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### On anger and prosocial behavior

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## **On Anger and Prosocial Behavior**

Janne van Doorn

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# **On Anger and Prosocial Behavior**

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**Introduction**

# Chapter 1





There is a curious contradiction about anger. On the one hand anger has been defined as a ‘toxic’ emotion. For example, Smith (1759, p. 58) identified anger as the “greatest poison to the happiness of a good mind”, and Bain (1865, p. 129) argued that “the distinctive feeling of anger implies the impulse knowingly to inflict suffering upon another sentient being and to derive a positive gratification from the fact of suffering inflicted”. More contemporary scholars that have built on this theoretical and empirical work confirmed that anger involves negative antecedents, experiences, and consequences (e.g., Averill, 1982; Berkowitz & Harmon-Jones, 2004; Frijda, 1986, 1987; Izard, 1991; Kuppens, Van Mechelen, Smits, & De Boeck, 2003; Russell, 1991).

On the other hand, anger has been identified as a moral emotion. Moral emotions are linked to the interest and welfare of persons other than the self (Haidt, 2003). There are many cases in which angry people stand up for the right of others and behave in ways that have positive consequences for society (e.g., Frank, 1988; Haidt; Kahneman, Schkade, & Sunstein, 1998; Smith, 1759). Not only is anger moral in the sense that it is felt over hurt inflicted upon others, there are also some preliminary indications that it may induce prosocial behaviors (e.g., Iyer, Schmader, & Lickel, 2007; Wakslak, Jost, Tyler, & Chen, 2007; Vitaglione & Barnett, 2003). For example, Lotz, Okimoto, Schlösser, and Fetchenhauer (2011) have shown that in cases where people experience anger because of unfairness done to someone else, people use both punishment of a perpetrator as well as compensation of a victim as justice interventions. The question is when, why, and how anger leads to more punitive or to more compensatory behaviors, or whether such findings should be accounted for by some other mechanism. This dissertation presents seven chapters containing theoretical analyses and empirical studies in order to come to a first answer to this question.

### **What is Anger?**

If I were to succinctly describe the core of research on anger it would be that anger is about blame and goal attainment. One of the scholars that provided comprehensive work on anger is Averill. He defines anger as an emotion that primarily ensues when “frustration is occasioned by the actions of another person, actions which are appraised by the angry individual as unjustified or at least avoidable” (Averill, 1982, p. 129). He

further said that: “The typical instigation to anger is a value judgment. More than anything else, anger is an attribution of blame” (Averill, 1983, p. 1150). Also Frijda, Kuipers, and Ter Schure (1989) defined anger as an emotion that concerns other-blame: “Anger and related emotions corresponded to appraisal of a negative event caused by another person (agency other), and involving unfairness. Appraisal of other’s agency, found with anger in all studies similar to ours, is shared by distrust, startle, and, understandably, jealousy.” Or, in the words of Lewis (2001, p. 215): “Anger rapidly couples with the appraisal that someone is at fault”. Hence, feeling angry does not just tell us that something went wrong, but that someone else is responsible for this wrongdoing (Schwarz, 2002).

Blame appears to be an important determinant in differentiating anger from other, related emotions, such as frustration, annoyance, and irritation (which belong to different subcategories in the same emotion cluster, see Shaver, Schwartz, Kirson, & O’Connor, 1987). For example, Clore, Ortony, Dienes, and Fujita (1993) have stated that: “Perceptions of blameworthiness (attributions of blame) are an important element in an emotion we call *anger*, but they are not important in another angerlike emotion that we call *frustration*” (p. 60), and “The formal specification of anger is, *disapproving of someone else’s blameworthy action and being displeased about the related undesirable event*” (p. 69). Thus, anger has a focus on blameworthy actions and undesirable outcomes whereas frustration only has a focus on undesirable outcomes. Averill (1983, p. 1151) adds that anger-like emotions such as frustration or annoyance are not just different from anger because of intensity, but more because of seriousness:

A person might get angry over the killing of baby seals, but only annoyed by someone loudly chewing gum, although the latter could be more immediately upsetting. This brings us back to the issue of blame. Anger has a moral connotation that annoyance does not, and morality cannot be reduced to a matter of intensity, in the sense (say) of physiological arousal.

Goal blockage has often been discussed in relation to anger as well, and has generally been accepted as an important determinant of anger (e.g., Berkowitz & Harmon-Jones, 2004; Frijda, 1986; Kuppens et al., 2003; Scherer, 1984, 1993). Note that goal blockage has also been termed as a goal-path obstacle (Smith & Ellsworth, 1985), goal/need

conduciveness (Scherer, 1984), motivational incongruence (Smith & Lazarus, 1993), motive-inconstant goal blockage (Roseman & Smith, 2001), or as an undesirable event (Ortony, Clore, & Collins, 1988). In general, it refers to appraising an event as blocking one's goals, which causes the anger.

If a negative event is not appraised as blocking one's goals, anger will most likely not be experienced. Or, as Roseman and Smith (2001, p. 16) stated: "If one blames another person for a negative event that is not really motive-incongruent or that would be motive-incongruent for most people but is not for the individual experiencing the event, no anger will be felt". Thus, if I blame the baker for not making the bread I ordered, forcing me to eat yoghurt for a week, I will not feel angry in response to this 'negative' event if I don't really mind eating yoghurt for a week.

Other elicitors of anger – which might be seen as more specific instances of the general themes of other blame and goal blockage – are violations of social norms or salient values, and injustice/inequity (e.g., Mikula, Scherer, & Athenstaedt, 1998; Nelissen & Zeelenberg, 2009; Scherer, 1984). Especially in the domain of injustice, anger has received different labels throughout various literatures. For example, we know empathic anger (anger on behalf of a victimized person; Vitaglione & Barnett, 2003), personal anger (anger at harm to self, O'Mara Jackson, Batson, & Gaertner, 2011), or indignation, moral outrage, or moral anger (anger at violation of a moral standard or norm; Batson et al., 2007; Elster, 1998; O'Mara et al.). In this dissertation I will use the term 'first-party anger' when I mean anger over being harmed oneself, and 'third-party anger' when I mean anger over someone else being harmed, which often entails the violation of a moral standard or norm.

### **What Behaviors do Angry People Display?**

In order to understand the emergence of behavior following anger, it is helpful to look at anger's central concern (Frijda, 1986). The central concern is what gives rise to an emotion and defines what people strive for when experiencing a certain emotion. An emotion signals that one's concern is at stake, and that something in the current situation needs to be changed. Hence, knowing what the central concern of an emotion

is means that we can predict emotion ensuing behaviors. Emotions prioritize behavior in order to deal with the concern in question (Frijda; Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008). As discussed previously, anger is an emotion with a general concern for goal attainment, meaning that behavior that follows from anger is aimed at removing the obstacle to attain the goal.

Studies that have looked at the behavioral consequences of anger are relatively scarce, but have convincingly shown that people respond with antagonistic behaviors when their goal has been blocked. For example, anger has been shown to lead to aggression (e.g., Berkowitz, 1990), revenge taking (e.g., Bougie, Pieters, & Zeelenberg, 2003), assault or opposition (e.g., Frijda et al., 1989), and punishment (e.g., Nelissen & Zeelenberg, 2009; Seip, Van Dijk, & Rotteveel, 2014). However, when looking at third-party situations (i.e., where anger is experienced because someone else is harmed), there are clear indications that anger can have prosocial consequences. Previous research already pointed towards more positive behaviors stemming from anger (e.g., Fischer & Roseman, 2007), and correlational studies have related anger to a support for and prosocial activities in favor of the disadvantaged (Montada & Schneider, 1989; Wakslak et al., 2007), helping a victim (Vitaglione & Barnett, 2003), and compensation of victims (Iyer et al., 2007; Lotz et al., 2011).

It is important to note that third-party situations allow for prosocial behavior to emerge whereas first-party situations generally do not (as acting prosocially towards oneself is often not possible). Still, research on anger has often only included the option to act antagonistically. For example, in the context of economic games, research finds that norm violations that lead to anger elicit higher punishment to those norm violators (Fehr & Fischbacher, 2004; Henrich et al., 2006; Nelissen & Zeelenberg, 2009; Seip et al., 2014). The literature on economic games and altruistic punishment has neglected other types of justice interventions such as compensation. Hence, if angry people would have been inclined to act prosocially towards a victim, there was often no possibility to do so. Although administering punishment can have positive consequences for upholding morality and cooperation in society (e.g., Fehr & Fischbacher; Frank, 1988; Haidt, 2003; Kahneman et al., 1998; Smith, 1759), it is not considered a prosocial act.

In this dissertation I focus on the behavioral consequences of anger in third-party situations and argue that anger can lead to prosocial behavior when the option to do so is included. More specifically, it is investigated when, why and how anger leads to prosocial behavior.

### Overview of Chapters

The chapters in this dissertation are based on individual papers that are published or under review. As a consequence, the co-authored chapters contain “we” instead of “I”. Furthermore, the chapters are written such that they can be understood separately, but they can also be read as part of a set. The order of the chapters reflects the development of my reasoning about anger<sup>1</sup>.

Chapter 2 reviews the literature on behavioral consequences of anger, and proposes that the behavioral consequences can be explained from an equity perspective (i.e., the idea that angry people want to right wrongs/restore equity).

Chapter 3 is aimed at experimentally establishing whether anger leads to prosocial behavior. The most important finding is that prosocial consequences stem from third-party anger (where there is a possibility to act prosocially towards a victim), and that acting prosocially towards a victim is preferred over punishment of a perpetrator. These prosocial effects of anger seem to occur independently from empathic concerns.

Chapter 4 investigates when anger leads to prosocial behavior, by testing the equity perspective as proposed in Chapter 2. The most important finding is that anger leads to prosocial behavior when one can still restore equity with that behavior; when equity is already restored by compensation of the victim or punishment of the perpetrator, one’s anger and one’s own motivation to act prosocially towards the victim decrease.

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<sup>1</sup> The following applies to all studies in this dissertation: all data exclusions (if any), all manipulations, and all measures are reported. Studies with U.S. Mturk workers had a HIT approval rate of 95% or more and received \$0.10-\$0.25 for their participation. When there was an inequality of variances when testing differences between means using *t*-tests, corrected degrees of freedom are reported. We use Cohen’s *d* for effect sizes of *t*-tests. In case of a paired samples *t*-test, we used the following formula to calculate Cohen’s *d*:  $t\sqrt{1/n}$ .

Together these results suggest that anger is an emotion with an equity-restoring goal, and provide insight into the anger-prosocial behavior link by showing that anger only leads to prosocial behavior when one can restore equity with that behavior.

Chapter 5 is focused on investigating the robustness of the preference for compensation over punishment; a coincidental but consistent finding from Chapter 3 and Chapter 4. In six studies it is consistently found that people prefer compensation of a victim over punishment of a perpetrator when varying both the situation as well as the contribution that compensation and punishment have in restoring equity. This chapter informs us about people's behavioral preference in trying to resolve situations of inequity or of social transgression.

Chapter 6 presents a potential application of the prosocial consequences of anger into a consumer context. More specifically, in this chapter it was found that anger can act as an emotional appeal in soliciting charitable donations: When a donation serves a specific equity restorative function as compared to a non-restorative function, only angry participants donated more to charity.

Finally, Chapter 7 summarizes and discusses the results from all chapters. It also outlines important implications and suggestions for future research that can be derived from the results.







# Chapter 2

## Anger and Prosocial Behavior

This chapter is based on: Van Doorn, J., Zeelenberg, M., & Breugelmans, S. M. (2014). Anger and prosocial behavior. *Emotion Review*, 6, 266-273.  
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Anger is often primarily portrayed as a negative emotion that motivates antagonistic, aggressive, punitive, or hostile behavior. In this chapter it is proposed that this portrayal is too one-sided. A review of the literature on behavioral consequences of anger reveals evidence for the positive and even prosocial behavioral consequences of this emotion. A more inclusive view of anger and its role in upholding cooperative and moral behavior is outlined, and a possible role of equity concerns including new predictions and lines of research derived from this equity perspective are suggested.

## Anger and Prosocial Behavior

Anger is typically seen as a negative emotion. It is elicited by situations that are seen as undesirable, it feels bad (i.e., it has a negative valence), it motivates goals of getting back at others, and leads to behaviors that are generally disadvantageous to others, such as complaining, exclusion, and overt aggression and punishment (e.g., Berkowitz, 1990; Bougie, Pieters, & Zeelenberg, 2003; Frijda, Kuipers, & Ter Schure, 1989; Greitemeyer & Rudolph, 2003; Lemay, Overall, & Clark, 2012; Nelissen & Zeelenberg, 2009; Pillutla & Murnighan, 1996; Roseman, Wiest, & Swartz, 1994; Van Coillie & Van Mechelen, 2006). Indeed, the evidence for anger – in all its aspects – as a negative emotion seems to be strong.

In the current article, we do not dispute this evidence, but rather we propose a richer perspective that suggests the view of anger as a negative emotion is one-sided. Anger is associated with both negative and (in)directly positive behavioral consequences. By direct positive consequences we refer to the prosocial or compensatory behaviors of angry people towards others. By indirect positive consequences we refer changes in others' behavior that benefit us and that are a response to expressions of anger. This review of the anger literature centers around two main points. First, we argue that prosocial behaviors can originate directly from the experience of anger. Second, taking a functional perspective (e.g., Frijda, 2004; Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008), we seek to explain both antagonistic and prosocial consequences of anger in terms of equity concerns.

Before expounding the two main points it may be useful to describe how we view anger and its central concern. According to Frijda (1988, p. 351): “Emotions arise in response to events that are important to the individual's goals, motives, or concerns. Every emotion hides a concern, that is, a more or less enduring disposition to prefer particular states of the world. A concern is what gives a particular event its emotional meaning.” The concern defines what people strive for when feeling a certain emotion. Most emotion research conceptualizes anger as an emotion stemming from intentional goal blockage by another agent (e.g., Berkowitz & Harmon-Jones, 2004; Kuppens, Van Mechelen, Smits, & De Boeck, 2003; Scherer, 1984, 1993). Appraisals of intentional goal

blockage elicit feelings of anger, which are characterized by a motivation (and concomitant action tendencies) to remove the obstacle and attain the desired goal.

In interpersonal contexts, this general concern translates into a concern for equity or just relations (e.g., Scherer, 1984; Stillwell, Baumeister, & Del Priore, 2008). For example, in an analysis of seven emotions among 2,921 participants in 37 countries, Mikula, Scherer, and Athenstaedt (1998, p. 769) found that “Anger producing events were most frequently perceived as very unfair (...). Events experienced as unjust were described as more immoral, *more obstructive to plans and goals*, and having more negative effects on personal relationships” (italics added). Put differently, anger is about getting even.

Please note that we do not argue that all experiences of anger are about equity or justice. We do argue that this is the case for interpersonal anger, which is the focus of this review. In the literature on the behavioral consequences of anger, the reader may encounter different terms, such as moral outrage, personal anger, or empathic anger (e.g., Batson et al., 2007). Although different terms may be used, all these constructs appear to concern interpersonal anger.

The motivation to restore equity can lead to different types of behavior. In dyadic situations, the most commonly observed behavior is punishment. Lowering the outcomes of a perpetrator leads to more equitable relations. Central to the current paper is that in triadic (three party) situations another behavioral alternative is available, namely compensation. When people *observe* an unfair or inequitable situation (e.g., an unfair distribution of resources) this allows for equity restoration through either punishing the perpetrator (e.g., taking away money) or compensating the victim (e.g., giving money). In dyadic situations, where people themselves are treated unfairly, the only viable option to restore equity is to punish the perpetrator as it is unlikely that people can compensate themselves. Thus, even though the anger experience may be the same in dyadic and triadic situations, the different affordances in these situations allow for different behavioral consequences (Frijda & Zeelenberg, 2001).

We present our argument by first discussing the common negative view of anger and its empirical foundation. Then, we discuss positive consequences of anger, including both indirect and direct effects. After describing the empirical evidence, we describe a possible integration of the findings from an equity perspective, and we explain how such a perspective relates to existing emotion perspectives about anger-behavior links. We end by proposing a research agenda for empirically testing these ideas.

### **The Negative View of Anger**

Anger has featured prominently in treatises of emotions, ever since scholars started to consider emotions a worthwhile topic for scientific scrutiny. In 1759, Adam Smith identified anger as the “greatest poison to the happiness of a good mind” (p. 58). Alexander Bain (1865) argued in a similar vein that “the distinctive feeling of anger implies the impulse knowingly to inflict suffering upon another sentient being and to derive a positive gratification from the fact of suffering inflicted” (p. 129). Even Darwin (1899), known for his nuanced and functional views of emotions and their expressions, was quite explicit about the negativity of anger: “(...) an indignant man unconsciously throws himself into an attitude ready for attacking or striking his enemy, whom he will perhaps scan from hood to foot in defiance” (p. 244-245).

In view of such parity among our intellectual forbearers it is not surprising that many contemporary psychologists also highlight the negative effects of anger. For example, Izard (1991, p. 241) stated that when an individual experiences anger “there is a feeling of power and an impulse to strike out, to attack the source of anger,” and Averill (1982, p. 178) argued that “the desire to gain revenge on, or to get back at the instigator of anger can almost be taken as a definition of anger.” Studies describing the experiential content of anger found that action tendencies, actions, and emotivational goals such as feeling like hitting someone and feeling like yelling at someone, saying something nasty to someone, wanting to hurt someone, and wanting to get back at someone are characteristic of this emotion (cf., Roseman et al., 1994). The anger script includes a desire for retribution, a loss of control, and attempts to strike out and harm the offender (Russell, 1991). Likewise, Frijda et al. (1989) argued that anger differs from other emotions by scoring high on “moving against,” which refers to antagonistic tendencies

such as assault or opposition. Finally, both Averill (1982, 1983) and Berkowitz (1989, 1990), portrayed anger as the subjective state accompanying or driving many forms of aggression. Of course, none of these researchers claim that anger *only* leads to aggression or punishment, but the primary focus of these perspectives on the negative consequences of anger can be clearly seen.

The negative impulses of anger are not limited to motivations but can also be observed in behavior. Research by Bougie et al. (2003) investigated angry behaviors in service encounters. In a first study, they found that angry customers felt like behaving aggressively, wanted to get back at the organization, and wanted to hurt someone. In a second study, they found that experiencing anger predicted negative word-of-mouth (WOM; i.e., telling others of one's social network about the negative service encounter), customer complaints aimed at obtaining a remedy or restitution from the service provider, third-party complaining (not directly related to the dissatisfying experience and external to the consumer's social circle, such as newspapers and legal agencies), and switching between firms. In related research, Wetzer, Zeelenberg, and Pieters (2007a) showed that seeking revenge on the firm motivated negative WOM in angry consumers (see also, Stillwell et al., 2008). Thus, empirical studies found that anger experiences are associated with negative feelings, negative interpersonal inclinations, and even negative interpersonal behaviors.

Anger also features prominently in the literature on punishment, albeit more implicitly. For example, anger has been proposed to be the proximate mechanism underlying third-party punishment (Fehr & Fishbacher, 2004; Fehr & Gächter, 2002; Nelissen & Zeelenberg, 2009). Fiske and Tetlock (1997) argued that taboo trade-offs (which violate normative conventions about admissible exchanges and markets) produce strong and immediate reactions of moral outrage, leading people to want to punish norm-violators. There are a number of factors that moderate the relationship between anger and punishment, such as whether the perpetrator had already received punishment (Goldberg, Lerner, & Tetlock, 1999), whether participants were accountable while determining responsibility and punishment (Lerner, Goldberg, & Tetlock, 1998), and whether the wrongdoer was identified (Small & Loewenstein, 2005).

Anger has often been associated with aggression. According to the frustration-aggression hypothesis, frustration or the thwarting of goal-directed behavior promotes aggression (Dollard, Doob, Miller, Mowrer, & Sears, 1939). Cognitive neoassociationistic theory explains why aversive events increase aggressive tendencies through general negative affect and anger is considered to be one of several potential causes of aggressive behavior (Berkowitz, 1989).

Anger also has been judged to lead to offensive behavior within *intergroup* situations. Mackie, Devos, and Smith (2000) found that participants who perceived the ingroup as strong were more likely to experience anger toward the outgroup and to desire to move against or harm the outgroup. Furthermore, Skitka, Bauman, Aramovich, and Morgan's (2006) results indicate that, shortly after the 9/11 terrorist attacks, anger (not fear) predicted support for expanding a war against Afghanistan. These studies, however, were all conducted during the escalation stage of conflict. Recent research found more constructive effects of anger when not examined at the escalation stage of conflict, as we discuss later in this paper.

To summarize, anger has often been related to negative feelings and behaviors that suggest that anger only results in harm or punishment, or the intention to do so. We propose that both the negative behaviors associated with anger and other compensatory behaviors are both means to the same end (i.e., the goal of restoring the unjust or inequitable relation). However, the specific set-up of past studies has not yet enabled a proper test of this idea. As explained in the next sections, there is substantial evidence for indirect positive effects of anger and even for direct positive effects.

### **Indirect Positive Effects of Anger**

Though anger is often viewed as antagonistic and destructive, it is also often considered to be a moral emotion (e.g., Haidt, 2003), linked to the interest and welfare of persons other than the self. Anger can be triggered vicariously, leading to behavior such as altruistic punishment that comes at a cost to the actor, but actually conveys benefits upon other people and society in general. As a case in point, there is a line of research showing that the communication of anger can be beneficial in negotiation settings by



eliciting cooperation (e.g., Van Kleef & Côté, 2007). Outside of negotiation settings, anger could explain why the threat of (altruistic) punishment is enough to deter potential free-riding or selfishness in cooperative settings (see Fehr & Fishbacher, 2004).

Fischer and Roseman (2007) also argued that the expression of anger can be used to instigate changes in others' behavior. When one expresses anger to someone, this signals that the relationship with that person is meaningful, important, and worthy of pursuing, which may motivate the other person to change his or her behavior in order to attain a better outcome. Their studies showed that participants in an anger condition reported a higher degree of intimacy with the person they were angry at, and more reconciliation intentions (making up, talking it over, and solving the problem) than did participants in a contempt condition (though it should be noted that the studies lacked a non-emotional control condition).

Along similar lines, several studies have shown that anger makes people want to socially share their feelings (Rimé, 2009; Wetzler, Zeelenberg, & Pieters, 2007b). For example, it was found that angry people have a motivation to "vent" (Wetzler et al., 2007a), to talk to others (Van Coillie & Van Mechelen, 2006), and to speak sooner about their anger or fear experiences than about sadness, joy, or love experiences (Rimé, Mesquita, Philippot, & Boca, 1991). According to Rimé, emotion sharing can enhance participants' social integration and attachment, especially in very intense situations.

To conclude, there are various suggestions in the emotion literature that anger can have positive interpersonal consequences. We would like to point to the indirect nature of these proposed consequences. It is not the anger itself that leads people to behave prosocially, but rather the threat of negative behavior following from anger that leads other people to comply or cooperate. Also, it is not the anger itself but rather its sharing with others that produces positive consequences. We believe that, though important, such indirect positive effects are only part of the story. Below we discuss research showing more direct effects of anger on prosocial behavior (i.e., performed by the person experiencing the anger).

### Direct Positive Effects of Anger

Evidence for direct prosocial consequences of anger has been found as early as 1989 by Montada and Schneider. They studied the impact of emotions on the readiness to engage in prosocial activities in favor of the disadvantaged. Participants were confronted with scenarios describing the problems and misery of different groups of people. Emotional reactions towards these problems were assessed, among which were anger (moral outrage about the unjust consequences of unemployment), existential guilt (about one's own privileges compared the disadvantaged), and sympathy. The results revealed that anger was a predictor of prosocial commitment (e.g., claiming support for the disadvantaged and the spending of money for charitable goals), even more so than existential guilt and sympathy.

A study by Wakslak, Jost, Tyler, and Chen (2007) obtained comparable results for the association between moral outrage and support for the disadvantaged. They studied the effects of participants' general emotional distress (by using both a moral-outrage scale and an existential-guilt scale) and endorsement of a system-justifying ideology (ideologies that justify social and economic inequality) on support for policies of redistribution (changes designed to help members of underrepresented groups gain jobs or university admission). Moral outrage mediated the effect of system justification on support for redistribution, where existential guilt or negative affect in general did not.

