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Two roads diverged: An alternative perspective on the EASI model

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I hereby declare that this PhD dissertation is my original work and it has been written by me in its entirety.
I have duly acknowledged all the sources of information which have been used in this dissertation.

This PhD dissertation has also not been submitted for any degree in any university previously.

Nadhilla Velda Melia
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Two Roads Diverged: An Alternative Perspective on the EASI Model

Nadhilla Velda Melia

Research on the interpersonal effect of anger expressions on others' concessionary behaviour has found conflicting results about whether anger expressions increase or decrease concessionary behaviour. The Emotions as Social Information (EASI) model (Van Kleef, 2009, 2014) proposed that these conflicting findings can be resolved by looking at inferential and affective processes. Specifically, anger expressions increase concessionary behaviour via inferential processes but decrease concessionary behaviour via affective processes. However, previous research has mainly focused on dominance-related inferences and reciprocal anger reactions. I propose that the relationship between anger expressions and concessionary behaviour is determined by the type of inferential and affective processes, and not just whether inferential or affective processes are occurring. I explore other inferential processes, such as affiliation-related inferences, and other affective processes, such as complementary fear reactions, together with dominance-related inferences and reciprocal anger reactions, as possible mediators of the relationship between anger expressions and others' concessionary behaviour. I also propose that the relative influence of these mediators depends on the perceived appropriateness of the anger expression and investigate the proposed model in a transgression setting. I found support for the mediating effect of dominance-related inferences and partial support for the mediating effect of reciprocal anger reactions, but not the other mediators. I also found partial support for the moderating effect of a counterpart's transgression role on the relationship between anger expressions and perceived appropriateness. I also did not find any moderating effects of perceived appropriateness. Implications of these findings and future research plans for further testing of the EASI model are discussed.

Keywords: anger expressions, concessions, EASI model, appropriateness, transgressions

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Introduction

One relatively overlooked area of negotiations is negotiating reconciliation after a social transgression. A social transgression occurs when one individual (i.e. a perpetrator) commits a wrongdoing against another (i.e. a victim). After a transgression occurs, the victim may seek compensation from the perpetrator and doing so may require negotiation. Previous research has looked at negotiations in many areas such as business transactions, dissenting opinions, and romantic disagreements. In many of these negotiation situations, both negotiation parties may have the same goal of achieving the best outcome for themselves and may have similar psychological needs although they have conflicting interests. However, negotiating reconciliation after a social transgression may be a unique negotiation situation given that the two negotiation parties take on two very different and distinct roles (i.e. the perpetrator and the victim) with different psychological needs and feelings attached to them. For example, the victim is likely to come into the negotiation angry at the perpetrator for their wrongdoing. Would it help the victim to receive more compensation if they expressed anger at the perpetrator? What if the perpetrator were to express anger? In this paper, I am investigating how anger expressions affect concessionary behaviour in a transgression negotiation setting.

Research on the interpersonal effect of anger expressions on concessionary behaviour in negotiations has found conflicting results. On one hand, anger expressions can elicit larger concessions from others due to inferences that the expresser is tough or has tough negotiation limits (Adam & Brett, 2018; Sinaceur & Tiedens, 2006; Van Kleef, De Dreu, & Manstead, 2004a). On the other hand, anger expressions can actually reduce others' concessionary behaviour because they trigger affective reactions from others, such as anger, and induce a desire for retaliation (Adam & Brett, 2015; Friedman et al., 2004; Harinck & Van Kleef, 2012). To reconcile these conflicting findings, Van Kleef (2009, 2014) proposed the

Emotions as Social Information (EASI) model and posits that whether anger expressions increase or decrease others' concessionary behaviour depends on the relative influence of affective versus inferential processes. He proposes that when affective processes, such as anger reactions, are more influential, anger expressions reduce others' concessionary behaviour. In contrast, when inferential processes, such as perceptions of the expresser's toughness, are more influential, anger expressions increase others' concessionary behaviour.

However, I argue that whether anger expressions increase or decrease others' concessionary behaviour also depends on the relative influence of *specific* inferences and affective reactions, rather than just the relative influence of inferential or affective processes in general. Previous research testing the EASI model has largely focused on only one type of inference (i.e. inferences of toughness) and one type of affective reaction (i.e. angry reactions) associated with anger expressions. There are many different types of inferences and affective reactions in response to anger expressions and it is unlikely that they all elicit similar behavioural responses. In this research, I will investigate multiple inferences and affective reactions and their relative influence in determining whether anger expressions increase or decrease others' concessionary behaviour. I will also investigate how the perpetrator/victim role of an expresser in a transgression negotiation setting influences the perceived appropriateness of an anger expression, which in turn determines the relative influence of different inferences and affective reactions.

This research has three theoretical contributions. First, this research adds to the EASI model by proposing that the *type* of inferences and affective reactions that occur can elicit different levels of concessionary behaviour in response to anger expressions, rather than just whether inferential versus affective processes occur. Previous research suggests that anger expressions lead to higher levels of concessionary behaviour from observers through inferential processes whereas anger expressions lead to lower levels of concessionary

behaviour through affective processes (Van Kleef, 2014). However, past research has largely focused on one type of inference and one type of affective reaction. Specifically, previous research has largely looked at inferences related to toughness (Adam & Brett, 2015; Adam & Brett, 2018; Belkin, Kurtzberg, & Naquin, 2013; Lelieveld, Van Dijk, Van Beest, Steinel, & Van Kleef, 2011; Sinaceur & Tiedens, 2006; Van Kleef & De Dreu, 2010; Van Kleef et al., 2004a) and affective reactions of anger (Friedman et al., 2004; Harinck & Van Kleef, 2012) as mediators of the relationship between anger expressions and concessionary behaviours. Based on theories of interpersonal perception dimensions and emotional reciprocity/complementarity, I propose that there are other types of inferences and other types of affective reactions associated with anger expressions that may elicit different outcomes. Specifically, I propose that another type of inference (i.e. affiliation-related inferences) associated with anger expressions can actually lead to lower levels of concessionary behaviour from observers and another type of affective reaction (i.e. fear reactions) associated with anger expressions can actually lead to higher levels of concessionary behaviour. Hence, this research will demonstrate that inferential processes associated with anger expressions may also reduce others' concessionary behaviour and that affective processes associated with anger expressions may also increase others' concessionary behaviour.

Second, this research will be one of the few to provide a full empirical test of the EASI model and the relative influence of its alternative mediators. Although the EASI model proposes two alternative mediators (i.e. affective and inferential processes) that predict differential effects of anger expressions on concessionary behaviour, previous research has largely failed to test these alternative mediators simultaneously. Instead, previous research mostly focuses on one mediator at a time and how its effect is attenuated or enhanced by a specific moderator. For instance, it was found that observers' power attenuated the mediating

effect of inferences of toughness on the relationship between anger expressions and concessionary behaviour (Sinaceur & Tiedens, 2006). A separate paper found that observers' power enhanced the mediating effect of anger reactions on the relationship between anger expressions and concessionary behaviour (Lelieveld, Van Dijk, Van Beest, & Van Kleef, 2012). Although these papers together demonstrate that observers' power has opposite moderating effects on inferential versus affective processes as mediators, we cannot be certain that when power attenuated the mediating effect of inferential processes in Sinaceur and Tiedens (2006), it did not also attenuate any affective processes, and when power enhanced the mediating effect of affective processes in Lelieveld et al. (2012), it did not also enhance the mediating effect of inferential processes. Failing to test these mediators simultaneously in a single model does not allow us to properly investigate the *relative influence* of each mediator. This is especially important because inferential processes and affective processes are likely operating in parallel and because they are proposed to motivate opposite behaviours (Van Kleef, 2014). Hence, the current research will test multiple alternative mediators simultaneously in order to investigate their relative influence depending on certain factors, such as the appropriateness of the anger expression, and to allow for better prediction about whether anger expressions will increase or reduce concessionary behaviour.

Finally, my research expands the investigation of the effects of anger expression on concessionary behaviour into a transgression negotiation setting. Unlike other conflict settings, individuals take on clearly defined roles in a transgression setting. When a transgression occurs, there is a clear victim and a clear perpetrator. According to the needs-based reconciliation model (Shnabel & Nadler, 2008), the victim and the perpetrator experience different psychological needs and emotions. I propose that these different psychological experiences elicit different perceptions of the appropriateness of an anger expression depending on *who* is expressing anger in the negotiation. Past research on the

EASI model has suggested that the appropriateness of an anger expression can determine whether inferential or affective processes are more influential (Van Kleef, 2009, 2014; Van Kleef, Homan, & Cheshin, 2012). Specifically, it was proposed that the relative strength of affective processes over inferential processes increases when an anger expression is deemed as inappropriate because inappropriate emotional displays evoke negative emotions in perceivers (Bucy, 2000). Going a step further, I propose that the appropriateness of an anger expression determines the *type* of inferential or affective processes that are more influential. By investigating the effect of anger expressions in a new context, I also identify a potential new factor (i.e. the perpetrator/victim role of the expresser in a transgression) that can also determine the appropriateness of an anger expression, and subsequently the relative influence of different inferential and affective processes.

Theoretical Background

Anger

Charles Darwin (1872) stated that anger is a potent emotion that motivated "animals of all kinds, and their progenitors before them, when attacked or threatened by an enemy, to fight and protect themselves" (p. 74). Anger is an emotional response to goal obstruction (Plutchik, 1980) and is associated with approach-related action tendencies that serve to get rid of these obstacles (Harmon-Jones & Allen, 1998). In the organizational literature, anger is defined as a feeling of displeasure or hostility towards someone or something that is perceived to be responsible for some wrongdoing (Gibson & Callister, 2010). Anger is expressed via lowering and knitting the brows, tightening and narrowing the eye openings and lips, and pressing the lips together (Ekman & Friesen, 1978) and anger expressions have been found to be universally recognizable (Ekman et al., 1987). Given the universal recognisability of anger expressions, it is likely that anger serves a social function and that its expression has interpersonal effects on others' behaviour. For instance, evolutionary theorists

propose that anger functions to increase another's consideration of the individual's own welfare (Sell, Tooby, & Cosmides, 2009). Fischer and Roseman (2007) also argue that an individual's anger expression serves to change another person's undesirable behaviour so that the individual can obtain their goal.

Indeed, previous research in conflict and negotiation has shown that anger expressions elicit larger concessions from others (e.g. Sinaceur & Tiedens, 2006; Van Kleef et al., 2004a; Van Kleef, De Dreu, Pietroni, & Manstead, 2006). Past research has shown that individuals believed that an angry counterpart was tough or had tough negotiation limits and that this caused individuals to concede more to the angry counterpart in order to accommodate their counterpart's tough limits in the hopes of reaching an agreement (Adam & Brett, 2015; Adam & Brett, 2018; Lelieveld et al., 2011; Sinaceur & Tiedens, 2006; Van Kleef & De Dreu, 2010; Van Kleef et al., 2004a; Van Kleef, De Dreu, & Manstead, 2004b). Individuals were also more afraid of an angry counterpart which also caused them to concede more than they otherwise would (Lelieveld et al., 2012).

However, anger expressions can also backfire and actually reduce others' concessionary behaviour. An angry counterpart can be perceived negatively (Van Kleef et al., 2004a), cause others to also become angry (Friedman et al., 2004), and induce others' desire for retaliation (Adam & Brett, 2015; Harinck & Van Kleef, 2012; Wang, Northcraft, & Van Kleef, 2012). For example, an angry expression from a low-power individual compared to an angry expression from a high-power individual is less likely to be seen as a threat since the low-power individual has limited control over outcomes. Hence, individuals faced with an angry counterpart with low power are less likely to feel afraid and are instead more likely to feel angry in turn, causing them to concede less (Lelieveld et al., 2012). Inappropriate displays of anger can also result in others feeling that they are being treated unfairly. These perceptions of unfair treatment are in turn associated with feelings of anger and a desire to

retaliate (Barclay, Skarlicki, & Pugh, 2005; Skarlicki & Folger, 1997), which would reduce concessionary behaviour (Van Kleef & Côté, 2007). Furthermore, when anger is directed at the individual instead of the individual's behaviour, the cause of the anger is more ambiguous and the individual may feel that changing his or her behaviour by conceding more would not solve the anger thus inhibiting concessionary behaviour (Lelieveld et al., 2011; Steinel, Van Kleef, & Harinck, 2008). Anger displays in a negotiation about moral issues are also less effective in increasing concessions. Dehghani, Carnevale, and Gratch (2014) argue that anger expressions from a counterpart would intensify concerns about a morally significant issue which would cause an individual to concede less on the issue. Thus, past research has demonstrated that although anger expressions can have positive effects on others' concessionary behaviour, they can also sometimes backfire and negatively affect others' concessionary behaviour instead.

Emotions as Social Information (EASI) Model

To reconcile these conflicting findings regarding the interpersonal effect of anger expressions on others' concessionary behaviours, Van Kleef (2009, 2014) proposed the EASI model which states that emotion expressions can affect others' behaviour through inferential and affective processes. The model proposes that anger expressions produce advantageous outcomes for the expresser, such as greater concessions from observers, through inferential processes whereas they produce disadvantageous outcomes for the expresser, such as fewer concessions from observers, through affective processes (Van Kleef, 2014).

Anger expressions can elicit inferential processes in observers. Emotional expressions carry a lot of information about the expresser's inner states, such as his or her intentions (Fridlund, 1994), his or her appraisal of a situation (Manstead & Fischer, 2001), and his or her dispositions (Knutson, 1996). Anger expressions have been found to signal that a negotiation offer is approaching the expresser's limits (Lelieveld et al., 2011; Steinel et al.,

2008; E. Van Dijk, Van Kleef, Steinel, & Van Beest, 2008; Van Kleef et al., 2004a, 2004b), that a negotiation issue is of high priority to the expresser (Pietroni, Van Kleef, De Dreu, & Pagliaro, 2008), and that the situation is a competitive one (Van Doorn, Heerdink, & Van Kleef, 2012). Anger expressions have also been shown to elicit perceptions that the expresser is tough (Adam & Brett, 2015; Adam & Brett, 2018; Sinaceur & Tiedens, 2006; Van Kleef & De Dreu, 2010), dominant (Belkin et al., 2013; Knutson, 1996), competent (Salerno & Peter-Hagene, 2015), and selfish (Yip & Schweinsberg, 2017).

