt and a decrease in the partner's and his/her such feeling can account for the decrease in reciprocal/compensation behavior.

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In gamma, we demonstrated the effectiveness of compensation as a function of the individual difference in preference for communal exchange mode of social interaction. The preference for a certain type of compensation (e.g., passing money to the being noise) also influences the interpersonal relationship formed between the recipient and the provider of the compensation: monetary compensation tends to undermine the perceived closeness between the recipient and the communal norm more than exchange mode of the provider of the compensation. The ending has implications for both interpersonal and interpersonal communication: for example, damage to social relationship, cooperation and the like, material compensation alone may not be enough to heal the wound, and may even make things worse (e.g., decreasing interpersonal closeness and reciprocal behavior). In addition, a sincere apology to the authentic and credible social compensation strategy may be better than that of repaying the relationship.

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Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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