Two studies by Iyer, Schmader, and Lickel (2007) showed that anger need not to be aimed at a specific group to predict prosocial behavior towards that group. Anger aimed at the ingroup predicted compensation toward the outgroup: American and British participants (ingroup) who perceived their countries to be responsible for illegitimate conditions in occupied Iraq (outgroup) reported more anger; anger, in turn, predicted action intentions to advocate compensation to Iraq, confrontation of the agents responsible, and withdrawal from Iraq. In contrast, guilt did not directly predict any political action, and shame predicted only withdrawal from Iraq. Within intergroup situations, Halperin, Russell, Dweck, and Gross (2011) have shown that anger aimed at an *outgroup* can have positive effects as well. Inducing anger toward an outgroup

increased support for making compromises in upcoming negotiations among those with low levels of hatred, but decreased support for compromise among those with high levels of hatred. Furthermore, within intergroup conflict, anger is related to a goal of correcting wrongdoing and to the promotion of support for positive, non-violent policies (Halperin, 2008; Reifen Tagar, Federico, & Halperin, 2011).

Vitaglione and Barnett (2003) showed differences in the effects of trait empathic anger and of state empathic anger (anger because someone else is harmed) on actions toward victims and transgressors. Participants heard a victim of drunk driving and reported their experienced empathic anger and the willingness to engage in actions directed toward the victim and transgressor. Results showed that state anger was positively related to helping the victim (spend time with the victim) and with punishing the perpetrator (circulate a petition to have the driver's license revoked permanently), in contrast to trait empathic anger which was related to neither.

A final example concerns a study by Lotz, Okimoto, Schlösser, and Fetchenhauer (2011). They investigated emotional determinants of third-party punishment and compensation. Participants observed a game between two other players and witnessed an unfair allocation of money. Participants were either told that the victim was aware of this unfair allocation or not. Next, participants responded to questions about their emotions, reflecting offender-focused moral outrage (angry, shocked, hostile, distressed, and aggravated) and self-focused feelings of threat (anxious, nervous, guilty, and confused). Participants were given money that they could use for punishing the perpetrator and/or compensating the victim. Moral outrage predicted both participants' assignment of punishment and compensation, regardless of whether the victim knew about the unfair allocation or not. Self-focused emotions predicted only compensation when the victim knew about the unfair allocation.

The above-mentioned studies are highly consistent in that they show an association between experienced anger and prosocial behavior (helping the disadvantaged or the ones harmed). Interestingly, most studies not only suggest positive behavior may directly follow from anger, they also suggest that anger may motivate two seemingly opposite behaviors. Apparently, moral outrage can lead to both punishment of the

perpetrator and compensation of the victim (Darley & Pittman, 2003). On the basis of the current empirical record it is hard to assess how such positive and negative behaviors relate, simply because few studies simultaneously measured antagonistic and prosocial behavior.

Before we proceed with a discussion of what these findings imply for our current conception of anger, it may be good to briefly think about why the prosocial consequences of anger may have been overlooked in most classical and contemporary discussions. Most studies on the negative consequences of anger are based on dyadic situations, where the person experiencing anger was the victim of the perpetrator's actions. In terms of the behavioral consequences of anger it is entirely understandable that we only observe antagonistic behavior in such situations. There is simply no victim to be compensated (unless one could compensate oneself). It should be noted that even in such situations, people may opt for non-antagonistic behaviors to maintain positive relationships (Deffenbacher, Oetting, Lynch, & Morris, 1996). The few studies that did include both positive and negative consequences typically did not directly measure anger or only as a trait. For example, Chavez and Bicchieri (2013), Leliveld et al. (2012), and Van Prooijen (2010) investigated compensation of victims after injustice or unfairness, but lacked a measurement of anger. Although it is plausible that anger was present in these studies, the absence of a measurement prohibits valid statements about anger's effect on prosocial behavior. Vitaglione and Barnett (2003) found that trait anger (how often or how easily people are angered) and state anger (how angry people feel right now about a specific situation) elicit distinct behaviors.

To summarize, there appears to be a small yet consistent body of evidence demonstrating prosocial effects of anger in third-party situations. In the next section we describe our attempt to explain both the positive and negative interpersonal behaviors that arise from anger.

### **An Equity Perspective on Anger**

When thinking about how to conceptualize anger in view of the evidence for both its positive and negative effects, it is useful to start from a functional perspective. Specific

emotions are associated with specific behaviors and behavioral tendencies (Frijda, 2004; Frijda, et al., 1989; Keltner & Haidt, 1999; Roseman et al., 1994). Thus, emotions shape and give direction to behavior. This can take a direct route, through specific action tendencies that deal with the central concern of the emotion, and a more indirect, “cold” route as is described in the notion of affect-as-information (Zeelenberg et al., 2008). Every emotion centers around a concern, a more or less enduring disposition to prefer particular states of the world (Frijda, 1988). A concern is what gives emotional meaning to a particular situation. Most scholars agree that the perception of goal blockage is a central concern to anger (e.g., Berkowitz & Harmon-Jones, 2004; Frijda, 1986; Kuppens et al., 2003; Scherer, 1993). Consequently, behavior following from anger is aimed at removing the obstruction.

We believe that in *interpersonal* contexts, this general concern translates into the perception that the goal of equity or justice is obstructed (please note that although we use the term equity, equity concern in other literatures is often expressed as justice or fairness). Scherer (1984, p. 310) already argued that justice/equity concerns are a facet of the central concern of anger. Importantly, an equity perspective can explain why anger motivates both antagonistic and prosocial behaviors. Anger reacts to perceived violations of equity – as is the case with unjust or unfair situations where the outcome for a person elicits an inequitable relation – and motivates a goal to restore equity (Stillwell et al., 2008). In third-party situations equity can be restored both by taking away the benefits of the perpetrator (i.e., punishment) or by compensating the disadvantage of the victim. Either way, equity is restored and the concern of anger is satisfied.

In this paper we have focused on the behavioral consequences of anger. However, our view also has implications for the antecedents or appraisals of anger. Different appraisals tend to be based on different sensitivities and thus motivate different modes of action readiness (Frijda, 2004). In the case of anger, when people act antagonistically or prosocially in response to the concern for equity, this might suggest inequity to be a more specific interpersonal appraisal of goal blockage. In an abstract sense goal obstruction is the appraisal that applies to all forms of anger. In interpersonal contexts this concern may manifest itself as a specific appraisal of equity/fairness violations. As

Scherer (1984) suggested, the same general appraisal may manifest itself differently in different contexts.

Within the punishment literature, we also find support for an equity perspective. For example, Raihani and McAuliffe (2012) show that equity, and not reciprocity, is the driving motivation behind punishment. Furthermore, individuals in many cultures seem to be inclined to reject or punish others who give too much, those who make so-called hyper-fair offers (e.g., Herrmann, Thöni, & Gächter, 2008). Although anger has not been explicitly measured in these studies after being confronted with the inequity, it appears that inequity motivates punishment to restore equity.

Equity can also be restored via compensation. Walster, Berscheid, and Walster (1973) already suggested that in dyads a *perpetrator* can restore injustice by compensating the victim. We argue that also in triads, where one is not the perpetrator but observes an inequitable situation, people are motivated to compensate the victim. A final illustration of an equity perspective can be found in Goldberg et al.'s (1999) study. They found that anger elicited by injustice carried over to judgments of unrelated acts of harm *only* when the perpetrator went unpunished. These results suggest that when equity is restored, the need for punishment disappears.

The equity perspective also differs from an empathic perspective, meaning that anger-induced compensation is independent from empathy-induced compensation. An illustration of this position is the research by Lotz et al. (2011) who manipulated whether or not victims knew that they had been victimized by an unfair allocation. Results showed that regardless of whether or not victims knew they had been victimized, moral outrage predicted participants' assignment of punishment and compensation, providing evidence that it is the anger itself and not empathy triggered simultaneously that motivates the restoration of equity and thus the prosocial behavior. After all, the goal of empathy is to comfort someone, but if the victim does not know about the unfair allocation there is no one to comfort.

Related illustrations can be found in Blader and Tyler (2002) who showed that both empathy and justice principles motivated prosocial behavior, but that familiarity is an

important determinant of empathy and not of justice principles. Justice theory suggests that we feel concerned even when a loathsome person for whom we feel little empathy is the victim of injustice. Although anger was not explicitly mentioned in this relationship between justice principles and prosocial behavior, the emotion appraisal literature shows that injustice is an important elicitor of anger (Mikula et al., 1998). In addition, Montada and Schneider (1989), discussed previously, showed that moral outrage was a predictor of prosocial commitment, even more so than sympathy; a construct very much related to empathy (Eisenberg & Fabes, 1990).

An equity perspective may help to understand results which seem to contradict the positive relation between anger and prosocial behavior. For example, Weiner, Perry, and Magnusson (1988) reported that individuals with mental-behavioral stigmas (e.g., drug abusers) evoked relatively high anger in individuals, and elicited generally low support for personal assistance and charity. Individuals with a physical stigma (e.g., blindness), however, evoked relatively low anger and more support for personal assistance as well as charitable donations. Also Polman and Ruttan (2012) showed that angry participants donated less money to research on cancer than participants not experiencing this emotion. At first sight, these studies appear to contradict the anger-compensation relationship. However, when analyzed from an equity perspective, these studies have in common that participants were unable to restore equity through prosocial behavior. Helping someone or donating to charity are behaviors that, in these cases, cannot contribute to righting a wrong. So, the fact that anger only correlated with negative behaviors might be explained by the absence of an equity restoring option.

Note that the differential effects of anger could also be explained from an attribution perspective (e.g., Weiner, 2006; Weiner et al., 1988). When we attribute blame to a person then anger towards that person leads to negative, punitive behaviors; however, the same anger may predict prosocial behaviors towards other people whom we do not blame. This explanation differs from an equity perspective in the sense that attribution is about the perception of blame in people and equity is about perception of the undesirable situation. Although very compatible, both views would lead to different predictions. We predict that only victims of inequity should be compensated and not just any needy person in an anger situation. Also, prosocial compensation should

diminish when inequity has been restored by a third party (e.g., an insurance company), which is hard to explain from the attribution of blame which has not changed.

### Summary and Research Agenda

2

The goal of this review was to propose that prosocial and constructive behaviors can originate directly from the experience of anger, and to explain behavioral consequences of anger by taking a functional perspective that describes anger as an emotion with an equity-restoring goal. As shown in the studies reviewed, anger can have clear positive consequences, both indirectly by shaping other people's behavior, and directly through evoking prosocial or compensatory behavior in the angry person.

By this we do not propose that anger is a prosocial emotion but rather that the prosocial consequences of anger can be complementary to the negative, antagonistic behaviors. Anger itself is neither positive nor negative, only its consequences can be classified as such. In the words of Tavris (1989, p. 259): "Anger is good or bad depending on its use, not its nature." Of course, the experience of anger is characterized by a negative valence (Solomon & Stone, 2002), but this is because it signals that the concern for equity is threatened or violated, and that action is needed (Carver & Harmon-Jones, 2009).

Whether antagonistic or compensatory behaviors will arise might be dependent upon a secondary appraisal of the constraints and affordances that a situation offers with respect to restoration of equity. In the case of dyadic situations where oneself is the victim of an inequitable situation, compensatory behaviors are constrained by the fact that one cannot compensate oneself, leaving only punishment as the most obvious option to deal with the inequity. Triadic situations, where one observes an inequitable situation, allow for compensation of the victim and for punishment of the perpetrator. However, if punishment is the only equity restoring option given, it is likely that such an option is selected. This does not mean that people do not want to compensate, it is just that the situation does not allow for such behavior to be expressed.

An important addition to our thesis is that we believe that the prosocial consequences of anger that we described occur independently of experienced empathy. Put



differently, we do not think that anger solely predicts negative behavioral effects and that any concomitant positive effects are explained by simultaneous experiences of empathic concern. Although this prediction has not yet been thoroughly tested, we believe that the literature that we described before lends it some plausibility. For example, although trait empathy is a predictor of compensation to a victim (Leliveld et al., 2012), research that includes a measurement of anger seems to suggest that anger affects prosocial behavior over and above the effects of trait empathy (Blader & Tyler, 2002; Montada & Schneider, 1989). Furthermore, Lotz et al. (2011) found no effect of victim visibility on restoration of inequity and thus the prosocial behavior, suggesting that empathy cannot explain why compensation also occurs in such situations.

Our beliefs about what anger is and what anger does, do not only have consequences for how we interpret existing research but also how we conceptualize future research. Previous research might have been able to show prosocial effects of anger if it had included a standard measure of anger as well as simultaneous measures of compensatory and retaliatory behavior. The studies that we discussed as showing a relation between anger and prosocial behavior were correlational in nature. Furthermore, anger was operationalized in many different ways, including generalized anger (e.g., Iyer et al., 2007), moral outrage specifically (e.g., Montada & Schneider, 1989; Wakslak et al., 2007), or empathic anger (e.g., Vitaglione & Barnett, 2003). Although different terms are used, all these constructs appear to concern the same anger experience as they focus on someone else getting harmed. Finally, sometimes anger is reported as a mediating factor, and sometimes it is not, meaning that several other factors in combination with anger are considered. Future studies on anger and behavior may benefit from a clear operationalization of anger and related constructs as well as from different behavioral options, including compensatory and retaliatory options.

Although our ideas follow from previous research and theorizing on anger, it is important to note they are still speculations to be proven by empirical evidence. For this reason, we would like to outline some potential research ideas to empirically test the assumption that anger has direct prosocial effects. A first step would be to conduct an experimental study that manipulates anger and subsequently asks for antagonistic and

prosocial action (tendencies), to ascertain what is a viable response and whether one response may be more frequent than the other. Second, it would be interesting to look at the preference for either antagonistic or prosocial behavior, seeing that both punishment and compensation can restore equity. Lotz et al. (2011) already showed that individuals have a preference for both punishment of a perpetrator and compensation of a victim, and that compensation was preferred over punishment. Unfortunately, as anger was not manipulated in their study we cannot draw the conclusion that anger might elicit a preference for either punishment or compensation, which would give specific insight into the potential prosocial qualities of anger. There may be clear social benefits from compensation over punishment because the former builds positive interdependent relations where the latter does not. Although research points in the direction that angry people are inequity averse, this obviously needs further studying. Third, as outlined previously, research should consider whether inequity can be judged as a form of goal blockage, a form of injustice, a specific appraisal, or just an aversive event. Fourth, it may be instructive to study the prevalence of anger in dyadic, triadic and group settings. This may also provide information concerning the goals of anger and how we can expect anger to be manifested behaviorally.

In sum, our review of the current literature on the behavioral consequences of anger suggests a broader perspective on anger than the common negative perspective. We believe that there are compelling reasons to expect direct prosocial consequences of anger. This diversity can be understood from the perspective that, in interpersonal situations, the behaviors stemming from anger are aimed at restoring equity. Though this perspective still needs to be supported by direct empirical research, we believe that it yields an interesting, integrative view of anger, as well as some specific predictions about the role of anger in punishment and compensation.



# Chapter 3

## Prosocial Consequences of Third-party Anger

This chapter is based on: Van Doorn, J., Breugelmans, S. M., & Zeelenberg, M. (2014). *Prosocial consequences of third-party anger*. Manuscript under review.

Anger has traditionally been associated with aggression and antagonistic behavior. A series of studies revealed that experiences of third-party anger can also lead to prosocial behavior. Three naturalistic studies showed that first-party anger (anger because people themselves were harmed) and third-party anger (anger because other people were harmed) occur equally often, are felt equally intensely and both stem from perceptions of unfairness. More pronounced differences were found in the behaviors following from the anger. Four experimental studies revealed that third-party anger can lead to prosocial behaviors aimed at the victim, and that there is a preference for such prosocial behaviors over antagonistic behaviors. It is concluded that behaviors stemming from anger, whether antagonistic or prosocial, are situation-specific reactions to inequity.

### Prosocial Consequences of Third-party Anger

Anger is one of the most frequently experienced emotions (e.g., Schimmack & Diener, 1997). It is elicited by events that are unpleasant or undesired, such as situations of goal obstruction, injustice, or unfairness (e.g., Berkowitz & Harmon-Jones, 2004; Frijda, 1986, 1987; Kuppens, Van Mechelen, Smits, & De Boeck, 2003; Scherer, 1993). Because of its prevalence and because the experience of anger typically involves negative situations and feelings, it is not surprising that this emotion has long been seen as one of the most exemplary negative emotions (e.g., Averill, 1982; Berkowitz, 1990; Izard, 1991; Russell, 1991).

Interestingly, the behaviors that angry people display appear to be diverse and not so unambiguously negative. Anger is an approach-motivated emotion (Carver & Harmon-Jones, 2009) that brings forth an effort to remove the violation of what 'ought' to be (Frijda, 1986). Studies have suggested that this approach motivation can take the form of aggressive, punitive, and antagonistic behaviors as well as to more positive behaviors such as social sharing, compensation to a victim, and helping the disadvantaged (e.g., Bougie, Pieters, & Zeelenberg, 2003; Darley & Pittman, 2003; Fischer & Roseman, 2007; Iyer, Schmader, & Lickel, 2007; Lemay, Overall, & Clark, 2012; Lotz, Okimoto, Schlosser, & Fetchenhauer, 2011; Nelissen & Zeelenberg, 2009; Pillutla & Murnighan, 1996; Rimé, 2009; Roseman, Wiest, & Swartz, 1994; Van Coillie & Van Mechelen, 2006; Wetzler, Zeelenberg, & Pieters, 2007b; Wakslak, Jost, Tyler, & Chen, 2007). This mix of antagonistic behaviors (aimed at hurting the perpetrator) and prosocial behaviors (aimed at helping the victim) suggests that the predominant view of anger as a negative, antagonistic emotion may be too narrow.

Still, previous studies showing a direct relation between anger and prosocial or helping behaviors are scarce; most studies on antagonistic and prosocial behavior did not measure or manipulate anger (for a review, see Van Doorn, Zeelenberg, & Breugelmans, 2014). In this paper we aim to extend our view of anger by showing when anger leads to prosocial behavior, and seek to explain both antagonistic and prosocial consequences of anger in terms of equity concerns.

Before we describe the rationale of our studies it is useful to note that in this article we use the term prosocial behavior to refer to behavior *aimed at helping a victim* in order to restore equity. We do not propose that anger leads to a general tendency to act prosocially to anyone or at any time. In fact, as we explain below, we believe it is crucial to differentiate between first and third-party anger to understand the various behavioral expressions of anger.

### **First-party and Third-party Anger**

We can experience anger both as a result of the harm done to ourselves (first-party anger) and as a result of the harm done to someone else (third-party anger). Although first and third-party anger might feel similar, there are reasons to believe that the behaviors that follow from these emotional experiences are different. With this we do not suggest that there are necessarily two different forms of anger; instead we argue that different situations offer different behavioral constraints and affordances for the expression of anger's approach-motivation (cf., Frijda & Zeelenberg, 2001). For example, being angry after unjustly receiving a disadvantageously low amount of money could lead to the restoration of equity by punishing the perpetrator who distributed the money. Being angry because someone else unjustly received a disadvantageously low amount of money could lead to the restoration of equity by punishing the perpetrator, but also by compensating the 'victim'. Thus, observers of inequity (i.e., being a 'third party') have a wider range of restorative behaviors at their disposal than victims of inequity do. After all, victims can rarely compensate themselves.

It has already been shown that various prosocial behaviors aimed at restoring equity may occur in third-party situations. For example, Lotz et al. (2011) found that people generally compensated more than they punished in third-party situations. Furthermore, Leliveld, Van Dijk, and Van Beest (2012) found that people who scored high on dispositional empathy had a preference for compensating victims instead of punishing perpetrators in these situations. Though these studies have shown that people both compensate and punish, the question is what drives people to act prosocially in triadic situations? We have reason to believe that anger, which has hitherto been associated only with third-party punishment (e.g., Fehr & Gächter, 2002), can also motivate third-

party prosocial acts. Anger has often been related to antagonistic behaviors, but the goal of anger is not to harm or to punish. Both punishment of a perpetrator and compensation of a victim can act as a means to the end of restoring unjust or inequitable relations (e.g., Frijda, 2004; Van Doorn et al., 2013). We believe that in interpersonal situations the general concern of anger, namely goal blockage (e.g., Berkowitz & Harmon-Jones, 2004; Kuppens et al., 2003; Scherer, 1984, 1993), translates into a concern for equity (e.g., Scherer, 1984; Stillwell, Baumeister, & Del Priore, 2008). This would imply that the behaviors following from anger are aimed at restoring equity. In third-party situations this is often done in an antagonistic manner, in third-party situations equity can also be restored in a prosocial manner.

Given that there are multiple ways to right certain wrongs in third-party situations, it is surprising that in experimental research punishment has often been the only option given to participants (e.g., Fehr & Fischbacher, 2004; Fehr & Gächter, 2002; Nelissen & Zeelenberg, 2009). In the few examples in which the research included prosocial options, moral outrage (anger provoked by the perception that a moral standard has been violated; see Batson et al., 2007) substantially correlated with both participants' assignment of punishment to a perpetrator and compensation to a victim (Darley & Pittman, 2003; Lotz et al., 2011). In a similar vein, Vitaglione and Barnett (2003) found that empathic anger was positively related to both helping a victim and with punishing a perpetrator; Montada and Schneider (1989) and Wakslak et al. (2007) showed that moral outrage correlates with prosocial activities such as donating money, signing petitions, and supporting social projects in favor of the disadvantaged; and Iyer et al. (2007) suggested that anger aimed at the ingroup predicted compensation to an outgroup. Although these findings are suggestive of a relationship between anger over someone else got harmed (third-party anger) and prosocial behavior, none of these studies included manipulations of anger leads to prosocial behavior in triadic situations, where there is a *possibility* to act prosocially towards the victim. On the basis of the findings by Lotz et al. (2011), we could even expect angry people to prefer compensation of a victim to punishment of a perpetrator as a way of restoring equity. In compensation, the victim is helped out of his/her disadvantageous position; punishing the perpetrator may also restore justice, but this only puts the perpetrator in a disadvantageous position and does not take away the harm done to the victim. Thus,



compensation of a victim seems to be a more positive approach, consistent with the do-no-harm principle (Baron, 1995).

We further expect compensation to be a *direct* result of the anger, which is independent from the empathic concerns that may be triggered simultaneously (Leliveld et al., 2012). Some initial support for this expectation can already be found in the experiment by Lotz et al. (2011), who found that visibility mattered for empathy: the goal of empathy is to comfort someone, but if the victim does not know about the unfair allocation there is no one to comfort. Visibility, however, did not matter for anger, which correlated to the restoration of injustice in all cases. According to Blader and Tyler (2002), justice theory suggests that we feel concerned even when a loathsome person for whom we feel little empathy is the victim of injustice. Although anger was not explicitly mentioned or examined in this relationship, the emotion appraisal literature shows that injustice indeed is an important elicitor of anger (Mikula Scherer, & Athenstaedt, 1998). Montada and Schneider (1989) even showed that moral outrage was a stronger predictor for prosocial behavior than sympathy - a construct very much related to empathy (Eisenberg & Fabes, 1990). In sum, the effects of anger and empathy on compensation are expected to be independent of one another.

### **The Current Studies**

We report here three naturalistic studies and four experimental studies using a variety of methods to investigate how often third-party and first-party anger are experienced and what their behavioral consequences are. All methods have been proven useful for studying emotions and their consequences in previous research. Of course, each method on its own has its idiosyncratic strengths and weaknesses. As a set, though, these different methodologies inform us about the potential prosocial consequences of anger. In Studies 3.1a—c we were interested in the prevalence of third-party and third-party anger experiences and their consequences. Thus, how often do people actually experience third-party anger and third-party anger, how recent are these experiences, do these experiences differ in emotion intensity, judgments of how unfair the situation was, and in how people act on their anger? The studies showed that experience of third-party anger and third-party anger hardly differ (i.e., they occur equally often, are felt

equally intensely and both stem from perceptions of unfairness), but that they do differ in their behavioral consequences (such as in prosocial and antagonistic behavior). Study 3.2 showed in addition that prosocial behavior was displayed more often than antagonistic behavior in third-party anger situations.

