

# Limiting fear and anger responses to anger expressions

Limiting fear  
and anger  
responses

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Received 22 January 2019  
Revised 9 October 2019  
20 November 2019  
Accepted 21 November 2019

## Abstract

**Purpose** – The purpose of this study is to test how individuals' emotion reactions (fear vs anger) to expressed anger influence their intended conflict management styles. It investigates two interventions for managing their reactions: hot vs cold processing and enhancing conflict self-efficacy.

**Design/methodology/approach** – Hypotheses were tested in two experiments using an online simulation. After receiving an angry or a neutral message from a coworker, participants either completed a cognitive processing task (E1) or a conflict self-efficacy task (E2), and then self-reported their emotions, behavioral activation/inhibition and intended conflict management styles.

**Findings** – Fear is associated with enhanced behavioral inhibition, which results in greater intentions to avoid and oblige and lower intentions to dominate. Anger is associated with enhanced behavioral activation, which results in greater intentions to integrate and dominate, as well as lower intentions to avoid and oblige. Cold (vs hot) processing does not reduce fear or reciprocal anger but increasing individuals' conflict self-efficacy does.

**Research limitations/implications** – The studies measured intended reactions rather than behavior. The hot/cold manipulation effect was small, potentially limiting its ability to diminish emotional responses.

**Practical implications** – These results suggest that increasing employees' conflict self-efficacy can be an effective intervention for helping them manage the natural fear and reciprocal anger responses when confronted by others expressing anger.

**Originality/value** – Enhancing self-efficacy beliefs is more effective than cold processing (stepping back) for managing others' anger expressions. By reducing fear, enhanced self-efficacy diminishes unproductive responses (avoiding, obliging) to a conflict.

**Keywords** Anger, Fear, Self-efficacy, Emotion, Conflict

**Paper type** Research paper

## Introduction

Imagine that you must cooperate with another employee of your firm on an important task and you anticipate that the upcoming meeting with this individual may be tense. How would you intend to respond to this person if he or she reacted angrily to your request? Importantly, are there possible ways that you might prepare beforehand so that you are better able to handle this coworker in the moment? In this paper, we argue that fear as well



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as reciprocal anger are common responses to another person's anger towards you but that these responses may constrain strategies for effectively responding to an angry person. We propose two specific and practical interventions – one focused on emotional self-management and one on cognitive self-management – that may break the anger-fear and anger-reciprocal anger links, thereby redirecting your intended behavioral responses to more effective conflict management styles.

Anger is one of the most common expressions during times of conflict and dispute. While anger has been portrayed as generating non-productive approaches to disputes (Allred *et al.*, 1997; Forgas, 1998; Pillutla and Murnighan, 1996), those who act out their anger can often get what they want. Acting angry may be a power tactic and source of influence, a stable trait, part of the “asshole” syndrome identified by Sutton (2007) or even be considered a type of work-based bullying (Harvey *et al.*, 2007). Some famous business figures who have used anger as a central element of management include Steve Jobs (Isaacson, 2011) and Jeff Bezos (Edwards, 2013). As Van Kleef *et al.* (2004) showed, angry negotiators often get their opponent to concede more. These kinds of concrete rewards for anger can reinforce its use, and astute emotional manipulators may learn that acting out anger on others can be tactically beneficial (Fulmer *et al.*, 2009) despite the pain and losses it creates for others.

Our goal in this paper is to focus on the recipients of anger, and what can be done to counteract – or at least neutralize – the initial, visceral, fear and reciprocal anger responses to anger. Specifically, we examine two moderators of established relationships between being the target of expressed anger and feeling fear and reciprocal anger in response. These moderators take the form of two potential strategies for self-management:

- (1) one focused on controlling emotions by the use of cold logical processing of the other person's perspective; and
- (2) one focused on changing cognitions of one's ability by enhancing one's self-efficacy with respect to managing conflicts.

Put simply, we mean to test whether it helps to manage one's reaction to another's anger by focusing on *emotional* self-management vs *cognitive* self-management. Testing these two interventions is the main contribution of this paper.

To achieve this goal, we integrate several theoretical perspectives, including prior work on the social processes involved in emotional expression and experience, the influence of motivation systems on behavioral intentions to approach and avoid, and the relationship between concerns for oneself vs others to conflict management styles. More specifically, we replicate and build on prior findings, which have tested the first two links of the causal model. Thus, we propose that:

- (1) expressed anger leads to fear and reciprocal anger (*H1-H2*); and
- (2) fear and reciprocal anger are associated with behavioral inhibition and activation (*H3-H4*).

We then propose several new relationships to connect and extend these prior findings, including:

- behavioral inhibition and activation are associated with different conflict management styles (*H5-H6*), thus leading to an indirect effect; and
- the links between expressed anger and felt emotional responses may be helpfully broken by certain self-management strategies (*H7-H8*).

We test these relationships in two computer-based scenario studies.

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## Fear and reciprocal anger as discrete emotional responses to a counterpart's anger

When faced with another person's expression of anger, how does the receiver of the anger respond? Broadly, the emotions of others serve as useful information about the social environment, in that observers can use others' emotions as a means to infer their feelings, motives and intentions (Keltner and Haidt, 1999; Van Kleef, 2010). First, expressed anger from another person can be interpreted as an indication of toughness, dominance and lack of affiliation from that person (Knutson, 1996) as well as an aggressive interpersonal tactic (Averill, 1983). Thus, to the extent that individuals interpret anger as a threat that necessitates immediate flight or another form of self-protection, they may feel fear (Lelieveld *et al.*, 2012). Indeed, prior work suggests that it is common to experience fear in response to being the target of another person's anger (Dimberg and Öhman, 1996; Van Kleef *et al.*, 2004).

Second, there is a substantial body of work showing that individuals are likely to feel reciprocal anger when they are the target of another person's anger. In general, reciprocal emotions occur through a process known as emotional contagion, in which individuals' emotions tend to converge with others' (Hatfield *et al.*, 1993). Thus, as the receiver interprets and reacts to the potentially aggressive and/or threatening situation at hand, receivers may feel both the reciprocal emotion of anger as well as the complementary emotion of fear (Larsen and McGraw, 2011; Lelieveld *et al.*, 2012). Overall, we expect to replicate the well-established relationships between expressed anger and both fear and reciprocal anger reactions:

- H1. Expressions of anger from another person will be positively associated with the experience of fear.
- H2. Expressions of anger from another person will be positively associated with the experience of reciprocal anger.

## Behavioral consequences of fear and reciprocal anger

We draw on both the appraisal theory of emotion and research on behavioral inhibition and behavioral activation to examine how fear is likely to shape individuals' initial behavioral tendencies when faced with an angry counterpart. Looking at fear, we see that fear is associated with low levels of certainty about the environment and a sense that the situation is less controllable and less under human agency (Smith and Ellsworth, 1985), i.e. low levels of control and agency are associated with fear because fear is a natural response to dangers that cannot be managed. We argue that fear is more likely to make people wary of acting – it is more likely to stimulate more watchful responses such as caution, wariness and anxiety compared to immediate action. Indeed, prior work has shown that anger expressions lead to avoidance-related behaviors from others (Marsh *et al.*, 2005). Fear in reaction to a threatening stimulus leads to withdrawal (Frijda, 1986) and a tendency to prefer risk-averse rather than risk-seeking choices (Lerner and Keltner, 2001). In contrast, anger – in this case reciprocal anger in response to another person's expression of anger toward you – is commonly associated with high levels of certainty about the environment and a sense that the situation is controllable and under human agency; thus, it may involve unfairness that should be corrected and prompts individuals to react antagonistically (Frijda *et al.*, 1989; Lerner and Keltner, 2001; Lerner *et al.*, 2015; Smith and Ellsworth, 1985).