In addition to inferential processes, anger expressions can also elicit affective reactions in observers. An angry expression can elicit feelings of anger in observers through the process of emotional contagion, defined as the tendency to "catch" another person's emotions (Hatfield, Cacioppo, & Rapson, 1994). This can occur through nonconscious mimicry of the expresser's facial, vocal, and postural expressions (Hatfield, Cacioppo, & Rapson, 1992), although emotional contagion has also been shown to occur in computer-mediated interactions in which mimicry cannot take place (Friedman et al., 2004; Van Kleef et al., 2004a). An angry expression can also elicit complementary emotions in others, such as fear. For example, it was found that an angry expression from a high-power negotiation counterpart elicited fear in individuals (Lelieveld et al., 2012). Another type of affective reaction includes evaluative judgments. For example, anger expressers are evaluated more negatively (Sommers, 1984; Tavris, 1984).

The inferential and affective processes associated with anger expressions can motivate opposite behaviours. An individual's own feelings of anger and negative impressions of the anger expresser would reduce concessionary behaviour (e.g. Lelieveld et al., 2012) whereas the perceptions of toughness and tough negotiation limits associated with anger expressions would increase concessionary behaviour (e.g. Adam & Brett, 2015). Given the opposing

effects of these inferential and affective processes, it is crucial to identify the factors that determine which of these processes overrides the other.

The EASI model has identified two factors that determine which process is more likely to occur. First, epistemic motivation, or the desire to obtain a rich and thorough understanding of a situation (Kruglanski, 1989), is proposed to facilitate inferential processes over affective processes. Epistemic motivation allows for deeper information processing and can be an individual disposition (Webster & Kruglanski, 1994) or influenced by the situation, such as when an individual is held accountable for their decisions (Tetlock, 1992) or when there is little to no time pressure (Van Kleef et al., 2004b), environmental noise (Kruglanski & Webster, 1991), or mental fatigue (Webster, Richter, & Kruglanski, 1996). Given that inferential processes rely more on cognition whereas affective processes rely more on emotional reactions, the deeper information processing that is a result of high epistemic motivation is more likely to enable inferential processes to override affective processes. For example, Van Kleef et al. (2004b) showed that people conceded more to an angry opponent compared to a happy one when they had low need for cognitive closure and were under low time pressure, which are both indicative of high epistemic motivation. They argued that this occurred because of the greater tendency for those with high epistemic motivation to engage in inferential processes such as utilizing the opponent's emotion expressions as an indication of their negotiation limits, although they did not test this empirically. High power also lowers epistemic motivation (Kruglanski & Webster, 1996) and research has found that perceptions of toughness associated with anger expressions are less influential when observers have high power thus leading to fewer concessions from observers (Sinaceur & Tiedens, 2006).

Another condition that determines whether inferential or affective processes are more influential is the appropriateness of the emotion expression. Inappropriate emotional displays tend to increase negative emotions in others (Bucy, 2000), suggesting that when an emotion

expression is inappropriate, affective processes are likely to be more influential than inferential processes. Factors that influence the appropriateness of certain emotion expressions include culture as well as intensity and authenticity of the emotion expression. For instance, anger expressions decreased concessionary behaviours in collectivistic Asian cultures because the display of anger is considered to be inappropriate in these cultures as they pose a threat to group harmony (Adam, Shirako, & Maddux, 2010). Overly intense anger expressions also trigger negative affective reactions due to their inappropriateness and reduce concessionary behaviour from others (Adam & Brett, 2018; Gibson, Schweitzer, Callister, & Gray, 2009). Finally, an inauthentic anger expression is also seen as dishonest or manipulative thus rendering it inappropriate and increasing negative affective reactions from others (Côté, Hideg, & Van Kleef, 2013).

To summarize, the EASI model helps to reconcile the inconsistent findings regarding the interpersonal effect of anger expressions on concessionary behaviour by proposing two types of processes as mechanisms through which anger expressions can affect concessionary behaviour. Inferential processes increase others' concessionary behaviour whereas affective processes reduce others' concessionary behaviour. The EASI model also proposes two factors that determine whether inferential or affective processes are more influential, which are epistemic motivation and the appropriateness of the emotion expression.

Although the EASI model has provided us with some insights into how anger expressions affect others' concessionary behaviour and the conditions under which each mechanism is most influential, there have not been many empirical tests of the overall model so far. Previous research has only tested parts of the overall model separately, such as by testing only one mediator at a time. For example, Adam and Brett (2018) demonstrated that high-intensity anger expressions, which are perceived as inappropriate, eliminated the mediating effect of inferences of toughness but did not test affective processes as a mediator.

By not doing so, we cannot be certain that high-intensity anger expressions would not also have eliminated the mediating effect of affective processes, or if high-intensity anger expressions would indeed enhance the mediating effect of affective processes over inferential processes. Not many studies have investigated both inferential and affective processes as mediators simultaneously in the context of anger expressions and concessionary behaviour. Given that both inferential and affective processes are likely occurring simultaneously and motivate opposite behaviours, it becomes especially important to properly investigate the relative influence of each mediator in order to understand and predict the nature of the relationship between anger expressions and concessionary behaviour.

Few studies have also investigated other types of inferences and affective reactions that result from anger expressions. Most of the previous research on anger expressions and concessionary behaviour has focused on inferences of toughness, which is related to perceptions of the expresser's dominance (Edelman & Omark, 1973; Parker & Omark, 1980). Past research on anger expressions and others' concessionary behaviour has also largely focused on reciprocal affective reactions in which anger expressions trigger reciprocal feelings of anger in others. However, there are other kinds of perceptions that are not related to an expresser's dominance, such as perceptions related to an expresser's affiliation, and other types of affective reactions to anger expressions, such as feelings of fear, that are not as thoroughly investigated. These other types of inferences and affective reactions may elicit different behavioural reactions to anger expressions compared to the inferences and affective reactions that have been typically studied in past research.

Dimensions of Interpersonal Perceptions

Other than dominance-related inferences, affiliation-related inferences should also be investigated. Research on interpersonal perceptions have suggested that there are two orthogonal dimensions along which people make inferences about others arranged in an

"interpersonal circumplex" (Kiesler, 1996; Leary, 2004; Wiggins, 1979), which are labelled as control (dominance versus submissiveness) and affiliation (friendliness versus hostility). Other streams of research have also identified two dimensions of interpersonal perceptions and have different labels for them including agency and communion (Bakan, 1966), or competence and warmth (Fiske, Cuddy, & Glick, 2007). Although the labels are different, dominance, agency and competence are closely interrelated whereas affiliation, communion and warmth are also closely interrelated (Abele & Wojciszke, 2007). Dominance relates to the individual's tendency to strive for power and mastery that would enhance the differentiation of the individual from others whereas affiliation relates to the individual's tendency to strive for solidarity and communality with others. Essentially, dominance refers to "getting ahead" whereas affiliation refers to "getting along" (Hogan, 1982). From an evolutionary standpoint, these two dimensions of interpersonal perception are essential for survival. Dominance perceptions provide information about an individual's relative position in a status hierarchy whereas affiliation perceptions provide information about another individual's potential as a cooperative ally.

It has been found that anger expressions lead to both inferences of high dominance and low affiliation (Hess, Blairy, & Kleck, 2000; Knutson, 1996). Past research on anger expressions and concessionary behaviour has typically focused on dominance-related inferences, such as perceptions of toughness, which is cooperative-inducing (Adam & Brett, 2015; Adam & Brett, 2018; Belkin et al., 2013; Sinaceur & Tiedens, 2006; Van Kleef & De Dreu, 2010). However, affiliation-related inferences associated with anger expressions are competition-inducing (e.g. Arora, Peterson, Krantz, Hardisty, & Reddy, 2012) and are actually likely to reduce others' concessionary behaviour. Low affiliation indicates that an individual has low regard for the other and that the individual is unlikely to care about the other's goals and interests (Abele & Wojciszke, 2007; Peeters, 1992). Anger expressions

have been found to signal low sociability and reduce trust (Belkin & Rothman, 2017) and also signal the competitive nature of a situation (Van Doorn et al., 2012), all of which indicate low affiliation and are likely to reduce cooperative or concessionary behaviour from others. This extends the idea in the prevailing literature that inferential processes mediate a positive relationship between anger expressions and others' concessionary behaviour.

Hypothesis 1a: There is a positive association between anger expressions and others' concessionary behaviour via dominance-related inferences.

Hypothesis 1b: There is a negative association between anger expressions and others' concessionary behaviour via affiliation-related inferences.

Reciprocal versus Complementary Affective Reactions

Affective reactions towards anger expressions can either be reciprocal or complementary. Emotional reciprocity occurs when observers feel the same emotion that another individual expresses and this occurs via emotional contagion (Hatfield et al., 1994). Emotional reciprocity has the function of improving social relationships via the promotion of thought and action coordination, mutual understanding, and interpersonal closeness (Anderson, Keltner, & John, 2003). Past research investigating affective reactions as a mediator of the relationship between anger expressions and others' concessionary behaviour has largely focused on this reciprocal type of affective reaction. For instance, Van Kleef (2014) suggests in his review that anger expressions lead to lower levels of concessionary behaviour from the observer when mediated by affective reactions. However, this review only considers reciprocal anger as an affective reaction.

Another type of affective reaction is emotional complementarity, in which an emotion expression evokes a "different but corresponding emotion in others" (Van Kleef et al., 2008, p. 1315). The social function of emotional complementarity is to improve social relationships by reducing the intensity of the emotion expressed (Keltner & Haidt, 1999) thus regulating

social interaction and allowing the continuation of the relationship (Morris & Keltner, 2000). For example, it has been demonstrated that expressions of disappointment evoke complementary feelings of guilt in observers (Lelieveld et al., 2012) whereas expressions of distress evoke complementary feelings of sympathy in observers (Eisenberg et al., 1989). The complementary affective reaction that is most often associated with anger is fear (Dimberg & Öhman, 1996). Anger expressions are associated with aggression (Averill, 1983) and signal a threat to observers (Sinaceur & Tiedens, 2006) thus inducing fear (Moody, McIntosh, Mann, & Weisser, 2007; E. Van Dijk et al., 2008; Van Kleef et al., 2004a). Feelings of fear have been shown to increase concessionary behaviour (e.g. Lelieveld et al., 2012). Hence, complementary affective reactions to anger expressions could actually increase concessionary behaviour, which would extend the proposition in existing literature that affective reactions mediate a negative relationship between anger expressions and others' concessionary behaviour.

Hypothesis 1c: There is a negative association between anger expressions and others' concessionary behaviour via reciprocal anger reactions.

Hypothesis 1d: There is a positive association between anger expressions and others' concessionary behaviour via complementary fear reactions.

Given the opposing nature of these proposed mediating effects, I also propose a factor (i.e. perceptions of appropriateness) which would determine which of these mediating effects would be relatively more influential.

Perceptions of Appropriateness

Based on the EASI model, the appropriateness of an anger expression is a key moderator that determines the relative influence of the mediators of the relationship between anger expressions and others' concessionary behaviour. Previous research has demonstrated that people perceive those who express anger to be high in dominance (e.g. Belkin et al.,

2013; Hareli, Shomrat, & Hess, 2009) and dominance-related characteristics, including toughness (e.g. Sinaceur & Tiedens, 2006; Van Kleef & De Dreu, 2010) and competence (e.g. Salerno & Peter-Hagene, 2015). However, anger expressions which violate normative expectations and display norms are deemed as inappropriate (Geddes & Callister, 2007; Shields, 2005). For example, a high-intensity anger expression is deemed inappropriate compared to one of low or medium intensity (Geddes & Callister, 2007). In a negotiation setting, anger expressions may be deemed inappropriate when the counterpart has shown themselves to be cooperative (Adam & Brett, 2015) because anger displays may indicate hostility and an unwillingness to reciprocate the counterpart's cooperativeness. Such inappropriate anger expressions may weaken the positive association between anger expression and dominance-related perceptions. For instance, research has found that the positive association between anger expressions and dominance-related perceptions is actually reversed for women such that anger expressions reduce perceptions of a woman's competence (Brescoll & Uhlmann, 2008; Schaubroeck & Shao, 2012) because it is perceived to be less normative and appropriate for women to express anger (Plant, Hyde, Keltner, & Devine, 2000). It was also found that the mediating effect of perception of toughness was eliminated when anger expressions were high in intensity, but not when anger expressions were low or medium in intensity (Adam & Brett, 2018).

Hypothesis 2a: Perceptions of appropriateness moderate the relationship between anger expressions and dominance-related inferences, such that a lower level of perceived appropriateness weakens the positive relationship between anger expressions and dominance-related inferences, as well as weakens the mediating effect of dominance-related inferences.

A less appropriate anger expression is also likely to strengthen the positive association between anger expression and reciprocal anger reactions. Van Kleef and Côté (2007) demonstrated that when there was an explicit norm against expressing anger, a negotiation

counterpart's anger expression elicited reciprocal feelings of anger in observers. Anger is an emotion that is typically targeted at others, rather than the self (Tavris, 1982), and is associated with blaming others (Kulik & Brown, 1979; Quigley & Tedeschi, 1996). Anger expressions also indicate the expresser's greater desire for engaging in aggression and retaliatory actions (Allred, 1999; Averill, 1983; Darley & Pittman, 2003). Inappropriate anger expressions are likely to make observers feel that they do not deserve to be blamed and do not deserve to be the target of retaliation. Van Kleef and Côté (2007) argue that observers would feel that they are being treated unfairly and with little respect. This feeling of mistreatment and unfairness elicits anger reactions (Mikula, Scherer, & Athenstaedt, 1998). It was also shown that an anger expression by a low-power bargainer compared to a high-power bargainer elicited feelings of anger (Lelieveld et al., 2012). Since anger expressions are less expected of and may be seen as less appropriate for people with low status and power (Tiedens, Ellsworth, & Mesquita, 2000), these findings further suggest that an inappropriate anger expression may strengthen the relationship between anger expression and reciprocal anger reactions.

Hypothesis 2b: Perceptions of appropriateness moderate the relationship between anger expressions and reciprocal anger reactions, such that a lower level of perceived appropriateness strengthens the positive relationship between anger expressions and reciprocal anger reactions, as well as strengthens the mediating effect of reciprocal anger reactions.

I also expect that the appropriateness of an anger expression will moderate the relationship between anger expressions and perceptions of affiliation, as well as the relationship between anger expressions and complementary fear reactions. However, I do not make any specific predictions about how appropriateness will moderate these relationships because previous research on the EASI model has not yet investigated perceptions of

affiliation and complementary fear reactions as mediators of the relationship between anger expressions and others' concessionary behaviour. Hence, the moderating effect of appropriateness on these two mediators will be explored for the first time in the present research.