Study 3.3 proved a first experimental test of whether experiences of anger (autobiographical recall) spillover to prosocial behavior in a third-party situation. This study shows that angry people are more willing to compensate a victim of unfairness, and that they are willing to do so more than punishing the perpetrator. This study also shows these effects to be independent of trait anger and trait empathy. Study 3.4 found that angry participants preferred compensation over punishment when forced to choose. Finally, Study 3.5 shows that it is the experienced anger over injustice and not merely the injustice in itself that motivates prosocial behavior towards the victim.

### **Study 3.1a-c: Investigating the Prevalence of First and Third-party Anger<sup>2</sup>**

#### **Study 3.1a**

##### **Method**

Mturk workers (294 males, 234 females;  $M_{age} = 29.28$ ,  $SD = 9.33$ ), participated in this study on anger experiences. They were asked to remember their most recent anger experience, and to write down how long ago this happened. Subsequently, participants indicated whether they were angry because they were harmed (first-party anger; FPA), someone else was harmed (third-party anger; TPA), or because of another reason (which, if selected, they were requested to explain). Next, participants indicated how angry they were in the episode, on a slider scale ranging from 0 (*not at all angry*) to 10 (*very angry*), and how unfair the episode was, on a slider scale ranging from 0 (*not at all unfair*) to 10 (*very unfair*).

<sup>2</sup> There were no gender effects in any of the studies. For reasons of clarity we recoded the original slider scales in Studies 3.1a-3.1c and 3.5. The original slider scales scores ranged from 0 to 100, which we divided by ten. Studies 3.3 and 3.4 were part of a larger testing session.

### Results<sup>3</sup>

The results are shown in Table 3.1. Based on participants' own classification of the 'type' of anger (FPA, TPA, or other), we found that 28% of the freely recalled anger episodes was FPA, 10% was TPA, and 62% involved another reason for being angry. Participants in the 'other' category sometimes did mention episodes of self-harm or other-harm. Therefore, we re-categorized these 'other anger' episodes, which yielded percentages of 49% FPA, 13% TPA and 38% other (mostly cases of frustration). These three categories formed the independent variable (labeled Condition) in subsequent analyses.

We created a scale of how long ago the reported anger episodes happened, by coding the reporting time in days and subsequently by making categories (same day, last week, last month, last year, last 5 years, or over 5 years). The order of ranking of the categories in which most anger episodes occurred did not differ between the FPA and TPA conditions, Mann Whitney *U*-test;  $Z = -1.13$ ,  $p = .260$ , but did differ between FPA and other,  $Z = -2.80$ ,  $p = .005$ , and between TPA and other,  $Z = -2.94$ ,  $p = .003$ . For all anger types, most episodes had occurred in the same week.

A MANOVA showed that there was an effect of Condition on ratings, Wilks' Lambda = .95,  $F(4, 1046) = 7.06$ ,  $p < .001$ ,  $\eta_p^2 = .03$ . Separate ANOVAs showed that there were no differences between conditions in anger intensity,  $F(1, 524) = 2.73$ ,  $p = .066$ ,  $\eta_p^2 = .01$ . There were significant though small differences on unfairness ratings,  $F(1, 524) = 13.65$ ,  $p = .001$ ,  $\eta_p^2 = .05$ . The other condition was less unfair than both the FPA and TPA conditions.

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<sup>3</sup> One participant indicated that he had not experienced anger recently, and so this participant was left out of the analyses. Thirty participants did not explicitly say how long ago the anger episode had happened and could therefore not be categorized.

**Table 3.1**

*Study 3.1a: Percentages of Recentness of Episodes, and Anger and Unfairness Ratings as a Function of Condition*

Recentness of episode	Condition		
	First-party anger ( <i>n</i> = 245)	Third-party anger ( <i>n</i> = 65)	Other anger ( <i>n</i> = 188)
Same day	13.1%	10.8%	20.2%
Same week	59.6%	55.4%	60.6%
Same month	13.9%	15.4%	14.9%
Same year	11.4%	13.8%	4.3%
Same 5 years	2.0%	3.1%	0%
More than 5 years ago	0%	1.5%	0%
Anger intensity	6.31 (2.38) <sub>a</sub>	6.63 (2.01) <sub>a</sub>	5.93 (2.41) <sub>a</sub>
Unfairness ratings	6.70 (3.13) <sub>a</sub>	6.66 (3.30) <sub>a</sub>	5.17 (3.39) <sub>b</sub>

*Note.* Anger intensity ratings could range from 0 (*not at all angry*) to 10 (*very angry*). Means with the same subscript did not differ significantly from each other,  $F(1, 524) = 2.73, p = .066, \eta_p^2 = .01$ . Unfairness ratings could range from 0 (*not at all unfair*) to 10 (*very unfair*). Means with a different subscript differ significantly from each other, all  $ps < .003$  (Tukey post hoc).

### Study 3.1b

#### Method

A new sample of Mturk workers (274 males, 195 females;  $M_{\text{age}} = 29.16, SD = 9.51$ ) were randomly assigned to the FPA condition or the TPA condition. They were asked to remember the most recent episode in which they experienced anger because they were harmed (FPA condition), or because someone else was harmed (TPA condition), and

write down how long ago this had happened. In an open-ended question participants were asked how they had acted upon their anger. Next, participants indicated how angry they were and how unfair the anger episode was, on slider scales as used in Study 3.1a.

### Results<sup>4</sup>

The results are shown in Table 3.2. Like in Study 3.1a, we created categories of how long ago the reported anger episodes had happened. The order of ranking of categories differed between the FPA and TPA conditions, Mann Whitney  $U$ -test;  $Z = -2.64$ ,  $p = .008$ . Third-party anger experiences occurred more recently than first-party anger experiences. Within the FPA condition, most anger occurred the same week or same year, and within the TPA condition, most anger occurred the same week.

Participants' responses were categorized by the first author as either antagonistic (aimed at the perpetrator, such as punching), prosocial (aimed at the victim, such as helping or comforting), venting (such as cursing, crying, and social sharing; not specifically aimed at the perpetrator or the victim), mediation (such as intervening or filing a police report), no act, or an act that does not fall into one of these categories (such as when it is unclear whether the behavior is aimed at the perpetrator or the victim and/or when behavior is not specifically positive or negative). Within both the FPA and TPA conditions participants most often indicated that they did not act after experiencing the anger.

We ran a MANOVA of Condition on ratings of anger and unfairness, Wilks' Lambda = .98,  $F(2, 462) = 5.89$ ,  $p = .003$ ,  $\eta_p^2 = .03$ . Separate ANOVAs showed that there were no differences between conditions in anger intensity,  $F(1, 463) = 0.05$ ,  $p = .833$ ,  $\eta_p^2 = .00$ . Participants in the TPA condition indicated that the situation was more unfair than participants in the FPA condition,  $F(1, 463) = 10.36$ ,  $p = .001$ ,  $\eta_p^2 = .02$ .

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<sup>4</sup> Four participants indicated that they had never experienced the type of anger that we asked for, and so these participants were left out of the analyses. Furthermore, 43 participants did not explicitly say how long ago the anger episode had happened and could therefore not be categorized.

**Table 3.2**

*Study 3.1b: Percentages of Recentness of Episodes and Behavior, and Anger and Unfairness Ratings as a Function of Condition*

	Condition	
	First-party anger ( <i>n</i> = 214)	Third-party anger ( <i>n</i> = 212)
Recentness of episode		
Same day	3.7%	3.3%
Same week	28.5%	38.7%
Same month	19.2%	18.9%
Same year	28.5%	29.7%
Same 5 years	14.5%	7.1%
More than 5 years ago	5.6%	2.4%
Behavior	First-party anger ( <i>n</i> = 233)	Third-party anger ( <i>n</i> = 232)
Antagonistic	22.3%	10.4%
Prosocial	0%	4.3%
Venting	16.7%	12.5%
Mediation	2.6%	7.3%
No act	52%	59.5%
Other	6.4%	6.0%
Anger intensity	6.64 (2.33) <sub>a</sub>	6.60 (2.22) <sub>a</sub>
Unfairness ratings	6.18 (3.29) <sub>a</sub>	7.09 (2.83) <sub>b</sub>

*Note.* Anger intensity ratings could range from 0 (*not at all angry*) to 10 (*very angry*). Means with the same subscript did not differ significantly from each other,  $F(1, 463) = 0.05, p = .833, \eta_p^2 = .00$ . Unfairness ratings could range from 0 (*not at all unfair*) to 10 (*very unfair*). Means with a different subscript differ significantly from each other,  $F(1, 463) = 10.36, p = .001, \eta_p^2 = .02$ .

### Study 3.1c

#### Method

A new sample of Mturk workers (329 males, 221 females;  $M_{\text{age}} = 28.79$ ,  $SD = 8.97$ ) participated in this study on anger experiences. They read a short introduction on anger types and indicated how often they experience FPA and TPA, on separate slider scales ranging from 0 (*not at all*) to 10 (*frequently*). In an open-ended question participants indicated what percentage (from 0% to 100%) of anger episodes in their life had been due to themselves being harmed, due to someone else being harmed, or due to other reasons.

#### Results

Participants indicated that, in general, they had experienced FPA more often in life ( $M = 5.76$ ,  $SD = 2.65$ ) than TPA ( $M = 5.26$ ,  $SD = 2.38$ ),  $t(549) = -3.86$ ,  $p < .001$ ,  $d = -0.16$ , although the effect was very small. Of all the anger episodes in participants' lives, a mean percentage of 39.33% (19.87) was FPA, which was somewhat higher than the 35.56% (18.88) of TPA,  $t(549) = -2.72$ ,  $p = .007$ ,  $d = 0.12$ , which in turn was higher than the mean percentage of 25.10% (21.08) which was due to other reasons,  $t(549) = 7.06$ ,  $p < .001$ ,  $d = 0.30$ .

#### Discussion

From these three naturalistic studies it appears that FPA and TPA are more or less equally prevalent and intense. Differences are mainly found in the responses that follow from these two anger experiences. Previous research has largely focused on FPA and its behavioral consequences, which has contributed to the view of anger being an antagonistic emotion. However, TPA is experienced frequently and seems to have different and more prosocial consequences, making it worthwhile and important to further investigate. In what follows we build on these preliminary findings and show examine in experimental settings whether FPA and TPA lead to different behaviors as well.

In the next study, we asked participants to recall and describe an occurrence in which they experienced FPA or TPA. We further asked about the behaviors engaged in during

the described anger experience, such as helping the victim or hurting the perpetrator, to more explicitly test whether prosocial consequences of anger are present in triadic situations.

### Study 3.2

3

#### Method

Tilburg University students (20 males, 109 females, three unspecified,  $M_{\text{age}} = 19.57$ ,  $SD = 2.79$ ) were randomly assigned to the FPA or TPA condition. They described a situation in which they felt angry because they got harmed (FPA condition) or because someone else got harmed (TPA condition). They described the cause and the development, as well as their thoughts, feelings, actions, and how they dealt with their anger.

Participants indicated how intensely they had experienced anger, guilt, shame, regret, frustration, sadness, and fear (1 = *not at all*, 7 = *very strongly*). Participants also indicated how much they agreed with nine statements about the situation and their actions, concerning either prosocial or antagonistic acts (1 = *not at all*, 7 = *very much*). Participants were thanked, debriefed, and received course credit for their participation.

#### Results

Participants in the TPA condition indicated that someone else got treated unfairly ( $M = 6.03$ ,  $SD = 1.75$ ), more so than participants in the FPA condition ( $M = 3.02$ ,  $SD = 2.32$ ),  $t(118.97) = -8.36$ ,  $p < .001$ ,  $d = 1.46$ . Participants in the FPA condition indicated that they were treated unfairly ( $M = 5.80$ ,  $SD = 1.30$ ), more so than participants in the TPA condition ( $M = 2.88$ ,  $SD = 2.07$ ),  $t(107.67) = 9.63$ ,  $p < .001$ ,  $d = 1.69$ .

The results are displayed in Table 3.3. The other emotion means are in the Appendix. Anger was equally intense in both conditions. Next to anger, participants in both conditions indicated that they experienced frustration as well. Participants in the FPA condition indicated that they were more in control of the situation than participants in the TPA condition. Within the TPA condition participants indicated that they wanted to help or support someone more often than they wanted to hurt or get back at someone,  $ts > 7.37$   $ps < .001$ ,  $ds > 0.91$ .



### **Discussion**

The results of this study reveal that in triadic situations when one has a *possibility* to act prosocially, anger can lead to prosocial behavior aimed at the victim. This prosocial behavior also seemed to be preferred over antagonistic behaviors. The next study investigated whether experienced anger spills over to an unrelated triadic situation, and whether this is independent from empathic concerns that may be triggered simultaneously.

**Table 3.3**  
*Study 3.2: Means (and Standard Deviations) of Statements and Anger Intensity as a Function of Condition*

Statements	Condition		<i>t</i> (128)	<i>d</i>
	First-party anger ( <i>n</i> = 65)	Third-party anger ( <i>n</i> = 65)		
Others are guilty for causing the situation	<i>M</i> ( <i>SD</i> ) 5.42 (1.36)	<i>M</i> ( <i>SD</i> ) 5.68 (1.72)	-0.96	-0.17
I blame others	5.51 (1.60)	5.88 (1.52)	-1.35	-0.24
I was in control of the situation	2.88 (1.67)	2.15 (1.37)	2.70**	0.48
I wanted to get back at someone because of the situation	3.20 (2.02)	3.15 (1.91)	0.13	0.03
I wanted to hurt someone because of the situation	2.65 (1.74)	2.71 (1.82)	-0.20	-0.03
I wanted to help someone because of the situation	2.65 (1.93)	5.46 (1.80)	-8.59***	-1.51
I wanted to support someone because of the situation	2.48 (1.86)	5.58 (1.86)	-9.51***	-1.67
Anger intensity	5.40 (1.01)	5.39 (1.02)	-0.34	0.01

*Note.* Anger scores could range from 1 (*not at all*) to 7 (*very strongly*). One participant did not complete the anger measure. Entries are mean answers to statements. Two participants did not complete the statement items. Participants answered based on scales ranging from 1 (*not at all*) to 7 (*very much*).  
 \*\* *p* < .01      \*\*\* *p* < .001.

### Study 3.3

#### Method

Tilburg University students (27 males, 94 females, one unspecified,  $M_{age} = 20.37$ ,  $SD = 2.11$ ) were randomly assigned to the anger or control condition. Participants completed an autobiographical recall task, describing a situation in which they felt angry (anger condition) or describing a normal day of the week (control condition). Recalling a situation in which a certain emotion was experienced reactivates the emotion and thereby also the motivational tendencies associated with that emotion (e.g., Strack, Schwarz, & Gschneidinger, 1985). Furthermore, such recall tasks have been effectively used in previous studies on the behavioral consequences of emotions (e.g., De Hooge, Breugelmans, & Zeelenberg, 2008). Participants first indicated how much anger, happiness, shame, regret, sadness, and guilt they felt (1 = *not at all*, 5 = *very strongly*) in that situation. They next continued with an unrelated task in which they read the following scenario (translated from the original Dutch):

Imagine: You observe a game played by two players, named Mark and Rick. Mark and Rick are playing a game in which €100 needs to be divided. Mark gets to decide how to divide this money between himself and Rick. Rick has no influence on the division of the money. Mark decides to give Rick €40 and to keep €60.

Then, participants read that they themselves owned €50, and that there were three options to use that money: compensate Rick (Every euro that they used for compensation would increase Rick's amount with €3), punish Mark (Every euro that they used for punishment would decrease Mark's amount with €3) and/or keep the money themselves (cf., Leliveld et al., 2012). Participants filled in the amount of money given to Rick, Mark, and themselves which would always add up to €50.<sup>5</sup>

Participants then completed the 7-item empathic concern scale ( $\alpha = .83$ ; Davis, 1983, 1994, as used in Leliveld et al., 2012), and a trait anger scale based on a shortened version of the trait anger subscale of the State-Trait Anger Expression Inventory ( $\alpha =$

<sup>5</sup> For exploratory reasons, we also asked participants to motivate their choice for punishment, compensation, or keeping the money themselves in Study 3.3 and Study 3.4. The most prevalent reason for choosing punishment or compensation was "the fairest/equitable thing to do", or that they could use the money themselves when choosing neither punishment nor compensation. However, we do not describe these results in detail here.

.87; STAXI; Spielberger, 1988), because these traits might influence the relation between state anger and compensation or punishment (e.g., Deffenbacher, Oetting, Lynch, & Morris, 1996; Leliveld et al., 2012; Vitaglione & Barnett, 2003). Finally, participants were thanked, debriefed, and received €8 or course credit for their participation.

## Results

The results are displayed in Table 3.4. The other emotion means are in the Appendix. Participants in the anger condition reported more anger than participants in the control condition. Participants in the anger condition reported more anger than all other emotions.

**Monetary division.** We looked at whether participants were willing to spend their own money on punishing Mark or compensating Rick. Although participants in the anger condition indicated more often than participants in control condition that they were willing to punish Mark (44% vs. 32%) and compensate Rick (65% vs. 54%), these differences were not significant;  $\chi^2_{\text{punishment}} (1, N = 122) = 1.93, p = .165, \chi^2_{\text{compensation}} (1, N = 122) = 1.49, p = .222$ .

An ANOVA<sup>6</sup> on the amount of euros spent on compensation revealed a significant effect of Condition,  $F(1, 120) = 4.86, p = .029, \eta_p^2 = .04$ . Participants in the anger condition reported significantly higher amounts of money to compensate Rick than participants in the control condition. Participants in the anger condition did not report significantly higher amounts of money to punish Mark than participants in the control condition,  $F(1, 120) = 1.02, p = .316, \eta_p^2 = .01$ . Furthermore, participants within the anger condition reported higher amounts for compensation than for punishment,  $t(62) = 2.37, p = .021, d = 0.30$ . Within the control condition, this difference was not significant,  $t(58) = 1.58, p = .119, d = 0.21$ .

<sup>6</sup> There were three extreme outliers (data points that are more extreme than  $Q1 - 3 * IQR$  or  $Q3 + 3 * IQR$ ) on the compensation and punishment measures, which were all in the anger condition. We chose not to delete these outliers, as we judged these responses as likely and valid, especially because these cases appeared in the same condition and might be considered as more intense reactions to the anger manipulation. However, when deleting these three cases we see a slight adjustment in one of the effects: The effect of condition on compensation becomes marginally significant ( $F(1, 117) = 3.14, p = .079, \eta_p^2 = .04$ ).

**Traits.** The scores on empathic concern ( $M = 3.40$ ,  $SD = 1.84$ ) and on trait anger ( $M = 6.71$ ,  $SD = 5.44$ ) did not differ between conditions, which is desirable. Regression analyses showed that empathic concern was related only to the amount of money participants used for compensation,  $\beta = .20$ ,  $t(120) = 2.17$ ,  $p = .032$ , and not related to the amount of money used for punishment,  $\beta = .15$ ,  $t(120) = 1.63$ ,  $p = .106$ . Trait anger was related only the amount of money participants used to punish,  $\beta = .23$ ,  $t(121) = 2.58$ ,  $p = .011$ , and not related to the amount of money used for compensation,  $\beta = .05$ ,  $t(121) = 0.57$ ,  $p = .572$ . When entering empathic concern as a covariate in the ANCOVA with Condition as an independent variable and the amount of compensation as dependent variable, condition remained significant,  $F(1, 118) = 4.56$ ,  $p = .035$ ,  $\eta_p^2 = .04$ . In addition, when entering trait anger as a covariate in an ANCOVA with Condition as an independent variable and the amount of punishment as dependent variable, the results remain non-significant,  $F(1, 119) = 0.64$ ,  $p = .427$ ,  $\eta_p^2 = .01$ . Thus, controlled for the traits empathic concern and anger, state anger still motivated participants to use higher amounts of money to compensate the victim as compared to participants not experiencing state anger.

### **Discussion**

This study found that angry people use a higher *amount* of money for compensation than people not experiencing this emotion. Furthermore, within the anger condition, more money was spent on compensation than on punishment. Put differently, when participants experienced anger they kept less money for themselves than participants in the control condition, which they are more likely to use on compensating the victim than on punishing the perpetrator. These effects occurred independently from participants' empathic concern. Study 3.4 tests which behavior, compensation or punishment, is preferred by angry participants when they are forced to choose.

**Table 3.4**

*Study 3.3: Anger and Monetary Division Means (and Standard Deviations) as a Function of Emotion Condition*

	Condition	
	Anger ( $n = 63$ )	Control ( $n = 59$ )
	$M (SD)$	$M (SD)$
Anger	3.67 (0.92) <sub>a</sub>	1.29 (0.74) <sub>b</sub>
Compensation	4.49 (6.12) <sub>a</sub>	2.51 (3.31) <sub>b</sub>
Punishment	2.46 (4.18) <sub>a</sub>	1.80 (2.95) <sub>a</sub>
Self	43.05 (7.98) <sub>a</sub>	45.69 (5.23) <sub>b</sub>

*Note.* Anger scores could range from 1 (*not at all*) to 5 (*very strongly*). Higher scores indicate higher amounts of euros used to punish/compensate. Means with a different subscript are significantly different with  $t_s > 2.20$ ,  $p_s < .03$ .

### Study 3.4

#### Method

Tilburg University students (61 males, 130 females, one unspecified;  $M_{age} = 21.06$ ,  $SD = 2.62$ ) were randomly assigned to the anger or control condition. Participants in the anger condition read the following scenario:

Imagine: You observe a game played by two players, named Mark and Rick. Mark and Rick are playing a game in which €100 needs to be divided. Mark gets to decide how to divide this money between himself and Rick. Rick has no influence on the division of the money. Mark decides to give Rick €20 and to keep €80.

Next, participants in the control condition read the same scenario, but here Mark decided to give Rick €50 and keep €50. As an emotion manipulation check, participants

subsequently indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation (1 = *not at all*, 5 = *very strongly*).

Then, participants read that they owned €50 and they could choose to compensate Rick or punish Mark, or keep all the money themselves. In the case of choosing punishment or compensation, participants also indicated how many euros they would spend (Every euro used would de/increase the other's amount with €3). Finally, participants were thanked, debriefed, and received €8 or course credit for their participation.

### **Results**

The results are displayed in Table 3.5. The other emotion means are in the Appendix. Participants in the anger condition reported more anger than participants in the control condition. Participants in the anger condition reported more anger than all other emotions. Participants in the anger condition punished Mark and compensated Rick more often than participants in the control condition. The majority of the participants in the control condition chose to keep the money. When we only consider the people who did not choose to keep the money themselves in the anger condition, results show that participants chose more often for compensation than for punishment,  $\chi^2 (1, N = 45) = 21.36, p < .001$ .

### **Discussion**

These results show that angry participants prefer compensation over punishment, whereas such a preference is absent in the control condition. Together, these studies support our hypothesis that third-party anger can elicit prosocial behavior aimed at the victim and leads even to a preference for prosocial behavior over antagonistic behavior in order to restore equity. The final study was designed to examine whether it is indeed the experienced anger that motivates prosocial behavior towards the victim (which we would expect), and not injustice in itself. Therefore, we kept injustice constant between conditions, and varied the amount of anger elicited by manipulating to whom the injustice was done.

**Table 3.5**

*Study 3.4: Anger Means (and Standard Deviations) and Percentages of Monetary Division Chosen as a Function of Emotion Condition*

	Condition	
	Anger ( <i>n</i> = 95)	Control ( <i>n</i> = 97)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	2.53 (1.17) <sub>a</sub>	1.07 (0.36) <sub>b</sub>
Compensation	40.0%	3.1%
Punishment	7.4%	0%
Self	52.6%	96.9%
$\chi^2 (2, N = 192) = 50.31, p < .001$		

*Note.* Anger scores could range from 1 (*not at all*) to 5 (*very strongly*). Means with a different subscript differ significantly from each other,  $t(111.51) = 11.63, p < .001$ .

### Study 3.5

#### Method

MTurk-workers (138 males, 73 females;  $M_{\text{age}} = 29.91, SD = 9.35$ ) were randomly assigned to the injustice-friend or injustice-stranger condition, and received \$0.20 for their participation. They read that either their friend (injustice-friend condition) or a person they did not know (injustice-stranger condition) was a victim of senseless violence during a night out. As an emotion manipulation check, participants subsequently indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation, on a slider scale ranging from 0 (*not at all*) to 10 (*very strongly*). Finally, participants indicated how many dollars (on a range from \$0 to \$50) they would spend on a fund that would pay for the recovery of the friend or stranger, as a dependent measure of prosocial behavior.



