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## **Ethics in economic decision-making**

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## Chapter 4

### Altruistic Compensation versus Altruistic Punishment:

#### How people Restore Justice

*Based on Leliveld, Van Dijk, & Van Beest (2008b)*

Distributive justice plays an important role in allocations of scarce resources (e.g., Folger, 1977; Colquitt & Greenberg, 2005; Tyler, Boeckmann, Smith, & Huo, 1997; Van den Bos, Lind, & Wilke, 2001). In such situations, resources are not always distributed in a fair and just way. Self-interest, for example, may induce people to benefit themselves at the expense of others. This behavior is often perceived as a violation of commonly held justice norms, like the equal division rule (e.g., Deutsch, 1975; Messick, 1993). In the current paper, we will study how people react to these kinds of violations, or, more specific, how they restore justice.

Two main behavioral reactions to such situations of injustice are to punish the person causing the injustice, or to compensate the person suffering the injustice (Darley & Pittman, 2003).<sup>8</sup> Because both reactions restore justice, one might argue that people will be indifferent to either punishment or compensation. We draw attention to the fact that the underlying motives for using punishment and compensation differ, which means that there are fundamentally different reasons to punish or to compensate. More specifically, punishment is thought to be used instrumentally to let the people causing the injustice get what they deserve (i.e., retribution), and to deter them from violating the rules in the future (e.g., Carlsmith, 2006; Carlsmith, Darley, & Robinson, 2002; Darley & Pittman, 2003; Mulder, 2008). Compensation, on the other hand, relates to a concern for the other as it makes the person suffering the injustice "whole" again (e.g., Darley & Pittman, 2003; Gromet & Darley, 2006).

Although punishment and compensation can both result in more equal outcomes (i.e., more justice), punishment is thus motivated as a way to deter and retaliate, whereas compensation is motivated by a concern for another person. In other words, punishment and compensation reach a similar goal, but differ in how they achieve this goal. Therefore, we argue that if one wants to

understand why people punish, one also needs to know why they do not compensate. And to understand why people compensate, one has to know why they do not punish. To obtain more insight in punishment and compensation behavior and the underlying motives, we therefore study situations in which both types of reactions are possible. Previous research most often focused on punishment only (e.g., Carlsmith, 2006; Fehr, & Gächter, 2002; Mulder, Van Dijk, DeCremer, & Wilke, 2006) or compensation only (Bornstein, 1998; O’Gorman, Wilson, & Miller, 2005; Okimoto & Tyler, 2007). The aim of the current paper is to make a direct comparison between punishment and compensation in order to get a better understanding of how people react on injustice.

### **Previous research on punishment**

Research on punishment in distributive settings has typically focused on the willingness to punish free-riders in social dilemmas. For example, when group members find out about a free-rider in their group, they engage in retributive reactions, like social exclusion and financial punishment (e.g., Stouten, De Cremer, & Van Dijk, 2006). Moreover, group members are even willing to give up own money, i.e., at their own expense, to punish these free-riders (e.g., Fehr & Gächter, 2002).

In the above mentioned studies, the group member’s own payoff was at stake, so a free-rider directly influenced the group member’s own outcome. Encountering a defector might thus have triggered revenge and retaliation (Stouten, et al., 2006), and with that the willingness to use retributive punishment. Other research showed that people are also willing to punish norm violators in situations in which revenge cannot be the explanation of the use of punishment (Fehr & Fischbacher, 2004; Kahneman, Knetsch, & Thaler, 1986; Turillo, Folger, Lavelle, Umphress, & Gee, 2002). To study this, Fehr and Fischbacher (2004) created the “third party punishment game”. In this game three persons – Person A, B, and C – are involved. Person A is endowed with 100 points, B with 0 points, and C with 50 points, each point representing a certain monetary value. In the first stage Person A and B play a Dictator Game. Player A makes a decision how many points to give to Person B. Person B has no influence on this decision, and is therefore powerless. In the second stage, Person C can transfer deduction points to Person A after observing A’s offer to B. Each deduction point transferred to A reduces the income of Person A by three points. Note that Person C is not involved in the allocation of points

between person A and B, and that none of the players will play another game with each other. Person C has therefore no financial benefit from punishing Person A. Nevertheless, Fehr and Fischbacher (2004) found that third parties punished Person A, with increasing transfers to Person A (i.e., punishment) when inequality of A's offer, benefiting Person A over Person B, increased.

This third party punishment game is an important contribution to the research on punishment as it provides an experimental setup in which punishment can be studied without retaliation playing a role. Fehr and Fischbacher (2004) explained the fact that outsiders were willing to punish in terms of social norm enforcement. In other words, they argued that people used punishment in order to impose a norm (in this case, the norm of equality), and to deter others from violating this norm in the future.

### **Previous research on compensation**

Compensation can be considered as an attempt to make the victim "whole" again after being harmed (e.g., Schroeder, Steel, Woodell, & Bembek, 2003). Or, in other words, to make the current situation for the harmed person as similar as possible as to how the situation was before the harm was done.

Most research on compensation focused on outsider's hypothetical compensations in non-distributive settings, such as compensations for rape, theft, or accidents (e.g., Bornstein, 1998; Haynes & Olson, 2006; Wissler, Evans, Hart, Morry, & Saks, 1997). For instance, Bornstein (1998) studied the effect of injury severity on participant's judgments in a simulated jury task. People were asked to indicate how much money they thought was appropriate for damage awards (i.e., compensation). Whereas the mean damage award was higher in the high severity condition (\$7.8 million) than in the low severity condition (\$275,000), the extremely high variances in the indicated damage awards resulted in a non-significant effect. Although other research (e.g., Wissler et al, 1997) could find effects on these hypothetical damage awards, this example shows how difficult it can be to study compensation by using hypothetical compensation amounts.