Anger Expressions by Victims and Perpetrators of a Transgression

The investigation of the EASI model in a transgression setting in the present research lends itself to a possible new factor that I propose could affect perceptions of appropriateness i.e. the perpetrator/victim role of the anger expresser in a transgression. Conflicts can arise when one individual (i.e. the perpetrator) commits a transgression against another (i.e. the victim). To reconcile the relationship, the perpetrator and the victim may engage in a negotiation to determine how the victim may be compensated by the perpetrator. This negotiation context is a unique one because unlike other negotiations, the two negotiation parties have different psychological needs and experiences as a result of their perpetrator/victim role. According to the needs-based model of reconciliation (Shnabel & Nadler, 2008), transgressions prevent victims and perpetrators from fulfilling different psychological needs and hence elicit different emotions. Victims feel a sense of inferiority and experience violations of personal autonomy (Baumeister, Stillwell, & Heatherton, 1994; Foster & Rusbult, 1999) and therefore become angry in response to transgressions (Batson, Chao, & Givens, 2009; Batson et al., 2007; Rozin, Lowery, Imada, & Haidt, 1999). On the other hand, perpetrators may feel that their moral self-concept has been damaged (Exline & Baumeister, 2000) and experience feelings of fear of social exclusion and guilt if they accept responsibility for the transgression (Baumeister et al., 1994).

As a result of different psychological needs and emotional reactions, victims and perpetrators are likely to and are expected to behave in different ways after a transgression has occurred. There is also a status/power imbalance between the two negotiation parties

given that the perpetrator has previously gained something at the expense of the victim thus resulting in the transgression (Murphy & Hampton, 1988; Wenzel, Okimoto, Feather, & Platow, 2008). This imbalance is likely to give rise to different perceptions about whether an anger expression is appropriate or not depending on who is expressing anger. Victims may be expected to react in many different ways to transgressions (Adams, 2016), including retaliation (Okimoto & Wenzel, 2011) and punishment (Wenzel et al., 2008). Victims are also expected to feel anger after a transgression (Van Kleef, Wanders, Stamkou, & Homan, 2015). Feelings of anger are closely linked to a desire for retaliation and aggressive behaviour (Averill, 1983; Darley & Pittman, 2003). For instance, it has been found that victims avoid perpetrators of a transgression for retaliatory, rather than self-protective, reasons and that anger, rather than fear, mediated this relationship (Barnes, Brown, & Osterman, 2009). Furthermore, given that, by definition, victims have had a transgression committed against them, a victim's cause for anger is likely to be "correct for the situation and in correct proportion to the evoking circumstances" (Shields, 2005, p. 7). This suggests that anger expressions are more appropriate for victims to express in a negotiation.

In contrast, perpetrators of a transgression can adopt strategies such as apologizing (ten Brinke & Adams, 2015), offering compensation (Adams & Mullen, 2013), and even self-punishment (Nelissen & Zeelenberg, 2009) to make up for their wrongdoing. Research has also shown that victims desire these actions from perpetrators (Leunissen, De Cremer, Folmer, & Van Dijke, 2013; Malsch & Carrière, 1999). However, a perpetrator's expression of anger violates expectations that the perpetrator will make up for their wrongdoing and may be seen as inappropriate. Furthermore, in committing a transgression, perpetrators have created a status/power imbalance in the relationship by putting themselves above the victim and expressing low regard for the victim (Murphy & Hampton, 1988; Wenzel et al., 2008). An expression of anger by a perpetrator would exacerbate this imbalance as anger is an

emotion associated with high status (Tiedens et al., 2000). Anger has also been found to indicate that the individual feels as though their welfare has not been taken into account (Sell et al., 2009). The idea that a perpetrator of a transgression should feel as though their welfare has not been taken into account (when they are the ones who have committed a wrongdoing) does not fit the situation and hence a perpetrator's anger expression may be seen as less appropriate compared to a victim's anger expression in a negotiation.

Hypothesis 3: A counterpart's perpetrator/victim role moderates the relationship between anger expressions and perceptions of appropriateness such that there is a stronger negative association between anger expressions and perceptions of appropriateness when the counterpart is a perpetrator compared to when the counterpart is a victim.

The Present Research

This research aims to show that the *type* of inferential and affective processes also matter and that different inferences (affiliation-related versus dominance-related) and different affective reactions (reciprocal anger versus complementary fear) can determine whether anger expressions reduce or increase others' concessionary behaviour in a transgression negotiation setting. Specifically, I predict that perceptions of dominance and complementary fear reactions mediate a positive relationship between anger expressions and others' concessionary behaviour whereas perceptions of affiliation and reciprocal anger reactions mediate a negative relationship between anger expressions and others' concessionary behaviour. Furthermore, I investigate this proposed model in a transgression setting and predict that the relative influence of these mediators depends on the perceived appropriateness of the anger expression, which in turn depends on a counterpart's perpetrator/victim role (see Figure 1 for overall theoretical model). These predictions will be investigated by testing these mediators simultaneously in a single model.

Study 1

Study 1 is a correlational study that investigated the relative influence of the proposed mediators in which participants engaged in a dyadic negotiation task.

Participants

Based on the effect size obtained from a meta-analysis regarding the mediating effect of inferences of toughness on the relationship between negative emotion expressions and concession making (Sharma, Elfenbein, Sinha, & Bottom, 2020), I estimated a sample size of 160 participants to achieve a power of 0.8 at 5% two-tailed alpha to detect the effect using a Monte Carlo power analysis simulation (Schoemann, Boulton, & Short, 2017). I acknowledge that there is a limitation in referring to this meta-analysis given the broader independent variable compared to the present research (negative emotion expressions versus only anger expressions) and use of a partial mediation model (one mediator versus five mediators). Since I am also testing a moderated mediation relationship, I also estimated a sample size of 256 based on the effect size obtained from a study investigating the moderating effect of an anger expresser's culture (which has been shown to affect the perceived appropriateness of an anger expression; Adam et al., 2010) on the relationship between anger expressions and concession making (Adam & Shirako, 2013).

Based on available resources, I recruited 186 participants using the subject pool in SMU. Students received course credit for their participation and had a chance to earn an extra SGD$2.50 if they were one of the top 3 participants who earned the most points in the negotiation. Participants were randomly assigned to the counterpart-as-victim condition or the counterpart-as-perpetrator condition within each dyad. One dyad had intermittent connection issues, one dyad was a pair of siblings, and one dyad misunderstood the negotiation instructions. After removing these six participants, I had a final sample size of 180 participants (90 dyads; 70.0% female; age: $M = 21.33$, $SD = 1.86$).

Procedure

Participants did the study online using Zoom, a video conferencing platform. Participants were randomly paired with another participant with whom they engaged in a dyadic negotiation task. Before reading the negotiation task, participants first filled in a measure regarding buyer/seller norms ($\alpha = 0.88$) in general transactions (1 = strongly disagree; 7 = strongly agree) using 8 items (e.g. "It is normal for a buyer to commit a wrongdoing against a seller"). The negotiation task (see Appendix) involves multiple issues. Participants read about a situation in which a buyer of a used textbook is unhappy with the purchase because the seller had sold it at its original price ($100) and promised that it was in brand new condition. However, when the buyer received the textbook, he/she found that the textbook was in poor condition. The textbook had its front cover, as well as several pages, missing. The textbook also had a lot of writing and drawings in it, some of which covered up the words in the textbook. The seller had also forgotten to send extra course materials, such as lecture slides and the seller's class notes, which he/she had promised would be included in the purchase. In this situation, the seller is the perpetrator of a transgression whereas the buyer is the victim. Within each dyad, participants were randomly assigned to the role of the buyer or seller in the situation and were informed that they would negotiate a new price of the used textbook and the delivery time of the extra course materials (see Appendix for full instructions). Participants in the buyer role were in the counterpart-as-perpetrator condition whereas participants in the seller role were in the counterpart-as-victim condition. Depending on their condition, participants also started off with either a positive (counterpart-as-victim condition) or negative (counterpart-as-perpetrator condition) payoff to further reflect the inequalities that arise in a transgression setting. Pre-tests were conducted to ensure that participants could easily understand the negotiation scenario.

After reading the instructions and answering some comprehension questions, participants then engaged in the negotiation task for 15 minutes or until they reached an agreement, whichever was shorter. Participants' negotiation interactions were recorded on video using Zoom. Participants' concessionary behaviour was measured in two ways. Firstly, participants' behavioural frequency of concession making (De Dreu & Nijstad, 2008) was calculated by observing the number of times participants provided an offer that resulted in a lower payoff for them compared to the previous offer that they had provided (i.e. number of concessions). Secondly, the payoff difference between the first offer and the final offer was calculated (Adam & Brett, 2015). Concessionary behaviour scores for the first offer and the final offer were calculated by subtracting the total payoff demanded by the participant across both issues from the maximum payoff possible. The difference in concessionary behaviour score for the first offer and the final offer gave a measure of concessionary behaviour (i.e. payoff difference).

After the negotiation, participants rated the extent to which their counterpart expressed anger during the negotiation (1 = not at all; 7 = very much). Participants also rated the extent to which they thought their counterpart felt angry, irritated, and aggravated (α = 0.93) during the negotiation (1 = not at all; 7 = very much), which made up an index of perceptions of the counterpart's feelings of anger (Van Kleef, De Dreu, Pietroni, et al., 2006). Thus, I measured a counterpart's anger expression in two ways.

Participants also rated their perception of the appropriateness (α = 0.82) of their counterpart's reactions (1 = strongly disagree; 7 = strongly agree) using 6 items (e.g. "I could understand why my negotiation partner reacted in this way;" see Appendix for complete measures) adapted from Van Kleef and Côté (2007).

Participants also rated their feelings of anger (α = 0.90), fear (α = 0.92), and guilt (α = 0.92) during the negotiation. They rated the extent to which they felt angry, irritated, and

aggravated during the negotiation (1 = not at all; 7 = very much), which made up an index of the participants' feelings of anger. Participants also rated the extent to which they felt afraid, afraid that their counterpart would retaliate, and fearful during the negotiation (1 = not at all; 7 = very much), which made up an index of the participants' feelings of fear (Lelieveld et al., 2012). They also rated their feelings of guilt (1 = not at all; 7 = very much) using the Guilt subscale of the State Shame and Guilt Scale (SSGS; Marschall, Sanftner, & Tangney, 1994) which consists of 5 items (e.g. "I felt remorse, regret.").

Participants also rated their perceptions of their counterpart's dominance ($\alpha = 0.79$) and affiliation ($\alpha = 0.74$) (1 = extremely inaccurate; 7 = extremely accurate) using 16 items (e.g. assertive, dominant, sympathetic, friendly) from the Interpersonal Adjective Scale (IAS-R; Wiggins, Trapnell, & Phillips, 1988). Composite scores of dominance and affiliation were calculated based on Montepare and Dobish's (2003) method (see Appendix).

As a manipulation check, participants also rated the extent to which they felt that their counterpart had been a victim of a transgression ($\alpha = 0.87$) committed by the participant in the situation (1 = strongly disagree; 7 = strongly agree) using 3 items (e.g. "I committed a wrongdoing against my counterpart"). Participants also rated the extent to which they felt that their counterpart had been a perpetrator of a transgression against them ($\alpha = 0.89$) in the situation (1 = strongly disagree; 7 = strongly agree) using 3 items (e.g. "My counterpart transgressed against me"). Finally, participants were thanked and debriefed.

Results

A summary of hypotheses supported and not supported in both studies is presented in Table 1. Descriptive statistics and correlations for the focal variables are presented in Table 2.

Manipulation check. I conducted an ANOVA to examine the effectiveness of the transgression role manipulation. The results demonstrated significant differences in perceptions regarding a counterpart's transgression role. Specifically, participants in the

counterpart-as-perpetrator condition (M = 2.91, SD = 1.58) perceived their counterpart as having been a perpetrator of a transgression compared to participants in the counterpart-as-victim condition (M = 2.27, SD = 1.14; $F(1, 177) = 9.55$, $p = .002$, $\eta_p^2 = .05$) whereas participants in the counterpart-as-victim condition (M = 3.51, SD = 1.63) perceived their counterpart as having been a victim of a transgression compared to participants in the counterpart-as-perpetrator condition (M = 2.09, SD = 1.04; $F(1, 177) = 48.65$, $p < .001$, $\eta_p^2 = .22$).

The effects of a counterpart's anger expression. I conducted mixed-effects regression analyses with maximum likelihood estimation using RStudio Version 1.2.1335 including the LME4 package (Bates, Mächler, Bolker, & Walker, 2015) to investigate the hypotheses given the interdependence of the dyads, controlling for counterpart transgression role condition, gender of the participant, whether the perpetrator or victim started the negotiation, and participants' agreement with buyer/seller norms. Not all of the dependent variables showed independence within dyads (feelings of anger: ICC(1,1) = 0.03, $p = .377$; feelings of fear: ICC(1,1) = -0.09, $p = .809$; feelings of guilt: ICC(1,1) = -0.18, $p = .959$; perceptions of dominance: ICC(1,1) = -0.03, $p = .611$; perceptions of affiliation: ICC(1,1) = 0.29, $p = .002$; perceptions of appropriateness: ICC(1,1) = 0.06, $p = .267$; number of concessions: ICC(1,1) = 0.48, $p < .001$; payoff difference: ICC(1,1) = 0.08, $p = .214$) hence I used multilevel modelling to test the hypotheses. To decide whether to use a random intercept model or a random intercept and random slopes model, I conducted likelihood ratio tests for model comparisons (Bliese & Ployhart, 2002) and found that most of the models with a random intercept only fit the data just as well as models with a random intercept and random slopes. Thus, I used random intercept models to avoid model non-convergence. Participants' dyad number was used as a random intercept to control for the differences between dyads. A

counterpart's anger expression, perceptions of a counterpart's feelings of anger, and perceptions of appropriateness were group mean-centered (Enders & Tofighi, 2007).

To test the association between a counterpart's anger expression and concessionary behaviour, I conducted mixed-effects regression analyses with maximum likelihood estimation. In Table 3, the results of Models 1 and 2 demonstrated non-significant effects of a counterpart's anger expression on concessionary behaviour (number of concessions: B = 0.02, S_E = 0.09, p = .783, *observed power* = 0.05; payoff difference: B = 1.11, S_E = 2.00, p = .583, *observed power* = 0.10). In Table 4, Models 1 and 2 demonstrated non-significant effects of perceptions of a counterpart's feelings of anger on concessionary behaviour (number of concessions: B = 0.11, S_E = 0.09, p = .202, *observed power* = 0.26; payoff difference: B = 2.04, S_E = 2.05, p = .321, *observed power* = 0.18).