## Results

Emotion means are displayed in the Appendix. Participants in the injustice-friend condition experienced more anger than participants in the injustice-stranger. Participants in both conditions reported more anger than other emotions.

An ANOVA on the amount of euros spent on the recovery fund revealed a significant effect of Condition,  $F(1, 209) = 85.38, p < .001, \eta_p^2 = .29$ . Participants in the injustice-friend condition ( $M = 36.00, SD = 16.43$ ) spent more dollars on the recovery fund than participants in the injustice-stranger condition ( $M = 15.66, SD = 15.53$ ). There was a significant positive relation between experienced anger and donating behavior in both the injustice-friend condition,  $r(102) = .44, p < .001$ , and the injustice-stranger condition,  $r(105) = .42, p < .001$ . This final study is thus consistent with the idea that it is not injustice in itself, but the experienced anger that motivates people to act prosocially towards the victim.

## General Discussion

We examined differences between first-party and third-party anger. In three naturalistic studies we found that first-party anger and third-party anger occur about equally often, are felt about equally intense and both stem mainly from perceptions of unfairness. In the four experimental studies that followed, we examined the behaviors that are associated with both types of anger. In Study 3.2, where we sampled experiences of first-party anger and of third-party anger, we found that prosocial consequences of anger are mainly present in the latter, triadic situations, and more so than antagonistic consequences. Study 3.3 found that autobiographical recalls of anger spill over to new situations and cause participants to act more prosocially in triadic situations. Interestingly, these effects could not be explained by trait anger and trait empathy. Study 3.4 elaborated on that and revealed that angry people prefer compensation of a victim to punishment of a perpetrator in a triadic situation. Finally, Study 3.5 explicitly showed that prosocial behavior is motivated by experienced anger and not solely by injustice.

We believe that these findings offer a significant contribution to the social psychological literature on anger and angry behaviors in that they are the first to show when anger motivates people to compensate or act prosocially towards the victim. We think that these prosocial consequences of anger have been overlooked in previous studies on the negative consequences of anger because these focused on dyadic situations; studies on prosocial behavior typically focus on triadic situations. Only when a person observes a certain inequitable situation can we observe prosocial behavior following from anger. When people themselves are victims of inequity, we primarily see antagonistic behavior because there is simply no victim to be compensated (unless one could compensate oneself). An additional reason for having overlooked prosocial consequences of anger could be the dominant theoretical focus on negative consequences of anger, most notably punishment. Previous studies that did look at positive or prosocial effects of anger were mainly correlational in nature, were inconsistent in the operationalization of anger (e.g., Iyer et al., 2007; Montada & Schneider, 1989; Wakslak et al., 2007), or lacked a simultaneous measure of both compensatory and punitive measures (as in third-party punishment studies). Finally, studies that did include positive consequences typically did not directly measure situational, state anger. For example, Leliveld et al. (2012) and Van Prooijen (2010) looked at prosocial consequences after injustice but did not include a measurement of anger. Deffenbacher et al. (1996) showed a positive correlation between trait anger and aggressive consequences, and Vitaglione and Barnett (2003) showed that there was no direct relation between trait empathic anger and helping or punishing. As has been shown for other emotions, such as shame, trait measures tend to yield different results than state measures of emotion (e.g., De Hooge et al., 2008). Effect of trait anger show what people do who are easily angered or who experience anger often. Effects of state anger show what people do who are angry about a specific situation.

By linking anger to prosocial behavior we do not propose that anger is a prosocial emotion, neither do we suggest that there are two different forms of anger, or that anger leads to a general tendency to act prosocial to anyone or in every situation. Instead, we merely argue that there are situational distinctions in the experience of anger allowing for certain behaviors to emerge. Prosocial behavior can only emerge when there is room for compensatory behavior towards the victim and not only punitive behavior towards

the perpetrator (as reflected in the difference between triadic situations and dyadic situations). Furthermore, there are several terms in the anger literature that in general refer to the same construct as the one that we called third-party anger. For example, Batson et al. (2007) differentiate between moral outrage (anger provoked by the perception that a moral standard has been violated), personal anger (anger one might feel when one's own interests are thwarted), and empathic anger (when interests of the cared-for other have been thwarted). First-party anger is what Batson et al. would call personal anger, and third-party anger is what they would call empathic anger when it concerns cared-for others such as friends, and moral outrage when it concerns strangers. As argued before, we do not believe that the *experiences* of anger are different between first-party or third-party anger, but rather its *behavioral consequences* are because the specific situations allow for different solutions. Studies that did concern behavioral consequences of moral outrage (O'Mara, Jackson, Batson, & Gaertner, 2011; Montada & Schneider, 1989; Wakslak et al., 2007) or empathic anger (Vitaglione & Barnett, 2003) all involved situations that we would call third-party anger situations. Finally, as discussed previously and shown in our studies, the positive effects of anger cannot be explained by simultaneous experiences of empathic concern.

In addition to finding a direct relation between anger and prosocial behavior, we even found that angry people prefer compensation to punishment. Compensation could be seen as a more efficient form of restoring equity than punishment is, as it allows for getting the victim out of its disadvantageous position. Punishment, on the other hand, only lowers the perpetrator's position to that of the victim, but does not do anything for the victim. However, there is also a possibility that people prefer compensation to punishment due to relational concerns. In contrast to punishment, compensation allows for investing in a relationship with the victim. Future research might reveal the exact motivation behind this preference.

We do realize that our studies do not comprise actual behavior but hypothetical situations. Still, we believe these studies are important, as they are an initial test of the argument that anger can lead to prosocial behavior. Furthermore, anger is commonly judged to be a negative emotion, but our participants still indicated that they would choose the prosocial option. Finally, as shown by Fehr and Gächter (2002), people are

likely to perform actual punitive behavior after injustice, which makes it very likely that people would also perform actual compensatory behavior if the option had been given. Taken together, we sought to comprehend the behavioral effects of anger, and how situational factors decide why anger leads to antagonistic behavior towards the perpetrator or prosocial behavior towards the victim. These studies suggest that the behaviors stemming from anger, be it antagonistic or prosocial, are a situation-specific reaction to inequity.

## Appendix

### Emotions experienced in Studies 3.2 to 3.5

Table 3.1

*Study 3.2: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Third-party anger ( <i>n</i> = 65)	First-party anger ( <i>n</i> = 66)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	5.40 (1.01) <sub>a</sub>	5.39 (1.02) <sub>a</sub>
Guilt	1.97 (1.46) <sub>a</sub>	2.73 (1.87) <sub>b</sub>
Shame	2.38 (1.73) <sub>a</sub>	3.06 (1.95) <sub>b</sub>
Regret	2.23 (1.81) <sub>a</sub>	3.17 (2.05) <sub>b</sub>
Sadness	4.05 (1.96) <sub>a</sub>	4.82 (1.98) <sub>b</sub>
Frustration	<b>6.00 (.97)<sub>a</sub></b>	<b>6.26 (.90)<sub>a</sub></b>
Fear	2.89 (1.90) <sub>a</sub>	2.82 (1.80) <sub>a</sub>

*Note.* One participant did not complete the emotion measure. Emotions could range from 1 (*not at all*) to 7 (*very strongly*). Means with a different subscript differ significantly with all *t*s > 2.10, *p*s < .038. Means in bold represent the dominant emotion experienced within that condition, with all *t*s > 4.85, *p*s < .001 in the third-party anger condition, and with all *t*s > 5.61, *p*s < .001 in the first-party anger condition.

Table 3.2

*Study 3.3: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Anger ( <i>n</i> = 63)	Control ( <i>n</i> = 59)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	<b>3.67 (0.92)<sub>a</sub></b>	1.29 (0.74) <sub>b</sub>
Guilt	1.67 (1.03) <sub>a</sub>	1.24 (0.60) <sub>b</sub>
Shame	1.89 (1.06) <sub>a</sub>	1.29 (0.70) <sub>b</sub>
Regret	2.08 (1.22) <sub>a</sub>	1.42 (0.79) <sub>b</sub>
Sadness	2.57 (1.36) <sub>a</sub>	1.25 (0.71) <sub>b</sub>
Happiness	1.25 (0.62) <sub>a</sub>	<b>3.29 (0.95)<sub>b</sub></b>

*Note.* Emotions could range from 1 (*not at all*) to 5 (*very strongly*). Means with a different subscript differ significantly with all *ts* > 2.84, *ps* < .006. Means in bold represent the dominant emotion experienced within that condition, with all *ts* > 8.12, *ps* < .001 in the anger condition, and with all *ts* > 10.36, *ps* < .001 in the control condition.

Table 3.3

*Study 3.4: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Anger ( <i>n</i> = 95)	Control ( <i>n</i> = 97)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	<b>2.53 (1.17)<sub>a</sub></b>	1.07 (0.36) <sub>b</sub>
Guilt	2.05 (1.20) <sub>a</sub>	1.26 (0.70) <sub>b</sub>
Shame	1.67 (1.02) <sub>a</sub>	1.22 (0.56) <sub>b</sub>
Regret	1.53 (0.85) <sub>a</sub>	1.39 (0.76) <sub>a</sub>
Pride	1.36 (0.74) <sub>a</sub>	<b>2.81 (1.32)<sub>b</sub></b>

*Note.* Emotions could range from 1 (*not at all*) to 5 (*very strongly*). Means with a different subscript differ significantly with all *ts* > 3.85, *ps* < .001. Means in bold represent the dominant emotion experienced within that condition, with all *ts* > 2.84, *ps* < .005 in the anger condition, and with all *ts* > 10.80, *ps* < .001 in the control condition.

Table 3.4

*Study 3.5: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Injustice friend ( <i>n</i> = 104)	Injustice stranger ( <i>n</i> = 107)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	<b>8.33 (1.99)<sub>a</sub></b>	<b>6.80 (2.85)<sub>b</sub></b>
Guilt	2.91 (2.99) <sub>a</sub>	1.91 (2.74) <sub>b</sub>
Shame	2.31 (2.95) <sub>a</sub>	2.29 (2.93) <sub>a</sub>
Regret	4.59 (3.14) <sub>a</sub>	2.39 (2.74) <sub>b</sub>
Pride	0.53 (1.21) <sub>a</sub>	0.38 (1.06) <sub>b</sub>

*Note.* Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Means with a different subscript differ significantly with all *ts* > 2.55, *ps* < .012. Means in bold represent the dominant emotion experienced within that condition, with all *ts* > 11.53, *ps* < .001 in the injustice-friend condition, and with all *ts* > 13.07, *ps* < .001 in the injustice-stranger condition.





# Chapter 4

## An Equity Perspective on Anger and Prosocial Behavior

This chapter is based on: Van Doorn, J., Breugelmans, S. M., & Zeelenberg, M. (2014). *An equity perspective on anger and prosocial behavior*. Manuscript under review.

This chapter investigates an equity perspective on prosocial effects of anger. Five studies tested the idea that third-party anger only leads to prosocial behavior when it serves the goal of restoring equity. Studies 4.1 and 4.2 found that prosocial behavior towards a victim decreased when equity had already been restored by compensation of the victim. Study 4.3 added that the subjective experience of anger also decreases when equity is restored. Study 4.4 generalized the effects to different types of compensation. Study 4.5 switched to the perspective of the victim, and showed a larger decrease in anger when equity was restored by means of compensation than by punishment. The implications of these findings for the nature of anger and its relation with prosocial behavior are discussed.

## An Equity Perspective on Anger and Prosocial Behavior

Anger is a moral emotion; anger and moral outrage motivate people to behave in ways that have positive consequences for society (e.g., Frank, 1988; Haidt, 2003; Kahneman, Schkade, & Sunstein, 1998; Smith, 1759; Wakslak, Jost, Tyler, & Chen, 2007). Traditionally, the moral nature of anger has been studied through third-party punishment: anger motivates people to punish those who inflict harm upon others (e.g., Fehr & Fischbacher, 2004; Nelissen & Zeelenberg, 2009). However, recent studies have shown that in such third-party situations people prefer to compensate victims over punishing perpetrators (e.g., Chavez & Bicchieri, 2013; Leliveld, Van Dijk, & Van Beest, 2012; Lotz, Okimoto, Schlösser, & Fetchenhauer, 2011). In a recent literature review, Van Doorn, Zeelenberg, and Breugelmans (2014) have discussed the evidence for third-party anger leading to compensation. They have put forward an equity perspective to explain why these effects occur. This paper presents five studies that test the predictions following from an equity explanation of third-party anger effects.

Equity theory is about perceptions of fair or unfair exchanges within interpersonal relationships in order to explain relational satisfaction (Adams 1965). Inequity can result in an unpleasant emotional state such as anger (Mikula, Scherer, & Athenstaedt, 1998). When people experience anger due to inequity, equity can be restored by punitive, antagonistic behavior (e.g., Berkowitz, 1990; Bougie, Pieters, & Zeelenberg, 2003; Frijda, Kuipers, & Ter Schure, 1989; Nelissen & Zeelenberg, 2009; Roseman, Wiest, & Swartz, 1994; Van Coillie & Van Mechelen, 2006). By lowering the outcomes of the perpetrator through punishment or other forms of retaliation, the relationship is equitable again. People can also experience anger over events that befall other people. In such cases third-party anger equity can be restored by punishing the perpetrator but also by prosocial behaviors such as compensating the victim (for examples of compensation, see Darley & Pittman, 2003; Iyer, Schmader, & Lickel, 2007; Lotz et al., 2011; Montada & Schneider, 1989; Vitaglione & Barnett, 2003; Wakslak et al., 2007).

Translating the equity perspective on anger to emotion theory would mean that we posit equity to be the central concern of anger in interpersonal situations. According to Frijda (1988, p. 351): "Emotions arise in response to events that are important to the

individual's goals, motives, or concerns. Every emotion hides a concern, that is, a more or less enduring disposition to prefer particular states of the world." By understanding its central concern, we can delineate when an emotion should lead to goal-directed behavior and when not (Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008). The central concern in anger is the obstruction of a desired goal or need (e.g., Berkowitz & Harmon-Jones, 2004; Frijda, 1986; Kuppens, Van Mechelen, Smits, & De Boek, 2003; Scherer, 1984, 1993). Thus, behavior following from anger can be understood as striving to remove the obstruction and attain the desired goal. In interpersonal situations, when the goal is blocked by an actor instead of a state of the world (such as a broken car), the general concern of goal blockage takes the form of the more specific concern for equity or just relations (e.g., Stillwell, Baumeister, & Del Priore, 2008; Scherer, 1984; Van Doorn et al., 2014; see also Walster, Berscheid, & Walster, 1973).

One consequence of an equity perspective is that anger should only occur when equity is violated, and that it should dissipate when equity is restored by a third party (as one's anger and behavior that deal with the concern are no longer necessary). We would thus expect that anger will only lead to prosocial behavior when such behavior can serve the goal of restoring equity. This reasoning resonates research on other emotions such as guilt – an emotion that is also focused on remaining relationships equitable (Nelissen, Breugelmans, & Zeelenberg, 2013). For example, De Hooze (2012) found that when a third party repairs the damage caused to a victim, the perpetrator's feelings of guilt as well as associated prosocial behaviors decreased. Another example on punishment can be found in Van de Calseyde, Keren, and Zeelenberg (2013), who revealed that people would punish identical transgressions less severely when victims are insured as opposed to uninsured (i.e., the harm done to a victim was restored by the insurance company). Moreover, Goldberg, Lerner, and Tetlock (1999) have shown that anger primed by injustice led to increasingly punishment judgments of other wrongdoers *only* when the perpetrator of the crime went unpunished. Thus, it seems that when the goal of restoring equity is attained (i.e., the central concern is acted upon) emotional experiences and ensuing behavioral consequences decrease (i.e., control-precedence of this behavior is not needed anymore).

It should be noted that there are other perspectives on the behavioral consequences of anger in interpersonal situations. One famous example is Berkowitz' (1990) cognitive neoassociationistic theory, which implies that the likelihood that a barrier to goal attainment will give rise to an aggressive response depends on the aversiveness of the event. Thus, frustrations give rise to anger and aggressive inclinations to the extent that they are judged as aversive or unpleasant. Another example is an attribution perspective to anger (e.g., Weiner, 2006; Weiner, Perry, & Magnusson, 1988), which entails that when we attribute blame to an anger-eliciting person, this might lead to punitive behaviors towards the blamed person or prosocial behaviors towards others whom we do not blame. Both perspectives would lead to different predictions than an equity perspective. For example, an equity perspective leads to the predictions that only victims of inequity should be compensated and not just any needy person in an anger situation, and that prosocial compensation should diminish when inequity has been restored by a third party (e.g., an insurance company).

Thus, in this paper we examine whether an equity perspective can explain the prosocial effects of anger. Our general hypothesis is that third-party anger only leads to prosocial behavior when it serves the goal of restoring equity. When equity has already been restored by another party, the equity concern has been satisfied, leading to a decrease in feelings of anger and associated prosocial behaviors towards the victim. This general hypothesis was tested in a series of five studies. In the first two studies we show that third-party prosocial behavior following anger decreases when equity was already restored by compensating the victim (Study 4.1) or by punishment of the perpetrator (Study 4.2). Study 4.3 adds that the experienced anger decreases as well. Study 4.4 shows that these effects generalize to different types of compensation. Finally, Study 4.5 switches to a victim's perspective, showing a larger decrease in anger when equity was restored via compensation than via punishment.

### Study 4.1: Equity Restoration by Compensation

#### Method<sup>7</sup>

One hundred and thirty-two Tilburg University students (99 females;  $M_{age} = 20.80$ ,  $SD = 2.60$ ) were randomly assigned to an inequity, compensated inequity or control condition. In both the inequity and compensated inequity condition participants read the following scenario (adopted from Zeelenberg & Breugelmans, 2008):

A friend of yours, Tim, just bought a new bicycle that took him three years to save for. He goes to the supermarket with his new bicycle to do some shopping, and puts his bicycle in front of the supermarket. When he comes back from the supermarket he sees that his bicycle got stolen. He can see the thief cycling away with his bicycle, however, having his hands full with his purchases Tim is unable to get his bicycle back.

In the control condition, participants read:

A friend of yours, Tim, just bought a new bicycle that took him three years to save for. He goes to the supermarket with his new bicycle to do some shopping, and puts his bicycle in front of the supermarket. When he comes back from the supermarket he takes his bicycle and cycles home with his purchases.

Participants then indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation (1 = *not at all*; 5 = *very strongly*). Only participants in the compensated inequity condition subsequently read that Tim insured his bicycle, and that the insurance covers a new bicycle for him. Next, all participants read: “a week after this incident with the bicycle, it is Tim’s birthday. You are also invited to his birthday.” Participants indicated how many euros they would spend on Tim’s birthday, as a dependent measure of prosocial behavior. Furthermore, only participants in the inequity and compensated inequity condition answered three questions about punishment of the bicycle thief: “How important is it to you that the thief will be caught?”; “How much would you like the thief to get punished?”; and “How important is it to you that the thief is paying for his deed?” on scales running from 1 (*not at all*) to 7

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<sup>7</sup> Studies 4.1 and 4.2 were part of a larger testing session. There were no gender effects in any of the experiments.

(*very much*). Finally, participants were thanked, debriefed, and received €8 for their participation.

## Results and Discussion

Statistics can be found in Table 4.1. Participants in the inequity condition and the compensated inequity condition reported more anger than participants in the control condition. There was no difference in reported anger between the two inequity conditions. Participants in both inequity conditions reported more anger than other emotions.

Participants in the inequity condition spent more euros on Tim's birthday than participants in the compensated inequity condition and control condition<sup>8</sup>. These last two conditions did not differ. Analyzing the three punishment dependent measures separately yielded the same results as putting them together. Therefore, we computed a single mean score of these items ( $\alpha = .84$ ). Participants in the equity condition were equally likely to punish the thief as participants in the compensated inequity condition.

In short, results show that when equity is restored (i.e., when the insurance company provided a new bike), people are less prosocial (i.e., spend less money on Tim's birthday present) compared to when equity was not yet restored. The willingness to see the thief punished is equal in the inequity conditions. Therefore, in the next study we aimed to investigate whether the restoration of equity via punishment of the perpetrator would reveal similar results on prosocial behavior as in Study 4.1.

<sup>8</sup> There were four extreme outliers (data points that are more extreme than  $Q1 - 3 * IQR$  or  $Q3 + 3 * IQR$ ) on the prosocial behavior measure, which were all in the control condition. We chose not to delete these outliers, as we judged these responses as likely and valid, especially because these cases appeared in the same condition. Deleting these cases did not alter the effect:  $F(2, 125) = 13.66, p < .001, \eta_p^2 = .18$ . Furthermore, a linear regression analysis revealed that age had a significant effect on prosocial behavior,  $\beta = .48, t = 6.23, p < .001$ . When entering age as a covariate in an ANCOVA with Condition as an independent variable and prosocial behavior as dependent variable, results remained the same: The ANCOVA showed a significant effect,  $F(2, 128) = 9.26, p < .001, \eta_p^2 = .13$ .



**Table 4.1**

*Study 4.1: Means (and Standard Deviations) of Emotions Experienced, Prosocial Behavior and Punishment Thoughts as a Function of Condition*

	Condition			$F(2, 129)$	$\eta_p^2$
	Inequity ( $n = 44$ )	Compensated inequity ( $n = 44$ )	Control ( $n = 44$ )		
	$M (SD)$	$M (SD)$	$M (SD)$		
Anger	<b>4.55 (0.82)<sub>a</sub></b>	<b>4.52 (0.66)<sub>a</sub></b>	1.09 (0.36) <sub>b</sub>	419.10***	.87
Guilt	2.14 (1.11) <sub>a</sub>	2.25 (1.14) <sub>a</sub>	1.11 (0.32) <sub>b</sub>	19.53***	.23
Shame	1.55 (0.85) <sub>ab</sub>	1.57 (0.85) <sub>a</sub>	1.18 (0.50) <sub>b</sub>	3.69*	.05
Regret	2.45 (1.41) <sub>a</sub>	2.66 (1.33) <sub>a</sub>	1.16 (0.53) <sub>b</sub>	21.75***	.25
Pride	1.30 (0.70) <sub>a</sub>	1.09 (0.36) <sub>a</sub>	<b>2.48 (1.27)<sub>b</sub></b>	33.19***	.34
Prosocial behavior (€)	14.76 (6.27) <sub>a</sub>	11.67 (4.79) <sub>b</sub>	10.19 (4.10) <sub>b</sub>	9.07***	.12
Punishment thoughts	6.08 (0.90) <sub>a</sub>	6.08 (0.88) <sub>a</sub>			

*Note.* Emotions could range from 1 (*not at all*) to 5 (*very strongly*). Means with a different subscript differ significantly with all  $ps < .05$  (Tukey post hoc). Means in bold represent the dominant emotion experienced within that condition with all  $ts > 5.84$ , all  $ps < .001$ . Higher scores on the prosocial behavior measure indicate higher amounts of euros for Tim's birthday present. Means with a different subscript differ significantly from each other with all  $ps < .015$  (Tukey post hoc). Punishment thoughts could range from 1 (*not at all*) to 7 (*very*). Higher scores indicate a higher motivation to see the thief punished. Means with a different subscript did not differ significantly from each other with,  $t(86) = 0.04$ ,  $p = .968$ . \*  $p = .028$  \*\*\*  $p < .001$ .

## Study 4.2: Equity Restoration by Compensation vs. Punishment

### Method

One hundred and thirty-five Tilburg University students (113 females;  $M_{\text{age}} = 19.96$ ,  $SD = 3.68$ ) were randomly assigned to an inequity, compensated inequity, punished inequity or control condition. Participants read the same scenarios and completed the same emotion check as in Study 4.1. Those in the punished inequity condition read that the police punished the thief. Participants then again indicated how much they would spend on Tim's birthday present. Finally, they were thanked, debriefed, and received course credit for their participation.

### Results and Discussion

Statistics can be found in Table 4.2. Participants in all three inequity conditions reported more anger than participants in the control condition. There was no difference in reported anger between the three inequity conditions. Participants in all three inequity conditions reported more anger than other emotions.