Approach/avoid theories of behavioral motivation more formally make this distinction between engagement with and disengagement from the situation or what Gray (1990) calls

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the systems of behavioral activation (BAS) and behavioral inhibition (BIS). The BAS system, sometimes called the behavioral approach system (Gray, 1990), together with the BIS system, are often considered two fundamental motivation systems underlying individuals' behavior. BAS motivates individuals to approach goals that offer rewards and is commonly associated with positive emotions such as hope, elation and happiness. In contrast, BIS is related to withdrawal and avoidance, and is commonly associated with negative emotions such as fear, frustration and anxiety (Carver and White, 1994; Gray, 1990; Yan and Dillard, 2010). However, anger should trigger a more aggressive stance than fear (Lerner and Keltner, 2001) and thus higher behavioral activation. On this basis and aligned with prior findings, we expect to replicate that:

- H3. People who experience the emotion of fear in response to others' anger will be higher in behavioral inhibition.
- H4. People who experience the emotion of reciprocal anger in response to others' anger will be higher in behavioral activation.

### **Impact of behavioral inhibition/behavioral activation on intended conflict style**

BIS and BAS, in turn, should be associated with different intended behavioral responses to another's expression of anger. According to Pruitt's (1981) dual concern model, conflict styles can be classified along two dimensions: concern for self and concern for other (also Rahim and Bonoma, 1979; Thomas and Kilmann, 1974). The relative weight assigned to these two dimensions yields a typology of four conflict styles that have been treated as both a trait used consistently by people across situations (Friedman *et al.*, 2004) and as a style that is adopted in response to specific situations. We expect that anger and fear will elicit different conflict styles, because they elicit different behavioral systems (activation or inhibition). Specifically, we expect that behavioral inhibition will predispose individuals to emphasize concern for others, whereas behavioral activation will predispose individuals to emphasize concern for self.

BIS is associated with fear and anxiety and is characterized by withdrawal and avoidance (Keltner *et al.*, 2003). When someone is withdrawn and inhibited, it is unlikely that they are in a position to advance their own needs and interests. Indeed, the ability to focus on others' needs and reduce the arguably natural desire to maximize one's own benefit has been positively associated with the broad ability to inhibit one's immediate, natural tendencies to look out for oneself. This has been framed in some research as "overcoming selfishness." For example, Sutterlin *et al.* (2011) find that inhibitory capacity is associated with less selfish behavior, and Aguiar-Pardo *et al.* (2013) find that children are more altruistic when they have higher inhibitory control abilities. These results support the idea that inhibition, in general, lowers a person's focus on their own needs. Considering these findings in the context of conflict, we argue that in conflict situations, inhibition as a result of feeling fear in response to another person's anger is likely to result in a kind of flight response that is reflected in conflict styles that place low (or no) emphasis on one's own outcome.

More specifically, two conflict management strategies – avoiding and obliging – are consistent with a flight response such that the individual can minimize the time spent interacting with an angry person. Individuals may opt for an *avoiding* strategy: one that is low on concern for both self and other. This strategy immediately removes an individual from a conflict situation; in this case, from further expressed anger. *Obliging*, which expresses low concern for self but high concern for other, appeases an angry person. By giving in to the other's demands (e.g. making concessions), the conflict can be ended rapidly.

Two other strategies – dominating and integrating – are high on concern for self. These two strategies are proactive (see discussion below) and therefore incompatible with a flight response. In summary, if expressed anger triggers the BIS system, individuals should favor the avoid strategies of obliging and avoiding over the approach strategies of dominating and integrating:

- H5.* Fear in response to anger will have a positive indirect effect on behavioral intentions to avoid and oblige, and a negative indirect effect on behavioral intentions to dominate and integrate via behavioral inhibition.

Expressed anger may elicit reciprocal anger and trigger the BAS system. According to [Keltner et al. \(2003\)](#), BAS is associated with affective aggression and approach goals. Unlike BIS, when BAS is triggered, individuals will be motivated to engage with the situation and pursue personal rewards, i.e. to have high concern for self. Two strategies – dominating and integrating – are consistent with the pursuit of personal benefit. A *dominating* strategy, which is high on concern for self and low on concern for other, most clearly expresses the approach tendency characteristic of BAS. Individuals who adopt this strategy single-mindedly focus on maximizing personal benefits while minimizing benefits to the angry other. Although this strategy may get the angry person's attention ([Brett et al., 1998](#)), it is also likely to initiate an escalating cycle of anger and tit-for-tat dominance, meaning that the conflict may be exacerbated. *Integrating*, which is high on concern for self and high concern for other, offers a more constructive option: it enables individuals to meet their own needs without becoming entrenched in escalatory spirals. In fact, this approach helps meet the most important needs of both disputants ([Pruitt et al., 1983](#)). Because it is driven equally by concern for self and other, it supports the persistence needed to uncover mutually acceptable outcomes ([Brett et al., 1998](#); [Pruitt et al., 1983](#); [Van de Vliert et al., 1995](#)). In summary, if expressed anger triggers the BAS system, individuals will favor the approach strategies of dominating and integrating over the avoid strategies of obliging and avoiding.

- H6.* Reciprocal anger in response to anger will have a positive indirect effect on behavioral intentions to dominate and integrate, and a negative indirect effect on behavioral intentions to avoid and oblige via behavioral activation.

### **Potential helpfulness of cold (vs hot) processing**

One strategy for managing threats such as another person's anger is to approach the event with logic and rationality ([Gottman et al., 2015](#)). The idea of self-directed rationality of this sort has strong parallels to perspective-taking in that it draws attention to the reasons behind another's expressed emotions rather than focusing solely on the self. In a sense, it enables individuals to rise above the emotions of the moment and focus on the big picture, which allows them to respond more constructively to threats ([Neff and Broady, 2011](#)). We propose that this is because stepping back and seeing the bigger picture means they avert an emotional response to the situation, thereby productively controlling their own emotions.

Reflecting on negative events can be either adaptive, and in the process decrease individuals' negative affect, or maladaptive, and in the process increase individuals' negative affect ([Ayduk and Kross, 2010](#)). Two theoretical perspectives provide insight into the conditions under which such rumination will be adaptive or maladaptive. First, the extent to which individuals are able to gain psychological distance will affect their ability to take a broader, helpful perspective ([Trope and Liberman, 2003](#)). Second, the extent to which individuals access either hot or cool cognitions will affect how they process information

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(Metcalf and Mischel, 1999). While hot cognition focuses on emotion and elicits more automatic approach or avoidance behaviors, cool cognition inhibits automatic processing and elicits a more rational analysis of events to inform subsequent, deliberately enacted behavior (Kross *et al.*, 2005). Integrating these theoretical perspectives, Ayduk and Kross (2010) argue that individuals who self-distance (i.e. stand back from the event in their minds) engage in cool processing, whereas those who self-immersed engage in hot processing.

More specifically, self-immersed individuals report reliving a negative event in their minds and show greater emotional reactivity to the event (Ayduk and Kross, 2010). In contrast, self-distanced individuals, who use cold processing, report lower levels of negative affect in response to negative events (Fabiansson *et al.*, 2012; Kross *et al.*, 2005). In related research, Witvliet *et al.* (2010) suggest that negotiators who are able to take the other person's perspective will experience less negative affect following an offense. Thus, research on rumination strategies suggests that individuals are most likely to experience negative affect following a negative experience such as expressed anger if they are unable to gain psychological distance from the event. We extend this idea in a novel direction by proposing that individuals can buffer themselves against the negative consequences of expressed anger – that is, feeling fear as well as reciprocal anger – in conflict management situations by approaching the event from a cool, analytical perspective rather than a hot, reflexive perspective. Based on the self-distancing literature, we hypothesize that:

- H7. Individuals who engage in cold processing are less likely to experience fear and reciprocal anger in response to exposure to expressed anger than those who engage in hot processing.

### **Potential helpfulness of higher (vs lower) Self-Efficacy**

Self-efficacy describes individuals' beliefs in their ability to control the environment (Bandura, 2000). A key aspect of self-efficacy is that it is not a generalized trait. Rather, it is domain specific and known to affect individuals' performance across a range of areas, including education, creativity and ethical decision-making (Gist *et al.*, 1991; Hannah and Avolio, 2010; Tierney and Farmer, 2002). In each case, individuals with high self-efficacy perform better than those with low self-efficacy in that domain. These performance differences can be attributed to differences in how high vs low self-efficacy individuals approach challenges. Individuals with high self-efficacy anticipate that exerting effort will yield positive results. They approach challenges optimistically and identify strategies to overcome them. Low self-efficacy individuals think pessimistically, experience anxiety when they encounter obstacles and give up in the face of challenges (Bandura, 2000, 2012).