I tested all the mediating effects simultaneously in order to investigate the relative influence of each of the mediators when controlling for the others and determine the strongest mediator of the relationship between anger expressions and concessionary behaviour. This is especially important because whether the relationship between anger expressions and concessionary behaviour is positive or negative is determined by which of the proposed mediators has the strongest effect. To test Hypothesis 1a which posited a positive association between anger expressions and others' concessionary behaviour via dominance-related inferences, I conducted mixed-effects regression analyses with maximum likelihood estimation for the associations between variables and used a method that involves computation of confidence intervals based on the distribution of the product between two normal random variables (Tofighi & MacKinnon, 2011) for the indirect effect. Model 3 in Tables 3 and 4 demonstrated significant positive effects of a counterpart's anger expression and perceptions of a counterpart's feelings of anger on perceptions of a counterpart's dominance (anger expression: B = 0.73, S_E = 0.25, p = .004, *observed power* = 0.84; feelings

of anger: B = 0.74, S_E = 0.26, p = .005, *observed power* = 0.80). Models 8 and 9 in Table 3 demonstrated that when controlling for a counterpart's anger expression and the other mediators, perceptions of a counterpart's dominance were non-significantly associated with concessionary behaviour (number of concessions: B = 0.06, S_E = 0.03, p = .066, *observed power* = 0.45; payoff difference: B = 1.10, S_E = 0.62, p = .080, *observed power* = 0.43). Models 8 and 9 in Table 4 also demonstrated that when controlling for perceptions of a counterpart's feelings of anger and the other mediators, perceptions of a counterpart's dominance were non-significantly associated with concessionary behaviour (number of concessions: B = 0.05, S_E = 0.03, p = .088, *observed power* = 0.39; payoff difference: B = 1.11, S_E = 0.62, p = .076, *observed power* = 0.43). The results also demonstrated significant positive indirect effects of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's dominance (number of concessions: B = 0.04, SE = 0.03, 95% *CI* [0.00, 0.09], *observed power* = 0.27; payoff difference: B = 0.81, SE = 0.56, 95% *CI* [0.03, 1.82], *observed power* = 0.33) and significant positive indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour via perceptions of a counterpart's dominance (number of concessions: B = 0.04, SE = 0.03, 95% *CI* [0.00, 0.09], *observed power* = 0.24; payoff difference: B = 0.82, SE = 0.57, 95% *CI* [0.04, 1.85], *observed power* = 0.32). Thus, the results supported Hypothesis 1a.

To test Hypothesis 1b which posited a negative association between anger expressions and others' concessionary behaviour via affiliation-related inferences, I used the same method. Model 4 in Tables 3 and 4 demonstrated significant negative effects of a counterpart's anger expression and perceptions of a counterpart's feelings of anger on perceptions of a counterpart's affiliation (anger expression: B = -0.68, S_E = 0.25, p = .007, *observed power* = 0.79; feelings of anger: B = -0.77, S_E = 0.25, p = .003, *observed power* = 0.87). Models 8 and 9 in Table 3 demonstrated that when controlling for a counterpart's

anger expression and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (number of concessions: B = -0.05, S_E = 0.03, p = .140, *observed power* = 0.31; payoff difference: B = -0.61, S_E = 0.64, p = .340, *observed power* = 0.16). Models 8 and 9 in Table 4 also demonstrated that when controlling for perceptions of a counterpart's feelings of anger and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (number of concessions: B = -0.04, S_E = 0.03, p = .165, *observed power* = 0.30; payoff difference: B = -0.62, S_E = 0.65, p = .335, *observed power* = 0.16). The results also demonstrated non-significant indirect effects of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's affiliation (number of concessions: B = 0.03, SE = 0.03, 95% CI [-0.00, 0.08], *observed power* = 0.20; payoff difference: B = 0.42, SE = 0.49, 95% CI [-0.29, 1.29], *observed power* = 0.11) and non-significant indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour via perceptions of a counterpart's affiliation (number of concessions: B = 0.03, SE = 0.03, 95% CI [-0.01, 0.09], *observed power* = 0.21; payoff difference: B = 0.48, SE = 0.55, 95% CI [-0.33, 1.45], *observed power* = 0.12). Thus, the results did not support Hypothesis 1b.

To test Hypothesis 1c which posited a negative association between anger expressions and others' concessionary behaviour via reciprocal anger reactions, I used the same method. Model 5 in Tables 3 and 4 demonstrated significant positive effects of a counterpart's anger expression and perceptions of a counterpart's feelings of anger on participants' feelings of anger (anger expression: B = 0.43, S_E = 0.09, p < .001, *observed power* = 1.00; feelings of anger: B = 0.56, S_E = 0.08, p < .001, *observed power* = 1.00). Models 8 and 9 in Table 3 demonstrated that when controlling for a counterpart's anger expression and the other mediators, participants' feelings of anger were non-significantly associated with

concessionary behaviour (number of concessions: $B = 0.05$, $S_E = 0.09$, $p = .607$, *observed power* = 0.08; payoff difference: $B = 1.75$, $S_E = 1.88$, $p = .355$, *observed power* = 0.16). Models 8 and 9 in Table 4 also demonstrated that when controlling for perceptions of a counterpart's feelings of anger and the other mediators, participants' feelings of anger were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.02$, $S_E = 0.10$, $p = .859$, *observed power* = 0.05; payoff difference: $B = 1.81$, $S_E = 1.99$, $p = .366$, *observed power* = 0.15). The results also demonstrated non-significant indirect effects of a counterpart's anger expression on concessionary behaviour via participants' feelings of anger (number of concessions: $B = 0.02$, $SE = 0.04$, 95% *CI* [-0.04, 0.09], *observed power* = 0.08; payoff difference: $B = 0.75$, $SE = 0.84$, 95% *CI* [-0.57, 2.17], *observed power* = 0.19) and non-significant indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour via participants' feelings of anger (number of concessions: $B = 0.01$, $SE = 0.05$, 95% *CI* [-0.08, 0.10], *observed power* = 0.05; payoff difference: $B = 1.01$, $SE = 1.13$, 95% *CI* [-0.81, 2.90], *observed power* = 0.20). Thus, the results did not support Hypothesis 1c.

To test Hypothesis 1d which posited a positive association between anger expressions and others' concessionary behaviour via complementary fear reactions, I used the same method. Model 6 in Tables 3 and 4 demonstrated significant positive effects of a counterpart's anger expression and perceptions of a counterpart's feelings of anger on participants' feelings of fear (anger expression: $B = 0.34$, $S_E = 0.11$, $p = .002$, *observed power* = 0.89; feelings of anger: $B = 0.45$, $S_E = 0.11$, $p < .001$, *observed power* = 0.98). Models 8 and 9 in Table 3 demonstrated that when controlling for a counterpart's anger expression and the other mediators, participants' feelings of fear were non-significantly associated with concessionary behaviour (number of concessions: $B = -0.01$, $S_E = 0.07$, $p = .920$, *observed power* = 0.04; payoff difference: $B = 0.90$, $S_E = 1.54$, $p = .558$, *observed power* = 0.08).

Models 8 and 9 in Table 4 also demonstrated that when controlling for perceptions of a counterpart's feelings of anger and the other mediators, participants' feelings of fear were non-significantly associated with concessionary behaviour (number of concessions: B = -0.01, S_E = 0.08, p = .854, *observed power* = 0.05; payoff difference: B = 0.79, S_E = 1.55, p = .609, *observed power* = 0.07). The results also demonstrated non-significant indirect effects of a counterpart's anger expression on concessionary behaviour via participants' feelings of fear (number of concessions: B = -0.00, SE = 0.03, 95% CI [-0.05, 0.04], *observed power* = 0.04; payoff difference: B = 0.31, SE = 0.56, 95% CI [-0.56, 1.28], *observed power* = 0.08) and non-significant indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour via participants' feelings of fear (number of concessions: B = -0.01, SE = 0.03, 95% CI [-0.06, 0.05], *observed power* = 0.06; payoff difference: B = 0.35, SE = 0.72, 95% CI [-0.78, 1.57], *observed power* = 0.08). Thus, the results did not support Hypothesis 1d.

The moderating effect of perceptions of appropriateness. I tested the moderated mediating effects of all the proposed mediators simultaneously in order to investigate which of the mediators would have the strongest effect depending on perceptions of appropriateness, which would subsequently determine whether the relationship between anger expressions and concessionary behaviour is a positive or negative one. To test Hypothesis 2a which posited that perceptions of appropriateness moderate the relationship between anger expressions and perceptions of dominance such that a lower level of perceived appropriateness weakens the positive relationship between anger expressions and perceptions of dominance, I conducted mixed-effects regression analyses with maximum likelihood estimation for the associations between variables and used a method that involves computation of confidence intervals based on the distribution of the product between two normal random variables (Tofighi & MacKinnon, 2011) for the moderated mediation effects.

The results demonstrated a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on perceptions of a counterpart's dominance (B = -0.36, S_E = 0.26, p = .171, *observed power* = 0.26). The results also demonstrated a non-significant two-way interaction effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on perceptions of a counterpart's dominance (B = -0.43, S_E = 0.26, p = .097, *observed power* = 0.37). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, perceptions of a counterpart's dominance were non-significantly associated with concessionary behaviour (number of concessions: B = 0.06, S_E = 0.03, p = .053, *observed power* = 0.48; payoff difference: B = 1.16, S_E = 0.62, p = .063, *observed power* = 0.49). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, perceptions of appropriateness, the two-way interaction effect and the other mediators, perceptions of a counterpart's dominance were non-significantly associated with concessionary behaviour (number of concessions: B = 0.05, S_E = 0.03, p = .076, *observed power* = 0.45; payoff difference: B = 1.13, S_E = 0.62, p = .070, *observed power* = 0.44). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via perceptions of a counterpart's dominance (number of concessions: B = -0.02, SE = 0.02, 95% *CI* [-0.06, 0.00], *observed power* = 0.08; payoff difference: B = -0.41, SE = 0.41, 95% *CI* [-1.17, 0.09], *observed power* = 0.09). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on concessionary behaviour via perceptions of a counterpart's dominance (number of concessions: B = -0.02, SE = 0.02, 95% *CI* [-0.06, 0.00], *observed*

power = 0.10; payoff difference: *B* = -0.49, *SE* = 0.43, 95% *CI* [-1.29, 0.05], *observed power* = 0.12). Thus, the results did not support Hypothesis 2a.

To test Hypothesis 2b which posited that perceptions of appropriateness moderate the relationship between anger expressions and reciprocal anger reactions such that a lower level of perceived appropriateness strengthens the positive relationship between anger expressions and reciprocal anger reactions, I used the same method. The results demonstrated a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on participants' feelings of anger (*B* = 0.01, S_E = 0.09, *p* = .885, *observed power* = 0.05). The results also demonstrated a non-significant two-way interaction effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on participants' feelings of anger (*B* = 0.01, S_E = 0.08, *p* = .863, *observed power* = 0.00). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, participants' feelings of anger were non-significantly associated with concessionary behaviour (number of concessions: *B* = 0.03, S_E = 0.09, *p* = .718, *observed power* = 0.06; payoff difference: *B* = 1.53, S_E = 1.87, *p* = .415, *observed power* = 0.12). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, perceptions of appropriateness, the two-way interaction effect and the other mediators, participants' feelings of anger were non-significantly associated with concessionary behaviour (number of concessions: *B* = 0.00, S_E = 0.10, *p* = .989, *observed power* = 0.04; payoff difference: *B* = 1.71, S_E = 1.99, *p* = .393, *observed power* = 0.15). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via participants' feelings of anger (number of concessions: *B* = 0.00, *SE* = 0.01, 95% *CI* [-0.01, 0.01], *observed power* = 0.00; payoff difference: *B* = 0.02, *SE* = 0.21, 95% *CI* [-0.31, 0.38],

observed power = 0.01). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on concessionary behaviour via participants' feelings of anger (number of concessions: B = 0.00, SE = 0.01, 95% *CI* [-0.01, 0.01], *observed power* = 0.00; payoff difference: B = 0.02, SE = 0.22, 95% *CI* [-0.30, 0.39], *observed power* = 0.01). Thus, the results did not support Hypothesis 2b.

To test Hypothesis 3 which posited that a counterpart's perpetrator/victim role moderates the relationship between anger expressions and perceptions of appropriateness such that there is a stronger negative association between anger expressions and perceptions of appropriateness when the counterpart is a perpetrator compared to when the counterpart is a victim, I conducted mixed-effects regression analyses with maximum likelihood estimation. I found that a counterpart's anger expression and perceptions of a counterpart's feelings of anger were significantly negatively associated with perceptions of appropriateness (anger expression: B = -0.19, S_E = 0.07, p = .006, *observed power* = 0.80; feelings of anger: B = -0.15, S_E = 0.07, p = .032, *observed power* = 0.62). I also found a significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on perceptions of appropriateness (B = -0.37, S_E = 0.13, p = .007, *observed power* = 0.81). Specifically, there was a significant negative association between perceptions of a counterpart's feelings of anger and perceptions of appropriateness when the counterpart was a perpetrator (B = -0.41, S_E = 0.09, p < .001) but not when the counterpart was a victim (B = -0.04, S_E = 0.09, p = .676). I also found a significant two-way interaction effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on perceptions of appropriateness (B = -0.31, S_E = 0.15, p = .037, *observed power* = 0.55). Specifically, there was a significant negative association between perceptions of a counterpart's feelings of anger and perceptions of appropriateness when the counterpart was a perpetrator (B = -0.33,

S_E = 0.10, p = .001) but not when the counterpart was a victim (B = -0.02, S_E = 0.10, p = .848). Thus Hypothesis 3 was supported.

Supplementary Analyses

The moderating effect of perceptions of appropriateness on perceptions of a counterpart's affiliation and participants' feelings of fear. I also expected that the appropriateness of an anger expression would moderate the mediating effects of perceptions of a counterpart's affiliation and participants' feelings of fear although I did not make any specific predictions about the nature of the moderation given that these mediators have not been tested before. Hence, the moderating effect of appropriateness on these two mediators is explored for the first time in the present research. I examined whether perceptions of appropriateness moderate the relationship between anger expressions and perceptions of affiliation by conducting mixed-effects regression analyses with maximum likelihood estimation for the associations between variables and using a method that involves computation of confidence intervals based on the distribution of the product between two normal random variables (Tofighi & MacKinnon, 2011) for the moderated mediation effects. The results demonstrated a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on perceptions of a counterpart's affiliation (B = 0.25, S_E = 0.26, p = .344). The results also demonstrated a non-significant two-way interaction effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on perceptions of a counterpart's affiliation (B = 0.31, S_E = 0.24, p = .200). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (number of concessions: B = -0.04, S_E = 0.03, p = .272; payoff difference: B = -0.99, S_E = 0.69, p = .155). The results also demonstrated that when

controlling for perceptions of a counterpart's feelings of anger, perceptions of appropriateness, the two-way interaction effect and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (number of concessions: B = -0.04, S_E = 0.03, p = .304; payoff difference: B = -1.02, S_E = 0.70, p = .148). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via perceptions of a counterpart's affiliation (number of concessions: B = -0.01, SE = 0.02, 95% CI [-0.04, 0.01]; payoff difference: B = -0.24, SE = 0.35, 95% CI [-0.91, 0.20]). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on concessionary behaviour via perceptions of a counterpart's affiliation (number of concessions: B = -0.01, SE = 0.02, 95% CI [-0.04, 0.01]; payoff difference: B = -0.32, SE = 0.37, 95% CI [-1.03, 0.13]).