Participants in the inequity condition spent most euros on Tim's birthday, more than participants in the compensated inequity condition and than participants in the control condition. The amount of money spend in the punished inequity condition was somewhere in the middle and did not differ significantly from other conditions<sup>9</sup>. In the next studies we wanted to see whether, next to the motivation to act prosocially, the experienced anger would decrease after equity is restored.

<sup>9</sup> There was one extreme outlier in the punished inequity condition on the prosocial behavior measure. We chose not to delete this outlier, for the same reason as stated in footnote 8. Deleting this case did not alter the effect:  $F(3, 130) = 3.70$ ,  $p = .014$ ,  $\eta_p^2 = .08$ . Furthermore, a linear regression analysis revealed that age had a significant effect on prosocial behavior,  $\beta = .56$ ,  $t = 7.67$ ,  $p < .001$ . When entering age as a covariate in an ANCOVA with Condition as an independent variable and prosocial behavior as dependent variable, results remained the same: The ANCOVA showed a significant effect,  $F(3, 130) = 2.93$ ,  $p = .036$ ,  $\eta_p^2 = .04$ .

**Table 4.2**  
 Study 4.2: Means (and Standard Deviations) of Emotions Experienced and Prosocial Behavior as a Function of Condition

	Condition			$F(3, 131)$	$\eta_p^2$
	Inequity ( $n = 34$ ) $M(SD)$	Compensated inequity ( $n = 34$ ) $M(SD)$	Punished inequity ( $n = 33$ ) $M(SD)$		
Anger	<b>4.41 (0.66)<sub>a</sub></b>	<b>4.44 (0.61)<sub>a</sub></b>	<b>4.30 (0.77)<sub>a</sub></b>	223.69***	.84
Guilt	1.76 (1.10) <sub>a</sub>	1.76 (1.08) <sub>a</sub>	1.76 (0.94) <sub>a</sub>	3.80*	.08
Shame	1.65 (0.95) <sub>ab</sub>	1.76 (1.18) <sub>b</sub>	1.61 (0.90) <sub>ab</sub>	3.09*	.07
Regret	1.82 (1.17) <sub>a</sub>	2.65 (1.41) <sub>b</sub>	2.36 (1.32) <sub>ab</sub>	12.22***	.22
Pride	1.24 (0.70) <sub>a</sub>	1.09 (0.38) <sub>a</sub>	1.12 (0.55) <sub>a</sub>	<b>2.32 (1.20)<sub>b</sub></b>	19.94***
Prosocial behavior (€)	15.59 (8.42) <sub>a</sub>	11.62 (3.48) <sub>b</sub>	13.41 (6.24) <sub>ab</sub>	3.40*	.07

*Note.* Emotions could range from 1 (*not at all*) to 5 (*very strongly*). Means with a different subscript differ significantly with all  $ps < .044$  (Tukey post hoc). Means in bold represent the dominant emotion experienced within that condition, with all  $ts > 5.32$ , all  $ps < .001$ . Higher scores on the prosocial behavior measure indicate higher amounts of euros for Tim's birthday present. Means with a different subscript differ significantly with all  $ps < .037$  (Tukey post hoc). \*  $p < .05$  \*\*\*  $p < .001$ .

### Study 4.3: Equity Restoration and the Decrease in Anger

#### Method

One hundred and forty-nine students from Fontys University in Tilburg (107 females;  $M_{\text{age}} = 20.84$ ,  $SD = 2.92$ ) were randomly assigned to an inequity or compensated inequity condition. They read the same scenarios as in Study 4.1. As an emotion check, participants subsequently indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation, on a slider scale ranging from 0 (*not at all*) to 10 (*very strongly*). Next, participants in the inequity condition read: “Tim never got his bicycle back”, whereas participants in the compensated inequity condition read: “Tim never got his bicycle back. However, Tim insured his bicycle and the insurance covers a new bicycle for him.” Participants then again rated how they would feel using the same questions. Next, all participants read that Tim’s birthday was coming up, and were asked how much they would spend. Finally, participants were thanked and debriefed.

#### Results and Discussion

Statistics can be found in Table 4.3. Directly after reading about the bicycle theft, participants in both conditions reported more anger than other emotions. There were no differences in emotion experiences between conditions. After reading about the current status of Tim’s bicycle (Tim never got his bicycle back or the insurance covers a new bicycle), participants in both inequity conditions still reported more anger than other emotions. But now there were between condition differences. Anger and regret were lower and pride was higher in the compensated inequity condition. Interestingly, when comparing the emotions at measure 1 and measure 2, anger feelings decreased significantly in the compensated inequity condition but not in the inequity condition. Participants in the compensated inequity condition also spent less euros on Tim’s birthday than participants in the inequity condition<sup>10</sup>.

From this study it thus appears that when equity is already restored (the insurance company bought a new bicycle), both the experienced anger and the motivation to act

<sup>10</sup> There were two extreme outliers in the compensated inequity condition on the prosocial behavior measure. We chose not to delete these outliers, for the reason stated in footnote 8. Deleting these cases did not alter the effect:  $t(104.55) = 4.56$ ,  $p < .001$ ,  $d = 0.75$ .

prosocially decrease. It seems that when the relation is equitable again (the concern is acted upon), control precedence is not needed anymore and anger can diminish. In Study 4 we varied the form of compensation to the victim to study whether that influenced the experienced anger and the motivation to act prosocially.

#### **Study 4.4: Compensation by Insurance vs. Retrieval**

##### **Method**

One hundred and fifty-eight students (78 females;  $M_{age} = 21.35$ ,  $SD = 2.50$ ) from different universities in the Netherlands were randomly assigned to a no compensation condition, the compensation by insurance, or the compensation by retrieval condition. They read the scenario from Study 4.1, and indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation, on a slider scale ranging from 0 (*not at all*) to 10 (*very strongly*). Participants in the no compensation condition subsequently read: "Tim never got his bicycle back". Participants in the compensation by insurance condition read: "Tim never got his bicycle back. However, Tim insured his bicycle and the insurance covers a new bicycle for him." Finally, participants in the compensation by retrieval condition read: "Tim's bicycle was found again and he now owns his own bike again." Next participants rated their emotions again on the same scales and indicated how much they would spend on Tim's upcoming birthday. Finally, participants were thanked and debriefed.

##### **Results and Discussion**

Statistics can be found in Table 4.4. Directly after reading about the bicycle theft participants in all conditions reported more anger than other emotions, and none of the emotions differed between conditions at this point. After reading about the current status of Tim's bicycle (stolen, covered by insurance, found back), participants in the no compensation condition and the compensation by insurance condition reported more anger than other emotions. Participants in the compensation by retrieval condition reported more anger than guilt, regret, and shame but not more anger than pride.

**Table 4.3**

Study 4.3: Means (and Standard Deviations) of Emotions Experienced and Prosocial Behavior as a Function of Condition

	Condition			
	Inequity ( <i>n</i> = 74)		Compensated inequity ( <i>n</i> = 75)	
	Measure 1 <i>M</i> ( <i>SD</i> )	Measure 2 <i>M</i> ( <i>SD</i> )	Measure 1 <i>M</i> ( <i>SD</i> )	Measure 2 <i>M</i> ( <i>SD</i> )
Anger	<b>8.37 (1.60)<sub>a</sub></b>	<b>8.07 (2.43)<sub>a</sub></b>	<b>8.37 (1.54)<sub>a</sub></b>	<b>5.12 (3.27)<sub>b</sub></b>
Guilt	2.41 (2.47) <sub>a</sub>	2.56 (2.82) <sub>a</sub>	2.62 (2.42) <sub>a</sub>	1.93 (1.87) <sub>b</sub>
Shame	3.01 (2.75) <sub>a</sub>	2.49 (2.51) <sub>b</sub>	2.64 (2.59) <sub>a</sub>	1.78 (1.93) <sub>b</sub>
Regret	4.11 (3.19) <sub>a</sub>	4.27 (3.42) <sub>a</sub>	3.91 (3.26) <sub>a</sub>	1.90 (2.00) <sub>b</sub>
Pride	1.11 (1.73) <sub>a</sub>	1.15 (1.93) <sub>a</sub>	0.92 (1.15) <sub>a</sub>	3.53 (3.17) <sub>b</sub>
Prosocial behavior (€)		17.34 (10.39) <sub>a</sub>		12.27 (7.95) <sub>b</sub>

Note. Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Emotion means with a different subscript differ significantly from each other on measure 1 and measure 2 within each condition, with all *ts* > 2.56, all *ps* < .013. None of the emotions differed between conditions at measure 1, *ts* < 0.48, *ps* > .401, but anger, regret, and pride did differ between conditions at measure 2, *ts* > 5.18, *ps* < .001. Means in bold represent the dominant emotion experienced within that condition, all *ts* > 2.50, *ps* < .015. Higher scores on the prosocial behavior measure indicate higher amounts of euros for Tim's birthday present. Prosocial behavior means differ significantly with  $t(147) = 3.35, p = .001, d = 0.55$ .

Interestingly, when comparing the emotions at measure 1 and measure 2, anger feelings decreased significantly in both the compensation by insurance condition and the compensation by retrieval condition, but not in the no compensation condition. The decrease in anger in the two compensation conditions did not differ. Participants in the no compensation condition spent more euros on Tim's birthday than participants in the compensation conditions, which did not differ from each other<sup>11</sup>.

We can conclude from this study that it does not matter what type of compensation the victim receives, as long as it can restore equity. In the next and final study we measure anger before and after equity restoration when oneself is the victim (i.e., a first-party anger perspective).

### Study 4.5: First-party Anger

#### Method

Two hundred and fourteen Tilburg University students (167 females;  $M_{age} = 20.01$ ,  $SD = 2.08$ ) were randomly assigned to an inequity condition, the compensated inequity condition, or punished inequity condition. In all conditions participants read the bicycle theft scenario as used in Study 4.1 but then from a first-party perspective (i.e., participants had to imagine that their bicycle got stolen). As an emotion manipulation check, participants subsequently indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation, on a slider scale ranging from 0 (*not at all*) to 10 (*very strongly*)<sup>12</sup>.

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<sup>11</sup> There were three extreme outliers in the compensation by retrieval condition on the prosocial behavior measure. We chose not to delete these outliers, for the reason in footnote 8. Deleting these cases did not alter the effect:  $F(2, 152) = 15.11$ ,  $p < .001$ ,  $\eta_p^2 = .17$ ). Furthermore, a linear regression analysis revealed that age had a significant effect on prosocial behavior,  $\beta = .24$ ,  $t = 3.04$ ,  $p = .004$ . When entering age as a covariate in an ANCOVA with Condition as an independent variable and prosocial behavior as dependent variable, results remained the same: The ANCOVA showed a significant effect,  $F(2, 154) = 10.88$ ,  $p < .001$ ,  $\eta_p^2 = .12$ .

<sup>12</sup> For reasons of clarity we recoded the original slider scales. The original slider scales scores ranged from 0 to 100, which we divided by ten.

**Table 4.4**

*Study 4.4: Means (and Standard Deviations) of Emotions Experienced and Prosocial Behavior as a Function of Condition*

	Condition					
	No compensation ( <i>n</i> = 52)		Compensation by insurance ( <i>n</i> = 52)		Compensation by retrieval ( <i>n</i> = 54)	
	Measure 1 <i>M</i> ( <i>SD</i> )	Measure 2 <i>M</i> ( <i>SD</i> )	Measure 1 <i>M</i> ( <i>SD</i> )	Measure 2 <i>M</i> ( <i>SD</i> )	Measure 1 <i>M</i> ( <i>SD</i> )	Measure 2 <i>M</i> ( <i>SD</i> )
Anger	<b>7.33 (2.74)<sub>a</sub></b>	<b>7.01 (2.83)<sub>a</sub></b>	<b>7.24 (2.92)<sub>a</sub></b>	<b>4.27 (3.16)<sub>b</sub></b>	<b>6.39 (2.91)<sub>a</sub></b>	<b>3.28 (2.71)<sub>b</sub></b>
Guilt	1.60 (2.28) <sub>a</sub>	1.61 (2.35) <sub>a</sub>	1.64 (1.99) <sub>a</sub>	1.01 (1.18) <sub>b</sub>	1.61 (2.01) <sub>a</sub>	0.94 (1.34) <sub>b</sub>
Shame	2.36 (2.40) <sub>a</sub>	2.05 (2.22) <sub>a</sub>	1.93 (2.31) <sub>a</sub>	1.07 (1.36) <sub>b</sub>	2.05 (2.72) <sub>a</sub>	1.21 (1.79) <sub>b</sub>
Regret	2.41 (2.96) <sub>a</sub>	2.17 (2.82) <sub>a</sub>	2.29 (2.58) <sub>a</sub>	1.35 (1.90) <sub>b</sub>	2.49 (2.73) <sub>a</sub>	1.14 (1.64) <sub>b</sub>
Pride	0.76 (1.33) <sub>a</sub>	0.86 (1.60) <sub>a</sub>	0.86 (1.19) <sub>a</sub>	2.00 (2.29) <sub>b</sub>	0.96 (1.52) <sub>a</sub>	<b>3.25 (3.03)<sub>b</sub></b>
Prosocial behavior (€)	14.61 (6.05) <sub>a</sub>		11.39 (4.83) <sub>b</sub>			10.10 (4.24) <sub>b</sub>

*Note.* Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Emotion means with a different subscript differ significantly from each other on measure 1 and 2 within each condition, with all *ts* > 2.52, all *ps* < .015. None of the emotions differed between conditions at measure 1, *F*s < 1.75, *ps* > .178, but anger, regret, shame, and pride did differ between conditions at measure 2, *F*s > 3.32, *ps* < .039. Means in bold represent the dominant emotion experienced within that condition, all *ts* > 5.22, *ps* < .001. The decrease in anger in the two compensation conditions did not differ (difference scores: 2.97 vs. 3.11, respectively), *t*(104) = 0.28, *p* = .783. Higher scores on the prosocial behavior measure indicate higher amounts of euros for Tim's birthday present. Prosocial behavior means differ significantly *F*(2, 155) = 11.01, *p* < .001,  $\eta_p^2 = .12$ , with all *ps* < .004 (Tukey post hoc).



Next, participants in the inequity condition read: “You never got your bicycle back”, whereas participants in the compensated inequity condition read: “You never got your bicycle back. However, you insured your bicycle and the insurance covers a new bicycle for you.”, and participants in the punished inequity condition read: “You never got your bicycle back. However, the police punished the thief.” As a second emotion check, participants again indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation.

### **Results and Discussion**

Statistics can be found in Table 4.5. Directly after reading about the bicycle theft, participants in all conditions reported more anger than other emotions, and none of the emotions differed between conditions at this point, with the exception of regret<sup>13</sup>. After reading about the current status of the bicycle (stolen, covered by insurance, thief punished), participants in the inequity and punished inequity conditions reported more anger than other emotions. Participants in the compensated inequity condition reported more anger and pride than guilt, regret, and shame.

When comparing the emotions at measure 1 and measure 2, anger feelings decreased significantly in all conditions, but the magnitude of this decrease was highest in the compensated equity condition as compared to the inequity and punished inequity conditions. The decrease in anger did not differ between these last two conditions.

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<sup>13</sup> We do not have a clear reason for why participants have a lower score on regret in the punished inequity condition, as participants from all conditions started with the exact same scenario before completing emotion measure 1. Because we judge this to be a coincidental result, we will not further discuss this.

**Table 4.5***Study 4.5: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

	Condition					
	Inequity ( <i>n</i> = 72)		Compensated inequity ( <i>n</i> = 71)		Punished inequity ( <i>n</i> = 71)	
	Measure 1 <i>M</i> ( <i>SD</i> )	Measure 2 <i>M</i> ( <i>SD</i> )	Measure 1 <i>M</i> ( <i>SD</i> )	Measure 2 <i>M</i> ( <i>SD</i> )	Measure 1 <i>M</i> ( <i>SD</i> )	Measure 2 <i>M</i> ( <i>SD</i> )
Anger	<b>8.73 (1.14)<sub>a</sub></b>	<b>7.25 (2.47)<sub>b</sub></b>	<b>9.11 (1.25)<sub>a</sub></b>	<b>4.32 (3.14)<sub>b</sub></b>	<b>9.12 (1.28)<sub>a</sub></b>	<b>6.75 (2.56)<sub>b</sub></b>
Guilt	2.69 (2.81) <sub>a</sub>	3.14 (3.06) <sub>a</sub>	2.45 (2.52) <sub>a</sub>	1.34 (2.09) <sub>b</sub>	2.02 (2.30) <sub>a</sub>	1.12 (1.67) <sub>b</sub>
Shame	3.49 (3.15) <sub>a</sub>	3.08 (3.19) <sub>b</sub>	3.14 (2.94) <sub>a</sub>	1.24 (1.75) <sub>b</sub>	2.84 (2.67) <sub>a</sub>	1.41 (2.09) <sub>b</sub>
Regret	4.65 (3.25) <sub>a</sub>	4.97 (3.23) <sub>a</sub>	4.81 (3.26) <sub>a</sub>	1.40 (2.04) <sub>b</sub>	3.51 (3.13) <sub>a</sub>	2.03 (2.60) <sub>b</sub>
Pride	0.35 (0.80) <sub>a</sub>	0.36 (0.87) <sub>a</sub>	0.52 (1.39) <sub>a</sub>	<b>3.37 (3.11)<sub>b</sub></b>	0.34 (1.02) <sub>a</sub>	1.14 (1.76) <sub>b</sub>

*Note.* Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Emotion means with a different subscript differ significantly from each other on measure 1 and measure 2 within each condition, with all *ts* > 2.33, all *ps* < .023. Except for regret ( $F(2, 211) = 3.45, p = .034, \eta_p^2 = .03$ ) none of the emotions differed between conditions at measure 1,  $F_s < 2.02, ps > .135$ , but all emotions did differ between conditions at measure 2,  $F_s > 12.57, ps < .001$ . Means in bold represent the dominant emotion experienced within that condition, all *ts* > 4.21, *ps* < .001. The decrease in anger differed between conditions,  $F(2, 211) = 31.40, p < .001, \eta_p^2 = .23$ . The decrease in anger was highest in the compensated inequity condition, *ps* < .001. The decrease in anger did not differ between the inequity condition and the punished inequity condition, *p* = .103.

## General Discussion

We conducted five studies to investigate an equity perspective on behavioral consequences of third-party anger (Van Doorn et al., 2014). Our general idea was that third-party anger only leads to prosocial behavior when it serves the goal of restoring equity. We found support in favor of this idea in each of the five studies. Studies 4.1 and 4.2 found that when equity was already restored, either by compensation of the victim (Study 4.1) or by punishment of the perpetrator (Study 4.2), the motivation to act prosocially towards a victim decreased. Study 4.3 showed that – next to prosocial behavior – also experiences of anger decreased after equity restoration. Study 4.4 showed that these effects generalize to different types of compensation. Finally, Study 4.5 switched to a victim's (i.e., first party) perspective and showed a larger decrease in anger when equity was restored via compensation than via punishment.

These results have consequences for our view of anger. First, these results demonstrate that anger can lead to prosocial behavior, suggesting that the view of anger as a negative emotion is too one-sided. Second, these results suggest that anger is an emotion with an equity-restoring goal. The present findings therefore constitute an important contribution to the anger literature. Emotions lead to behavior when the situation allows for dealing with the central concern of that emotion. In the case of interpersonal anger this entails an equity concern and, as appears from our results, is accompanied by an equity-restoring goal. When the goal of anger is satisfied (i.e., equity is restored), one's anger and behavior that deal with the concern are no longer necessary and thus decrease.

Interestingly, in Study 4.3 we observe a (non-significant) trend that punishment is less effective in restoring equity than compensation. From a first-party perspective (Study 4.5) it might make sense for a victim to prefer compensation over punishment, because compensation has clear benefits for the victim whereas punishment does not. However, why would third parties rather see a victim getting compensated than a perpetrator getting punished? One reason could be that punishment still leaves the victim in a disadvantageous position, while compensation helps the victim out of the disadvantageous position. Punishing the perpetrator may also restore equity, but this

only puts the perpetrator in a disadvantageous position and does not take away the harm done to the victim. Another reason could be that people are generally reluctant to do harm (Baron, 1995). They might therefore rather choose a positive act of restoring equity than a negative act. Future research might reveal the exact motivation behind this preference for compensation over punishment in third parties.

Our studies could also have implications for prosocial behavior in practical settings, such as insurance, charity, and justice. First, in our scenarios we often use insurance as a compensation tool. It appears that angry people act less prosocially when a victim receives compensation from an insurance company. Therefore, people might not feel the need to act prosocially towards insured victims in cases where victims do need help. Some evidence for this idea can already be found in the research by Van de Calseyde et al. (2013). They found that that people recommend milder punishments for perpetrators when the victim was insured. Second, it might be beneficial for charities to signal that people's contribution help to right wrongs: If people have the idea that there is no opportunity to restore equity with their behavior, they might not feel inclined to donate at all. Finally, these results also have implications for theories of justice and law. From our results it appears that both first parties and third parties judge compensation of a victim as more satisfying than punishment of a perpetrator, while punishment is the dominant justice-restoring device in tort cases.

Some limitations of the present research need to be highlighted. First, in our studies the victim always received full compensation. That is, either the insurance company covers a new bicycle for Tim or the original bike that got stolen is found back again. In real life full compensation is less likely. For example, an insurance company typically reimburses the current value of what is stolen or damaged, and not the original costs. It would be interesting to investigate whether full compensation is needed, or whether partial compensation (i.e., an insurance company could choose to only cover half of the expenses of the stolen bicycle) would also lead to a decrease in anger and prosocial behavior. If a victim receives partial compensation, the position of the victim is still somewhat disadvantageous and might therefore not be judged as reaching the goal of restoring equity. The concept of compensation is that it should restore the concrete condition of the victim to what it was prior to the accident (Darley & Pittman, 2003).

Second, we realize that our studies do not comprise actual behavior but hypothetical situations. Still, we believe these studies are important as they are an initial test of an equity perspective to explain prosocial effects of anger. Furthermore, other emotion research has convincingly shown that the effects in hypothetical situations generalize to actual behavior (e.g., De Hooge, Nelissen, Breugelmans, & Zeelenberg, 2011; Feinberg, Willer, Stellar, & Keltner, 2012; Seip, Van Dijk, & Rotteveel, 2014).

To summarize, five studies suggest that third-party anger is an emotion with an equity-restoring goal, meaning that anger can lead to prosocial behavior when an inequitable situation can be set right. When equity has already been restored by another party (i.e., the concern of anger has been satisfied), feelings of anger and prosocial behavior towards the victim dissipate.





# Chapter 15

## A Robust Preference for Compensation Over Punishment

This chapter is based on: Van Doorn, J., Zeelenberg, M., & Breugelmans, S. M. (2014). *A robust preference for compensation over punishment*. Manuscript under review.



Previous research suggests that in order to restore equity, people prefer compensation of a victim over the punishment of a perpetrator in third-party situations. It remains unclear, however, whether this preference for compensation over punishment is stable or specific to certain situations. In six studies the robustness of the preference for compensation over punishment in angry people is investigated. Results from all experiments showed that adjustments in the situation or in the behavioral options hardly influence participants' preference for compensation over punishment.

## A Robust Preference for Compensation Over Punishment

There are multiple ways to restore an inequitable or unjust situation. For example, one can punish a perpetrator or compensate a victim in order to restore equity. Research on anger following from inequity has shown that in order to understand when people opt for punishment or compensation it is crucial to differentiate between first-party anger (anger because you yourself were harmed) and third-party anger (anger because someone else was harmed; see Van Doorn, Zeelenberg, & Breugelmans, 2014 for a review). In the case of first-party anger, there is often only the option to act antagonistically towards the person responsible for the harm; it is not possible to be prosocial towards oneself. In third-party situations, there is both the option to punish a perpetrator responsible for the harm done and compensating a harmed victim.