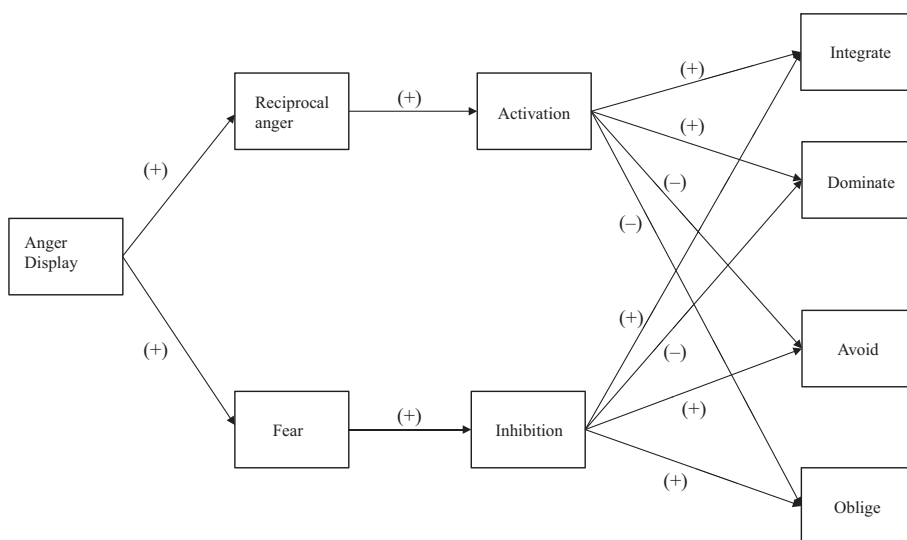
Individuals' beliefs about their ability to respond to threats and to manage adversity – i.e. their coping efficacy – play a central role in their ability to self-regulate emotions when confronted with threat (Bandura, 2012). Individuals with low vs high self-efficacy are more likely to anticipate negative consequences and to feel fearful and anxious when they encounter threats (Bandura, 1983; Ozer and Bandura, 1990). For example, students with low academic self-efficacy report feeling more threatened when their teachers emphasize the need to avoid failure (Putwain and Remedios, 2014). In contrast, in organizations undergoing change, individuals with high change efficacy report a more positive attitude to change and perceive it as less threatening (Fugate *et al.*, 2012). Relatedly, negotiators with high vs low negotiation efficacy are more likely to persist with cooperation after an adverse (threatening) event (Caza and Olekals, 2014). Overall, these findings suggest that individuals with high conflict management self-efficacy will be better able to manage the emotional aftermath of a counterpart's expressed anger than those with low conflict management self-efficacy.



Why would this be the case? Bandura (1977) argued that individuals accede to the fear intrinsic to a threatening situation by focusing on and building up fear-provoking thoughts in their minds. He further argued that this response is most likely to occur when individuals have low levels of coping self-efficacy because of the belief that they lack the necessary coping skills increases perceived threat (Bandura, 1983). Conversely, high levels of coping self-efficacy reduce the perceived threat and in turn the associated fear. Supporting this proposition, Bandura *et al.* (1982) showed that as self-efficacy increases, fear arousal decreases. More recently, Hastings and Brown (2002) showed that the greater individuals' self-efficacy, the less fear they experience when confronted with challenging behavior from others. We extend these findings to consider the role that conflict management self-efficacy plays in moderating emotional responses to expressed anger. Specifically, we propose that expressed anger is less likely to elicit fear in individuals with high conflict management self-efficacy because of their greater confidence in managing the threat. Similarly, high conflict management self-efficacy may reduce reciprocal anger because it lessens individuals' focus on their overall emotional response to being the target of anger and focuses them more on their ability to deal with the situation effectively. Consequently, we expect that the process we described above (H1-H4) will be activated when individuals have low self-efficacy but will be interrupted at the first stage (i.e. the fear and/or reciprocal anger response) when they have high self-efficacy. Thus, we extend prior findings on context-specific self-efficacy in a new direction by proposing that specifically in the conflict management context:

H8. Feeling high conflict self-efficacy, compared to low conflict self-efficacy, will reduce the experience of fear and reciprocal anger in response to expressed anger.

In sum, we have argued that expressed anger elicits fear along with reciprocal anger from the expresser, triggering higher BIS through felt fear and higher BAS through reciprocal anger and thereby influencing conflict styles (Figure 1). This pattern suggests that the fear response to expressed anger is particularly dysfunctional in terms of conflict management responses because it reduces the intention to use styles that satisfy personal needs and



**Figure 1.**  
Hypothesized Model  
(H1-H6)

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enhances the intention to engage in styles that sacrifice personal needs. This model is tested in Experiments 1 and 2. This pattern of unproductive responses to expressed anger can be dampened, we argue, by encouraging cold processing (Experiment 1) and conflict self-efficacy (Experiment 2).

### **Experiment 1: cold processing intervention**

In this experiment, we investigate whether cold vs hot processing influences reactions to expressed anger. For this purpose, we focus on the way receivers of another's anger process the event either by emphasizing the underlying reasons for the anger (ignoring one's felt emotional response; a "cold," rational approach) or by emphasizing receivers' felt emotions in response to the other person's anger (an emotional or "hot" approach). This design allows us to examine the relationship between individuals' ability to step back and gain psychological distance from a threatening event and their emotional responses in the wake of expressed anger.

#### *Method*

*Participants.* Subjects for the study were 266 adults who had registered to participate in studies through MTurk. We restricted the subject pool by requiring participants to be located in the USA. Pay was \$1 for each participant. The average age of subjects was 37.72 years, the sample was 55.6 per cent female, and the average years of work experience was 17.34. The median education was an associate's degree, and the ethnic make-up was 78 per cent white, 7.5 per cent Asian, 6 per cent African-American and 7 per cent Hispanic.

*Procedure.* Subjects were exposed to a cold vs hot processing intervention, followed by a high vs low anger manipulation in a  $2 \times 2$  experimental design. To manipulate hot and cold processing, we used the technique developed by [Kross et al. \(2005\)](#). Subjects were instructed to "think about a time when someone was angry, threatening, or disrespectful to you." Those in the "hot" condition were then instructed:

Go back to that place and time and recapture how you felt. Relive it as if you were experiencing it all over again. Recall how you felt at the time. How easily could you do this? [Respond from 1 through 5]. Briefly describe the experience and how you felt at the time.

In contrast, those in the "cold" condition were instructed:

Take a few steps back and move away from your experience. Watch the interaction unfold as if you were an impartial observer. Try to understand the reasons for the other person's anger. How easily could you do this? [Respond from 1 (difficult) through 5 (easy)]. Briefly describe the experience and how you felt at the time.

Because their response indicated they were not able to recall an angry situation, those who responded lower than "3" on the question of ease of recall were allowed to continue the study for payment purposes, but were excluded from all analyses. As a manipulation check, participants were also asked "How strongly are you reliving the emotions associated with this experience?" on a 1 (low) to 5 (high) scale. We excluded a further 26 participants who responded lower than "3" on this item who were deemed to have failed the manipulation check. After excluding these participants, the sample included 191 respondents.

Before continuing with the rest of the experiment, participants in the hot condition were told to:

Keep this experience and the emotions you felt at the time in mind as you read the scenario on the following page. Focus on how you feel hearing Chris' [a production manager with whom you work] reactions in the scenario.



Those in the cold condition were told to:

Keep this experience and the emotions you felt at the time in mind as you read the scenario on the following page. Focus on the reasons why Chris acted in the manner described in the scenario.

Study participants were then asked to put themselves into the role of an account manager who needs the help of a production manager, Chris, to launch a new product, but the production manager says “no.” In one version of this scenario (all materials are available upon request), the production manager says “no” but conveys that rejection using an emotionally positive style. The scenario says that he smiles, is relaxed and attentive and speaks in a low, even tone. Also visible while reading the scenario is a photo of the production manager, purportedly a screen-capture from a Skype call, showing him smiling. In another version, the production manager also says “no” but uses an angry style. The scenario says that he leans in, shakes his head and glares. He interrupts the account manager and blames the problem on him/her. He says that he is offended to be asked to do this task and points at the account manager while speaking. Furthermore, a photo of the production manager with an angry expression is also visible. Thus, in both cases, the actual level of cooperation by the production manager was the same (he rejected the request), but the manner of the rejection was different. As a manipulation check for anger, after subjects read the scenario, they were asked to provide their impression of the level of anger expressed by the production manager (1 = low to 5 = high).