Little is known about compensation behavior in distributive settings. In one of the few studies, Okimoto and Tyler (2007) presented participants with a scenario describing a situation in which they had a loss of \$200 because of a mistake by a housing company. Different settlements of compensation accompanied with or without relational concern like, for example, an apology,

were evaluated. When compensation was accompanied with an apology, people were more willing to accept the settlement than without any relational concern. Note that this research did not study people's own willingness to compensate. Instead, this research focused on the reactions on compensation of those who were harmed. To accept compensation from the perspective of the harmed person is, however, not the same as actually compensating to a harmed person.

To study compensation behavior, we therefore developed the altruistic compensation game. In this game, three persons - Person A, B, and C - are involved. Person C observes the dictator game played by Person A and Person B. After observing the behavior of Person A, Person C is given the possibility to keep the valuable chips for themselves or transfer a number of chips to Person B who will receive three chips for every compensation chip transferred by the participant.

### **Altruistic compensation vs. altruistic punishment**

With their similar structures, the altruistic punishment game (Fehr & Fischbacher, 2004) and our newly developed altruistic compensation game are well-suited for comparing punishment and compensation behavior. The main difference with the altruistic punishment game is that in the altruistic compensation game people have to make a decision to compensate or not, instead of making a decision to punish or not.

There is little research which directly compared the willingness to punish and compensate. In distributive settings, the one study on compensation and punishment behavior we know of focused on the perspective of the harmed person (DeCarufel, 1981), and not on whether people were willing to punish or compensate. In a scenario study, DeCarufel (1981) studied people who were disadvantaged with respect to their payment. Results suggested that these disadvantaged persons preferred a situation in which both punishment and compensation was possible. Though in a different setting, i.e., on handling crimes, another study by Gromet and Darley (2006) showed that for citizens, in order to accept a restorative justice procedure, a retributive justice procedure must also be available. Having both options available is thus preferred over only one option (i.e., compensation or punishment). These studies reported the perceptions from the perspective of the harmed person, which clearly differs from actual compensation and punishment behavior.

Over the course of three experiments we study altruistic punishment and compensation. In Experiment 7, we investigate whether people are willing

to altruistically compensate, using a similar method (i.e., the strategy method) as Fehr and Fischbacher (2004) did in their altruistic punishment game. In Experiment 8, we investigate whether people have a preference for altruistic punishment or altruistic compensation, by comparing punishment and compensation in isolated settings (i.e., when people can only compensate or punish), and in combined settings in which people can do both. Finally, in Experiment 9, we continue our investigation by focusing on the underlying processes of punishment and compensation. In this study, we turn to the literature on empathy, and argue that high or low empathic concern can influence the use of compensation or punishment.

### **Experiment 7: Are People Willing to Costly Compensate?**

As a first test of our newly developed paradigm, we used a strategy method, similar to Fehr and Fischbacher (2004), to investigate the relation between the inequality between Person A and B, and the willingness to transfer compensation points. The strategy method implies that participants are explained the situation, and learn that before they know what Person A chooses to offer Person B, they have to indicate their reaction. This means that for every possible offer of Person A, participants need to indicate beforehand how many compensation points they would transfer. It is only after this, that they are shown the actual offer of Person A. By using a strategy method, we replicate the design of Fehr and Fischbacher (2004).

Fehr and Fischbacher (2004) showed that outsiders were more willing to punish the allocator, the more the observed offer in a dictator game deviated from an equal division (with the recipient being the disadvantaged party). This is consistent with the literature on the equal division rule, which argues that equality is a strong norm because of its simplicity and justifiability (e.g., Messick, 1993; 1995; Van Dijk, Wit, Wilke, & De Kwaadesteniet, in press). Consequently, any deviation from this equality rule can be considered as a violation of the norm. And the more the offer deviates from the equal split, the more that behavior is considered as a norm violation.

To restore equality, people in the altruistic compensation game can compensate Person B. Compensation can be used to make the victim "whole" again, and the more the observed offer disadvantages Person B, the more compensation is needed to make Person B whole again. Specifically, we expected that people would be willing to give up money to compensate, and

that they would be more willing to do so when the observed inequality between Person A and Person B increases.

To study whether people indeed perceived deviations from the equal division rule as inappropriate and unjust, we also studied these perceptions of injustice as an underlying process. We expected that the more the offer deviated from the equal division, the more people perceive the offer of Person A as unjust.

### *Method*

#### *Design and participants*

A 6 (offer of Person A to B: 0 vs. 10 vs. 20 vs. 30 vs. 40 vs. 50) within-subjects design was used to investigate the willingness to give up money to compensate Person B. A total of 38 students of Leiden University (14 males, 24 females; mean age 19.92,  $SD = 2.27$ ) participated in this experiment.

#### *Procedure*

Participants were placed in separate cubicles, and all information was presented on the computer screen. They were informed that they would stay anonymous during and after the experiment. Participants learned that they were endowed with 50 chips which they could exchange for money after the experiment. Each chip was worth 10 eurocents. Participants were explained that they would be observers of an allocation of money between two other players, Player A and Player B, which would take place in another room. They learned that in stage 1 Player A had to decide how to divide the 100 chips between him/herself and Player B. Player B had no influence on the division of the chips. Player A could choose to allocate 0 to 50 chips to Person B in steps of 10 chips (cf., Fehr & Fischbacher, 2004). Subsequently, participants were informed about stage 2, in which they could transfer compensation points to Player B. For each point transferred to Player B, Player B would receive 3 chips as compensation.