I also examined whether perceptions of appropriateness moderate the relationship between anger expressions and complementary fear reactions by using the same method. The results demonstrated a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on participants' feelings of fear (B = -0.09, S_E = 0.11, p = .440). The results also demonstrated a non-significant two-way interaction effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on participants' feelings of fear (B = -0.08, S_E = 0.11, p = .471). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, participants' feelings of fear were non-significantly associated with concessionary behaviour (number of concessions: B = -0.02, S_E = 0.08, p = .802; payoff difference: B = 0.72, S_E = 1.53, p = .639). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, perceptions of appropriateness, the two-way interaction effect and the other mediators,

participants' feelings of fear were non-significantly associated with concessionary behaviour (number of concessions: B = -0.02, S_E = 0.08, p = .759; payoff difference: B = 0.82, S_E = 1.55, p = .598). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via participants' feelings of fear (number of concessions: B = 0.00, SE = 0.01, 95% CI [-0.01, 0.02]; payoff difference: B = -0.06, SE = 0.23, 95% CI [-0.49, 0.26]). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on concessionary behaviour via participants' feelings of fear (number of concessions: B = 0.00, SE = 0.01, 95% CI [-0.01, 0.02]; payoff difference: B = -0.07, SE = 0.23, 95% CI [-0.49, 0.25]).

The mediating effect of participants' feelings of guilt. Given the transgression setting of the negotiation, I also investigated feelings of guilt as a possible mediator of the relationship between anger expressions and others' concessionary behaviour. Guilt is an emotion that often arises in transgression settings (Baumeister et al., 1994) thus I believe it would be important to investigate this emotion as a potential complementary emotion to anger expressions in this particular context. I examined whether participants' feelings of guilt would mediate the relationship between anger expressions and others' concessionary behaviour by conducting mixed-effects regression analyses with maximum likelihood estimation for the associations between variables and using a method that involves computation of confidence intervals based on the distribution of the product between two normal random variables (Tofighi & MacKinnon, 2011) for the indirect effect. Model 7 in Tables 3 and 4 demonstrated a non-significant effect of a counterpart's anger expression on participants' feelings of guilt (B = 0.18, S_E = 0.11, p = .118) but a significant positive effect of perceptions of a counterpart's feelings of anger on participants' feelings of guilt (B = 0.31, S_E = 0.11, p = .007). Models 8 and 9 in Table 3 demonstrated that when controlling for a

counterpart's anger expression and the other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.12$, $S_E = 0.07$, $p = .092$; payoff difference: $B = 0.11$, $S_E = 1.45$, $p = .940$). Models 8 and 9 in Table 4 also demonstrated that when controlling for perceptions of a counterpart's feelings of anger and the other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.12$, $S_E = 0.07$, $p = .101$; payoff difference: $B = 0.20$, $S_E = 1.46$, $p = .891$). The results demonstrated non-significant indirect effects of a counterpart's anger expression on concessionary behaviour (number of concessions: $B = 0.02$, $SE = 0.02$, 95% CI [-0.00, 0.06]; payoff difference: $B = 0.02$, $SE = 0.31$, 95% CI [-0.48, 0.54]) via participants' feelings of guilt and non-significant indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour (number of concessions: $B = 0.04$, $SE = 0.03$, 95% CI [-0.00, 0.09]; payoff difference: $B = 0.06$, $SE = 0.49$, 95% CI [-0.73, 0.88]) via participants' feelings of guilt.

As with the other mediators, I also examined whether perceptions of appropriateness moderate the relationship between anger expressions and participants' feelings of guilt by using the same method. The results demonstrated a significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on participants' feelings of guilt ($B = -0.23$, $S_E = 0.11$, $p = .041$). Specifically, there was a significant positive association between a counterpart's anger expression and participants' feelings of guilt at low levels of perceived appropriateness ($B = 0.41$, $S_E = 0.14$, $p = .003$) but a non-significant association at high levels of perceived appropriateness ($B = 0.10$, $S_E = 0.13$, $p = .475$). The results also demonstrated a non-significant two-way interaction effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on participants' feelings of guilt ($B = -0.16$, $S_E = 0.11$, $p = .156$). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect

and the other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.12$, $S_E = 0.07$, $p = .095$; payoff difference: $B = -0.67$, $S_E = 1.49$, $p = .653$). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, perceptions of appropriateness, the two-way interaction effect and the other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.12$, $S_E = 0.07$, $p = .091$; payoff difference: $B = -0.49$, $S_E = 1.50$, $p = .746$). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via participants' feelings of guilt (number of concessions: $B = -0.03$, $SE = 0.02$, 95% CI [-0.07, 0.00]; payoff difference: $B = 0.16$, $SE = 0.39$, 95% CI [-0.44, 0.85]). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and perceptions of appropriateness on concessionary behaviour via participants' feelings of guilt (number of concessions: $B = -0.02$, $SE = 0.02$, 95% CI [-0.06, 0.00]; payoff difference: $B = 0.08$, $SE = 0.30$, 95% CI [-0.37, 0.60]).

Simple mediation analyses. Given that the proposed mediating effects were largely non-significant when they were investigated as simultaneous mediating effects (possibly because the study was underpowered to detect these simultaneous mediating effects), I also examined the simple mediating effect of perceptions of a counterpart's dominance without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, perceptions of a counterpart's dominance were significantly positively associated with concessionary behaviour (number of concessions: $B = 0.08$, $S_E = 0.03$, $p = .011$; payoff difference: $B = 1.34$, $S_E = 0.60$, $p = .025$). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, perceptions of a counterpart's dominance were significantly positively associated with

concessionary behaviour (number of concessions: $B = 0.07$, $S_E = 0.03$, $p = .021$; payoff difference: $B = 1.34$, $S_E = 0.59$, $p = .025$). The results demonstrated significant positive indirect effects of a counterpart's anger expression on concessionary behaviour (number of concessions: $B = 0.05$, $SE = 0.03$, 95% CI [0.01, 0.11]; payoff difference: $B = 0.98$, $SE = 0.57$, 95% CI [0.18, 2.02]) via perceptions of a counterpart's dominance and significant positive indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour (number of concessions: $B = 0.05$, $SE = 0.03$, 95% CI [0.01, 0.10]; payoff difference: $B = 0.99$, $SE = 0.58$, 95% CI [0.18, 2.05]) via perceptions of a counterpart's dominance.

I also examined the simple mediating effect of perceptions of a counterpart's affiliation without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, perceptions of a counterpart's affiliation were significantly negatively associated with concessionary behaviour but only when measured by number of concessions ($B = -0.07$, $S_E = 0.03$, $p = .019$) and not payoff difference ($B = -1.09$, $S_E = 0.57$, $p = .056$). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, perceptions of a counterpart's affiliation were significantly negatively associated with concessionary behaviour but only when measured by number of concessions ($B = -0.06$, $S_E = 0.03$, $p = .042$) and not payoff difference ($B = -1.08$, $S_E = 0.58$, $p = .065$). The results demonstrated a significant positive indirect effect of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's affiliation but only when measured by payoff difference ($B = 0.74$, $SE = 0.49$, 95% CI [0.07, 1.65]) and not number of concessions ($B = 0.03$, $SE = 0.03$, 95% CI [-0.00, 0.08]), and significant positive indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour (number of concessions: $B = 0.05$, $SE = 0.03$, 95% CI

[0.01, 0.10]; payoff difference: B = 0.84, SE = 0.55, 95% CI [0.07, 1.83]) via perceptions of a counterpart's affiliation.

I also examined the simple mediating effect of participants' feelings of anger without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, participants' feelings of anger were non-significantly associated with concessionary behaviour (number of concessions: B = 0.13, S_E = 0.09, p = .137; payoff difference: B = 2.82, S_E = 1.74, p = .107). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, participants' feelings of anger were non-significantly associated with concessionary behaviour (number of concessions: B = 0.08, S_E = 0.09, p = .396; payoff difference: B = 2.75, S_E = 1.89, p = .147). The results demonstrated non-significant indirect effects of a counterpart's anger expression on concessionary behaviour (number of concessions: B = 0.05, SE = 0.04, 95% CI [-0.01, 0.12]; payoff difference: B = 1.20, SE = 0.80, 95% CI [-0.02, 2.59]) via participants' feelings of anger and non-significant indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour (number of concessions: B = 0.04, SE = 0.05, 95% CI [-0.04, 0.13]; payoff difference: B = 1.53, SE = 1.09, 95% CI [-0.19, 3.37]) via participants' feelings of anger.

I also examined the simple mediating effect of participants' feelings of fear without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, participants' feelings of fear were non-significantly associated with concessionary behaviour (number of concessions: B = 0.05, S_E = 0.07, p = .449; payoff difference: B = 1.12, S_E = 1.37, p = .416). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, participants' feelings of fear were non-significantly associated with concessionary behaviour (number of concessions: B = 0.03, S_E = 0.07, p = .665; payoff difference: B = 0.98, S_E = 1.40, p = .484). The results

demonstrated non-significant indirect effects of a counterpart's anger expression on concessionary behaviour (number of concessions: $B = 0.02$, $SE = 0.02$, 95% CI [-0.02, 0.06]; payoff difference: $B = 0.38$, $SE = 0.51$, 95% CI [-0.38, 1.27]) via participants' feelings of fear and non-significant indirect effects of perceptions of a counterpart's feelings of anger on concessionary behaviour (number of concessions: $B = 0.01$, $SE = 0.03$, 95% CI [-0.04, 0.07]; payoff difference: $B = 0.44$, $SE = 0.65$, 95% CI [-0.58, 1.55]) via participants' feelings of fear.

I also examined the simple mediating effect of participants' feelings of guilt without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, participants' feelings of guilt were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.13$, $S_E = 0.07$, $p = .054$; payoff difference: $B = 0.62$, $S_E = 1.35$, $p = .646$). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, participants' feelings of guilt were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.11$, $S_E = 0.07$, $p = .088$; payoff difference: $B = 0.54$, $S_E = 1.37$, $p = .694$). The results demonstrated non-significant indirect effects of a counterpart's anger expression on concessionary behaviour (number of concessions: $B = 0.02$, $SE = 0.02$, 95% CI [-0.00, 0.06]; payoff difference: $B = 0.11$, $SE = 0.29$, 95% CI [-0.31, 0.63]) via participants' feelings of guilt and a significant indirect effect of perceptions of a counterpart's feelings of anger on concessionary behaviour via participants' feelings of guilt but only when measured by number of concessions ($B = 0.04$, $SE = 0.03$, 95% CI [0.00, 0.08]) but not payoff difference ($B = 0.17$, $SE = 0.46$, 95% CI [-0.55, 0.96]).

The moderating effect of perpetrator/victim role. Finally, since I did not find any moderating effects of perceptions of appropriateness, I examined the moderating effects of a counterpart's perpetrator/victim role directly as this was found to affect the perceived

appropriateness of an anger expression. I examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and perceptions of dominance by conducting mixed-effects regression analyses with maximum likelihood estimation for the associations between variables and using a method that involves computation of confidence intervals based on the distribution of the product between two normal random variables (Tofighi & MacKinnon, 2011) for the moderated mediation effects. The results demonstrated a significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on perceptions of a counterpart's dominance ($B = 1.07$, $S_E = 0.51$, $p = .037$). Specifically, there was a significant positive association between a counterpart's anger expression and perceptions of a counterpart's dominance when the counterpart was a perpetrator ($B = 1.22$, $S_E = 0.36$, $p < .001$) but a non-significant association when the counterpart was a victim ($B = 0.14$, $S_E = 0.36$, $p = .689$). The results also demonstrated a significant two-way interaction effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on perceptions of a counterpart's dominance ($B = 1.24$, $S_E = 0.53$, $p = .020$). Specifically, there was a significant positive association between perceptions of a counterpart's feelings of anger and perceptions of a counterpart's dominance when the counterpart was a perpetrator ($B = 1.32$, $S_E = 0.37$, $p < .001$) but a non-significant association when the counterpart was a victim ($B = 0.08$, $S_E = 0.37$, $p = .838$). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, perceptions of a counterpart's dominance were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.06$, $S_E = 0.03$, $p = .065$; payoff difference: $B = 1.03$, $S_E = 0.63$, $p = .103$). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, perceptions of a counterpart's

dominance were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.05$, $S_E = 0.03$, $p = .108$; payoff difference: $B = 0.96$, $S_E = 0.62$, $p = .124$). The results also demonstrated a significant moderated mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via perceptions of a counterpart's dominance as measured by number of concessions ($B = 0.06$, $SE = 0.05$, 95% CI [0.00, 0.15]) but not payoff difference ($B = 1.10$, $SE = 0.91$, 95% CI [-0.07, 2.81]). Specifically, there was a significant positive indirect effect of a counterpart's anger expression on number of concessions via perceptions of a counterpart's dominance when the counterpart was a perpetrator ($B = 0.07$, $SE = 0.04$, 95% CI [0.01, 0.15]) but a non-significant indirect effect when the counterpart was a victim ($B = 0.01$, $SE = 0.02$, 95% CI [-0.03, 0.05]). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on concessionary behaviour via perceptions of a counterpart's dominance (number of concessions: $B = 0.06$, $SE = 0.05$, 95% CI [-0.00, 0.15]; payoff difference: $B = 1.19$, $SE = 0.98$, 95% CI [-0.09, 3.01]).

I also examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and perceptions of affiliation by using the same method. The results demonstrated a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on perceptions of a counterpart's affiliation ($B = -0.96$, $S_E = 0.58$, $p = .098$). The results demonstrated a significant two-way interaction effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on perceptions of a counterpart's affiliation ($B = -1.23$, $S_E = 0.57$, $p = .032$). Specifically, there was a negative association between perceptions of a counterpart's feelings of anger and perceptions of a counterpart's affiliation when the counterpart was a perpetrator ($B = -1.47$, $S_E = 0.38$, $p < .001$) but a non-significant

association when the counterpart was a victim (B = -0.24, S_E = 0.38, p = .527). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (number of concessions: B = -0.04, S_E = 0.03, p = .200; payoff difference: B = -0.73, S_E = 0.66, p = .267). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (number of concessions: B = -0.05, S_E = 0.03, p = .174; payoff difference: B = -0.70, S_E = 0.66, p = .287). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via perceptions of a counterpart's affiliation (number of concessions: B = 0.04, SE = 0.04, 95% CI [-0.01, 0.13]; payoff difference: B = 0.70, SE = 0.85, 95% CI [-0.36, 2.30]). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on concessionary behaviour via perceptions of a counterpart's affiliation (number of concessions: B = 0.06, SE = 0.05, 95% CI [-0.01, 0.15]; payoff difference: B = 0.86, SE = 0.98, 95% CI [-0.44, 2.66]).