Previous theory and research on third-party anger has predominantly focused on punishment following from anger (e.g., Fehr & Fischbacher, 2004; Goldberg, Lerner, & Tetlock, 1999; Nelissen & Zeelenberg, 2009; Seip, Van Dijk, & Rotteveel, 2014). However, recent studies have reported that when an option of compensation was included people seemed to prefer this option over that of punishment (Chavez & Bicchieri, 2013; Lotz, Okimoto, Schlösser, & Fetchenhauer, 2011). This finding raises the question to what extent the preference for compensation over punishment generalizes across situations. Therefore, in this research we investigate the robustness of the preference for compensation over punishment in third-party anger.

It is important to study one's behavioral preference after third-party anger for several reasons. First, and foremost, if compensation would indeed be structurally preferred over punishment this would have implications for the predominant view of anger as a punitive, antagonistic emotion (Van Doorn et al., 2014). Second, knowing the behavioral predisposition of angry people in third-party situations allows us to more accurately predict angry people's behavior in social interactions. Causing harm by, for example, unfairness or injustice is a prime elicitor of anger (e.g., Kuppens, Van Mechelen, Smits, & De Boeck, 2003; Mikula, Scherer, & Athenstaedt, 1998), and anger guides our behavior in dealing with the caused harm (cf. Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008). Finally, studying the behavioral preferences of people in anger eliciting

situations can also teach us about how people try to resolve situations of inequity or of social transgression. This, in turn, is important for contemporary models of human cooperation beyond kinship ties (e.g., Nowak, 2006). Previous research has shown that human cooperation is best supported by repeated positive interactions with others (Rand, Dreber, Ellingsen, Fudenberg, & Nowak, 2009).

Before turning to our studies, we start with reviewing some reasons for why angry people could prefer compensation over punishment. Firstly, third-party compensation might be preferred over punishment because previous studies on third-party responses were conducted in a non-repeated setting (Chavez & Bicchieri, 2013; Lotz et al., 2011). However, when a perpetrator can be unfair repeatedly it might be more beneficial to punish the perpetrator to stop his or her unfair behavior. Indeed, deterrence of future offenses is one of the justifications for why people punish (Carlsmith, Darley, & Robinson, 2002).

A second reason for preferring compensation over punishment could be that compensation is judged as having a greater contribution or as being more efficient than punishment, because punishment still leaves the victim in a disadvantageous position. In previous research where monetary compensation and punishment was used, both behavioral options were equally costly and had an equal influence on the total amount of money victims and perpetrators owned (Chavez & Bicchieri, 2013; Leliveld, Van Dijk, Van Beest, 2012; Lotz et al., 2011). It might be the case that people only consider punishment when the efficiency of such a negative option is greater than that of compensation. People are reluctant to do harm and rather not act negatively if they can avoid it (Baron, 1995).

Third and related to the previous reason, people might not be willing to punish themselves but might be inclined to choose punishment when performed by someone else. Research on self-other decision making has revealed that there is a difference in how individuals make a decision with a negative impact for themselves as compared to advising someone else about the decision (Kray & Gonzalez, 1999). Giving someone else advice about making a decision is more socially distant than making the decision yourself (Polman & Emich, 2011) and is judged as easier (Kray & Gonzalez). Hence,

people might be more inclined to choose punishment when performed by someone else if they do not have to bear the costs of punishment themselves.

In the next six studies we have created a set of conditions to investigate these reasons and study the robustness of the preference for compensation over punishment. In Studies 1-3 we confronted people with a perpetrator who has a possibility to act unfairly multiple times, and asked whether participants want to use their own money to compensate the victim, punish the perpetrator, or whether they want to keep the money themselves. In Study 4 we made punishment more efficient than compensation, and in Study 5 we examine whether people might be reluctant to punish themselves, and prefer punishment if performed by someone else. Finally, in Study 6 we test a methodological constraint, namely whether people increase punishment when an option to compensate is absent.

### Study 5.1

#### Method<sup>14</sup>

Three hundred and eight MTurk-workers (170 males, 138 females;  $M_{\text{age}} = 31.86$ ,  $SD = 10.62$ ) were randomly assigned to the single game condition or multiple games condition. Participants in the single game condition read the following scenario:

Imagine: You observe a game played by Mark and Rick. In this game, \$100 needs to be divided. Mark gets to decide how to divide this money between himself and Rick. Rick has no influence on the division of the money. Mark decides to give Rick \$20 and to keep \$80.

Participants in the multiple games condition read the following scenario:

Imagine: You observe a series of games played by Mark and Rick. In every game \$100 needs to be divided, and in every game Mark gets to decide how to divide this money between himself and Rick. Rick has no influence on the division of the money. In the first game, Mark decides to give Rick \$20 and to keep \$80.

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<sup>14</sup> There were no gender effects on monetary choice in any of the studies.

Next, as an emotion check, participants indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation, on slider scales ranging from 0 (*not at all*) to 10 (*very strongly*)<sup>15</sup>. Then, participants read that they themselves owned \$50, and that they could choose one of the three options to use the dollars they owned: They could compensate Rick; every dollar that they used for compensation would increase Rick's amount with \$3. They could punish Mark; every dollar that they used for punishment would decrease Mark's amount with \$3. Or they could keep the money themselves. In case of choosing punishment or compensation, participants also indicated how many dollars they would spend.

### **Results and Discussion**<sup>16</sup>

Participants in the single game and multiple games conditions reported more anger than all other emotions after reading about the unfair distribution. Participants in both conditions experienced anger equally intense.

The percentages of monetary choice are shown in Table 5.1. There was no difference in the choice for compensation, punishment, or keeping the money between conditions. In both conditions participants more often choose for compensation than for punishment. There were no differences in the amount of money spent on compensation between the single game condition ( $M = \$18.26$ ,  $SD = 12.93$ ) and the multiple games condition ( $M = \$19.45$ ,  $SD = 11.87$ ),  $t(102) = -0.49$ ,  $p = .627$ .

It thus appears that people are reluctant to punish when they have an opportunity to compensate a victim, even if a perpetrator might act unfairly again in the future. In the next study, adjusted versions of the scenarios used in Study 5.1 were used. It might not have been clear how many games Mark would play in the multiple games condition and that Mark could be repeatedly unfair. We also made it clear that the decision to let Mark decide was purely random.

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<sup>15</sup> In studies using a slider scale we divided the original scores (ranging from 0 to 100) by ten for reasons of clarity.

<sup>16</sup> Results for emotions in all studies are in the Appendix.

**Table 5.1***Studies 5.1-5.3: Percentages of Monetary Choice as a Function of Condition*

Monetary choice	Condition	
	Single game ( <i>n</i> = 153)	Multiple games ( <i>n</i> = 155)
<b>Study 5.1</b>		
Compensation	31.4%	37.4%
Punishment	7.2%	5.8%
Keep	61.4%	56.8%
$\chi^2 (2, N = 308) = 1.33, p = .515$		
Monetary choice	Single game ( <i>n</i> = 67)	Multiple games ( <i>n</i> = 70)
	<b>Study 5.2</b>	
Compensation	56.7%	52.9%
Punishment	7.5%	14.3%
Keep	35.8%	32.8%
$\chi^2 (2, N = 137) = 1.64, p = .441$		
Monetary choice	Repeated unfairness ( <i>n</i> = 100)	Repeated fairness ( <i>n</i> = 101)
	<b>Study 5.3</b>	
Compensation	39.0%	22.8%
Punishment	20.0%	2.0%
Keep	41.0%	75.2%
$\chi^2 (2, N = 201) = 29.32, p < .001$		

## Study 5.2

### Method

One hundred and thirty-seven Tilburg University students<sup>17</sup> (25 males, 112 females;  $M_{\text{age}} = 19.46$ ,  $SD = 2.41$ ) were randomly assigned to the single game condition or multiple games condition and received course credit for their participation. Participants in the single game condition read the following scenario:

Imagine: You observe a single game played by Mark and Rick in which €100 needs to be divided. By the toss of a coin Mark is selected to decide how to divide this money between himself and Rick. Rick has no influence on the division of the money. Mark decides to give Rick €20 and to keep €80.

Participants in the multiple games condition read the following scenario:

Imagine: You observe a series of 20 games played by Mark and Rick, and in every game \$100 needs to be divided. By the toss of a coin Mark is selected to decide how to divide this money between himself and Rick in every game. Rick has no influence on the division of the money. In the first game, Mark decides to give Rick €20 and to keep €80.

As an emotion check, participants subsequently indicated how much anger, shame, regret, pride, and guilt they would feel in the described situation (1 = *not at all*, 5 = *very strongly*). Then as in Study 5.1, participants read that they themselves owned €50, and that they could choose to compensate Rick, to punish Mark, or they could keep the money themselves. All participants were asked to think carefully about how to use their €50.

### Results and Discussion

Participants in the single game and multiple games conditions reported more anger than all other emotions after reading about the unfair distribution. Participants in both conditions experienced anger equally intense.

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<sup>17</sup> An additional three participants were excluded from the analyses because they failed to follow the instructions.

The percentages of monetary choice are shown in Table 5.1. There was no difference in the choice for compensation, punishment, or keeping the money between conditions. In both conditions participants more often choose for compensation than for punishment. There were no differences in the amount of money spent on compensation between the single game condition ( $M = \text{€}18.50$ ,  $SD = 10.76$ ) and the multiple games condition ( $M = \text{€}17.78$ ,  $SD = 10.21$ ),  $t(72) = 0.29$ ,  $p = .770$ .

From these results we can conclude that when a perpetrator could be repeatedly unfair, people are still reluctant to punish and prefer to compensation over punishment. In the next study, we again adjusted the scenario and confront participants with Mark acting unfairly multiple times. We also adjusted to whom the unfairness was done. Participants might have chosen to compensate the victim, because Mark could harm the same victim multiple times. So, in the next study Mark acts unfairly to multiple victims.

### Study 5.3

#### Method

Two hundred and one MTurk-workers (112 males, 89 females;  $M_{\text{age}} = 33.65$ ,  $SD = 11.01$ ) were randomly assigned to the repeated unfairness condition or repeated fairness condition. Participants in the repeated unfairness condition read the following scenario:

Imagine: You observe a series of 10 games played by Mark, and among others, Tim, Michael and Rick. In every game \$100 needs to be divided. By means of a coin flip it is decided that Mark gets to divide the money between himself and the other player. The other player has no influence on the division of the money. In the first game, Mark decides to give Tim \$20 and to keep \$80. In the second game, Mark decides to give Michael \$10 and to keep \$90. In the third game, Mark decides to give Rick \$20 and to keep \$80. Thus, Mark always keeps the greater part of the money and gives a small part to the other player.

Participants in the repeated fairness condition read the same scenario, but instead of an unequal distribution, Mark divided the money between himself and the other players equally. Next, as an emotion check, all participants subsequently indicated how much



anger, shame, regret, pride, and guilt they would feel in the described situation, on slider scales ranging from 0 (*not at all*) to 10 (*very strongly*).

Next, participants read that:

Shortly, Mark will play a fourth game with Daniel. You own \$50 in this fourth game. How would you spend the \$50 as an observer of this game? You have three options to spend each dollar: You can compensate Daniel; every dollar that you use for compensation will increase Daniel's amount with \$3. You can punish Mark; every dollar that you use for punishment will decrease Mark's amount with \$3. Or you can keep the money.

In the repeated unfairness condition, participants subsequently read: "In the fourth game, Mark decides to give Daniel \$20 and to keep \$80." In the repeated fairness condition, participants read: "In the fourth game, Mark decides to give Daniel \$50 and to keep \$50." Finally, participants were asked which option (punishment, compensation, or keeping the money) they would choose.

### **Results and Discussion**

Participants in the repeated unfairness condition experienced more anger than participants in the repeated fairness condition. Participants in the repeated unfairness condition reported more anger than all other emotions.

The percentages of monetary choice are shown in Table 5.1. Participants in the repeated unfairness condition more often chose for punishment and compensation than participants in the repeated fairness condition, whereas participants in the latter condition more often chose to keep the money. In both conditions participants more often choose for compensation than for punishment. There were no differences in the amount of money spent on compensation between the repeated unfairness condition ( $M = \$28.87$ ,  $SD = 14.50$ ) and the repeated fairness condition ( $M = \$23.43$ ,  $SD = 15.95$ ),  $t(59) = 1.37$ ,  $p = .177$ .

In the next study we varied the contribution of the punishment and compensation. Participants read that either the contribution of compensation and punishment would

be equal or unequal. In the unequal condition, the contribution of punishment would be greater than compensation. This difference might motivate people to actually choose punishment over compensation.

## Study 5.4

### Method

Two hundred and two MTurk-workers (138 males, 64 females;  $M_{\text{age}} = 31.28$ ,  $SD = 9.33$ ) were randomly assigned to the equal contribution condition or unequal contribution condition. All participants read the same scenario as the one used in the single game condition of Study 5.1, where Mark decides to give Rick \$20 and to keep \$80, and completed the same emotion check.

Next, participants in the equal contribution condition read that they themselves owned €50, and that they could choose one of the three options to use the dollars they owned: They could compensate Rick. Every dollar that they used for compensation would increase Rick's amount with \$3; or they could punish Mark. Every dollar that they used for punishment would decrease Mark's amount with \$3; or they could keep the money themselves. In the unequal contribution condition participants read that that they themselves owned \$50, and that they could choose one of the three options to use the dollars they owned: They could compensate Rick. Every dollar that they used for compensation would increase Rick's amount with \$1; or they could punish Mark. Every dollar that they used for punishment would decrease Mark's amount with \$3; or they could keep the money themselves.

### Results and Discussion

Participants in the equal contribution and the unequal distribution conditions reported more anger than all other emotions after reading about the unfair distribution. Participants in both conditions experienced anger equally intense.

The percentages of monetary choice are shown in Table 5.2. Participants in the equal contribution condition more often chose for compensation and also spent more on compensation ( $M = \$17.94$ ,  $SD = 11.52$ ) than participants in the unequal contribution

condition ( $M = \$26.78$ ,  $SD = 14.35$ ),  $t(67) = -2.83$ ,  $p = .006$ . In both conditions participants more often choose for compensation than for punishment. However, in the unequal contribution condition participants chose more often for keeping the money themselves than for compensation.

In the next study we investigate whether people are reluctant to punish themselves, but might still judge punishment effective *if* performed by someone else. Therefore, in what follows either participants themselves were responsible for deciding how to spend the \$50 or someone else was responsible for deciding how to spend the money.

**Table 5.2**

*Study 5.4: Percentages of Monetary Choice as a Function of Condition*

Monetary choice	Condition	
	Equal contribution ( $n = 101$ )	Unequal contribution ( $n = 101$ )
Compensation	41.6%	27.7%
Punishment	7.9%	10.9%
Keep	50.5%	61.4%
$\chi^2 (2, N = 202) = 4.34, p = .114$		

## Study 5.5

### Method

Three hundred and three MTurk-workers (161 males, 142 females;  $M_{age} = 31.98$ ,  $SD = 10.71$ ) were randomly assigned to the third-party decision condition, fourth-party own decision or fourth-party other decision condition. All participants read the same scenario as the one used in the single game condition of Study 5.1, where Mark decides to give Rick \$20 and to keep \$80, and completed the same emotion check, with the small adjustment that participants in the third-party decision condition read that they observed this game between Mark and Rick and participants in the two fourth-party conditions read that they and another person observed the game between Mark and Rick.

As in previous studies, participants (alone or together with the other person) read that they owned \$50 and that they could choose one of the three options to use the dollars they owned: They could compensate Rick. Every dollar that they used for compensation would increase Rick's amount with \$3; or they could punish Mark. Every dollar that they used for punishment would decrease Mark's amount with \$3; or they could keep the money themselves. In the third-party decision condition, participants were asked which option they would choose. In the fourth-party own decision condition, participants subsequently read that they were the person responsible for choosing one of the above stated choices, and were asked which option they would choose. In the fourth-party other decision condition participants subsequently read that the other person was responsible for deciding how to spend the \$50 and were asked how they would like to other person to spend the \$50.

### Results and Discussion

Participants in all conditions reported more anger than all other emotions after reading about the unfair distribution. Participants in all conditions experienced anger equally intense.

The percentages of monetary choice are shown in Table 5.3. There was no difference in the choice for compensation, punishment, or keeping the money between conditions. In

all conditions participants more often choose for compensation than for punishment. There were no differences in the amount of money spent on compensation,  $F(2, 110) = 2.56, p = .082, \eta_p^2 = .044$ . Participants in the third-party decision condition ( $M = \$17.87, SD = 9.94$ ) spend an equal amount of money on compensation as participants in the fourth-party own decision condition ( $M = \$22.19, SD = \$14.71$ ),  $p = .358$ , and the fourth-party other decision condition ( $M = \$24.79, SD = 15.35$ ),  $p = .068$ .

In the next study we wanted to see when people only have the option to do something (punish) or do nothing (keep the money themselves), whether they would prefer the active option (although it is a negative one). Anger is judged as an approach-related affect (Carver & Harmon-Jones, 2009), and centers around restoring equity. Hence, if people only have the option to punish as the active response, they might be inclined to choose this option over the passive option.

### Table 5.3

*Study 5.5: Percentages of Monetary Choice as a Function of Condition*

	Condition		
	Third-party decision ( $n = 98$ )	Fourth-party own decision ( $n = 104$ )	Fourth-party other decision ( $n = 101$ )
Monetary choice			
Compensation	38.8%	34.6%	39.6%
Punishment	8.2%	9.6%	10.9%
Keep	53.1%	55.8%	49.5%
$\chi^2 (4, N = 303) = 1.16, p = .885$			

## Study 5.6

### Method

Two hundred and four MTurk-workers (130 males, 74 females;  $M_{\text{age}} = 31.74$ ,  $SD = 9.21$ ) were randomly assigned to the two options (punishment/keeping the money) condition or three options (punishment/compensation/keeping the money) condition. All participants read the same scenario as the one used in the single game condition of Study 5.1, where Mark decides to give Rick \$20 and to keep \$80, and completed the same emotion check.

Next, participants in the two options condition read that they themselves owned \$50, and that they could choose one of the two options to use the dollars they owned: They could punish Mark. Every dollar that they used for punishment would decrease Mark's amount with \$3; or they could keep the money themselves. In the three options condition participants read that that they themselves owned \$50, and that they could choose one of the three options to use the dollars they owned: They could compensate Rick. Every dollar that they used for compensation would increase Rick's amount with \$3; or they could punish Mark. Every dollar that they used for punishment would decrease Mark's amount with \$3; or they could keep the money themselves.

### Results and Discussion

Participants in the two options and the three options conditions reported more anger than all other emotions after reading about the unfair distribution. Participants in both conditions experienced anger equally intense.

The percentages of monetary choice are shown in Table 5.4. Participants in the two options condition more often chose for punishment and keeping the money than participants in the three options condition. Participants in the three options condition more often chose to compensate than to punish, whereas participants in the two options condition more often chose to keep the money than to punish.

**Table 5.4***Study 5.6: Percentages of Monetary Choice as a Function of Condition*

Monetary choice	Condition	
	Two options ( <i>n</i> = 102)	Three options ( <i>n</i> = 102)
Compensation	-	37.3%
Punishment	15.7%	3.9%
Keep	84.3%	58.8%
$\chi^2 (2, N = 204) = 49.83, p < .001$		

### General Discussion

In six studies we investigated the robustness of the preference for compensation over punishment in angry people. Studies 5.1 to 5.3 showed that when a perpetrator can be or is unfairly repeatedly to one or multiple victims, angry participants still prefer compensation of a victim over punishment of the perpetrator. Study 5.4 again shows that angry people prefer compensation over punishment irrespective of the contribution of punishment being greater than the contribution of compensation. In Study 5.5 we found that angry people prefer compensation over punishment when the act is performed by themselves as well as by others. Finally, Study 5.6 shows that when the option to compensate was absent the majority of angry people chose not to act. We consistently find a similar pattern of percentages in the choice for compensation, punishment, or keeping the money in the baseline condition that is present in almost all studies, namely the condition in which one victim receives an unequal amount of money from a dictator and where participants have the option to compensate, punish, or keep the money (please note that although these conditions are the same across studies, they are named differently).

Considering the *amount* of money that is spend to compensation and punishment, results are consistent with the choices participants make: When there is no difference in choosing compensation between conditions, there is also no difference in the amount of money spend on compensation. There was no possibility to compare the amount of money spend on compensation with the amount of money spend on punishment in our studies because of the low amount of participants actually choosing punishment.

Why would there be such a robust preference for compensation? What we did not test here is that there may be considerations of effectiveness. Punishment only makes sense if there is a good-enough probability that the behavior of the perpetrator will change. Otherwise, compensation should clearly have precedence because its effectiveness is certain. Furthermore, although we increased the contribution of punishment in Study 4, and not that of compensation, one could still argue that the victim is in a disadvantageous position and people want to see it restored. In compensation the victim is helped out of his/her disadvantageous position; punishing the perpetrator may also restore the harm done, but this only puts the perpetrator in a disadvantageous position and does not take away the harm done to the victim. Finally, it might also be the case that compensation is preferred because of relational concerns (Haesevoets, Van Hiel, & Reinders Folmer, & De Cremer, 2014; Okimoto & Tyler, 2007), and a fear for retribution by the punished perpetrator. Compensation allows for investing in a relationship whereas punishment does not. Future research might reveal the exact motivation behind the robust preference for compensation over punishment.

Although there is a clear preference for compensation over punishment in our studies, the percentage of people choosing to punish did increase in some situations. For example, in Study 5.3 people were angrier and more often chose to punish when they were confronted with a perpetrator that had acted unfairly repeatedly as compared to a perpetrator that had acted fairly repeatedly. Also in Study 5.6 we see an increase in punishment when the option to compensate is not given. Finally, in Study 5.4 we find that when punishment has a greater contribution, people less often choose for compensation. However, instead of seeing a larger total of angry people choosing for punishment, we see a larger total of angry people choosing to keep the money themselves. We also see a surprisingly large amount of participants choosing to



compensate in the repeated fairness condition of Study 3, where there is not really a victim. It might be the case that people chose this prosocial option as it can be interpreted more as giving instead of compensating, and people derive pleasure from that. Furthermore, people might be reluctant to act negatively by taking away money or to be egoistic by keeping the money in a fair situation.

When looking at the different acts, results show a clear preference for compensation over punishment. However, our studies also included the option not to act. When comparing the prosocial act with not acting at all results do not indicate a clear preference. The approach-motivated characteristics of anger (Carver & Harmon-Jones, 2009) might especially be present in cases of first-party anger. Our results suggest that in cases of third-party anger this approach motivation is less present. A reason for this might be that people judge their act as interfering between other people's business.

We realize that our studies do not comprise actual behavior but hypothetical situations. Still, we believe these studies are important as they are an initial test of the robustness of the preference for compensation over punishment. Furthermore, the choice for punishment in our 'imaginary' studies might even be easier than in studies where real choices are made and real costs are involved. Without real costs involved in punishment in our studies we still find the robust preference for compensation over punishment. Hence, the preference we find in our studies will most likely be equally if not more strongly present in actual behavior (see also Chavez & Bicchieri, 2013).

The results from our six studies have implications for how we see anger as an emotion. Anger has often been related to negative behavioral consequences such as aggression, antisocial behavior, and has been suggested to be the proximate mechanism behind punishment (e.g., Berkowitz, 1990; Bougie, Pieters, & Zeelenberg, 2003; Fehr & Fischbacher, 2004; Fehr & Gächter, 2002; Nelissen & Zeelenberg, 2009; Seip et al., 2014). Our results, however, suggest that even when punishment might be a more effective option, people consistently choose compensation instead. This implies that the anger is a more moral and prosocial emotion than has widely been believed, and underlines the importance of considering emotions in social interactions.

Furthermore, our findings also have implications in the domain of punishment. Punishment has often been the only option given to participants, especially in the context of economic games, which has made punishment the dominant response in cases of inequity, unfairness or norm violations (e.g., Fehr & Fischbacher, 2004; Goldberg et al., 1999; Nelissen & Zeelenberg, 2009; Seip, Van Dijk, & Rotteveel, 2009, 2014). Our results show that as soon as other behavioral options are included, such as compensation, that this dominant response of punishment shifts to a dominant preference for compensation or not acting at all. Both positive interactions with others and the fact that only a small amount of people choose to punish might be very effective in upholding cooperation (Frank, 2004; Rand et al., 2009).