Participants were explained that before they would learn how Person A decided to divide the 100 chips between him/herself and Person B, they had to indicate the number of compensation points they would transfer to Person B for all possible allocations of A. In other words, participants had to indicate the compensation points they wanted to assign B in case Person A allocated 0, 10, 20 etc. chips to B. Participants learned that this information would be used to decide how many transfer points they would pay after the allocation of Person A would be known. Note that we did not use the term 'compensation' in the

information provided to participants, similar as Fehr and Fischbacher (2004) did not use 'punishment'.

After participants made their decisions, we asked them three justice-related questions (fair, just, and appropriate) for each possible offer of Person A. These questions were combined into a justice scale ( $\alpha = .78$ ) with higher values indicating higher perceived justice of the offer.

Finally, we asked them two questions to check whether they correctly understood the consequences of transferring a chip to Person B for themselves (i.e., one chip transferred to B implied a loss of one chips for themselves) and for Person B (i.e., one chip transferred to person B, implied a gain of 3 chips for Person B). All participants correctly answered these questions. In the end, participants were debriefed, and paid €2 for participation.

## Results

### *Compensation*

A 6 (offer of Person A: 0 vs. 10 vs. 20 vs. 30 vs. 40 vs. 50) within-subjects ANOVA on the number of chips participants gave up to compensate Person B yielded a significant effect,  $F(5,185) = 234.47$ ,  $p < .001$ ,  $\eta^2 = .86$ . Figure 3 shows the relationship between the offer of Person A and the decision of the participant. A linear contrast analysis showed that the more the offer of Person A to Person B deviated from the equal split, the more chips the participants were willing to transfer to Person B,  $F(1,37) = 394.51$ ,  $p < .001$ ,  $\eta^2 = .91$ .

### *Perceived justice of the offer*

A 6 (offer of Person A: 0 vs. 10 vs. 20 vs. 30 vs. 40 vs. 50) within-subjects ANOVA on the justice scale revealed a significant effect,  $F(5,185) = 324.99$ ,  $p < .001$ ,  $\eta^2 = .90$ . Linear contrast analysis showed that the more the offer deviated from the equal division (i.e., a 50 chips to Person B), the more unjust participants perceived the offer,  $F(1,37) = 1408.23$ ,  $p < .001$ ,  $\eta^2 = .97$  ( $M_0 = 1.16$ ,  $SD_0 = .42$ ;  $M_{10} = 1.63$ ;  $SD_{10} = .89$ ;  $M_{20} = 2.26$ ;  $SD_{20} = .93$ ;  $M_{30} = 3.02$ ;  $SD_{30} = 1.20$ ;  $M_{40} = 3.45$ ;  $SD_{40} = .85$ ;  $M_{50} = 6.72$ ;  $SD_{50} = .61$ ).

### *Eventual outcome of Person B*

To assess the influence of the compensation points on B's eventual outcome, we also computed the total number of chips Person B after compensation, i.e., the number of chips offered by Person A added with the number of compensation chips times three. A 6 (offer of Person A: 0 vs. 10 vs. 20 vs. 30 vs. 40 vs. 50) within-subjects ANOVA yielded a significant effect on



the end result for B,  $F(5,185) = 14.19, p < .001, \eta^2 = .28$ . Figure 3 shows the relationship between the offer of Person A and the end result of Person B after compensation. At first sight, these results seem to suggest that for all offers participants aimed at compensating Person B to the level of 50 chips, i.e., the offer which would have been in line with the equal division rule. However, additional analyses show that participants did not fully make Person B “whole” again when B was offered 0, 10, or 20 chips by Person A. The end result for B in these cases significantly differed from 50 chips,  $t(37)'s > |3.4|, p < .001$ . The end result for B did not differ significantly from 50 chips when B would have been offered 30, 40, or 50 chips by Person A,  $t(37)'s < |1.8|, ns$ .

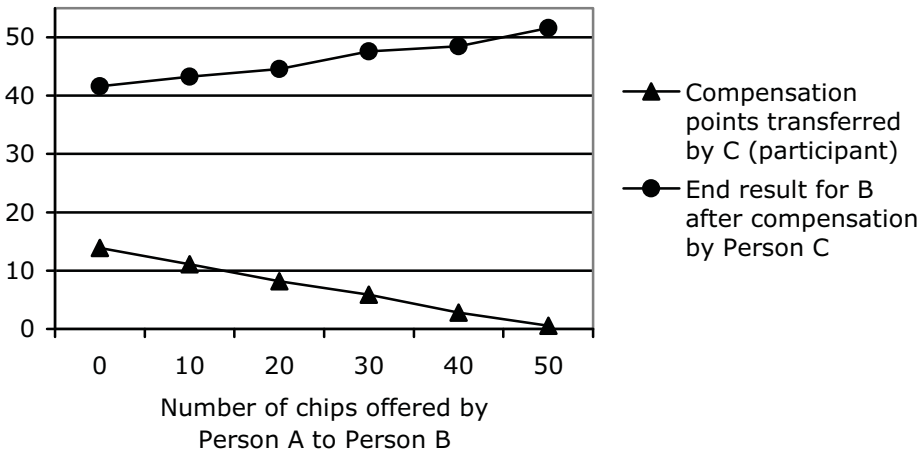


Figure 3. Number of chips participants (Person C) is willing to give up for compensation and the total number of chips for Person B after compensation as a function of the offer by Person A

Discussion

Experiment 7 showed that the altruistic compensation game provides a good paradigm to study compensation behavior. We showed that people are willing to give up their own money to compensate a person who suffered injustice. This provides first evidence that people are willing to altruistically compensate.