I also examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and reciprocal anger reactions by using the same method. The results demonstrated a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on participants' feelings of anger (B = -0.07, S_E = 0.18, p = .710). The results also demonstrated a non-significant two-way interaction effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on participants' feelings of anger (B = -0.14, S_E = 0.17,

p = .396). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, participants' feelings of anger were non-significantly associated with concessionary behaviour (number of concessions: B = 0.06, S_E = 0.09, p = .545; payoff difference: B = 1.58, S_E = 1.89, p = .404). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, participants' feelings of anger were non-significantly associated with concessionary behaviour (number of concessions: B = 0.02, S_E = 0.10, p = .829; payoff difference: B = 1.66, S_E = 1.99, p = .407). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of anger (number of concessions: B = -0.00, SE = 0.02, 95% CI [-0.04, 0.03]; payoff difference: B = -0.10, SE = 0.46, 95% CI [-0.92, 0.54]). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of anger (number of concessions: B = -0.00, SE = 0.02, 95% CI [-0.04, 0.03]; payoff difference: B = -0.24, SE = 0.52, 95% CI [-1.23, 0.43]).

I also examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and complementary fear reactions by using the same method. The results demonstrated a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on participants' feelings of fear (B = -0.29, S_E = 0.22, p = .193). The results also demonstrated a non-significant two-way interaction effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on participants' feelings of fear (B = -0.15, S_E = 0.23, p = .513). The results also demonstrated that when controlling for a counterpart's anger

expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, participants' feelings of fear were non-significantly associated with concessionary behaviour (number of concessions: B = -0.00, S_E = 0.08, p = .975; payoff difference: B = 0.92, S_E = 1.54, p = .552). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, participants' feelings of fear were non-significantly associated with concessionary behaviour (number of concessions: B = -0.01, S_E = 0.08, p = .876; payoff difference: B = 0.75, S_E = 1.54, p = .625). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of fear (number of concessions: B = 0.00, SE = 0.03, 95% CI [-0.04, 0.05]; payoff difference: B = -0.27, SE = 0.60, 95% CI [-1.39, 0.59]). The results also demonstrated a non-significant moderated mediation effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of fear (number of concessions: B = 0.00, SE = 0.02, 95% CI [-0.03, 0.04]; payoff difference: B = -0.11, SE = 0.45, 95% CI [-0.93, 0.51]).

I also examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and participants' feelings of guilt by using the same method. The results demonstrated a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on participants' feelings of guilt (B = 0.20, S_E = 0.23, p = .367). The results also demonstrated a non-significant two-way interaction effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on participants' feelings of guilt (B = -0.06, S_E = 0.23, p = .785). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the

other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.12$, $S_E = 0.07$, $p = .091$; payoff difference: $B = -0.12$, $S_E = 1.48$, $p = .937$). The results also demonstrated that when controlling for perceptions of a counterpart's feelings of anger, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (number of concessions: $B = 0.11$, $S_E = 0.07$, $p = .119$; payoff difference: $B = -0.16$, $S_E = 1.47$, $p = .916$). The results also demonstrated a non-significant moderated mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of guilt (number of concessions: $B = 0.03$, $SE = 0.04$, 95% CI [-0.02, 0.09]; payoff difference: $B = -0.02$, $SE = 0.45$, 95% CI [-0.78, 0.69]). The results also demonstrated a non-significant moderation mediation effect of perceptions of a counterpart's feelings of anger and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of guilt (number of concessions: $B = -0.01$, $SE = 0.03$, 95% CI [-0.06, 0.04]; payoff difference: $B = 0.01$, $SE = 0.36$, 95% CI [-0.55, 0.59]).

To summarise, I found support for Hypothesis 1a which posited that there is a positive association between anger expressions and others' concessionary behaviour via dominance-related inferences. However, I did not find any support for Hypotheses 1b-1d and Hypotheses 2a-2b in Study 1. I found support for Hypothesis 3 which posited that there is a stronger negative association between anger expressions and perceptions of appropriateness when the counterpart is a perpetrator compared to when the counterpart is a victim. Although I did not find the predicted mediating effects of participants' feelings of anger and fear and perceptions of a counterpart's affiliation, I found significant positive mediating effects (rather than the predicted negative mediating effect) of perceptions of a counterpart's affiliation when I analysed all the mediating effects separately rather than simultaneously. I also found support

for a positive association between a counterpart's anger expression and participants' feelings of anger and fear, as well as a negative association between a counterpart's anger expression and perceptions of a counterpart's affiliation. Finally, although I did not find any support for the moderating effects of perceived appropriateness, I found partial support for the moderating effect of a counterpart's perpetrator/victim role on the indirect effect of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's dominance.

One limitation of Study 1 is that in the negotiation task, the seller always plays the role of the perpetrator and the buyer always plays the role of the victim. Thus, a counterpart's transgression role may be confounded by buyer/seller norms. For example, research has suggested that a successful buyer/seller relationship depends on the seller's ability to provide value to the buyer (Ravald & Grönroos, 1996), suggesting an asymmetric relationship in which it is the seller's responsibility to maintain a positive relationship. This confounding factor is partly addressed by controlling for participants' perceptions of buyer/seller norms in Study 1 but will be further addressed by using a different negotiation task in Study 2 which does not involve any buyer/seller roles.

Study 2

Study 2 is an experimental study in which I directly manipulated a counterpart's anger expression and the counterpart's perpetrator/victim role and investigated the relative influence of different inferential and affective processes on participants' concessionary behaviour. The procedure of the online negotiation task with a preprogrammed counterpart was adapted from Van Kleef et al. (2004a).

Participants

I recruited 204 participants using the subject pool in SMU. Students received course credit for their participation and had a chance to earn an extra SGD$2.50 if they were one of

the top 3 participants who earned the most points in the negotiation. Seven participants were excluded because they suspected that they were interacting with a computer programme thus resulting in a final sample size of 197 (82.7% female; age: $M = 21.46$, $SD = 1.80$). The study followed a 2 (emotion expression: anger vs control) x 2 (counterpart transgression role: counterpart-as-victim vs counterpart-as-perpetrator) between-subject design and participants were randomly assigned to one of the four conditions.

Procedure

Participants were informed that they would be randomly paired with another participant (actually a preprogrammed counterpart) with whom they would engage in a negotiation task online (see Appendix). Participants read about a situation in which JK (counterpart-as-perpetrator condition) / MN (counterpart-as-victim condition) had lent his/her laptop that had cost $1000 to MN (JK) for one day because MN (JK) had left his/her laptop at home. However, MN (JK) accidentally damaged JK's (MN's) laptop by spilling a cup of coffee on it. It is nearing the end of the semester when several projects and assignments are due and JK (MN) does not have any other laptop or personal computer device to work on his/her assignments. JK and MN have agreed to negotiate how much money MN (JK) should give to JK (MN) as compensation, as well as a duration of time during which MN (JK) will lend his/her own laptop to JK (MN). In this situation, MN (JK) was the perpetrator of a transgression whereas JK (MN) was the victim. Participants were informed that they would negotiate the amount of compensation money and the duration of time for lending the laptop (see Appendix for full instructions). Depending on their condition, participants also started off with either a positive (counterpart-as-victim condition) or negative (counterpart-as-perpetrator condition) payoff as in Study 1. Participants were also informed that they may exchange messages with their online counterpart during the negotiation. Pre-tests were also conducted to ensure that participants could easily understand the negotiation scenario.

After reading the instructions and answering some comprehension questions, participants were shown a page with a loading animation and were informed that they were being randomly assigned to a counterpart as well as their role in the negotiation. All participants were assigned to the role of JK but read different negotiation task instructions based on their counterpart transgression role condition.

All participants were told that their counterpart would make the first offer. Participants in the counterpart-as-victim condition received the following offers (in the format: amount of compensation money / duration of time in days) over six rounds: $900 / 8 days (Round 1), $850 / 8 days (Round 2), $850 / 7 days (Round 3), $800 / 7 days (Round 4), $800 / 6 days (Round 5), $750 / 6 days (Round 6). Participants in the counterpart-as-perpetrator condition received the offers: $100 / 2 days (Round 1), $150 / 2 days (Round 2), $150 / 3 days (Round 3), $200 / 3 days (Round 4), $200 / 4 days (Round 5), $250 / 4 days (Round 6). Participants provided their counteroffer after the counterpart in each round. Participants' counteroffer was accepted if it equalled or exceeded the next offer that the computer was supposed to make and the negotiation stopped. For example, if a participant in the counterpart-as-perpetrator condition offered $120 / 3 days in Round 2, the negotiation would end since the next offer by the counterpart would be $150 / 3 days which is more than the participant's offer.

In Rounds 1, 3, and 5, participants received a message from their counterpart after inputting their counteroffers. Participants in the anger expression condition received the messages: "This offer makes me really angry. I am going to offer [Round 2's Offer by Counterpart]," "This is really getting on my nerves. I am going to offer [Round 4's Offer by Counterpart]," and "I am going to offer [Round 6's Offer by Counterpart] because this negotiation pisses me off," adapted from Van Kleef et al. (2004a). Participants in the control condition received the messages: "I am going to offer [Round 2/4/6's Offer by Counterpart]."

After receiving each message, participants were also given a chance to send a message back to their counterpart.

After the negotiation, participants rated their own feelings of anger (α = 0.94), fear (α = 0.95) and guilt (α = 0.92), their perceptions of their counterpart's dominance (α = 0.79) and affiliation (α = 0.67), and the appropriateness (α = 0.92) of their counterpart's reactions, as in Study 1. Participants' concessionary behaviour was measured using the payoff difference method as in Study 1.

As a manipulation check, participants also rated the extent to which their counterpart expressed anger during the negotiation (α = 0.94), the extent to which they felt that their counterpart had been a victim of a transgression in the negotiation situation (α = 0.83), and the extent to which they felt that their counterpart had been a perpetrator of a transgression in the negotiation situation (α = 0.92), using the same scales as in Study 1. Finally, participants were thanked and debriefed.

Results

Descriptive statistics and correlations for the focal variables are presented in Table 5.

Manipulation check. I conducted an ANOVA to examine the effectiveness of the anger expression and transgression role manipulations. The results demonstrated significant differences in perceptions regarding a counterpart's anger expression. Specifically, participants in the anger expression condition (M = 5.83, SD = 1.46) perceived their counterpart as expressing more anger compared to participants in the control condition (M = 2.24, SD = 1.51; $F(1, 195) = 287.49$, $p < .001$, $\eta_p^2 = .60$). Participants in the anger expression condition (M = 5.86, SD = 1.24) also perceived their counterpart as feeling angrier compared to participants in the control condition (M = 3.35, SD = 1.71; $F(1, 195) = 137.36$, $p < .001$, $\eta_p^2 = .41$).

The results also demonstrated significant differences in perceptions regarding a counterpart's transgression role. Specifically, participants in the counterpart-as-perpetrator condition (M = 4.63, SD = 1.73) perceived their counterpart as having been a perpetrator of a transgression compared to participants in the counterpart-as-victim condition (M = 3.02, SD = 1.41; $F(1, 195) = 51.42$, $p < .001$, $\eta_p^2 = .21$) whereas participants in the counterpart-as-victim condition (M = 3.80, SD = 1.54) perceived their counterpart as having been a victim of a transgression compared to participants in the counterpart-as-perpetrator condition (M = 2.56, SD = 1.17; $F(1, 195) = 40.72$, $p < .001$, $\eta_p^2 = .17$).

The effects of a counterpart's anger expression. To test the association between a counterpart's anger expression and concessionary behaviour, I conducted ordinary least squares regression analyses. In Table 6, the results of Model 1 demonstrated non-significant effects of a counterpart's anger expression on concessionary behaviour (B = 6.34, S_E = 4.37, p = .149, *observed power* = 0.28).

As in Study 1, I tested all the mediating effects simultaneously in order to investigate the relative influence of each of the mediators when controlling for the others and determine the strongest mediator of the relationship between anger expressions and concessionary behaviour. To test Hypothesis 1a which posited a positive association between anger expressions and others' concessionary behaviour via dominance-related inferences, I conducted ordinary least squares regression analyses for the associations between variables and Hayes' (2013) bootstrapping method with 5000 repetitions for the indirect effect. Model 2 in Table 6 demonstrated a significant positive effect of a counterpart's anger expression on perceptions of a counterpart's dominance (B = 3.09, S_E = 0.44, $p < .001$, *observed power* = 1.00). Model 7 in Table 6 demonstrated that when controlling for a counterpart's anger expression and the other mediators, perceptions of a counterpart's dominance were non-significantly associated with concessionary behaviour (B = 1.38, S_E = 0.78, p = .077,

observed power = 0.45). The results also demonstrated a significant positive indirect effect of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's dominance (*B* = 4.26, *SE* = 2.35, 95% *CI* [0.05, 9.15], *observed power* = 0.50). Thus Hypothesis 1a was supported.

To test Hypothesis 1b which posited a negative association between anger expressions and others' concessionary behaviour via affiliation-related inferences, I used the same method. Model 3 in Table 6 demonstrated a significant negative effect of a counterpart's anger expression on perceptions of a counterpart's affiliation (*B* = -2.26, S_E = 0.54, *p* < .001, *observed power* = 0.99). Model 7 in Table 6 demonstrated that when controlling for a counterpart's anger expression and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (*B* = 0.13, S_E = 0.64, *p* = .836, *observed power* = 0.07). The results also demonstrated a non-significant indirect effect of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's affiliation (*B* = -0.30, *SE* = 1.21, 95% *CI* [-2.66, 2.21], *observed power* = 0.05). Thus Hypothesis 1b was not supported.