Next, to assess participants’ emotional reactions, participants were asked to respond to items from the PANAS (Watson and Clark, 1994) subscale of fear. The fear items included jittery, frightened, nervous, scared, afraid and shaky. The scale ranged from 1 (low) to 5 (high). To measure reciprocal anger, we asked items from the hostility scale in PANAS: scornful, loathing, hostile, disgusted, irritable and angry. Next, subjects were asked to indicate how they would respond to the production manager based on an adapted version of the BIS/BAS scale (Carver and White, 1994). Sample activation items were “When I look at the opportunity to persuade Chris [the production manager who said “no”], I get excited” and “I would go all out to persuade Chris.” Sample behavioral inhibition items were “I feel worried and upset knowing that Chris is angry at me” and “In responding to Chris, I worry about making mistakes.” Finally, subjects were asked how they would act in the situation (i.e. their conflict management behavioral intentions) using items from the Rahim and Magner (1995) conflict styles subscales for accommodating, integrating, avoiding and dominating. Sample items included “I would accommodate Chris and accept that he cannot do the reformatting” (accommodating), “I would try to bring all our concerns out in the open so that the issues can get resolved in the best possible way” (integrating), “I would avoid an encounter with Chris” (avoiding) and “I would use my authority to get Chris to reformat the report” (dominating). At the end of the study, subjects were told the questionnaire feedback was manipulated; therefore, they should not consider themselves to be especially strong or weak managing conflicts based on the survey, thanked and paid.

*Materials.* The photos in both conditions were created using an actor displaying expressions of either anger, neutrality or (because neutral expressions can sometimes be misinterpreted as negative; Zebrowitz *et al.* (2010)) happiness. In a pilot study, we examined seven images, asking 16 students, professors and professionals from the USA and China to rate each picture on the level of anger displayed (from a low of 1 to a high of 5). We included people from several cultures to enhance the universalness of the selected images. The two images that were selected were the ones that were most consistently rated as very high or very low in expressed anger. The selected angry photo had a mean of 4.25 out of a potential 5.0 for anger. The selected non-angry photo was one of two photos where all participants

rated the person as “1” on anger. We should note that the purely neutral expressions from the actor generated highly mixed reactions from raters with mean scores of about 3.0 – as could be expected. Some people interpreted the neutral expression as angry while others did not. Because our goal was to study the effects of anger expressions in particular, we wanted to create the most unequivocal distinction between images with one photo showing clear anger and the other clear lack of anger. Thus, the non-angry photo chosen included aspects of both neutral (calm, even tone) and happy (smiling) expressions (material available from authors). In sum, the angry condition included visual cues of the expresser’s anger as well as cues in the text such as interrupting, dismissing the other person’s point of view and blaming (Schroth *et al.*, 2006), while the non-angry condition did not.

*Experiment 1 results*

*Descriptive statistics.* Means, standard deviations, correlations and Cronbach’s alphas can be found in Table I.

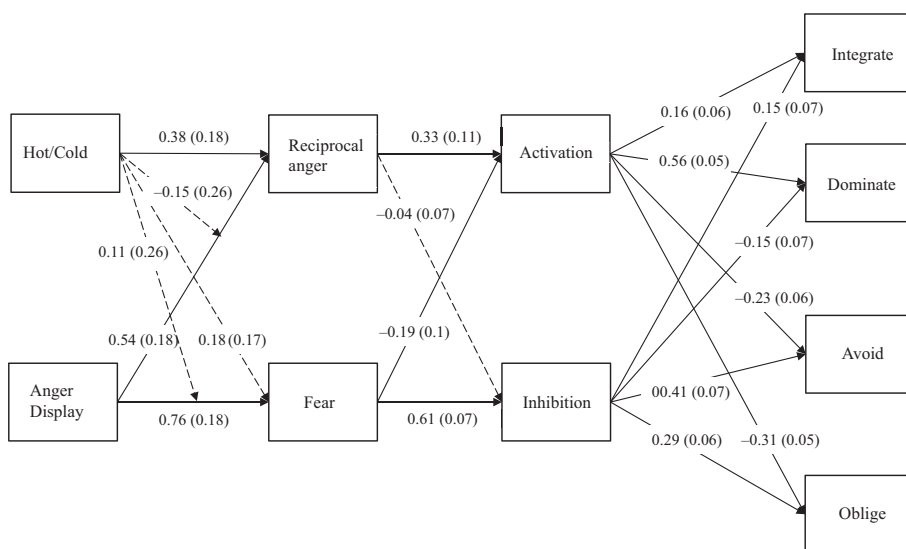
*Manipulation checks.* We report *t-values* based on the results of Levene’s test for equality of variances (Tabachnik and Fidell, 2007). Participants in the hot condition reported relieving their emotions more strongly ( $M = 4.03, SD = 1.00$ ) than participants in the cold condition ( $M = 3.75, SD = 0.99$ ),  $t(189) = 1.99, p = 0.048$ . Those in the anger condition reported a mean anger score of 4.54 ( $SD = 0.59$ ) for the production manager Chris, while those in the not-angry condition reported a mean anger score of 1.99 ( $SD = 1.11$ ). The difference between the two means was significant:  $t(129.86) = 19.37, p < 0.001$ . Thus, both the hot/cold processing and the anger condition manipulations were successful.

*Analyses.* Path analyses (Edwards and Lambert, 2007) of the overall model were conducted using *Mplus* (version 7.11; Muthén and Muthén (1998-2012)). Parameter estimates and SEs from regression analyses can be found in Figure 2. Examination of model fit statistics indicated they were acceptable (CFI = 0.92, TLI = 0.84, RMSEA = 0.09 [90 per cent CI = 0.07, 0.12], SRMR = 0.06,  $\chi^2(26) = 69.83, p < 0.001$ ). Results supported *H1* and *H2*, where the effects of anger on fear ( $B = 0.76, SE = 0.18, p < 0.001$ ) and anger on reciprocal anger ( $B = 0.54, SE = 0.18, p < 0.001$ ) were both significant, showing that expressed anger leads to increased fear and reciprocal anger in response. *H3* and *H4* were supported by the results. The indirect effects of anger on inhibition through fear (indirect effect = 0.46 [95 per cent CI = 0.24, 0.7]) (*H3*) and anger on activation through reciprocal anger (indirect effect = 0.18 [95 per cent CI = 0.05, 0.41]) (*H4*) were significant. In addition, results showed there were significant indirect effects of expressed anger through fear and inhibition on avoiding (indirect effect = 0.19 [95 per cent CI = 0.1, 0.31]), obliging (indirect effect = 0.14 [95 per cent CI = 0.07, 0.24]) and dominating (indirect effect = -0.07 [95 per cent CI = -0.18, -0.01]), but

**Table I.**  
Means, standard deviation, and correlations among variables (experiment 1)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Reciprocal anger	3.22	0.92	(0.85)							
2. Fear	2.18	1.01	0.48**	(0.91)						
3. BIS	2.60	1.00	0.23**	0.59**	(0.81)					
4. BAS Drive	3.10	1.18	0.16*	-0.05	-0.13	(0.89)				
5. Obliging	2.16	0.96	-0.26**	0.20**	0.40**	-0.38**	(0.76)			
6. Avoiding	2.61	1.09	-0.07	0.25**	0.42**	-0.30**	0.64**	(0.76)		
7. Dominating	3.38	1.13	0.17*	-0.11	-0.21**	0.60**	-0.49**	-0.38**	(0.87)	
8. Integrating	3.68	1.05	-0.03	-0.03	0.14*	0.19**	0.18**	0.14*	0.02	(0.83)

Notes: \* $p < 0.05$ ; \*\* $p < 0.01$ , scale alpha in parentheses



**Notes:** SE is shown in parentheses. Relationships that are significant at the  $p = 0.05$  level (two tailed) are shown as solid lines. Effects that are not significant are shown in dashed lines

**Figure 2.**  
Experiment 1 Results

not on integrating (indirect effect = 0.07 [95 per cent CI = -0.002, 0.17]), although this effect showed a tendency in the opposite direction as predicted (*H5*). The results also showed significant indirect effects of expressed anger through reciprocal anger and activation on avoiding (indirect effect = -0.06 [95 per cent CI = -0.15, -0.01]), obliging (indirect effect = -0.04 [95 per cent CI = -0.12, -0.01]), integrating (indirect effect = 0.03 [95 per cent CI = 0.01, 0.09]) and dominating (indirect effect = 0.1 [95 per cent CI = 0.03, 0.26]), all in the expected directions (*H6*). Thus, *H5* and *H6* were overall supported.