Furthermore, Experiment 7 provides some evidence that people do not fully compensate a person when this costs them too much. It may be relevant to compare this aspect to the findings of Fehr and Fischbacher (2004). They also observed that people did not always transfer a sufficient number of punishment points to make the end result for the dictator 50 points (in the Fehr & Fischbacher study, the end results of the dictator varied between 58.04 and 49.58 points). Put differently, although people are willing to altruistically compensate and punish, there are limits to these types of altruism. These findings fit with the notion that it is costly to compensate.

Experiment 7 gave us a first impression of people's willingness to compensate. As argued in the Introduction, to be really able to study whether people want to compensate or punish, one should study a situation in which people can react in both of these ways. To shed more light on compensation on the one hand and punishment on the other hand, we therefore conducted a second experiment in which we directly compared these two types of behavior. Moreover, in Experiment 8 we did not use a strategy method as in Experiment 7, but presented participants with an unequal offer benefiting Person A. In normal life, people simply observe a specific situation of injustice and decide how to deal with that specific injustice. Presenting people with a specified, unjust behavior therefore better represents real life situations and thus the decisions people make.

### **Experiment 8: Altruistic Compensation vs. Altruistic Punishment**

Sometimes, we can only compensate the person suffering the harm. Or we can only punish the person causing the harm. In other situations, we have the possibility to both punish *and* to compensate. To compare compensation and punishment behavior in distributive settings, we therefore studied these behaviors both in isolation and in combination of each other. In other words, after observing an unequal offer benefiting the allocator, we gave people the possibility to transfer 1) only compensation points, 2) only punishment points, or 3) both compensation points *and* punishment points.

Studying compensation and punishment behavior in combination and in isolation, gave us the possibility to answer two questions. First, we wanted to test whether people are willing to give up *more* money when given two possibilities for transfer (both punishment and compensation) than when having only one possibility (either punishment or compensation). Second, we wanted to investigate whether people have a preference for compensation or

punishment. That is, are people more willing to give up money for punishment or for compensation? By studying compensation and punishment in isolation and combination, we were able to test the latter question both between subjects (comparing the two isolation conditions), and within subjects (i.e., in the both possibilities condition).

To answer the first question, we draw on the scarce research that compared compensation and punishment. As we described in the Introduction, the few existing studies suggest that people prefer situations in which both types of justice restoring mechanisms are available (DeCarufel, 1981; Gromet & Darley, 2006). This research reported preferences from the perspective of a harmed person, and not whether or not people were willing to compensate or punish. But based on the results of DeCarufel (1981) and Gromet and Darley (2006), we might expect that people also prefer a situation in which they can both punish and compensate compared to situations in which they only have one option. We already know that in the altruistic punishment game (Fehr & Fischbacher, 2004) and altruistic compensation game (Experiment 7) people are willing to altruistically compensate and punish. Combined, one might expect that people are more willing to give up money in a situation where they have both options, than in situations in which they have only one option (i.e., either punishment or compensation).

As explained above, Experiment 8's second aim was to study the *extent* to which people would punish and compensate. For example, do people punish more than they compensate? Or will they punish and compensate equally? As explained before, punishment is motivated by deterrence and enforcement of norms, whereas compensation is motivated by a concern for the other person. We do not know of any literature suggesting that either one of these motives is more important than the other, or suggesting that they are equally important. Yet, a preference for compensation might, for example, be expected if people consider that compensating someone is a nicer and safer option. When others (i.e., the targets) find out you compensated them, they will be happy and grateful; a punished target might become upset and retaliate. But one can also speculate that punishment motives (i.e., the benefits for the future, by teaching the person a lesson) outweigh compensation motives. This would lead to the reverse prediction. Experiment 8 is in part designed to uncover and explore this research question.

### *Method*

#### *Design and participants*

A 3 (transfer option: punishment vs. compensation vs. both) between-subjects design was used to study the number of chips transferred for altruistic compensation and/or punishment. A total of 73 participants (23 males, 50 females; Mean age of 20.25,  $SD = 2.85$ ) were randomly assigned to one of the conditions.

#### *Procedure*

All participants were assigned the role of Player C and were endowed with 50 chips. Participants observed an allocation situation between Player A and Player B (similar to Experiment 7). In the compensation condition participants learned that they had the opportunity to transfer compensation chips to Player B. For each chip they transferred, Person B would gain 3 chips. In the punishment condition, participants learned that they had the opportunity to transfer punishment chips to Player A. For each chip they transferred, Person A would lose 3 chips. In the 'both' condition participants learned that they had the opportunity to transfer compensation and/or punishment chips.

Next, participants were shown the offer of Player A to Player B. Participants learned that Player A chose to allocate 20 chips to Player B and 80 chips to him/herself. After this, participants had to make the decision how many punishment and/or compensation points (depending on the condition) they wanted to transfer.

After participants made their decisions, we asked them three justice-related questions concerning the offer (cf., Experiment 7). These questions were combined into a justice scale ( $\alpha = .70$ ) with higher values indicating higher perceived justice of the offer. Next, we asked them several questions to check whether they correctly understood the consequences of transferring a chip; for themselves (loss of one chip – asked in all three conditions), for Person A (loss of 3 chips – asked only in punishment and 'both' condition), and for Person B (gain of 3 chips – asked only in compensation and 'both' condition). No participant made more than one mistake, and 94.52% answered all questions correctly. Excluding participants who answered incorrectly did not yield different results than reported below. In the end, participants were debriefed, and paid €2 for participation.