To test Hypothesis 1c which posited a negative association between anger expressions and others' concessionary behaviour via reciprocal anger reactions, I used the same method. Model 4 in Table 6 demonstrated a significant positive effect of a counterpart's anger expression on participants' feelings of anger (*B* = 0.61, S_E = 0.25, *p* = .014, *observed power* = 0.68). Model 7 in Table 6 demonstrated that when controlling for a counterpart's anger expression and the other mediators, participants' feelings of anger were non-significantly associated with concessionary behaviour (*B* = -2.08, S_E = 1.36, *p* = .127, *observed power* = 0.33). The results also demonstrated a non-significant indirect effect of a counterpart's anger expression on concessionary behaviour via participants' feelings of anger (*B* = -1.28, *SE* = 1.18, 95% *CI* [-4.19, 0.60], *observed power* = 0.24). Thus Hypothesis 1c was not supported.

To test Hypothesis 1d which posited a positive association between anger expressions and others' concessionary behaviour via complementary fear reactions, I used the same method. Model 5 in Table 6 demonstrated a non-significant effect of a counterpart's anger expression on participants' feelings of fear (B = 0.19, S_E = 0.23, p = .396, *observed power* = 0.14). Model 7 in Table 6 demonstrated that when controlling for a counterpart's anger expression and the other mediators, participants' feelings of fear were non-significantly associated with concessionary behaviour (B = 2.14, S_E = 1.60, p = .182, *observed power* = 0.26). The results also demonstrated a non-significant indirect effect of a counterpart's anger expression on concessionary behaviour via participants' feelings of fear (B = 0.41, SE = 0.65, 95% *CI* [-0.57, 2.06], *observed power* = 0.03). Thus Hypothesis 1d was not supported.

The moderating effect of perceptions of appropriateness. As in Study 1, I tested the moderated mediating effects of all the proposed mediators simultaneously in order to investigate which of the mediators would have the strongest effect depending on perceptions of appropriateness. Perceptions of appropriateness were grand mean-centered (Aiken & West, 1991). To test Hypothesis 2a which posited that perceptions of appropriateness of moderate the relationship between anger expressions and perceptions of dominance such that a lower level of perceived appropriateness weakens the positive relationship between anger expression and perceptions of dominance, I conducted ordinary least squares regression analyses for the associations between variables and Hayes' (2013) bootstrapping method with 5000 repetitions for the moderated mediation effect. I found a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on perceptions of a counterpart's dominance (B = -0.06, S_E = 0.30, p = .842, *observed power* = 0.05). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, perceptions of a counterpart's dominance were non-significantly associated with

concessionary behaviour (B = 1.27, S_E = 0.77, p = .100, *observed power* = 0.40). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via perceptions of a counterpart's dominance (B = -0.08, SE = 0.56, 95% CI [-1.50, 0.84], *observed power* = 0.02). Thus, Hypotheses 2a was not supported.

To test Hypothesis 2b which posited that perceptions of appropriateness moderate the relationship between anger expressions and reciprocal anger reactions such that a lower level of perceived appropriateness strengthens the positive relationship between anger expression and reciprocal anger reactions, I used the same method. I found a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on participants' feelings of anger (B = -0.14, S_E = 0.15, p = .371, *observed power* = 0.15). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, participants' feelings of anger were non-significantly associated with concessionary behaviour (B = -0.33, S_E = 1.51, p = .828, *observed power* = 0.06). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via participants' feelings of anger (B = 0.28, SE = 0.41, 95% CI [-0.33, 1.30], *observed power* = 0.00). Thus, Hypotheses 2b was not supported.

To test Hypothesis 3 which posited that a counterpart's perpetrator/victim role moderates the relationship between anger expressions and perceptions of appropriateness such that there is a stronger negative association between anger expressions and perceptions of appropriateness when the counterpart is a perpetrator compared to when the counterpart is a victim, I conducted ordinary least squares regression analyses. I found that a counterpart's anger expression was significantly negatively associated with perceptions of appropriateness

(B = -0.75, S_E = 0.19, p < .001, *observed power* = 0.98). However, I found a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on perceptions of appropriateness (B = -0.70, S_E = 0.37, p = .062, *observed power* = 0.48). Thus Hypothesis 3 was not supported.

Supplementary Analyses

The moderating effect of perceptions of appropriateness on perceptions of a counterpart's affiliation and participants' feelings of fear. I also expected that the appropriateness of an anger expression would moderate the mediating effects of perceptions of a counterpart's affiliation and participants' feelings of fear although I did not make any specific predictions about the nature of the moderation given that these mediators have not been tested before. Hence, as in Study 1, the moderating effect of appropriateness on these two mediators is explored. I examined whether perceptions of appropriateness moderate the relationship between anger expressions and perceptions of affiliation by conducting ordinary least squares regression analyses for the associations between variables and Hayes' (2013) bootstrapping method with 5000 repetitions for the indirect effect. I found a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on perceptions of a counterpart's affiliation (B = -0.44, S_E = 0.34, p = .206). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (B = -0.50, S_E = 0.67, p = .453). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via perceptions of a counterpart's affiliation (B = -0.06, SE = 0.31, 95% CI [-0.79, 0.55]).

I also examined whether perceptions of appropriateness moderate the relationship between anger expressions and complementary fear reactions by using the same method. I found a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on participants' feelings of fear (B = -0.02, S_E = 0.16, p = .901). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, participants' feelings of fear were non-significantly associated with concessionary behaviour (B = 1.93, S_E = 1.57, p = .222). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via participants' feelings of fear (B = -0.04, SE = 0.37, 95% CI [-0.97, 0.61]).

The mediating effect of participants' feelings of guilt. As in Study 1, I investigated the mediating effect of participants' feelings of guilt as guilt could potentially be a complementary emotion to anger expressions in a transgression setting. I examined whether participants' feelings of guilt would mediate the relationship between anger expressions and others' concessionary behaviour by conducting ordinary least squares regression analyses for the associations between variables and Hayes' (2013) bootstrapping method with 5000 repetitions for the indirect effect. Model 6 in Table 6 demonstrated a non-significant effect of a counterpart's anger expression on participants' feelings of guilt (B = 0.34, S_E = 0.21, p = .109). Model 7 in Table 6 demonstrated that when controlling for a counterpart's anger expression and the other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (B = -0.78, S_E = 1.69, p = .644). The results also demonstrated a non-significant indirect effect of a counterpart's anger expression on concessionary behaviour via participants' feelings of guilt (B = -0.27, SE = 0.69, 95% CI [-1.98, 1.01]).

I also examined whether perceptions of appropriateness moderate the relationship between anger expressions and participants' feelings of guilt by using the same method. I found a non-significant two-way interaction effect of a counterpart's anger expression and perceptions of appropriateness on participants' feelings of guilt (B = -0.06, S_E = 0.15, p = .681). The results also demonstrated that when controlling for a counterpart's anger expression, perceptions of appropriateness, the two-way interaction effect and the other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (B = -1.73, S_E = 1.70, p = .309). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and perceptions of appropriateness on concessionary behaviour via participants' feelings of guilt (B = 0.05, SE = 0.29, 95% CI [-0.41, 0.83]).

Simple mediation analyses. Given that the proposed mediating effects were largely non-significant when they were investigated as simultaneous mediating effects (potentially due to the lack of power in the study to detect these simultaneous mediating effects), I also examined the simple mediating effect of perceptions of a counterpart's dominance without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, perceptions of a counterpart's dominance were non-significantly associated with concessionary behaviour (B = 1.06, S_E = 0.71, p = .140). The results demonstrated a non-significant indirect effect of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's dominance (B = 3.26, SE = 2.11, 95% CI [-0.66, 7.66]).

I also examined the simple mediating effect of perceptions of a counterpart's affiliation without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (B = -0.00, S_E = 0.58, p =

.996). The results demonstrated a non-significant indirect effect of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's affiliation (*B* = 0.01, *SE* = 1.18, 95% *CI* [-2.20, 2.51]).

I also examined the simple mediating effect of participants' feelings of anger without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, participants' feelings of anger were non-significantly associated with concessionary behaviour (*B* = -1.32, S_E = 1.27, *p* = .301). The results demonstrated a non-significant indirect effect of a counterpart's anger expression on concessionary behaviour via participants' feelings of anger (*B* = -0.81, *SE* = 1.03, 95% *CI* [-3.17, 1.07]).

I also examined the simple mediating effect of participants' feelings of fear without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, participants' feelings of fear were non-significantly associated with concessionary behaviour (*B* = 1.49, S_E = 1.39, *p* = .286). The results demonstrated a non-significant indirect effect of a counterpart's anger expression on concessionary behaviour via participants' feelings of fear (*B* = 0.29, *SE* = 0.50, 95% *CI* [-0.45, 1.57]).

I also examined the simple mediating effect of participants' feelings of guilt without controlling for the other mediators. The results demonstrated that when controlling for a counterpart's anger expression, participants' feelings of guilt were non-significantly associated with concessionary behaviour (*B* = 0.09, S_E = 1.48, *p* = .951). The results demonstrated non-significant indirect effects of a counterpart's anger expression on concessionary behaviour via participants' feelings of guilt (*B* = 0.03, *SE* = 0.62, 95% *CI* [-1.24, 1.37]).

The moderating effect of perpetrator/victim role. Finally, since I did not find any moderating effects of perceptions of appropriateness, I examined the moderating effects of a counterpart's perpetrator/victim role directly as in Study 1. I examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and perceptions of dominance by conducting ordinary least squares regression analyses for the associations between variables and Hayes' (2013) bootstrapping method with 5000 repetitions for the indirect effect. I found a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on perceptions of a counterpart's dominance (B = 0.95, S_E = 0.88, p = .278). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, perceptions of a counterpart's dominance were non-significantly associated with concessionary behaviour (B = 1.42, S_E = 0.78, p = .071). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via perceptions of a counterpart's dominance (B = 1.23, SE = 1.61, 95% CI [-0.94, 5.39]).

I also examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and perceptions of affiliation by using the same method. I found a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on perceptions of a counterpart's affiliation (B = -0.11, S_E = 1.08, p = .921). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, perceptions of a counterpart's affiliation were non-significantly associated with concessionary behaviour (B = 0.14, S_E = 0.65, p = .824). The results demonstrated a non-significant moderation mediation effect of a

counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via perceptions of a counterpart's affiliation (B = 0.00, SE = 0.60, 95% CI [-1.47, 1.15]).

I also examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and reciprocal anger reactions by using the same method. I found a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on participants' feelings of anger (B = 0.25, S_E = 0.49, p = .618). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, participants' feelings of anger were non-significantly associated with concessionary behaviour (B = -2.08, S_E = 1.36, p = .128). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of anger (B = -0.36, SE = 1.17, 95% CI [-3.35, 1.50]).

I also examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and complementary fear reactions by using the same method. I found a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on participants' feelings of fear (B = 0.78, S_E = 0.45, p = .086). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, participants' feelings of fear were non-significantly associated with concessionary behaviour (B = 2.29, S_E = 1.62, p = .158). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of fear (B = 2.00, SE = 1.73, 95% CI [-0.43, 6.15]).

I also examined whether a counterpart's perpetrator/victim role moderates the relationship between anger expressions and participants' feelings of guilt by using the same method. I found a non-significant two-way interaction effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on participants' feelings of guilt (B = -0.23, S_E = 0.43, p = .591). The results also demonstrated that when controlling for a counterpart's anger expression, a counterpart's perpetrator/victim role, the two-way interaction effect and the other mediators, participants' feelings of guilt were non-significantly associated with concessionary behaviour (B = -0.90, S_E = 1.70, p = .598). The results demonstrated a non-significant moderation mediation effect of a counterpart's anger expression and a counterpart's perpetrator/victim role on concessionary behaviour via participants' feelings of guilt (B = 0.51, SE = 1.16, 95% CI [-1.55, 3.34]).

The effects of a counterpart's anger expression, perpetrator/victim role, and round. I also conducted mixed-effects regression analyses with maximum likelihood estimation to examine the effects of a counterpart's anger expression, perpetrator/victim role, and round on participants' demand level, with round as a repeated measures variable. A higher demand level indicates lower concessions. I used participants' identification number as a random intercept that controlled for the differences between participants. In Table 7, the results of Model 1 demonstrated significant negative effects of a counterpart's perpetrator/victim role (B = -41.46, S_E = 5.76, p < .001) and round (B = -4.72, S_E = 0.25, p < .001) on demand level. Specifically, when the counterpart was a victim, participants had a higher demand level, thus conceding less (M = 129.55, SD = 41.49), compared to when the counterpart was a perpetrator (M = 88.13, SD = 45.82). Participants also demanded less, thus conceding more, in later rounds compared to earlier rounds (round 1: M = 125.11, SD = 45.31; round 2: M = 114.55, SD = 46.62; round 3: M = 108.51, SD = 47.64; round 4: M = 104.18, SD = 49.44; round 5: M = 102.29, SD = 47.96; round 6: M = 100.29, SD = 48.89).

The results demonstrated a non-significant effect of anger expression on demand level (B = -9.30, S_E = 5.76, p = .108).

To explore the joint effects of anger expression, perpetrator/victim role, and round on demand level, I computed the results of the two-way and three-way interaction effects in Model 2. The results demonstrated significant two-way interaction effects between anger expression and perpetrator/victim role on demand level (B = -27.37, S_E = 11.91, p = .022) and between perpetrator/victim role and round on demand level (B = -2.15, S_E = 0.70, p = .002; see Figures 2 and 3). Specifically, a counterpart's anger expression was negatively related to demand level, thus positively related to concessionary behaviour, when the counterpart was a perpetrator (B = -22.16, S_E = 3.61, p < .001) but not when the counterpart was a victim (B = 3.18, S_E = 3.35, p = .343), controlling for round. The negative relationship between round and demand level was also stronger when the counterpart was a perpetrator (B = -5.66, S_E = 1.05, p < .001) compared to when the counterpart was a victim (B = -3.80, S_E = 0.98, p < .001), controlling for perpetrator/victim role. The two-way interaction effect between anger expression and round (B = -1.22, S_E = 0.70, p = .084) and the three-way interaction effect (B = 0.58, S_E = 1.00, p = .563) were non-significant.

I also explored the effects of perceptions of a counterpart's dominance and affiliation and participants' feelings of anger, fear and guilt on demand level, controlling for the main and interactive effects of anger expression, perpetrator/victim role, and round in Model 3. The results demonstrated non-significant effects of perceptions of a counterpart's dominance (B = -0.52, S_E = 0.92, p = .570), perceptions of a counterpart's affiliation (B = -1.32, S_E = 0.75, p = .082), and participants' feelings of guilt (B = -0.28, S_E = 2.00, p = .890). The results also demonstrated a significant positive effect of participants' feelings of anger (B = 6.33, S_E = 1.60, p < .001) and a significant negative effect of participants' feelings of fear (B = -8.50, S_E = 1.89, p < .001).