*H7* predicted that individuals engaged in hot processing, but not cold processing, would experience both fear and reciprocal anger in response to the angry work scenario. Results did not support this hypothesis. The interaction of hot/cold processing and expressed anger did not have a significant effect on either fear ( $B = 0.11$ ,  $SE = 0.26$ ,  $p = 0.65$ ) or reciprocal anger ( $B = -0.15$ ,  $SE = 0.26$ ,  $p = 0.58$ ) even as a one-tailed test (as hypothesized). Because these results suggested that the magnitude of indirect effects did not vary across levels of hot/cold processing, conditional indirect effects were not examined.

### Experiment 1 discussion

Our analysis showed that being the target of expressed anger led to fear (*H1*), as well as to reciprocal anger (*H2*). Fear in turn enhanced behavioral inhibition (*H3*), and reciprocal anger enhanced behavioral activation (*H4*). Experiencing expressed anger thus triggered two responses: fear and behavioral inhibition and reciprocal anger and behavioral activation. The path through fear and inhibition to conflict management styles increased individuals' preferences for avoidance and obliging, but decreased their preference for dominating (*H5*). Conversely, the path from anger displays to reciprocal anger and activation increased individual's preferences for integrating and dominating but decreased their preferences for avoiding and obliging (*H6*). These effects suggest that fear, by increasing inhibition,

encourages individuals to adopt an other-oriented perspective that accommodates others' needs, whereas reciprocal anger, by increasing activation, encourages individuals to adopt a self-oriented perspective that emphasizes meeting their own needs. The latter is a risky strategy because of its potential for escalating conflict. However, this risk may be offset by the preference for integrating that also comes with activation, as integrating is a strategy that supports problem-solving.

Finally, we consider two sets of significant results that, while not hypothesized, are informative. First, we found a direct effect showing that hot processing increased the level of reciprocal anger felt. However, inconsistent with  $H_7$ , hot/cold processing style did not interact with expressed anger to break the anger-fear and anger-reciprocal anger links. We make two observations about this pattern of findings. In both cognitive processing conditions, we asked participants to recall an event that evoked anger. We speculate that recalling this event from a hot processing style may have evoked reciprocal anger independent of the anger condition, and may have thereby over-ridden the impact of our neutral (non-angry) condition. Although unintended as a result of our manipulation, the direct effect from processing style to reciprocal anger is still informative, suggesting that, if hot processing may increase reciprocal anger, cold processing may be an effective tool for reducing reciprocal anger. Of course, additional empirical work is needed to test this reasoning directly.

Second, as illustrated in [Figure 2](#), the effects from inhibition and activation to conflict styles parallel the effects we reported above with one exception: inhibition had a significant positive effect in the use of integrating. Thus, although we did not find a significant indirect effect from fear to integrating through inhibition, the significant effect of inhibition on integrating suggests that inhibition offers individuals a somewhat broader behavioral repertoire for responding to anger, i.e. inhibition may offer the benefit of allowing the anger recipient to “flow” around the anger, simultaneously de-escalating the tension and steering the conversation towards productive problem-solving. Thus, to the extent that inhibition may be helpful, this finding uncovers a potential hidden benefit of fear. Overall, the pattern of effects suggests that both behavioral systems support problem-solving (integrating) and differ in the extent to which the complementary strategies favor solutions that give some ground to the angry individual (via inhibition) or claim ground for the target of anger (via activation).

### **Experiment 2: self-efficacy intervention**

In this experiment, we focus on the relationship between conflict management self-efficacy and fear and reciprocal anger. Specifically, we examine the relationship between individuals' felt self-efficacy in managing conflict situations and their experience of fear and reciprocal anger in the wake of expressed anger.

#### *Method*

*Participants.* Subjects for the study were 260 adults who had registered to participate in studies through MTurk and were located in the USA. Pay was \$1 for each participant. The average age of subjects was 38.29 years, the sample was 54.6 per cent female, and the average years of work experience was 17.76. The median education level achieved was an associate's degree, and the ethnic make-up was 80 per cent white, 5.4 per cent Asian, 5.4 per cent African-American, and 5.8 per cent Hispanic. After excluding individuals who took less than 6 min or more than 45 min to complete the study, we were left with 230 participants.

*Procedure.* We followed the same general procedure as in Experiment 1, including the manipulation of anger. We replaced our cognitive processing manipulation with a self-

efficacy manipulation. Following Sanna (1992), subjects filled out a “Workplace Interaction Questionnaire” that included nine questions about their ability to manage conflict. Items included “I am confident in my ability to resolve difficult situations” and “I feel I am not “natural” when it comes to dealing with difficult people.” Subjects were then told to wait for their score calculations and feedback. After a brief pause, subjects received one of two messages:

The Workplace Interactions Questionnaire assessed your ability to adapt to difficult conversations and situations in the workplace. Your responses told us about your flexibility and willingness to try alternative strategies in difficult situations and your confidence in managing difficult conversations.

**[High self-efficacy condition]** Compared to participants in previous studies, managing difficult conversations and situations comes easily to you. You are a “natural.” Your final score put your skills in the top 20 per cent of participants.

**[Low self-efficacy condition]** Compared to participants in previous studies, managing difficult conversations and situations does not come easily to you. You are not a “natural.” Your final score put your skills in the bottom 20 per cent of participants.

After receiving this feedback, subjects were asked: “You are about to talk to a colleague about an error that he needs to correct. How confident do you feel that you will manage this conversation effectively?” They rated their confidence on a 1 (not all confident) to 7 (highly confident) scale.

### Experiment 2 results

**Descriptive statistics.** Means, standard deviations, correlations and Cronbach’s alphas can be found in Table II.

**Manipulation checks.** We report *t-values* based on the results of Levene’s test for equality of variances (Tabachnik and Fidell, 2007). Results showed that participants in the high self-efficacy condition were significantly more confident in their conflict management abilities ( $M = 5.43, SD = 1.30$ ) than those in the low self-efficacy condition ( $M = 4.86, SD = 1.60$ ),  $t(207.93) = 2.93, p = 0.004$ . Participants in the angry condition reported a mean anger score of 4.49 ( $SD = 0.78$ ), while those in the not-angry condition reported a mean anger score of 2.42 ( $SD = 1.30$ ). The difference between the two means was significant:  $t(193.96) = 14.79, p < 0.001$ . Thus, both the self-efficacy and the anger condition manipulations were successful.