### Results

#### Compensation and punishment

Table 3 provides the cell means and totals of the number of chips transferred for punishment and/or compensation. With respect to our first research question, we hypothesized that having two options might lead to higher levels of transferred chips than when having one option. Contrast analysis between the 'both' condition and 'one option' conditions (only punishment or only compensation) revealed that, in line with our hypothesis, participants in the 'both' condition transferred more chips in total ( $M = 18.30$ ,  $SD = 7.50$ ) than participants in the one option conditions,  $t(70) = 1.80$ ,  $p = .039$  (one-tailed). Moreover, participants who could only compensate Person B, transferred exactly the same number of chips ( $M = 14.48$ ,  $SD = 9.94$ ) as participants who could only punish Person A ( $M = 14.48$ ,  $SD = 7.59$ ).

To study our second research question of whether participants had a preference for compensation or punishment, we also compared compensation and punishment when given both opportunities (i.e., within the 'both' condition). A within-subjects ANOVA (transferred points: for compensation vs. for punishment) did not yield a significant difference between the number of chips transferred for compensation ( $M = 8.68$ ,  $SD = 5.93$ ) and punishment ( $M = 10.09$ ,  $SD = 5.77$ ),  $F(1,21) = .56$ ,  $p = .46$ . Moreover, a paired samples t-test did not yield a significant effect,  $t(19) = 1.06$ , *ns*.

Table 3. Number of chips transferred for compensation and/or punishment

	Compensation condition	Punishment condition	Both possibilities
For compensation	14.48 (9.94)	-	8.68 (5.93)
For punishment	-	14.48 (7.59)	10.09 (5.77)
Total	14.48 (9.94)	14.48 (7.59)	18.39 (7.50)

Note. Standard deviations are given in parentheses.

This analysis within the 'both' condition is based on an average number of transferred chips. The fact that this analysis did not yield significant differences between punishment and compensation does not imply that all people transferred the same number of chips for punishment and compensation. When taking a closer look at these data we found that 36.4% of the participants in the 'both' condition choose to transfer exactly the same amount of chips for compensation as for punishment. Another same 36.4% choose to transfer more chips for punishment than for compensation (ranging evenly from 1 to 20 chips more), and the other 27.2% choose to transfer more chips for compensation than for punishment (ranging evenly from 2 to 20 chips more). So, although analyses did not yield a significant difference between the mean number of chips transferred for punishment and compensation, this closer inspection showed that only one-third of the people allocated exactly the same number of chips for punishment and compensation. The majority of the participants did show a preference for either punishment or for compensation.

#### *Perceived justice of offer*

To analyze the perceived justice of the 80-20 offer of Person A to B, we conducted a one-way ANOVA (transfer possibility: punishment vs. compensation vs. both) on the justice scale. This analysis did not yield a significant effect,  $F(2,70) = 2.89$ , *ns*. Participants perceived the offer to be equally unjust in the punishment condition ( $M = 2.10$ ,  $SD = .86$ ), in the compensation condition ( $M = 2.78$ ,  $SD = 1.15$ ), and 'both' condition ( $M = 2.60$ ,  $SD = .98$ ).

#### *Discussion*

Experiment 8 showed that people are willing to give up their own money to compensate a harmed person, even when they can also use altruistic punishment. Moreover, we showed that when given the possibility to both compensate and punish, people are willing to transfer more chips in total than when people only have one possibility (i.e., to punish or to compensate). Furthermore, directly comparing the willingness to compensate and punish showed that people altruistically punish as much as they altruistically compensate.

We also observed that within the 'both' condition, we did find that only one third of the participants transferred exactly the same number of chips for punishment and compensation. Another one-third of the people transferred more chips for punishment than compensation, and the final one-third choose

to transfer more chips for compensation than for punishment. So although analysis showed on average no clear preference for either compensation or punishment, our data seemed to suggest that there may be different groups of people: A group that is more motivated to use compensation, a group that is more motivated to use punishment, and a group who shows no preference. In Experiment 9 we aim to give more insights in the motivations to punish or compensate, by turning to the literature on empathic concern.

### **Experiment 9: Empathic Concern and its Influence on Punishment and Compensation**

Empathic concern has been described as the possibility to have feelings congruent to another person's feelings (Eisenberg & Miller, 1987). When people have a high empathic concern, they feel compassion and concern for the other person. Considerable evidence supports the idea that empathic concern increases the willingness to behave prosocially (e.g., Batson et al., 1995; 2003; Davis, 1994; Dovidio, Piliavin, Schroeder, & Penner, 2006; for reviews see Batson, 1991; Eisenberg & Miller, 1987). Because altruistic punishment and altruistic compensation both promote more equal outcomes by giving up own money, both reactions can be conceived as prosocial behavior. In past research, empathy is mostly associated with a concern for a neutral party or harmed party (e.g., Batson, 1991; Eisenberg, & Miller, 1987). However, the fact that empathy has not been studied in relation to a person causing injustice, does not imply that such a relationship does not exist. People may be concerned about the person causing injustice as well. We argue that people who are highly empathic might be more concerned about others in general (i.e., about the person causing harm as well as the person suffering the injustice) than people low on empathic concern. This is important, because punishment is directed to the person causing harm and compensation focuses on the person suffering the injustice. A general concern for others might affect both the willingness to punish and compensate.

Punishing the person causing injustice implies that this person loses money (or, in other instances, freedom, property, etc.). The consequences of punishment are not only to deter and retaliate, but also that the outcomes of the person are reduced. For high empathic people, this may be in conflict with their high concern for others. Therefore, they might become reluctant to punish the person causing injustice. On the other hand, they would be more willing to compensate the person suffering from injustice, because compensation is in line

with their concern for others. In sum, we hypothesized that high empathic people would prefer compensation over punishment.