Finally, these results also have implications for justice and law. From our results it appears that third-parties prefer compensation of a victim over punishment of a perpetrator, while punishment is the dominant justice-restoring device in tort cases. This preference also holds when third parties do not have to indicate a preference themselves, but have to indicate how they would prefer someone to choose, which is similar to a third party advising a judge in dealing with injustice. If punishment is not the preferred manner in restoring equity or justice, a (severe) punishment might never match up to the contribution that compensation establishes in observers' eyes.

Taken together, our results show that angry people have a strong preference for compensation over punishment in order to restore equity. Although in some situations the percentage of people who want to punish the perpetrator does increase, the preference for compensation of victims seems to be a strong one. Even when punishment might refrain a perpetrator from acting unfairly again in the future, and even when punishment has a greater contribution in restoring equity than compensation does, the preference for compensation remains. These findings imply that angry people prefer a prosocial option over an antagonistic option which has implications for theories on punishment, emotions and law.

## Appendix

### Emotion Checks of Studies 5.1 to 5.6

Table 5.1

*Study 5.1: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Single game ( <i>n</i> = 153)	Multiple games ( <i>n</i> = 155)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	<b>5.17 (3.11)<sub>a</sub></b>	<b>4.98 (3.14)<sub>a</sub></b>
Guilt	2.91 (3.35) <sub>a</sub>	2.80 (3.08) <sub>a</sub>
Shame	3.31 (3.28) <sub>a</sub>	3.31 (3.14) <sub>a</sub>
Regret	2.93 (3.17) <sub>a</sub>	2.74 (2.95) <sub>a</sub>
Pride	1.30 (2.27) <sub>a</sub>	1.23 (2.03) <sub>a</sub>

*Note.* Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Means with the same subscript do not differ significantly, with all *t*s < 0.55, all *p*s > .585. Means in bold represent the dominant emotion experienced within that condition, with all *t*s(152) > 6.56, *p*s < .001 for the single game condition, and all *t*s(154) > 6.16, *p*s < .001 for the multiple games condition.

Table 5.2

*Study 5.2: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Single game ( <i>n</i> = 67)	Multiple games ( <i>n</i> = 70)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	<b>2.48 (0.99)<sub>a</sub></b>	<b>2.49 (0.94)<sub>a</sub></b>
Guilt	2.07 (1.20) <sub>a</sub>	1.71 (0.97) <sub>a</sub>
Shame	1.70 (0.94) <sub>a</sub>	1.57 (0.75) <sub>a</sub>
Regret	1.63 (1.01) <sub>a</sub>	1.39 (0.64) <sub>a</sub>
Pride	1.13 (0.46) <sub>a</sub>	1.31 (0.75) <sub>a</sub>

*Note.* Emotions could range from 1 (*not at all*) to 5 (*very strongly*). Means with the same subscript do not differ significantly, with all *ts* < 1.94, all *ps* > .054. Means in bold represent the dominant emotion experienced within that condition, with all *ts*(66) > 2.39, *ps* < .020 for the single game condition, and all *ts*(69) > 4.77, *ps* < .001 for the multiple games condition.

Table 5.3

*Study 5.3: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Repeated unfairness ( <i>n</i> = 100)	Repeated fairness ( <i>n</i> = 101)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	<b>5.58 (3.23)<sub>a</sub></b>	1.90 (2.66) <sub>b</sub>
Guilt	2.42 (3.01) <sub>a</sub>	0.89 (1.61) <sub>b</sub>
Shame	3.04 (3.25) <sub>a</sub>	1.11 (2.14) <sub>b</sub>
Regret	2.87 (3.00) <sub>a</sub>	1.56 (2.59) <sub>b</sub>
Pride	1.33 (2.14) <sub>a</sub>	<b>3.35 (3.26)<sub>b</sub></b>

*Note.* Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Means with a different subscript differ significantly, with all *ts* > 3.29, *ps* < .001. Means in bold represent the dominant emotion experienced within that condition, all *ts*(99) > 6.56, *ps* < .001 for the repeated unfairness condition, and all *ts*(100) > 3.20, *ps* < .002 for the repeated fairness condition.

Table 5.4

*Study 5.4: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Equal contribution ( <i>n</i> = 101)	Unequal contribution ( <i>n</i> = 101)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	<b>4.65 (2.89)<sub>a</sub></b>	<b>4.72 (3.23)<sub>a</sub></b>
Guilt	2.70 (2.92) <sub>a</sub>	1.81 (2.85) <sub>b</sub>
Shame	3.36 (3.23) <sub>a</sub>	2.42 (3.01) <sub>b</sub>
Regret	2.44 (2.58) <sub>a</sub>	2.31 (2.80) <sub>a</sub>
Pride	1.67 (2.19) <sub>a</sub>	1.01 (1.94) <sub>b</sub>

*Note.* Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Means with a different subscript differ significantly, with all *ts* > 2.12, *ps* < .035. Means in bold represent the dominant emotion experienced within that condition, all *ts*(100) > 4.67, *ps* < .001 for the equal contribution condition, and all *ts*(100) > 6.84, *ps* < .001 for the unequal contribution condition.

Table 5.5

*Study 5.5: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition		
	Third-party decision ( <i>n</i> = 98)	Fourth-party own decision ( <i>n</i> = 104)	Fourth-party other decision ( <i>n</i> = 101)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	
Anger	<b>4.54 (3.11)<sub>a</sub></b>	<b>5.07 (3.10)<sub>a</sub></b>	<b>5.05 (3.13)<sub>a</sub></b>
Guilt	2.44 (2.94) <sub>a</sub>	2.41 (3.01) <sub>a</sub>	2.68 (3.28) <sub>a</sub>
Shame	3.17 (3.34) <sub>a</sub>	3.15 (3.24) <sub>a</sub>	3.07 (3.45) <sub>a</sub>
Regret	3.02 (3.20) <sub>a</sub>	2.62 (2.97) <sub>a</sub>	3.05 (3.29) <sub>a</sub>
Pride	1.25 (2.15) <sub>a</sub>	1.16 (1.86) <sub>a</sub>	1.04 (1.97) <sub>a</sub>

*Note.* Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Means with the same subscript do not differ significantly, with all *F*s < 0.93, *p* > .394. Means in bold represent the dominant emotion experienced within that condition, all *t*s(97) > 4.02, *ps* < .001 for the third-party decision condition, all *t*s(103) > 6.32, *ps* < .001 for the fourth-party own decision condition, and all *t*s(100) > 5.78, *ps* < .001 for the fourth-party other decision

Table 5.6

*Study 5.6: Means (and Standard Deviations) of Emotions Experienced as a Function of Condition*

Emotions	Condition	
	Two options ( <i>n</i> = 102)	Three options ( <i>n</i> = 102)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Anger	<b>4.55 (3.07)<sub>a</sub></b>	<b>5.01 (3.01)<sub>a</sub></b>
Guilt	2.38 (2.97) <sub>a</sub>	2.53 (2.82) <sub>a</sub>
Shame	3.06 (3.21) <sub>a</sub>	3.27 (3.20) <sub>a</sub>
Regret	2.60 (2.90) <sub>a</sub>	2.64 (2.82) <sub>a</sub>
Pride	0.98 (1.56) <sub>a</sub>	1.14 (1.86) <sub>a</sub>

*Note.* Emotions could range from 0 (*not at all*) to 10 (*very strongly*). Means with the same subscript do not differ significantly, with all *ts* < 1.09, all *ps* > .279. Means in bold represent the dominant emotion experienced within that condition, all *ts*(101) > 4.67, *ps* < .001 for the two options condition, and all *ts*(101) > 5.59, *ps* < .001 for the three options condition.





# Chapter 9

## Anger Appeals Promote Charitable Donations

This chapter is based on: Van Doorn, J., Zeelenberg, M., & Breugelmans, S. M. (2014). *Anger appeals promote charitable donations*. Manuscript under review.

This chapter investigates if and when anger appeals, communications that elicit anger in consumers, can be used to increase donations to charity. In an experimental study the idea was tested that anger leads to higher charitable donations, under the condition that people can restore equity with that donation (i.e., restore the harm done to the victim). Results indeed showed that when one's donation serves a specific restorative function (i.e., compensate the suffering of these women so that they can start a new life) as compared to a non-restorative function (i.e., offer help in special crisis centers for women, to alleviate their suffering and not worsen their situation), angry participants donated more to charity. This difference was absent when people did not experience anger. Furthermore, angry people donated more to the restorative charity than people not experiencing this emotion. The effect of anger on charitable donations occurred independently from consumers' empathic concern. These results thus suggest that anger can act as an emotional appeal in soliciting charitable donations.

## Anger Appeals Promote Charitable Donations

Emotional appeals are often used in advertising to persuade consumers to allocate their resources to some desired good; to buy a particular product or service or to donate money charity. Popular emotions in such appeals are fear and guilt (e.g., Hastings, Stead, & Webb, 2004; Hibbert, Smith, Davies, & Ireland, 2007; Witte & Allen, 2000), and sometimes regret (Landman & Petty, 2000; Zeelenberg & Pieters, 2004). The idea behind emotion appeals is that by making consumers for example feel fearful, motivations to act on this emotion are activated. If the product offered by the advertiser then offers a way to satisfy these motivations consumers should be more inclined to acquire the product. Research has shown that making people afraid of dental pain can induce them to brush more often because they are motivated to avoid what they fear (e.g., Janis & Feshbach, 1953). Similarly, fund-raisers use guilt appeals and offer guilt-reducing solutions to persuade consumers; depicting a sick, needy person in a charity fundraising ad may motivate people to donate money because they want to reduce their guilt over being better off (Hibbert et al., 2007; Basil, Ridgway, & Basil, 2008). The research in this article focuses on the effects of another emotion that may be an important motivator of charitable giving, namely anger. Anger may be less readily thought of when thinking about motivating consumers to engage in constructive behaviors – indeed, it seems that anger appeals have never been used in persuading people. Yet, as we will outline below, there are good theoretical as well as empirical reasons to believe that anger appeals can effectively motivate prosocial behavior and that this influence is independent from that of other emotions.

### Anger and Prosocial Behavior

Anger might have been overlooked as an emotion that can be used in persuasive communication because it is general thought of as an intense, negative emotion with only negative behavioral inclinations (such as aggression, antisocial behavior, and punishment; for a review, see Van Doorn, Zeelenberg, & Breugelmans, 2014). However, anger can also have prosocial consequences such as compensating victims and helping the disadvantaged (Iyer, Schmader, & Lickel, 2007; Montada & Schneider, 1989; Wakslak, Jost, Tyler, & Chen, 2007). These prosocial consequences mostly occur when

anger is experienced in third-party situations – when people get angry over harm done to another person.

Anger, like any specific emotion, is linked to specific concerns and goals (Bagozzi, Baumgartner, Pieters, & Zeelenberg, 2000; Frijda, 1988; Han, Lerner, & Keltner, 2007; Wetzler, Zeelenberg, & Pieters, 2007b; Yi & Baumgartner, 2004; Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008). In third-party situations, anger is often a reaction to perceived violations of equity, such as when an unjust or unfair situation elicits an inequitable relation. Consequently, behaviors that are motivated by anger have the goal to restore equity (e.g., Stillwell, Baumeister, & Del Priore, 2008; Scherer, 1984; see also Raihani & McAuliffe, 2012; Nasr Bechwati & Morrin, 2003). Inequity can be resolved by punitive, antagonistic behavior aimed at the perpetrator, but also by compensating the disadvantage of the victim.

Studies have reported people engaging in compensatory behavior following experiences of anger. For example, Montada and Schneider (1989) studied the impact of various emotions on the readiness to engage in prosocial activities in favor of the disadvantaged. Participants were confronted with scenarios describing the problems and misery of different groups of people. Results showed that anger was a predictor of prosocial commitment (e.g., claiming support for the disadvantaged, blaming political and economic leaders, and the spending of money for charitable goals), and that it was even more so than existential guilt and sympathy. Another example can be found in Iyer et al. (2007) who showed that anger aimed at one's own group predicted compensation toward the outgroup: American and British participants (ingroup) who perceived their countries to be responsible for illegitimate conditions in occupied Iraq (outgroup) reported more anger; anger, in turn, predicted action intentions to advocate compensation to Iraq.

It is important to note that such prosocial effects of anger can occur independently from feelings of empathy. In other words, it is not the case that anger towards a perpetrator leads to punishment while co-occurring empathy towards a victim leads to compensation. Although empathy can lead to compensation (e.g., Bagozzi & Moore, 1994; Batson, Duncan, Ackerman, Buckley, & Burch, 1981; Blader & Tyler, 2002;

Leliveld, Van Dijk, & Van Beest, 2012), this effect is orthogonal to the effect of anger, which can incite both punishment and compensation. Evidence for this position can be found in Lotz, Okimoto, Schlösser, and Fetchenhauer (2011) who showed that regardless of whether or not victims knew they had been victimized, anger predicted participants' compensation of the victim. The goal of empathy is to comfort someone, but if the victim does not know about the unfair allocation there is no one to comfort. Anger is independent of the victim's knowledge because it reacts to the inequity of the distribution and hence can motivate compensation even in absence of such knowledge. A similar idea has been suggested by Blader and Tyler, who argued that both justice principles and empathy can lead to prosocial behavior. Justice theory suggests that we feel concerned even when a loathsome person for whom we feel little empathy is the victim of injustice and the emotion appraisal literature shows that injustice is an important elicitor of anger (Mikula, Scherer, Athenstaedt, 1998).

When equity or justice is already restored the motivation to act decreases, in line with the goal-directed nature of anger. For example, research by Van de Calseyde, Keren, and Zeelenberg (2013) revealed that when a victim had already been compensated by an insurance company, consumers recommended less severe punishment for the criminal. Goldberg, Lerner, and Tetlock (1999) showed that anger elicited by injustice carried over to judgments of unrelated acts of harm *only* when a perpetrator went unpunished. These results suggest that when equity is restored, the need for punishment disappears. These findings imply that angry people only act if their actions can contribute to righting the wrong. Put differently, angry people only act when their behavior can still serve the goal of restoring equity. Thus, it can be expected that people also only act *prosocially* towards a victim when equity still needs to be restored.

### Emotional Appeals

Emotional appeals can be used as a tool to persuade consumers. Such appeals have been shown to lead to attitudinal and behavioral change. For example, a meta-analysis revealed that fear appeals are an effective marketing tool when the advertisement or message is severe enough (Witte & Allen, 2000), although field research evaluations of fear appeals usually reveal that fear has weaker effects in real-world campaigns

(Hastings et al., 2004). Guilt appeals have been extensively studied as well. For example, Coulter and Pinto (1995) found that advertisements with moderate levels of guilt were more effective than strong guilt appeals in influencing participants' purchase intention.

Outside of a traditional consumer context, emotional appeals have been shown to be effective in charitable fundraisings as well. Research on guilt convincingly showed that guilt can have interpersonal prosocial consequences towards victims (e.g., Baumeister, Stillwell, & Heatherton, 1994; De Hooge, Nelissen, Breugelmans, & Zeelenberg, 2011; Ketelaar & Au, 2003). In emotional appeal studies, guilt has been shown to induce higher donations, in relation to persuasion knowledge (knowledge of persuasion tactics and charities), agent knowledge (beliefs about the characteristics, competencies, and goals of the charity; Hibbert et al., 2007), a sense of responsibility (Basil, Ridgway, & Basil, 2006), and experienced empathy and self-efficacy (Basil et al., 2008).

In light of the existing emotional appeals research it is surprising that anger has never been considered by fundraisers, especially in view of the observation that anger can induce compensatory behavior independently from empathic concerns in situations of third-party inequity. Bagozzi and Moore (1994) did find that exposure to an anti-child abuse public service advertisement induced anger, sadness, fear, and tension which in turn increased helping behavior. However, they did not study the separate effects of each emotion, leaving it in the middle what the specific contribution of anger on helping behavior was. The study of anger as a potential emotion appeal is important because many charities are aimed at people who are the victim of injustice or inequity. Anger motivates a goal to restore such justice or equity, and charities often deal precisely with this restorative goal.

### **Anger as an Emotional Appeal**

Based on previous theory and findings it is predicted that anger leads to higher charitable donations, under the condition that people can restore equity with that donation (i.e., restore the harm done to the victim). If the donation does not serve a specific restorative function, angry people should not be inclined to donate more than people not experiencing anger. In the experiment reported in this paper empathic

concern was also measured so as to be able to assess the unique effect of anger. Two hypotheses were tested:

**H1:** Anger, independently from empathy, leads to more charitable giving when the donation serves a restorative goal.

**H2:** Empathy, independently from anger, leads to more charitable giving irrespective of whether the donation serves a restorative goal.

### Study 6.1

6

#### Method<sup>18</sup>

One hundred twenty-eight Tilburg University students (20 males, 105 females, 3 unspecified,  $M_{\text{age}} = 19.50$ ,  $SD = 2.22$ ) were randomly assigned to an anger or a control condition. Participants first described a situation in which they felt angry (anger condition), or a regular day of the week (control condition). Such recalls are a common method of emotion induction (e.g., Strack, Schwarz, & Gschneidinger, 1985). Recalling a situation in which an emotion was experienced reactivates this emotion and associated motivational tendencies. After the recall, participants indicated how much anger, happiness, shame, regret, sadness, and guilt they felt, on rating scales running from 1 (*not at all*) to 5 (*very strongly*).

Next, participants read about two different charities: *OneMen*, focused on repairing negative consequences of women who are victim of human trafficking, and *Doctors Without Borders (DWB)*, focused on taking care of women who lost everything due to natural disasters. In the case of OneMen participants read: “With your contribution, OneMen will compensate the suffering of these women so that they can start a new life.” In the case of DWB participants read: “With your contribution, Doctors Without Borders will offer help in special crisis centers for women, to alleviate their suffering and prevent deterioration of their situation.”

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<sup>18</sup> There were no gender effects on the emotions and charity measures.



Participants were asked to imagine that they had an extra €50 to spend this month and to indicate how much they were willing to donate to either of these charities, on a scale of €0 to €50 with intervals of €5. They also indicated which of the charities (OneMen/women trafficking or DWB/natural disasters) they found most important, and which of the charities' goals they thought was most important (OneMen: compensation to women; DWB: offering help to women), both measured on a scale of 1 (*OneMen is most important*) to 7 (*DWB is most important*) with the midpoint (4) being *both OneMen and DWB are equally important*. Participants then completed the 7-item empathic concern scale ( $\alpha = .80$ ; Davis, 1983, 1994). Finally, participants were thanked, debriefed, and received course credit for their participation.

## Results

Means, standard deviations and relevant statistics are shown in Table 6.1. Participants in the anger condition reported more anger than participants in the control condition; within the anger condition, participants reported more anger than all other emotions. This pattern of results shows that the manipulation of anger was successful. Furthermore, univariate tests showed that participants in the anger condition donated significantly more to OneMen than participants in the control condition, but no such effect was found for donations to DWB. Within the anger condition, but not within the control condition, participants donated more to OneMen than to DWB<sup>19</sup>. Within the anger and control conditions, participants judged both charities and the goals they represent as equally important (as the means did not differ from the midpoint).

We next tested whether donation intention could be explained by empathic concern. A regression analysis showed that empathic concern was related to the amount of money participants donated to both OneMen and DWB,  $\beta = .28$ ,  $t = 3.22$ ,  $p = .002$  and  $\beta = .21$ ,  $t = 2.40$ ,  $p = .018$ , respectively. When entering empathic concern as a covariate in ANCOVAs with Condition as an independent variable and donation intention to OneMen and DWB as dependent variables, the effects remain stable with  $F(1, 123) = 4.93$ ,  $p = .028$ ,  $\eta_p^2 = .04$  for OneMen, and  $F(1, 123) = 0.13$ ,  $p = .722$ ,  $\eta_p^2 = .001$  for DWB. Thus, the increased donations in the anger condition cannot be explained in terms of empathic concern.

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<sup>19</sup> There were two missing values in the anger condition on the donation to DWB measure.

**Table 6.1**

*Study 6.1: Means (and Standard Deviations) of Emotions Experienced, Donation Intention, and Charity Importance as a Function of Condition*

	Condition		<i>t</i> (126)	<i>p</i>	<i>d</i>
	Anger ( <i>n</i> = 64)	Control ( <i>n</i> = 64)			
Emotions	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )			
Anger	<b>3.30 (1.22)</b>	1.33 (0.76)	10.99	.000	1.94
Guilt	1.50 (0.78)	1.14 (0.39)	3.30	.001	0.60
Shame	1.89 (1.16)	1.19 (0.53)	4.42	.000	0.78
Regret	1.98 (1.22)	1.27 (0.51)	4.36	.000	0.76
Sadness	2.84 (1.30)	1.34 (0.78)	7.91	.000	1.40
Happiness	1.34 (0.72)	<b>3.22 (0.95)</b>	-12.59	.000	-2.23
Donation (€)			<i>F</i> (1, 126)	<i>p</i>	$\eta_p^2$
OneMen	<b>13.47 (11.69)</b>	8.91 (9.94)	5.64	.019	.043
DWB	10.73 (9.36)	11.09 (12.71)	0.03	.854	.000
Importance			<i>F</i> (1, 126)	<i>p</i>	$\eta_p^2$
Charity	3.64 (1.51)	3.86 (1.36)	0.75	.389	.006
Goal of charity	4.25 (1.58)	4.19 (1.44)	0.06	.815	.000

*Note.* Emotions could range from 1 (*not at all*) to 5 (*very strongly*). Means in bold represent the dominant emotion experienced within that condition, with all *t*s > 2.61, all *p*s < .011, *d*s > 0.33. Higher scores on the donation measures indicate higher amounts of euros donated to each charity. The mean in bold is the charity that is donated most to within the anger condition, *t*(61) = 2.07, *p* = .043, *d* = 0.26. There was no difference within the control condition: *t*(63) = -1.31, *p* = .195, *d* = -0.16. Scales of both importance measures ranged from 1 (*OneMen is most important*) to 7 (*DWB is most important*). Within the anger and control conditions, participants judged both charities and the goals they represent as equally important (as the means did not differ from the midpoint), *t*s < 1.91, *p*s > .061, *d*s < 0.24.

## General Discussion

This article presented a first empirical study of whether and when anger appeals lead consumers to donate more to charity. Results indicate that when a donation serves a specific restorative function (i.e., compensating suffering of these women so that they can start a new life) as compared to a non-restorative compensatory function (i.e., helping in special crisis centers for women, to alleviate their suffering and prevent deterioration of their situation), angry participants donated more to charity. This difference in donation intentions was absent when people did not experience anger. Furthermore, angry people donated more to the restorative charity than people not experiencing this emotion. These results suggest that anger can act as an appeal in soliciting charitable donations.

It is important to note that the effect of anger was independent from that of goal importance and empathy. Although angry people donated more to OneMen (i.e., the restorative charity), they did not think that OneMen itself or the goals it represents were more important than Doctors Without Borders (i.e., non-restorative charity). In other words, people were not just inclined to judge a charity as more important because they just donated more to that charity. Anger-induced donations occurred independently from empathy-induced donations. Empathy predicted charitable giving to OneMen as well as Doctors Without Borders, whereas anger only led to charitable giving in the case of OneMen. These results are in line with previous research suggesting independent prosocial effects of anger (e.g., Blader & Tyler, 2002; Lotz et al., 2011; Montada & Schneider, 1989).

Apart from demonstrating the effects of anger appeals, our results also more broadly speak to the view of (third-party) anger as having an equity concern and an equity-restoring goal (Stillwell et al., 2008; Scherer, 1984, Van Doorn et al., 2014; see also Walster, Berscheid, & Walster, 1973). Anger only led to a higher charitable donation when this could restore equity/justice. Showing prosocial consequences of anger of course does not imply that anger per se is a prosocial emotion; rather it means that prosocial consequences of anger are complementary to the negative and more well-known antagonistic behaviors (e.g., Berkowitz, 1990; Bougie, Pieters, & Zeelenberg,

2003; Nelissen & Zeelenberg, 2009; Yi & Baumgartner, 2004) because both can serve the same goal.