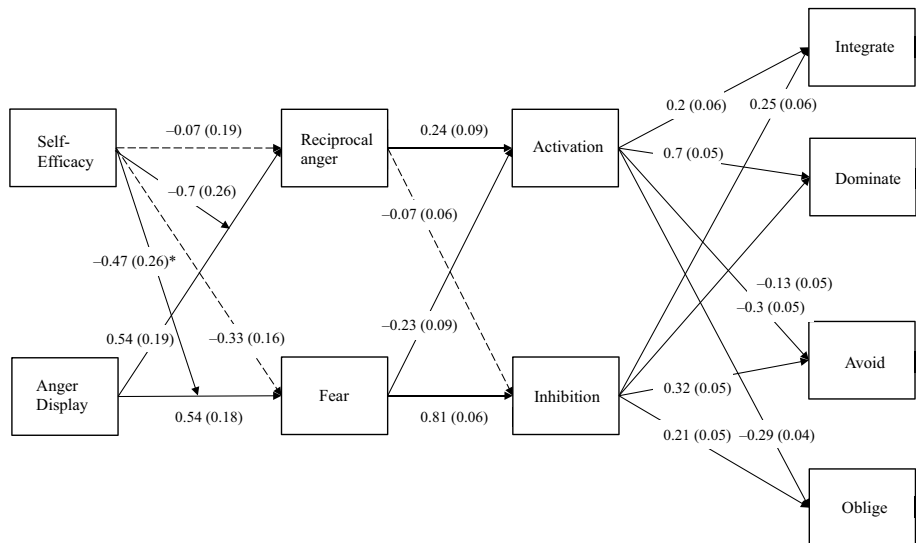
Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Reciprocal anger	3.07	1.05	(0.90)							
2. Fear	2.08	1.00	0.53**	(0.93)						
3. BIS	2.63	1.08	0.30**	0.68**	(0.88)					
4. BAS Drive	3.30	1.16	0.07	-0.12*	-0.30**	(0.90)				
5. Obliging	2.07	0.88	-0.16*	0.19**	0.39**	-0.45**	(0.72)			
6. Avoiding	2.50	0.99	-0.02	0.29**	0.49**	-0.45**	0.61**	(0.74)		
7. Dominating	3.51	1.15	0.13*	-0.10	-0.31**	0.74**	-0.56**	-0.49**	(0.88)	
8. Integrating	3.55	1.05	-0.12*	0.08	0.17**	0.16**	0.23**	0.16*	-0.01	(0.83)

**Table II.**  
Means, standard deviation, and correlations among variables (experiment 2)

**Notes:** \* $p < 0.05$ ; \*\* $p < 0.01$ , scale alpha in parentheses

*Analyses.* Results were again tested with path analyses, with the full model shown in [Figure 3](#). Based on model fit criteria proposed by [Hu and Bentler \(1999\)](#), the overall path model demonstrated acceptable/good fit to the data: CFI = 0.96, TLI = 0.91, RMSEA = 0.75 (90 per cent CI = 0.5, 0.1), SRMR= 0.06,  $\chi^2(26) = 59.72, p < 0.001$ . Results supported  $H_1$  and  $H_2$  because the effects of anger on fear ( $B = 0.54, SE = 0.21, p < 0.01$ ) and on reciprocal anger ( $B = 0.54, SE = 0.16, p < 0.001$ ) were both significant.  $H_3$  and  $H_4$  were supported by the results. The indirect effects of anger on inhibition through fear (indirect effect = 0.44 [95 per cent CI = 0.1, 0.77]) ( $H_3$ ) and anger on activation through reciprocal anger (indirect effect = 0.13 [95 per cent CI = 0.03, 0.28]) ( $H_4$ ) were significant. While testing  $H_5$ , the results showed there were significant indirect effects of anger through fear and inhibition on avoiding (indirect effect = 0.14 [95 per cent CI = 0.03, 0.28]), obliging (indirect effect = 0.09 [95 per cent CI = 0.02, 0.19]), integrating (indirect effect = 0.11 [95 per cent CI = 0.02, 0.25]; although an unexpected positive effect) and dominating (indirect effect = -0.06 [95 per cent CI = -0.14, -0.01]). Testing  $H_6$ , the results showed there were significant indirect effects of anger through reciprocal anger on avoiding (indirect effect = -0.04 [95 per cent CI = -0.1, -0.01]), obliging (indirect effect = -0.04 [95 per cent CI = -0.1, -0.01]), integrating (indirect effect = 0.03 [95 per cent CI = 0.01, 0.07]) and dominating (indirect effect = 0.09 [95 per cent CI = 0.02, 0.21]) in the expected directions.

*Moderated mediation analyses.*  $H_8$  predicted that those in the low (but not high) self-efficacy condition would experience fear and reciprocal anger in response to being the target of expressed anger. The results showed that the interaction of self-efficacy and anger was significant for fear ( $B = -0.47, SE = 0.26, p = 0.04$ , one-tailed) and for reciprocal anger ( $B = -0.70, SE = 0.26, p < 0.01$ ) ( $H_8$ ). The significant interaction of anger and self-efficacy



**Notes:** SE is shown in parentheses. Relationships that are significant at the  $p = 0.05$  level (two tailed) are shown as solid lines. Effects that are not significant are shown in dashed lines; \*The relationship is significant as a one-tailed test, in the direction hypothesized, so is indicated here with a solid line

**Figure 3.**  
Experiment 2 Results



indicated that the effects of anger on fear and reciprocal anger varied across levels of self-efficacy, indicating conditional indirect effects. [Table III](#) summarizes the conditional indirect effects through fear and inhibition, and [Table IV](#) summarizes the conditional indirect effects through reciprocal anger and activation. The results showed that all conditional indirect effects through fear and reciprocal anger corresponding to *H1-H6* were significant in the low self-efficacy condition, but none of the conditional indirect effects were significant in the high self-efficacy condition.

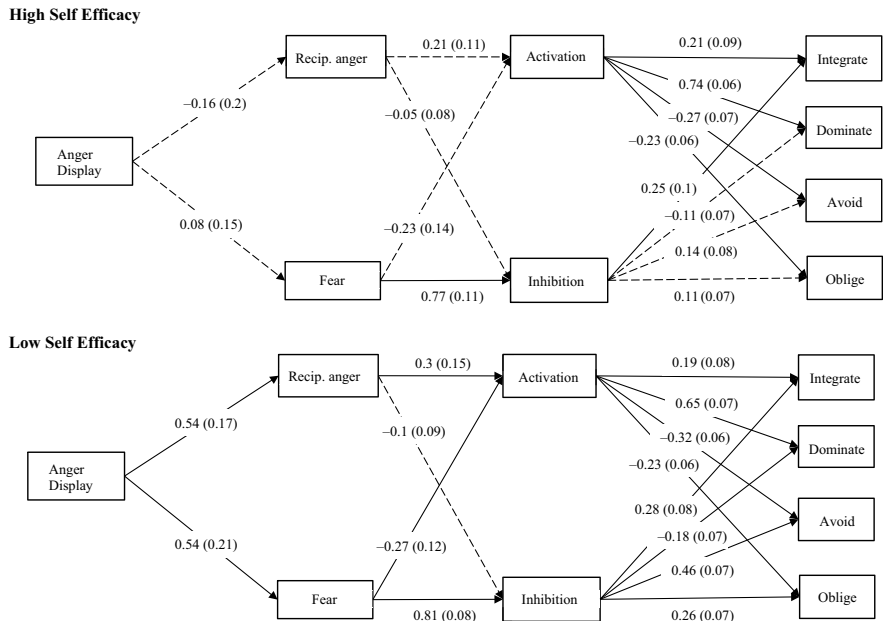
To visualize this difference, we conducted separate path analyses for those in the high and low self-efficacy conditions ([Figure 4](#)). It can be seen that in the high self-efficacy condition, most of the paths that comprise *H1-H6* are insignificant because the first part of those paths (the effect of anger on fear and reciprocal anger) is not significant. In the low self-efficacy condition, however, the paths from anger to fear and reciprocal anger, and on to

Mediator(s)	Outcome	Moderator	Cond. indirect effects	
			Est.	95% CI
Fear	Inhibition	Low self-efficacy	0.44	0.1, 0.77
		High self-efficacy	0.06	-0.16, 0.27
Fear + Inhibition	Avoiding	Low self-efficacy	0.14	0.03, 0.28
		High self-efficacy	0.02	-0.05, 0.1
Fear + Inhibition	Obliging	Low self-efficacy	0.09	0.02, 0.19
		High self-efficacy	0.01	-0.03, 0.07
Fear + Inhibition	Dominating	Low self-efficacy	-0.06	-0.14, -0.01
		High self-efficacy	-0.01	-0.05, 0.02
Fear + Inhibition	Integrating	Low self-efficacy	0.11	0.02, 0.25
		High self-efficacy	0.02	-0.04, 0.08

**Table III.**  
Conditional indirect  
effects on conflict  
styles through fear  
and inhibition  
(experiment 2)

Mediator(s)	Outcome	Moderator	Cond. indirect effects	
			Est.	95% CI
Reciprocal anger	Activation	Low self-efficacy	0.13	0.03, 0.28
		High self-efficacy	-0.04	-0.16, 0.04
Reciprocal anger + Activation	Avoiding	Low self-efficacy	-0.1	-0.04, -0.1
		High self-efficacy	0.01	-0.02, 0.05
Reciprocal anger + Activation	Obliging	Low self-efficacy	-0.04	-0.1, -0.01
		High self-efficacy	0.01	-0.01, 0.05
Reciprocal anger + Activation	Dominating	Low self-efficacy	0.09	0.02, 0.21
		High self-efficacy	-0.03	-0.12, 0.03
Reciprocal anger + Activation	Integrating	Low self-efficacy	0.03	0.01, 0.07
		High self-efficacy	-0.04	-0.01, 0.01

**Table IV.**  
Conditional indirect  
effects on conflict  
styles through  
reciprocal anger and  
activation  
(experiment 2)



**Figure 4.**  
Moderated  
Experiment 2 Results  
(self-efficacy  
moderates all paths)

BIS/BAS and conflict styles, can be formed through significant effects along the path. This result provides further support for *H8*.