How about the preferences of low empathic people? Because they are low empathic, they are less concerned with other people. Consequently, they may not (or to a lesser extent) be willing to compensate the person suffering injustice. That is, compensation is not in line with their low concern for others. However, low empathic people might not be reluctant to deter the person causing the injustice. The fact that punishment implies a certain loss for the person causing is no problem for them, as they are also less concerned about others. Therefore, we hypothesized that low empathic people would prefer punishment over compensation.

### *Method*

#### *Design and participants*

A total of 73 participants (31 males, 42 females; mean age of 20.74,  $SD = 3.81$ ) participated in this experiment. We studied the preference for punishment, compensation, or keeping the chips for themselves as a function of empathic concern.

#### *Procedure*

First, participants were asked to fill in the empathic concern scale (Davis, 1983; 1994). This questionnaire consists of 7 items (e.g., "I often have concerned feelings for people less fortunate than me"), and had a high reliability ( $\alpha = .81$ ). After this questionnaire, participants completed a short unrelated study, to prevent any spill-over effects. Next, the actual experiment started. The procedure was similar to the 'both' condition in Experiment 8, except that participants now had to make a choice between transferring chips for compensation, for punishment or to keep the chips for themselves.

All participants were assigned the role of Player C and were endowed with 50 chips. Participants observed an allocation situation between Player A and Player B. They learned that they had to choose between three options about what to do with their own chips. One, they could transfer chips to compensate Person B. For each transferred chip, Person B would receive 3 chips. Two, they could transfer chips to punish Person A. For each chip they transferred, Person A would lose 3 chips. Three, they could choose to keep the chips all for themselves. Participants also learned that when they would choose for compensation or for punishment, only after their decision, they had to indicate how many points they wanted to transfer (minimum 1, maximum 50).



Next, participants were shown the offer of Player A to Player B. Participants learned that Player A chose to allocate 20 chips to Player B and 80 chips to him/herself. After this, participants had to make their choice between punishment, compensation, or keeping the chips for themselves. When chosen for punishment or compensation, participants were subsequently asked to indicate how many chips they wanted to transfer.

After participants made their decisions, we asked them three questions to check whether they correctly understood the consequences of transferring a chip, for themselves and for Person A or B. No participant made more than one mistake, and 90.41% answered all questions correctly. Exclusion of participants who made (an) error(s) did not yield any different effects. In the end, participants were debriefed, and paid €2 for participation.

## Results

### Choice

The majority of the participants chose to transfer chips. A total of 35.6% ( $N = 26$ ) of the participants chose to transfer chips for punishment, and 37% ( $N = 27$ ) chose to transfer chips for compensation. Only 27.4% ( $N = 20$ ) of the participants chose to keep all the chips for themselves.

To analyze the influence of empathy on the choice participants made, we conducted two different analyses. In the first analysis, we analyzed the influence of empathic concern on *all* three possible choices (punish, compensate, or keep the chips for self) using a median split. This enabled us to present the effect of empathy on choice in a clear way. Participants were categorized either as having low empathic concern ( $M = 4.83$ ,  $SD = .76$ ,  $n = 36$ ) or as having high empathic concern ( $M = 6.03$ ,  $SD = .39$ ,  $n = 37$ ) based on the median of the empathy scale (5.58). A hierarchical loglinear analysis with choice (punishment vs. compensation vs. self) and empathic concern (high vs. low) yielded a significant interaction effect,  $\chi^2$  ( $df = 2$ ;  $N = 73$ ) = 7.30,  $p = .026$ . Participants with low empathic concern chose most often for punishment (47.2%) and less often for compensation (22.2%), and 30.6% of participants chose to keep all the chips for themselves. In contrast, participants with high empathic concern chose most often for compensation (54.4%) and less often for punishment (24.3%), and 24.3% choose to keep all the chips for themselves (see Table 4 for  $n$  per cell).

In the second analysis, we focused on those people who chose to transfer money (either for punishment or compensation), and used empathic

concern as a continuous variable. A binary (1 = punishment, 2 = compensation) logistic regression of empathic concern on the choice to punish or compensate (thus including *only* participants who chose to transfer chips for compensation or punishment) yielded a significant effect,  $B = 1.01$ , Wald ( $df = 1$ ) = 5.07,  $p = .024$ , Odds Ratio = 2.75. The higher the participants scored on empathic concern, the higher the probability was that they chose compensation over punishment. Put differently, the lower the participants scored on empathic concern, the higher the probability was that they chose punishment over compensation.

*Table 4.* Number of participants choosing punishment, compensation, or keeping chips to self as a function of empathic concern; including cell means and standard deviations of number of transferred chips

	Choice of participants	Number of participants	Mean number transferred chips	SD
Low empathic concern	Punishment	17	17.59 <sup>a</sup>	8.66
	Compensation	8	14.38 <sup>a</sup>	7.76
	Keeping to self	11	-	
High empathic concern	Punishment	9	16.67 <sup>a</sup>	6.61
	Compensation	19	15.05 <sup>a</sup>	8.88
	Keeping to Self	9	-	

<sup>a</sup> Means with the same subscript do not differ significantly,  $F < 1$ , *ns*.