The results have important implications for fundraisers and charities, especially in the domain of injustice. Not only do these results suggest that inducing anger in potential givers might help in increasing donations, the results also suggest that charities should be aware of what information is given to potential givers. Charitable campaigns are usually occupied with how to 'portray their victims' (e.g., Small, Loewenstein, & Slovic, 2007), however, equally important for charitable campaigns is to be clear and informative about what goal is served with the raised money. As becomes clear from our experiment, the fact that the contribution of a donation is framed as either having a restorative function versus a non-restorative function has a large effect on the magnitude of the donation. An important next step for future research is to investigate whether these findings generalize to actual charitable campaigns.

To summarize, anger appeals lead to higher donations when this serves a specific restorative function (i.e., compensating the victim and helping her out of her disadvantageous position). This effect occurs independently from that of co-occurring empathic concerns and can be explained from an equity perspective.



**Discussion**

# Chapter 7



In the introduction I talked about a contradiction in how anger is perceived by the different classic and contemporary theorists. It has been argued that it is bad to experience anger (a 'poisonous' emotion), while at the same time scholars have argued for the moral character of anger. While the negative view of anger might have been the most commonly accepted view of this emotion, in this dissertation I have emphasized a prosocial side of anger. More specifically, this dissertation explored the idea that anger can lead to prosocial behavior, and that the interpersonal behavioral consequences of anger can be understood from a central concern for equity. Let me below summarize the empirical findings presented in this dissertation and illustrate how our insights into anger progressed during the last few years.

### **Overview of Findings**

Chapter 2 clearly demarcates the beginning of my research into the social nature of anger by providing a review of the empirical research at that time. I argued that the negative view of anger is too one-sided, as previous research and theorizing leads us to expect direct prosocial consequences from anger (i.e., prosocial behavior performed by the angry person themselves) in third-party situations (i.e., when observing that harm is done to someone else). It was further suggested that the antagonistic and prosocial consequences can be understood from the perspective that in interpersonal situations the behaviors stemming from anger are aimed at restoring equity.

Chapters 3 and 4 were designed as a first test of the ideas that followed from the review in Chapter 2. The empirical research in these chapters was aimed at answering the questions whether and when anger leads to prosocial behavior. The results presented in Chapter 3 provided a first experimental demonstration of the direct prosocial consequences of anger in third-party situations, which can occur independently from empathic concerns that may be experienced simultaneously. From these results it also appears that people prefer the prosocial option over the antagonistic option, as they were more willing to choose or give money for compensation than punishment. Chapter 4 more explicitly showed that the prosocial consequences of anger can be explained from an equity perspective, and proposed that anger is an emotion with an equity-restoring goal. Results demonstrated that anger only leads to prosocial behavior



towards a victim when the situation is inequitable. When equity has already been restored by another party, and the concern of anger has been satisfied, one's feelings of anger and one's own prosocial behavior towards the victim dissipate.

Chapter 5 elaborated on a coincidental but consistent finding in Chapters 3 and 4, namely that people have a preference for compensation over punishment. The studies revealed that the preference for compensation over punishment in angry people is a robust one. Although some situational variations increased the choice for punishment, it never topped the choice for compensation. Even when punishment might refrain a perpetrator from acting unfairly again in the future, and even when punishment has a greater contribution in restoring equity than compensation, does the preference for compensation remain.

Finally, Chapter 6 presented a potential application of the prosocial consequences of anger in a consumer context. The study indicated that anger appeals can be used in eliciting higher charitable donations. Results showed that when one's donation serves a specific restoring function (i.e., compensate the suffering of these women so that they can start a new life) as compared to a non-restoring function (i.e., offer help in special crisis centers for women, to alleviate their suffering and not worsen their situation), angry participants donated more to charity. For participants not experiencing anger, this difference was absent. Furthermore, angry people donated more to the restoring charity than people not experiencing this emotion. In line with results from Chapter 3, the effect of anger on charitable donations occurred independently from empathic concern, which predicted charitable giving irrespective of the specific restorative function.

The studies combine a variety of methods that have been proven useful for studying emotions and their consequences in previous research. Of course, each method has its idiosyncratic strengths and weaknesses, but as a set these different methodologies inform us about the prosocial consequences of anger. Although the studies do not comprise actual behavior but hypothetical situations, they do provide a first test of when and why anger leads to prosocial behavior. Furthermore, there are clear indications that anger will lead to prosocial behavior in real life. For example, anger is

commonly judged to be a negative emotion and there are no real costs involved in punishment in the hypothetical situations, but our participants still indicated that they would choose the prosocial option. Additionally, people are likely to perform actual punitive behavior after injustice, which makes it likely that they would also perform actual compensatory behavior if the option is given.

In general the following can be concluded: (1) anger in third-party situations is experienced quite often, (2) in interpersonal situations anger is an emotion with an equity-restoring goal, (3) ways to satisfy this goal can include both antagonistic (i.e., punishment of a perpetrator) and prosocial behavior (i.e., compensation of a victim), (4) people prefer to restore equity by means of compensation, (5) the prosocial or compensatory behavior following from anger can be translated into higher charitable donations. Although the series of studies in this dissertation cannot provide us with a definite answer about the nature and function of anger, the results do paint a broader picture of anger.

I do not dispute previous reasoning on anger. In fact, the results from this dissertation are in line with theories that anger involves negatives experiences, that it is about goal blockage, and that that behavioral tendencies can be predicted from the central concern of goal attainment. This dissertation adds that these behavioral tendencies are much more versatile than has generally been assumed; anger is an emotion that goes beyond punitive, antagonistic, and aggressive behaviors. The results in this dissertation can therefore best be summarized in the words of Carol Tavris (1989, p. 259): “Anger is good or bad depending on its use, not its nature.” This understanding of anger has important implications for anger in first-party and third-party situations and in economic games, anger as a moral emotion, and for justice and law.

### **Implications**

This dissertation teaches us the importance of investigating anger not only in first-party (when you yourself are harmed) situations, but also in and third-party situations (when you observe that someone else is harmed). It also underscores the importance of including a diverse set of behavioral options for people to cope with their anger. The

action tendencies of anger that have been identified by previous research appear to be antagonistic and self-oriented, which in many cases is true. In first-party situations, the most straightforward option to restore equity is to strike back. An option to act prosocially is often only present in third-party situations, where one can act towards a perpetrator and a victim. As the results from this dissertation highlight, including a prosocial option in the set of behavioral options in third-party situations has consequences for how people deal with transgressions in interpersonal situations. This is indicative of the behavioral repertoire of anger in real life, where the concerns that are relevant in anger can be served by many different behaviors. Failing to include these different behavioral options in research hinders progress as it does not allow for the richness of the anger response to manifest itself.

The results from this dissertation are especially relevant for the domain of economic games, where punishment has been the dominant response in cases of inequity, unfairness or norm violations (e.g., Goldberg, Lerner, & Tetlock, 1999; Nelissen & Zeelenberg, 2009; Seip, Van Dijk, & Rotteveel, 2009, 2014). For example, Fehr and Fischbacher (2004) studied third-party sanctions of violations of a distribution norm in a dictator game. In such games there are dictators who determine a distribution of a certain amount of money between themselves and recipients who simply receive whatever dictators decide to distribute. Third parties observing this dictator game are then given the opportunity to (costly/altruistically) punish the dictator. In such games an additional prosocial option could have been offered as well. By having the possibility to compensate the recipient, punishment might become less of a dominant response in third parties. This would have consequences for the idea that third-party punishment can explain sustainable cooperation in society (Fehr & Gächter, 2002). The results in this dissertation suggest that when a prosocial option is included people will opt for that. Hence, third-party compensation might be a key motive for the explanation of cooperation as well. Frank (2004) already argued that only a small amount of people choosing punishment is necessary in upholding cooperation, and Rand, Dreber, Ellingsen, Fudenberg, and Nowak (2009) have shown that human cooperation is best supported by repeated positive interactions with others.

Related to the issue of punishment, this dissertation also has consequences for our view of anger as a moral emotion. Moral emotions are emotions that are linked to the interests or welfare of persons other than the self and that elicit prosocial action tendencies (Haidt, 2003). Anger has previously been classified as a moral emotion because it can be strongly felt both for the harm that is done to oneself as well as others, but not because of its behavioral consequences. The antagonistic behaviors that follow from anger might lead people to think of anger as an immoral emotion. Although emotions that motivate helping behavior are easy to label as moral emotions, the antagonistic behaviors that follow anger are a part of its moral nature as well. The moral nature of anger lies in the fact that it leads people to care about the (social) world and to improve or restore that world. This dissertation shows that such restoring behaviors can be both antagonistic and prosocial, and that the prosocial behavior is even preferred by third parties. Hence, based on the disinterested elicitors *as well as* its consequences, this dissertation suggests that anger might be more of a prototypical moral emotion than has previously been assumed.

Furthermore, the fact that anger can be felt for the harm that is done to others is unique. Of course, other emotions can also be experienced in third-party situations but these are often vicarious emotions. For example, when someone else makes a shameful mistake we can experience shame irrespective of how we behaved ourselves (Welten, Zeelenberg, & Breugelmans, 2012). Third-party anger, however, is the anger that results directly from what is done to someone else, and not on behalf of someone else (as in the case of vicarious emotions). In addition, Chapter 3 has demonstrated that first-party anger and third-party anger occur equally often, are felt equally intensely and both stem from perceptions of unfairness, which is less apparent from other specific emotions and their vicarious counterparts.

Finally, this dissertation is relevant for theories on justice and law. From our results it appears that third-parties prefer compensation of a victim over punishment of a perpetrator, while our legal system is mainly focused on punishment. The preference for compensation over punishment might be relevant in explaining why people are often dissatisfied about punishments in the Netherlands (e.g., De Keijser, Van Koppen, & Elffers, 2007). Punishment might be judged as less effective because of high recidivism

rates (Wartna et al., 2012), but it might also be the case that dissatisfaction regarding punishments is due to the fact that it does not help the victim out of his or her disadvantageous position. If punishment is not the preferred manner in restoring equity or justice, a punishment might never match up to the contribution that compensation establishes. Hence, people might be more supportive of alternative approaches to punishment that focus more on victims of injustice.

### **Future Research**

In elaboration on the previous paragraph, a next step would be to more explicitly study the rationale behind the preference for compensation over punishment in third parties, as found in Chapters 3, 4, and 5. Why would there be such a robust preference for compensation? We have suggested several explanations in previous chapters, which deserve further studying. For example, it might be the case that people are generally reluctant to do harm (Baron, 1995). Another explanation might be that people judge punishment as less effective because punishment only makes sense if there is a good-enough probability that the behavior of the perpetrator will change. They might also judge punishment as less effective because the disadvantageous position of the victim is not restored through punishment. It might also be the case that compensation is preferred because of relational concerns (Okimoto & Tyler, 2007). Compensation allows for investing in a relationship whereas punishment does not. Instead, punishment might elicit an intention for retribution by the punished perpetrator. Elaborating on the rationale behind compensation and punishment could contribute to a better understanding of behavioral preferences in third parties.

What would also add to the understanding of behavioral preferences in third parties is investigating people's behavioral preferences in cases of low and high crime severity. In this dissertation, none of the offenses or transgressions were very severe, such as an unfair distribution of money, robbery, and attacks of senseless violence. It might be the case that the preference for compensation is only present in cases of mildly severe crimes, and that people prefer punishment in cases of severe crimes. For example, Rucker, Polifroni, Tetlock, and Scott (2004) have shown that in cases of severe crimes (e.g., forcibly removing someone from their car and stealing the car as compared to

stealing money from an ATM machine) people were punitive, regardless of threat to social order (whether conviction rates were high or low for that crime). Still, the harm done to the victim could increase with the severity of the crime as well. Hence, one could argue that compensation is still preferred in cases of severe crimes. However, more severe crimes also more often concern irrevocable harm. When one is unable to compensate the harm (such as in cases of rape or murder) punishment is the only viable option left. In cases of severe crimes with irrevocable harm such as rape, people might still be concerned with doing something for the victim even if direct compensation might not be possible. For example, research shows that people are accepting of taking into account the described consequences of a severe crime for the victim when determining the punishment of the offender (Lens, Van Doorn, Pemberton, & Bogaerts, 2014).

Another interesting avenue regards the different mechanisms of anger or empathy and prosocial behavior. Both in Chapter 3 and Chapter 6 it was demonstrated that prosocial effects of anger remain after controlling for dispositional empathy (i.e., empathic concern). Although we see that empathic concern predicts compensation to victims and predicting higher charitable donations (as in line with other research on the prosocial consequences of empathy; e.g., Bagozzi & Moore, 1994; Batson, Duncan, Ackerman, Buckley, & Burch, 1981; Blader & Tyler, 2003; Leliveld, Van Dijk, & Van Beest, 2012), anger seems to take a different route towards the same prosocial outcomes. Although not tested in this dissertation, it seems to be the case that angry people are focused on the (inequitable) *situation*, whereas empathic and compassionate people are focused on the *victim*. That is why anger only leads to prosocial behavior when equity can be restored with that behavior, whereas empathic concern is a general predictor of prosocial behavior. Hence, I would predict that third-party anger only encourages prosocial behavior towards the harmed person (the victim of inequity) and not towards any needy person in the situation. In line with this prediction is research on guilt, which only leads to prosocial behavior towards the victim of inequity. This preoccupation of restoring the harm done to the victim leads to a negligence of others in the social surrounding (De Hooge, Nelissen, Breugelmans, & Zeelenberg, 2011). These ideas remain to be investigated though.

## **Conclusion**

This dissertation investigated when, why, and how anger leads to prosocial behavior. The results indicate that third-party anger can lead to prosocial behavior, and that this prosocial behavior is observed when one can restore equity with that behavior. By showing a more diverse set of behaviors stemming from anger than the well-known negative behaviors and by indicating why such behaviors emerge, the findings from this dissertation shed some new light on and extend the negative view of anger. It is time for anger to bloom above the murk.

**References**

**Samenvatting**

(Summary in Dutch)

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## Samenvatting

Er is iets vreemds met boosheid. Enerzijds wordt boosheid gezien als een negatieve emotie: Boosheid ontstaat door negatieve gebeurtenissen zoals onrechtvaardigheid, het is een negatieve ervaring en leidt tot negatieve gedragingen zoals agressie. Ondanks dat het voor veel mensen vanzelfsprekend is dat boosheid een negatieve emotie is, wordt boosheid anderzijds soms ook als een positieve emotie gezien. Soms staat bij boosheid namelijk het belang van anderen centraal. We komen niet alleen voor onszelf op wanneer we boosheid voelen, maar staan ook op voor het recht van anderen. Bijvoorbeeld, we kunnen boos worden omdat we zien dat een onschuldig iemand in elkaar geslagen wordt. In dit soort situaties leidt boosheid niet alleen tot agressief of bestraffend gedrag naar de veroorzaker van het onrecht, maar ook tot het helpen van het slachtoffer van onrecht (ook wel pro sociaal gedrag genoemd). Oftewel, boosheid ontstaat uit schade dat onszelf of anderen aangedaan wordt en motiveert zowel positieve als negatieve gedragingen om de schade te herstellen. Echter, hoewel we weten dat boosheid zowel positief als negatief gedrag kan uitlokken, is nog onduidelijk wanneer, waarom en hoe het tot deze gedragingen leidt. Het onderzoek in dit proefschrift richt zich daarop.

Het onderscheid tussen boos worden omdat jou iets aangedaan wordt (eerstepersoonsboosheid) of omdat een ander iets aangedaan wordt (derdepersoonsboosheid) blijkt belangrijk in het verklaren van gedrag dat voortkomt uit boosheid (Hoofdstuk 2). Boosheid kan bijvoorbeeld leiden tot agressie, wraak en straffen als reactie op onrecht dat ons wordt aangedaan. Maar als we kijken naar derdepersoonssituaties dan zijn er duidelijke indicaties dat boosheid pro sociale consequenties kan hebben. Zo is er een relatie gelegd tussen boosheid en het steunen van minder bedeelden, het helpen van slachtoffers en compensatie aan slachtoffers. Dit komt doordat je je in derdepersoonssituaties kan richten op zowel een dader als een slachtoffer en zulke situaties dus toegang geven tot pro sociale gedragingen. In eerstepersoonssituaties kun je je alleen richten op de dader waardoor straffen logischer is. Kortom, als je boos bent om wat *jou* is aangedaan, zal je dus meestal geneigd zijn de dader te straffen. Maar als je boos bent om wat *een ander* is aangedaan, kun je zowel geneigd zijn om de dader te straffen als het slachtoffer te helpen. Hoofdstuk 2 omvat een

uitgebreide review van de literatuur over de gedragingen die voortkomen uit boosheid in eerstpersoons- en derdepersoonssituaties en legt uit dat deze gedragingen lijken te ontstaan doordat boze mensen onrecht willen rechtzetten.

Hoofdstuk 3 onderzoekt de mate waarin mensen eerstpersoonsboosheid en derdepersoonsboosheid ervaren in het dagelijks leven en of boosheid leidt tot prosociaal gedrag in derdepersoonssituaties. In de studies wordt boosheid opgewekt door deelnemers situaties te laten beschrijven waarin zij zelf boos waren (herinneringstaak) of door deelnemers een boosheidopwekkende situatie te laten lezen en hen te vragen zich voor te stellen hoe zij zich zouden voelen (scenario). Vervolgens geven deelnemers aan in hoeverre ze bereid zouden zijn om een dader te straffen of een slachtoffer te compenseren in een onrechtvaardige situatie. Als deelnemers ervoor kiezen om het slachtoffer te compenseren, kan dat ook voortkomen uit empathie in plaats van boosheid. Daarom is ook gemeten hoe empathisch deelnemers zijn. Resultaten tonen aan dat boosheid in eerstpersoons- en derdepersoonssituaties even vaak ervaren wordt. We voelen dus even vaak boosheid om wat onszelf is aangedaan als om wat een ander is aangedaan. Daarnaast hebben boze deelnemers in derdepersoonssituaties een voorkeur voor het compenseren van een slachtoffer boven het straffen van een dader. Het effect van boosheid op compensatie kan niet verklaard worden door mogelijke empathische gevoelens.

Hoofdstuk 4 geeft een verklaring voor prosociaal gedrag vanuit boosheid, namelijk dat boze mensen onrecht willen rechtzetten. In de studies wordt boosheid opgewekt door inleving in scenario's waarin iemand onrecht wordt aangedaan en lezen deelnemers vervolgens of het onrecht al is rechtgezet of niet. Bijvoorbeeld, doordat de politie de dader al heeft gestraft of dat de verzekeringsmaatschappij de schade van een slachtoffer al heeft gecompenseerd. Vervolgens geven deelnemers aan in hoeverre zij boosheid ervaren en bereid zijn zich prosociaal te gedragen naar het slachtoffer. Resultaten uit vijf studies laten zien dat boosheid alleen leidt tot prosociaal gedrag naar een slachtoffer wanneer een deelnemer met dat gedrag onrecht kan herstellen. Wanneer onrecht hersteld is door een andere partij, zoals de politie of de verzekeringsmaatschappij, leidt dit tot een afname van zowel de mate van ervaren boosheid als de motivatie tot prosociaal gedrag naar het slachtoffer. Oftewel, als iemand anders de schade al hersteld

heeft, hoeft je dat zelf dus niet meer te doen. In dat geval worden mensen minder boos en vertonen zij minder prosociaal gedrag naar het slachtoffer. Uit de resultaten blijkt bovendien dat mensen minder boos zijn en minder prosociaal gedrag vertonen wanneer de andere partij het slachtoffer compenseert dan wanneer de andere partij de dader straft. Het lijkt er dus op dat mensen compenseren eerder als herstel van onrecht zien dan straffen. Niet gek dus dat mensen een voorkeur hebben voor compensatie boven straffen (zie Hoofdstuk 3). Het onrecht is dan in hun ogen meer rechtgezet waardoor zij minder restgevoelens van boosheid ervaren en zij zich minder geroepen voelen om zelf door prosociaal gedrag het onrecht recht te zetten.

Hoofdstuk 5 bekijkt hoe robuust de voorkeur voor compenseren boven straffen is. In zes studies kunnen deelnemers met hun eigen geld een onrechtvaardige verdeling rechttrekken door geld weg te nemen bij de verdeler (i.e., straffen van de dader) of door middel van het geven van geld aan de ontvanger (i.e., compenseren van het slachtoffer). Deelnemers krijgen verschillende scenario's te lezen en er wordt gevraagd in hoeverre zij naar aanleiding van die scenario's zouden straffen of compenseren. Bijvoorbeeld, er wordt gekeken naar de keuze voor straffen en compenseren als deelnemers meer mogen wegnemen (als straf) dan mogen geven (als compensatie), als de dader meerdere slachtoffers kan maken of heeft gemaakt, en als de keuze tot straffen of compenseren zelf gemaakt mag worden of door een ander. Uit de resultaten blijkt echter dat deze variaties in sommige gevallen wel tot een verhoging van straffen leiden, maar nooit de keuze voor compenseren overtreft. Uit deze studies blijkt dus een robuuste voorkeur voor compensatie boven straffen. Met andere woorden, als mensen in een onrechtvaardige situatie de keuze krijgen om te compenseren of straffen, dan zouden ze in een variatie aan situaties de voorkeur geven aan compenseren.

Hoofdstuk 6 demonstreert een mogelijk toepassing van de prosociale consequenties van boosheid in een consumentencontext. Er wordt specifiek gekeken of boosheid leidt tot prosociaal gedrag in de vorm van het doneren aan goed doel als men met deze donatie onrecht kan herstellen. In de studie wordt boosheid opgewekt aan de hand van een herinneringstaak. Vervolgens wordt deelnemers gevraagd in hoeverre ze bereid zijn geld te doneren aan twee verschillende goede doelen. Deze goede doelen verschillen van elkaar in de bijdrage die ze kunnen leveren met het geld dat ingezameld wordt. Het



ene goede doel heeft een specifiek herstellende functie: Met de donatie worden vrouwen die slachtoffer zijn van mensenhandel gecompenseerd zodat zij een nieuw leven kunnen starten. Het andere goede doel heeft een niet-herstellende functie: Met de donatie worden vrouwen die slachtoffer zijn van natuurrampen en in crisiscentra verblijven opgevangen. Ook hier kan het zijn dat het doneren van geld voortkomt uit empathie in plaats van boosheid. Daarom wordt gekeken naar het empathisch vermogen bij deelnemers als mogelijk alternatieve verklaring voor de mate van doneren. Resultaten laten zien dat boze mensen meer geld doneren wanneer de donatie een herstellende functie heeft dan wanneer deze geen herstellende functie heeft. Mensen die geen boosheid ervaren doneren even veel geld aan een goed doel met een herstellende als een niet-herstellende functie. In overeenstemming met de resultaten uit Hoofdstuk 4 leidt boosheid alleen tot prosociaal gedrag als hiermee onrecht rechtgezet kan worden en – in overeenstemming met Hoofdstuk 3 – kan het effect van boosheid op donaties onafhankelijk van empathie ontstaan. Empathie is wel een onafhankelijke voorspeller van doneren: Als mensen een hogere mate van empathie hebben, doneren ze meer geld. Dit gebeurt echter onafhankelijk van of het doel een herstellende functie heeft of niet. Hoe empathisch mensen zijn kan daarmee niet verklaren waarom boze mensen specifiek meer geld doneren aan een doel met een herstellende functie.

Hoofdstuk 7, tenslotte, vat de resultaten en conclusies van alle eerder hoofdstukken samen. Specifiek kan het volgende geconcludeerd worden: (1) boosheid in eerstpersoons- en derdepersoonssituaties wordt even vaak ervaren, (2) manieren om onrecht recht te zetten zijn zowel negatief (zoals het straffen van een dader) als prosociaal (zoals het compenseren van een slachtoffer), (3) boosheid leidt tot prosociaal gedrag als men daarmee onrecht kan rechtzetten, (4) boze mensen geven de voorkeur aan het herstellen van onrecht via prosociaal gedrag en (5) prosociale gedragingen die voortkomen uit boosheid kunnen leiden tot hogere donaties aan een goed doel. Door te laten zien dat boosheid tot meer diverse gedragingen kan leiden dan alleen negatief en agressief gedrag en door te laten zien wanneer en waarom deze gedragingen tot stand komen, schijnt dit proefschrift nieuw licht op boosheid. Zoals de lotusbloem op de cover van dit proefschrift vanuit de modder ontluikt en voor nieuwe inzichten staat, wordt het tijd dat de positieve kant van boosheid tot wasdom komt.





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