*Experiment 2 discussion*

We replicated several of the key findings from Experiment 1. Our analyses showed that anger increases both fear and reciprocal anger. In turn, fear increased behavioral inhibition and reciprocal anger increased behavioral activation. Behavioral inhibition increased participants' intentions to avoid and oblige, as for Experiment 1, but also to integrate, which was counter to our hypothesis but aligned with the tendency in this direction found in Experiment 1. Also, as for Experiment 1, behavioral activation increased participants' intentions to integrate and dominate, and decreased their intentions to avoid and oblige. A key difference between the two experiments was that, in this experiment, we found a significant rather than merely directional indirect path from anger through fear and inhibition to integrating, which a style conducive to productive problem-solving. We thus have consistent evidence across two experiments for both indirect and direct effects from BIS/BAS to conflict resolution styles, which suggest behavioral inhibition may offer a more flexible approach to managing others' anger than behavioral activation. In particular, fear in response to expressed anger may not be unequivocally detrimental as long as (even relatively weak) intentions to integrate can be enhanced and (stronger) unhelpful intentions to avoid and oblige can be mitigated. This breadth may offer the benefit of allowing the recipient of anger to simultaneously de-escalate the tension (through avoiding and obliging) and steer the conversation towards problem-solving (through integrating).

Overall, our results suggest that both behavioral systems can potentially support productive problem-solving strategies (i.e. integrating), but are likely to differ in the extent to which the complementary strategies prompted by each behavioral system favor solutions

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that give some ground to the angry individual (avoiding and obliging via inhibition) vs claim ground for the target of anger (dominating via activation). Thus, although there may be benefits to the fear response, such as the unexpected positive indirect effect between fear and intentions to integrate found in this experiment, there are also potential dangers to the extent that intentions to avoid and oblige – i.e. to give in to the angry person – can unduly harm the individual.

Importantly, unlike Experiment 1, this study found evidence for a successful intervention to mitigate the dangers of felt fear and reciprocal anger. These data demonstrate moderated mediation ( $H_3$ ): fear and reciprocal anger were both influenced by the interaction between expressed anger and self-efficacy. Subsequent analysis showed that the relationships between expressed anger and fear and reciprocal anger held when individuals had low but not high conflict self-efficacy, i.e. initial emotional reactions to anger can be mitigated through feeling enhanced conflict self-efficacy such that focusing positively on one's conflict management ability appears to eliminate strong fear (and reciprocal anger) reactions to anger.

### General discussion

In this paper, we replicate, connect and extend existing work on the influence of emotion expressions and experiences on behavior in several ways. First, we explicitly hypothesize a replication of prior findings linking emotional expressions to emotional responses and linking emotions to behavioral motivations (BIS/BAS). Second, we extend prior work by explicitly linking these two relationships in a causal model, showing that these effects indirectly shape conflict management styles. Third, we extend this work by testing two interventions to help individuals break the link between another's expressed emotion and their emotional responses in the specific context of conflict management, i.e. although self-efficacy has been demonstrated to be helpful for performance in some contexts (e.g. academic performance, negotiations), the ability of conflict-management self-efficacy to mitigate emotional reactions in a conflict situation has not been previously tested. We offer a similar argument for examining hot vs cold processing: although others have argued and found that processing styles are related to the experience of emotions, this effect has not been tested as a potential intervention to disrupt specific emotional responses to being the target of another person's anger in conflict management contexts.

We found, as expected, that the negative emotion of fear does occur in response to anger, as does reciprocal anger, as found in prior work. Fear, in turn, is associated with behavioral inhibition, which leads to intended responses – obliging and avoiding (Rahim and Bonoma, 1979) – that further bestow power upon the angry person through the subjugation and submission (Tiedens, 2001) of the recipient. Either response diminishes one's ability to assert one's own needs in the face of the angry person, and may even reinforce the angry behavior by rewarding the angry person for that behavior. Van Kleef *et al.* (2004), for example, show that expressing anger elicits concessions (obliging behavior) from negotiation partners. Inhibition also diminishes intentions to dominate, even though dominating may sometimes help serve as a counterweight to the angry person's attempt to dominate, and has been shown to be needed as a first step to get the other party to be open to an integrative approach (Brett *et al.*, 1998).

One result that was surprising in our studies was the positive relationship between inhibition and intentions to integrate found in Experiment 2, and a similar tendency in this direction is seen in Experiment 1. Although opposite to our hypothesis, this result is plausible given prior work on bullying, which has found that many victims at least begin with constructive conflict management strategies such as integration even if they also resort to obliging and avoiding over time as the bullying continues (Zapf and Gross, 2001). More

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specifically in regards to our work, it could be the case that individuals feel competing tendencies to try to solve the problem (through integrating) as well as simply make the other person's anger stop (through obliging and/or avoiding). Building further on this point, the self-regulation manipulations may have had an unintended effect on individuals' focus on problem-solving, which we did not measure. Cold processing reduced the overall likelihood of reciprocal anger, and high self-efficacy moderated the relationship between anger displays and emotions. These findings suggest that individuals considering the situation from either a self-efficacious or a cold processing standpoint may have been prompted to treat the situation with the angry counterpart from a problem-solving lens (as a conflict problem that was solvable). Thus, despite the negative effects of their inhibition, those who felt relatively more efficacious or distanced from the emotions of the situation may have felt somewhat prompted to consider the other party's interests as useful information for solving the problem, thereby having the added, unintended effect of increasing their integrative intentions as well as the hypothesized decrease in dominating and increase in avoiding and obliging intentions as a result of feeling fear.

Broadly, the two approaches to self-management in the face of anger that we develop in this paper both focus on manipulations to dampen the tendency to feel fear and reciprocal anger in response to another person's anger. If one can reduce fear, for example, it lessens the likelihood of being cornered into avoiding and obliging or of giving up the potentially beneficial option of dominating. We tested two approaches to emotion management: focusing on cold (rather than hot) processing and enhancing self-efficacy. In Experiment 1, we found that cold processing did not effectively change emotional responses to anger. In Experiment 2, however, we showed that enhancing self-efficacy moderated the impact of anger, actually eliminating fear along with reciprocal anger in response to anger. Put simply, we found that conflict self-efficacy broke the link between anger and emotional responses, while cold processing did not. What can we learn from this pattern? We offer three potential insights into the different ways that self-efficacy and hot/cold processing influence individuals' responses to expressed anger.

One explanation is that hot/cold processing vs self-efficacy indicate different levels of self vs situational control. Hot processing, which immerses individuals in emotions experienced at the time, not only highlights these emotions for individuals but may also lead to reduced feelings of control because individuals focus on the emotions of the moment rather than how they might effectively manage the situation. In contrast, cold processing distances individuals from emotions experienced at the time. However, although it may enable individuals to view the current events dispassionately, it may not instill feelings of control because even self-distanced individuals may not feel that they are able to influence the situation. Thus, although they work through different mechanisms, the inability of either self-immersion (hot) or self-distancing (cold) to establish a sense of control may be because both strategies rely on an outward-looking, social perspective, i.e. one focused on the other person as well as the self. In contrast, self-efficacy is (by definition) focused on both the self and a sense of control. Further, to link this intervention explicitly to appraisal theory, it is plausible that self-efficacy restores some degree of certainty, agency and control, and the associated action readiness tendencies that is missing from cold-processing, which is unlikely to have the same effect on these appraisals, i.e. self-efficacy, which provides information about individuals' ability to manage themselves in a specific domain, by its nature implies control and agency: an ability to manage a situation and direct its path. Our findings thus suggest individuals will more effectively manage expressed anger when they feel in control of the situation than when they feel in control of the self.