#### *Number of transferred chips*

To investigate the number of chips participants chose to transfer after choosing punishment or compensation, we conducted a regression with empathic concern (centralized), choice (-1 = punishment, 1 = compensation), and their interaction on the number of chips transferred. This analysis did not yield any significant effects,  $F < 1$ , *ns*. To illustrate our findings, we provide descriptive statistics for participants with high and low empathic concern based on a median split of empathy in Table 4. Independent of empathic concern or their choice for punishment or compensation participants transferred

approximately one third of their chips ( $M = 16.04$ ,  $SD = 8.18$ ). This number replicates the results of Experiment 8.

### *Conclusion*

In line with our hypotheses, we showed that people high on empathic concern compensated more often than people low on empathic concern. Furthermore, we showed that low empathic people punished more often than high empathic people. Feeling empathy for others thus influences the motivation and willingness to punish and compensate. Note that low empathic people did not refrain from prosocial behavior by keeping everything for themselves, but decided to punish the person causing the injustice. This is an interesting finding because it relates empathic concern to behavior directed towards the person causing the injustice, whereas past research mostly focused on the person in need (i.e., the person suffering from injustice). We discuss these findings more extensively in the General Discussion of this chapter.

In addition, the majority of the people were willing to transfer some of their own chips for compensation or punishment when given the explicit choice between transfer and keeping the chips for themselves. Similar to Experiment 8, we did not find differences between punishment and compensation on the total number of chips transferred.

### **General Discussion**

We started this research by arguing that punishment and compensation are two ways to restore justice, and that to understand when people use compensation and when people use punishment, one needs to directly compare these two behaviors. More specifically, we explained that punishment and compensation fundamentally differ from each other (Darley & Pittman, 2003). Punishment is an instrument to deter or retaliate, and is directed at the person causing the injustice. Compensation, on the other hand, reflects a concern for others, and is directed at the person suffering the injustice. In other words, compensation and punishment share aspects (restore injustice and inequality), but they also differ on other aspects. The purpose of this study was to directly compare compensation and punishment behavior in distributive settings. To do this, we introduced the altruistic compensation game (cf., third party punishment game; Fehr & Fischbacher, 2004), in which people were given the possibility to transfer some of their own chips to compensate the victim after observing behavior in a dictator game. This new game made it possible to study

actual compensation behavior, instead of hypothetical compensation behavior or behavioral intentions, and to compare it to punishment behavior.

Experiment 7 showed that people indeed are willing to give up parts of their own endowment to compensate. The more the offer of a dictator deviated from the equal division rule, the more chips people transferred to the victim. In Experiment 8 we showed that observers altruistically compensate even when they can also altruistically punish. Moreover, in Experiment 9 we turned to the influence of empathic concern to study altruistic compensation and punishment. Results showed that people with a high empathic concern compensated more than people low on empathic concern, and also that people with a low empathic concern more often punished than high empathic people.

It may be interesting to compare our results of Experiments 7 and 8, and the results of Fehr and Fischbacher (2004). First, our results in the altruistic compensation game (Experiment 7) are similar to the results of Fehr and Fischbacher (2004). That is, in the altruistic punishment game, participants decided to transfer 14.45 deduction points when Person A would choose the 100-0 option, whereas in the altruistic compensation game, participants decided to transfer 13.87 chips. Moreover, the linear effect between offer and transferred points as we found in our experiment was similar to the effect in the Fehr and Fischbacher study.

Yet, we also observed different patterns in the results of (a) our Experiment 7 and 8, and (b) Fehr and Fischbacher (2004). Participants in Experiment 8 were willing to give up more chips after observing an 80-20 offer (14 chips in compensation only condition; 14 chips in punishment only condition) than they were willing in Experiment 7 (8 chips for compensation), or in the Fehr and Fischbacher study (7 chips for punishment). In other words, actually observing economic injustice versus thinking about a strategy on how to act when injustice might be observed (i.e., the strategy method) led to different results. We argue that this might be due to the specific characteristics of the strategy method. In both Experiment 7 and the study of Fehr and Fischbacher (2004), participants were faced with all possible offers of Person A to B, simultaneously presented on one screen. These offers ranged from 0 chips allocated to Person B to 50 chips allocated to B. The 50-50 split was thus the best Person B could get, and may have served as a reference point. Therefore, people may have become motivated to compensate B (or punish A in the altruistic punishment game) up to a level of 50 chips in situations in which A would offer B less than 50 chips. In Experiment 8, however, participants were

faced with only one offer, i.e., an offer of 80 chips for A and 20 chips for B, and no reference was made to a possible 50-50 split. In this case, people may have focused on compensating Person B up to a level of 80 chips, or punish Person A down to a level of 20 chips, which takes more chips to transfer than in the strategy method situation. This might be the reason for the higher level of transfers in Experiment 8, compared to the studies using the strategy method.

#### *The influence of empathic concern*

In Experiment 9, we showed that empathy influences the willingness to punish and to compensate. This is an interesting extension of the existing literature on empathy and prosocial behavior. Prosocial behavior has mostly been operationalized in terms of helping someone in need, donating to charity, volunteering, etc. (see for example Eisenberg & Miller, 1987). Research showed that the higher the empathic concern, the higher the willingness is to help the unfortunate person. However, empathic concern has not been directly studied in relationship with the person causing injustice. The current article provided insights on this relation by studying the relationship between empathic concern and prosocial behavior directed to both the person suffering injustice (i.e., compensation) and the person causing an injustice (i.e., punishment).

We showed that people low on empathic concern decided to altruistically punish. They gave up parts of their own endowment to punish a person causing injustice, rather than keeping all chips for themselves. Given the fact that giving up money can be seen as a prosocial act, our results imply that low empathic people behaved prosocially. By focusing on prosocial behavior directed towards the person causing injustice, we were able to show that low empathic people can also act in an altruistic way. We argue that high empathic people are more concerned about others in general, and not only about unfortunate people. Compensation reflects this concern for others, which makes high empathic people more willing to compensate than low empathic people. However, compared to low empathic people, high empathic people may also be more concerned about the consequences of punishment for the person causing injustice, i.e., a monetary loss. Therefore, they may be less willing to altruistically punish than people low on empathic concern. Relating empathy to both altruistic compensation and altruistic punishment thus increased our knowledge on the role of empathy and a concern for others as the underlying process of punishment and compensation.

*Explaining the altruism in altruistic punishment and altruistic compensation*

We believe that the current series of experiments also contribute to the ongoing debate on why people are willing to give up money without any benefits for the self, i.e., to be altruistic (e.g., De Waal, 2003; 2006; Fehr & Fischbacher, 2003; Fehr & Gächter, 2002; Krebs, 2008; Trivers, 1971; 2006). In the Introduction we outlined the specific motivations to compensate (e.g., concern for other), to punish (e.g., retribution and deterrence), and the shared characteristic of compensation and punishment, i.e., to restore inequality. When explaining the altruist act of punishment, previous theorizing has mainly focused on the motivations to punish (e.g., Fehr & Fischbacher, 2003; 2004; Fehr, Fischbacher, & Gächter, 2002; Fehr & Gächter, 2002). More specifically, the main reasoning of Fehr and colleagues was that people are willing to give up parts of their own endowment (i.e., to be altruistic) to enforce the social norm of cooperation and deter people from norm violating behavior in the future, which therefore makes humans a uniquely cooperative species compared to other species, like primates (Fehr & Fischbacher, 2003). Our research shows that people are also willing to give up money to compensate someone who suffered a norm violation. By compensating this person, people can emphasize the importance of the equal division rule. Because the focus is not on the person causing the injustice, but on the person suffering it, this altruistic compensation cannot be explained in terms of enforcing a cooperative norm or deterrence.

So, how can we explain the fact that people are willing to altruistically compensate and punish? We argue that one should not only focus on the specific motivations to punish (i.e., deterrence, just desert) to explain altruistic punishment, or on the motivations to compensate (i.e., concern for others) to explain altruistic compensation. We believe that one should also focus on the shared characteristic of punishment and compensation to explain this altruism, which is restoring inequality.

This preference for equality and equity (see for example Fehr & Schmidt, 1999; Messick, 1995) can be understood from an evolutionary approach as the preference is not restricted to humans. For example, capuchin monkeys also reject unequal pay (Brosnan & de Waal, 2003), which can be regarded as altruistically. The question remains why human and non-human primates behave altruistic. De Waal (2006) argues that "In the short run, caring about what others get may seem irrational, but in the long run it keeps one from being taken advantage of." (p.360). Both altruistic punishment and

altruistic compensation could be explained in these terms, i.e., people would want to be compensated themselves in situations where they suffer from injustice, and would like to see the person causing that injustice being punished, because it creates a situation of equality. In sum, until now the literature on the evolution of fairness (or altruism) has focused on the reasons why it is best for everyone to punish a party violating the norms (see also the work on reciprocal altruism by Trivers, 1971; 2006). By studying altruistic compensation behavior and thereby focusing on the person suffering from injustice, we have extended the current scope of explaining altruistic behavior in terms of the equality rule.

#### *Future research*

We designed this study to shed light on altruistic compensation, and to directly compare it with altruistic punishment. In the current study, we concentrated on observed behavior consistent with the work of Fehr and Fischbacher (2004). Additionally, we considered process measures (perceived justice of the offer) in Experiment 7. In Experiment 9, we directly tapped into the underlying processes of punishment and compensation by using empathic concern. We showed that it is the concern for the other which influences people's motivations to either punish or compensate. Future research might provide additional support this finding by asking people for their motivations to punish (e.g., just desert, deterrence) and compensate (e.g., making the person whole again), and to assess how these specific motivations explain variance above and beyond the violations of equality.

Finally, by studying punishment and compensation, we focused on people causing injustice, and people suffering injustice. Other fields of research also focused on (either one of) these persons. The current insights and paradigm could be used to advance theorizing in these related areas as well. For example, the altruistic compensation game and altruistic punishment game could also extend the research on the Belief in a Just World (BJW). According to this line of research, people have a need to believe that the world is just and that people get what they deserve (e.g., Lerner & Simmons, 1966; Lipkus, Dalbert, & Siegler, 1996; Rubin & Peplau, 1975). When people cannot change an unjust situation (e.g., by helping or compensating a harmed person), they therefore derogate the harmed person, i.e., the victim, to keep their belief in the just world. By believing the victim was responsible for the injustice people can keep on believing that the world is just. However, the BJW research has

always focused on changing the situation of the harmed person, and not changing the situation of the person violating the rules. It might be argued that punishing this person is also a way of letting people get what they deserve, and thus to maintain the belief in a just world. Punishment might thus also be a way to prevent victim derogation, similar to the possibility of compensation. A study on the influence of a possibility to punish the person causing the harm on victim derogation and the BJW might therefore be an interesting way to extend the BJW literature.

### *Conclusion*

This study provided a first direct comparison between punishing and compensating behavior. We argued that to gain more insight in how people react to situations of distributive injustice, one needs to investigate punishment and compensation behavior together. We showed first empirical evidence that people are willing to give up money to compensate in order to restore justice. Moreover, this study showed that empathic concern influences the willingness to compensate and to punish. Our results suggest that studying altruistic compensation versus altruistic punishment leads to new insights: Not only insights on why people punish and compensate, but also on why people are altruistic.