A second, and associated, possibility is suggested by findings on both cognitive biases and cognitive switching costs, i.e. asking individuals to recall a similar past instance of being the target of another person's anger before they again became the target of a person's anger in our study may have had unintended consequences on their processing. Drawing from classic work on the availability bias (Tversky and Kahneman, 1974), it is possible that asking individuals to recall a similar anger episode increased the overall availability of anger-relevant information in their memory. Most investigations of hot/cold processing occur in a "neutral" environment, i.e. a task in which recalling an anger-related event is followed by a paper-and-pencil evaluation of individuals' responses to that event. In our experiments, participants recalled an anger episode and then went on to evaluate a social interaction (viewing a photograph and reading a script) that also involves anger (in the anger condition). It may be that, in a context that is less neutral and presents participants with a new interaction, recalling an anger episode overrides processing style (hot or cold). Instead, the increased accessibility of anger-relevant information may have increased the probability that individuals relied on anger-relevant scripts – based on their own past experiences in dealing with others' anger – that shaped how individuals then approached and reacted to the current anger situation (Fitness, 2000). If this is true, then past findings on the beneficial effects of manipulated cold processing may be weaker when individuals are managing more complex, ongoing instances of anger and conflict.

Finally, it may also be the case that self-efficacy is more enduring than cold processing. The very definition of self-efficacy is the ability to handle situations; therefore, as difficult situations are faced, they do not seem as daunting. By contrast, cold processing is not about how to handle a situation, but just how to think about a situation. Thinking in a cold way may be helpful for a moment, but does not provide security in the face of a new challenging situation. It is likely that the new situation (being the recipient of anger) can still overwhelm a "cold" processor. In other words, self-efficacy is more enduring while self-distancing is more episodic. Ironically, to achieve effective cold processing in our scenario (i.e. by not having fear or reciprocal anger triggered), simple emotional self-management was not enough. Instead, achieving the benefits of cold processing may have first required confidence born from feeling self-efficacy, which future research should explore. In this case, it is not about being rational, but about being confident.

These possibilities need to be tested by further research, but it is clear in these studies that the most beneficial interventions are cognitive- rather than emotionally-focused (for example, experiencing enhanced self-efficacy for how to manage an interpersonal conflict effectively). This provides some support for those who advocate conflict training (Jones and Brinkert, 2008), including training on handling difficult conversations (Stone *et al.*, 2010) and deploying other conflict resolution skills. The influence of self-efficacy is consistent with research showing that negotiators with high self-efficacy believe that others are more willing to problem-solve and more likely to use problem-solving (integrative) tactics (O'Connor and Arnold, 2001; Sullivan *et al.*, 2006). It is also clear that this kind of training may be especially important before conflicts arise: in our study, the self-efficacy enhancement occurred before hearing the anger, protecting subjects from the fear that is likely to result from being the target of anger. Thus, it is better not to "manage in the moment" but rather to plan ahead and build confidence in core conflict management competencies so that individuals are ready for conflict situations before they arise.

### Limitations and future directions

Several limitations to this research exist. Our goal was to identify the conditions under which expressed anger elicits, via fear or reciprocal anger, a submissive response (avoiding,

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obliging) that sustains and reinforces the use of anger vs the conditions under which expressed anger elicits a more assertive response (dominating, integrating) that challenges the expression of anger. Consistent with our hypotheses, we found that participants intended to be more avoiding or obliging when they felt fearful and more dominating when they felt angry, but also, surprisingly, more integrating in both cases. However, the path from expressed anger to the conflict resolution strategy intention choices that participants made in both of our studies was based on a hypothetical scenario only. Put simply, our goal was to examine how two practical interventions might influence individuals' intended behavioral reactions when faced with an angry counterpart; in other words, how do I intend to react when someone expresses anger towards me, and can my intentions be redirected to more rather than less beneficial conflict management strategies? As a result of this focus, we did not examine actual behaviors. Although there is empirical evidence that self-reported and actual conflict resolution behaviors are highly correlated (De Dreu *et al.*, 2001), the use of explicit behavioral measures to assess the impact of expressed anger on the actual deployment of various conflict resolution strategies in a variety of conflict situations would strengthen the applied generalizability of our findings.

A second limitation appears in the manipulations used for both studies. Although the difference in hot vs cold manipulation (4.03 vs 3.75) was statistically significant, both of these means are considerably above the midpoint on a five-point scale. This restricted variance could provide at least partial explanation for why the hot/cold intervention did not have the anticipated effects on breaking the anger-fear and anger-reciprocal anger links in Study 1, i.e. it could be the case that the cold manipulation was not strong enough, leading to "warm" rather than truly cold processing. Future research should test various means by which to induce stronger cold processing to better test its effects on breaking these links. One possible way to strengthen the manipulation could be by having participants write about how they will use what they are experiencing (i.e. the emotions they are currently feeling vs the reasons the production manager acted in a certain way) in the upcoming conversation with the production manager. Relatedly, although the difference for high vs low self-efficacy in Study 2 was significant and led to the expected effects for breaking the anger-fear and anger-reciprocal anger links, these means reflected a restricted range (5.43 for high and 4.86 for low self-efficacy). Thus, the effect size for self-efficacy could have been unnecessarily attenuated. Future research should similarly test various means by which to induce stronger self-efficacy effects to more robustly examine (and replicate) the effects that we found. For example, participants might write about how higher (lower) self-efficacy will be a benefit (challenge) in the upcoming negotiation or their plans to use (overcome) their strength (limitation) in the negotiation.

One possible avenue for future research relates to our choice of Skype as the communication medium for the conflict scenario. Electronic communication typically amplifies hostility and competitiveness (Friedman and Belkin, 2013), and so may have resulted in stronger reactions to expressed anger than if the interaction had taken place face-to-face. Paralinguistic and nonverbal cues provide additional cues about a speaker's intentions, softening the impact of any single cue, and so it is possible that in a face-to-face interaction the anger appears less intense (Daft and Lengel, 1986). In contrast, it is possible that, in this case, the lack of these cues reduced rather than increased the intensity of the other person's anger for the recipient because participants were not able to ascertain a complete picture of their counterpart's intentions. Finally, participants responded only to a relatively thin slice of the other person's behavior (a single expression of anger). This indicates that they made a best guess about the effectiveness of various strategies, but had no opportunity to test them or obtain feedback from the other person across continued



interaction. Thus, although we have shown that individuals who experience fear in response to expressed anger indicate a certain pattern of initial responses in terms of how to manage the conflict, we are not yet able to determine the downstream consequences of those initial strategy choices as the interaction unfolds. Overall, future research should explore in more depth the mechanisms that underlie responses to expressed anger by comparing electronic and face-to-face interactions.

Finally, future research should examine other potential combinations of emotions felt in response to being the target of another person's anger. For example, beyond fear and reciprocal anger, targets may feel surprise if the angry person's response seems confusing or incommensurate with the target's request to the angry person. It is also plausible that the target may feel guilty at disturbing the other person if they believe the other person's anger is caused by feeling overwhelmed, stressed or otherwise unable to help the target. As emotions even of the same valence can vary in important ways terms of their appraisal and action tendencies (Smith and Ellsworth, 1985), it would be interesting to compare and contrast how individuals who feel different emotions – or combinations of emotions – in response to being the target of anger react differently depending on the action tendencies of the specific emotions felt.

## Conclusion

What we have learned from these studies is that when facing others who express anger, people respond emotionally, particularly with fear as well as reciprocal anger (as found in prior studies). A fear response is associated with behavioral inhibition and conflict management styles that are supported by inhibition – such as avoiding and obliging – and a reciprocal anger response is associated with styles supported by activation – such as dominating. These initial emotional responses can be mitigated by enhancing the target's sense of conflict self-efficacy (but not by enhancing cold processing), suggesting an important way for people to minimize the chance that anger can be used as a tactic to control them, especially when they feel fear.

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