Since the two-way interaction effect between a counterpart's anger expression and round and the three-way interaction effect were non-significant, I collapsed the demand level across rounds to get a measure of average demand level. To test perceptions of the counterpart's dominance, perceptions of the counterpart's affiliation, participants' feelings of fear, participants' feelings of guilt, and participants' feelings of anger as simultaneous mediators on average demand level, controlling for a counterpart's perpetrator/victim role, I conducted Hayes' (2013) bootstrapping method with 5000 repetitions. The results demonstrated a significant positive indirect effect of a counterpart's anger expression on average demand level via participants' feelings of anger (B = 4.08, SE = 1.89, 95% CI [0.88, 8.16]). The results also demonstrated non-significant indirect effects of a counterpart's anger expression on average demand level via participants' feelings of fear (B = -2.26, SE = 2.14, 95% CI [-6.73, 1.72]), participants' feelings of guilt (B = 0.05, SE = 0.87, 95% CI [-1.59, 2.08]), perceptions of a counterpart's dominance (B = -2.10, SE = 2.90, 95% CI [-8.18, 3.23]), and perceptions of a counterpart's affiliation (B = 2.98, SE = 2.04, 95% CI [-0.22, 7.75]).

I also examined the moderated mediation effects of a counterpart's anger expression and a counterpart's perpetrator/victim role on average demand level. The results demonstrated a non-significant moderation mediation index for the mediators of participants' feelings of anger (B = 0.95, SE = 1.82, 95% CI [-2.80, 4.90]), participants' feelings of fear (B = -9.73, SE = 5.63, 95% CI [-21.59, 0.24]), participants' feelings of guilt (B = -1.87, SE = 3.50, 95% CI [-10.07, 3.91]), perceptions of a counterpart's dominance (B = -0.16, SE = 1.44, 95% CI [-3.70, 2.28]), and perceptions of a counterpart's affiliation (B = -0.02, SE = 1.07, 95% CI [-2.31, 2.22]).

To summarise, I found support for Hypothesis 1a, which posited that perceptions of a counterpart's dominance would positively mediate the relationship between a counterpart's

anger expression and concessionary behaviour. However, I did not find support for Hypotheses 1b-1d and Hypotheses 2a-2b. I also did not find support for Hypothesis 3, which posited that there is a stronger negative association between anger expressions and perceptions of appropriateness when the counterpart is a perpetrator compared to when the counterpart is a victim. As in Study 1, I also found support for the positive effects of a counterpart's anger expression on participants' feelings of anger and perceptions of a counterpart's dominance and the negative effect of a counterpart's anger expression on perceptions of a counterpart's affiliation. Finally, I also found a significant positive mediating effect of participants' feelings of anger on the relationship between a counterpart's anger expression and average demand level across negotiation rounds.

General Discussion

The findings of the two studies did not consistently support the prediction that the type of inferences and affective reactions elicited in response to anger expressions would determine the effect of anger expressions on concessionary behaviour, and that the type of inferences and affective reactions elicited would depend on perceptions of appropriateness. I did find support for the prediction that anger expressions would increase concessionary behaviour via perceptions of dominance, and partial support for the prediction that anger expressions would decrease concessionary behaviour via feelings of anger. However, I did not find any support for the prediction that perceptions of appropriateness would moderate these mediating relationships. I also found partial support that a counterpart's perpetrator/victim role would moderate the relationship between a counterpart's anger expression and perceptions of appropriateness. Specifically, there was a stronger negative association between anger expressions and perceptions of appropriateness when the counterpart was a perpetrator compared to when the counterpart was a victim. In the supplementary analyses in Study 1, I found significant positive mediating effects (rather than

the predicted negative mediating effect) of perceptions of a counterpart's affiliation when I analysed all the mediating effects separately rather than simultaneously. Furthermore, although I did not find any support for the moderating effects of perceived appropriateness, I found partial support for the moderating effect of a counterpart's perpetrator/victim role on the indirect effect of a counterpart's anger expression on concessionary behaviour via perceptions of a counterpart's dominance, such that there was a positive indirect effect when the counterpart was a perpetrator but a non-significant indirect effect when the counterpart was a victim.

Theoretical Implications

The present research adds to the EASI model by proposing others types of inferences and affective reactions as possible mediators of the relationship between anger expressions and others' concessionary behaviour. Previous research has mainly focused on dominance-related inferences (Adam & Brett, 2015; Adam & Brett, 2018; Belkin et al., 2013; Lelieveld et al., 2011; Sinaceur & Tiedens, 2006; Van Kleef & De Dreu, 2010; Van Kleef et al., 2004a) and affective reactions of anger (Friedman et al., 2004; Harinck & Van Kleef, 2012) as mediators of this relationship. In addition to these inferences and affective reactions, I also found partial support that anger expressions can elicit other affective reactions, such as feelings of fear and guilt, and that feelings of guilt can also mediate a positive relationship between anger expressions and others' concessionary behaviour. I also found support that anger expressions can elicit negative perceptions of affiliation. This complements other research which has also looked at other mediators of the relationship between anger expressions and cooperative behaviour in negotiations, such as inferences of selfishness (Yip & Schweinsberg, 2017). Thus, I hope that this research will continue to spark further interest in the investigation of different types of inferences and affective reactions as alternative mediators to explain the mechanisms behind the interpersonal effects of anger expressions.

The present research also adds to previous research investigating the factors that influence the perceived appropriateness of an anger expression. Previous research has identified culture (Adam et al., 2010), gender (Kelly & Hutson-Comeaux, 2000), and emotional intensity (Adam & Brett, 2018) as factors influencing the perceived appropriateness of an anger expression. In addition, I found partial support for a significant moderating effect of perpetrator/victim role on the relationship between anger expressions and perceptions of appropriateness such that there is a stronger negative association between anger expressions and perceptions of appropriateness when the counterpart is a perpetrator compared to when the counterpart is a victim. By investigating the effect of anger expressions in a transgression context, I identified a new factor (i.e. the role of the expresser in a transgression) that could also influence the perceived appropriateness of an anger expression.

The present research also attempts to provide a full empirical test of the EASI model by investigating the effects of alternative mediators simultaneously in the context of anger expressions and others' concessionary behaviours. This allows us to understand the relative influence of each mediator which is especially important given that they are all likely to occur simultaneously and motivate opposite behaviours. Previous research has done this with the effects of anger expressions on leader effectiveness (Van Kleef, Cheshin, Koning, & Wolf, 2019) and team performance (Van Kleef et al., 2009; Wang, Restubog, Shao, Lu, & Van Kleef, 2018) and I hope to continue this trend and encourage the simultaneous testing of multiple mediators in future tests of the model, especially in regards to the relationship between anger expressions and others' concessionary behaviour.

Although I found that perceptions of dominance have the strongest mediating effect on the relationship between anger expressions and concessionary behaviour, this finding should be interpreted with caution. For instance, although the mediating effect is significant,

the relationship between perceptions of dominance and concessionary behaviour was found to be non-significant. It is possible that the relationship between anger expressions and perceptions of dominance was too strong and therefore drove the significant indirect effect. However, the more likely explanation could be that the current studies are underpowered (as can be seen from the observed power results) and therefore unable to detect the effect of perceptions of dominance on concessionary behaviour. This is supported by the simple mediating effects of perceptions of dominance which showed that perceptions of dominance are indeed significantly related to concessionary behaviour and contribute to a significant indirect effect in Study 1 when the other mediators are not controlled for. Given the significant bivariate correlations between the proposed mediators (see Tables 2 and 5), it is also possible that the other proposed mediators take away explanatory power from perceptions of dominance as a predictor of concessionary behaviour when testing all the mediators simultaneously, further preventing the effect from being detected. However, this may not be the case based on the Study 2 simple mediation results. In Study 2, the mediating effect of perceptions of dominance was no longer significant when looking at the simple mediating effects. This could be due to the suppressor effects (Akinwande, Dikko, & Samson, 2015) of the other mediators such that the predictive power of perceptions of dominance on concessionary behaviour is actually improved when including the other mediators in the model as they help to partial out the parts of perceptions of dominance that do not predict concessionary behaviour. Thus, when perceptions of dominance were tested as a mediator without controlling for the other mediators and accounting for their suppressor effects, the mediating effect disappears. Hence, it is important to consider the simultaneous and simple mediating effects in conjunction, as well as consider the possibility that the current studies are underpowered, when interpreting the present findings.

Although my findings that a counterpart's anger expression had a positive indirect effect on concessionary behaviour via perceptions of dominance but a negative indirect effect on concessionary behaviour via feelings of anger supported previous research on the EASI model, these findings were contingent on how anger expressions and concessionary behaviour were measured and operationalized. For instance, the mediating effect of perceptions of dominance was only significant when concessionary behaviour was operationalized as the number of concessions an individual gave within a single negotiation, as well as the difference between the payoff that an individual would have received based on their first offer and the payoff that an individual would have received based on their final offer. These difference measures represent an individual's change in demand level within a single negotiation and thus may be conceptualized as an individual's *increased* willingness to concede. In contrast, the mediating effect of feelings of anger was only significant when concessionary behaviour was operationalized as average demand level across negotiation rounds. This measure represents an individual's willingness to concede *relative* to other individuals. Given these different operationalizations of concessionary behaviour, we may come to different conclusions regarding these mediators. For example, it could be that perceptions of dominance may be more helpful during a long negotiation in which there are several rounds of offers and counteroffers because perceptions of a counterpart's dominance could lead to a greater decrease in an individual's demand level over the course of the negotiation. In contrast, feelings of anger may be more detrimental on average because eliciting feelings of anger in a negotiation counterpart may lead to higher demand levels, thus lower concessionary behaviour, from the counterpart overall. Relatedly, I also found partial support that anger expressions increased concessionary behaviour via feelings of guilt, but only when concessionary behaviour is measured by number of concessions made rather than the payoff difference between the first and final offer. This suggests that an individual's

feelings of guilt may elicit many rounds of concessionary offers but these concessions may not be very large. Hence, it is important to consider the different ways that concessionary behaviour are operationalized in these studies when interpreting these findings.

My research also has implications for existing work on transgressions. For instance, I found a counterpart's perpetrator/victim role to be the strongest predictor of concessionary behaviour such that people were more likely to concede when their counterpart was a victim compared to when their counterpart was a perpetrator, even when controlling for anger expression and the proposed mediators in Study 1 (see Tables 3 and 4). This suggests that in a transgression situation, a counterpart's anger expression may be ineffective in eliciting concessionary behaviour. Instead, it may be more important to emphasize the perpetrator/victim roles in the situation. It is possible that once a perpetrator realizes that he or she is at fault and understands the role that he or she occupies in the transgression situation, this is sufficient to elicit concessionary behaviour and that additional anger expressions from the victim are unlikely to have any positive effect. In fact, previous research has found that a victim's anger expression actually elicited destructive behaviour from perpetrators (Lemay Jr, Overall, & Clark, 2012). I also found that a counterpart's perpetrator/victim role was associated with feelings of guilt, such that people were more likely to experience feelings of guilt when their counterpart was a victim compared to when their counterpart was a perpetrator, controlling for a counterpart's anger expression. Thus, it could be that once an individual realizes that his or her counterpart is a victim and that the individual is the perpetrator in the situation, the feelings of guilt that the individual experiences may be enough to elicit concessionary behaviour. This is supported by research suggesting that accepting responsibility for an offense promotes conflict resolution (Kirchhoff, Wagner, & Strack, 2012). This has interesting implications for research on

transgressions as it suggests that anger expressions may not be the most effective way for a victim to elicit concessions or compensation from a perpetrator.

Although anger expressions may be ineffective for victims in eliciting others' concessionary behaviour, the findings suggest that anger expressions may actually be effective for perpetrators to elicit concessionary behaviour from their counterpart. I found moderating effects of a counterpart's perpetrator/victim role on the relationship between anger expressions and concessionary behaviour. Specifically, I found that when the counterpart is a perpetrator, there is a positive indirect effect of anger expressions on concessionary behaviour via perceptions of dominance and a negative effect of anger expressions on average demand level (i.e. a positive effect of anger expressions on concessionary behaviour), but no such effects when the counterpart is a victim. These findings suggest that anger expressions may actually be more effective for perpetrators, rather than victims, to elicit concessionary behaviour from their counterpart and this could be due to perceptions of dominance. A perpetrator who desires to elicit concessions from their counterpart may enact a strategy of dominance and toughness. By expressing anger after committing a transgression, a perpetrator may be demonstrating that he or she is willing to do whatever it takes to achieve his or her negotiation outcomes and that he or she is unwilling to compensate for his or her transgression. Indeed, the perpetrator may be indicating that he or she does not think that a transgression has even occurred. A negotiation counterpart of such a perpetrator may therefore have no choice but to concede if they hope to gain anything out of the negotiation at all. The simple mediating effects in Study 1 also suggest that anger expressions increase concessionary behaviour via perceptions of low affiliation, contrary to what was hypothesized. This suggests that people actually concede more to an individual whom they perceive to be low in affiliation, possibly to prevent the negotiation from breaking down completely. Hence, a perpetrator may choose to stay consistently tough and dominant

in order to elicit concessions from their counterpart and may do so without showing concern for their counterpart. Previous research has shown that an expression of appeasement emotions such as guilt actually results in lower concessions from a counterpart (Van Kleef, De Dreu, & Manstead, 2006), supporting the idea that a perpetrator's best strategy in eliciting concessions from his or her counterpart may be to express anger instead of appeasement emotions and elicit perceptions of dominance and low affiliation so as not to be taken advantage of.

Finally, the finding that guilt is a significant mediator of the relationship between anger expressions and others' concessionary behaviour also suggests that guilt, rather than fear, could potentially be a complementary emotion to anger. Previous research has identified fear as the most common complementary emotion to anger (Dimberg & Öhman, 1996). However, the emotion that is complementary to anger in transgression situations could potentially be guilt, rather than fear. In a transgression situation, there exists an inequity in which a perpetrator has gotten more out of the relationship than the victim has. Research on equity theory has suggested that being underbenefited is associated with feelings of anger whereas being overbenefited is associated with feelings of guilt (Guerrero, La Valley, & Farinelli, 2008). When a counterpart expresses anger in a transgression situation, this may indicate that the individual has overbenefited from the relationship in some way and created an inequity, which may induce guilt feelings in the individual. Together with my Study 1 findings, which found a simple mediating effect of an individual's feelings of guilt, but not an individual's feelings of fear, on the relationship between a counterpart's anger expression and an individual's concessionary behaviour, this suggests that guilt may be a complementary emotion to anger, at least in inequitable relationships. This finding also contradicts previous research suggesting that a victim's hurt feelings, but not anger feelings, elicit a perpetrator's

guilt feelings (Lemay Jr et al., 2012). However, this finding was inconsistent in Study 1 and not replicated in Study 2 so it should be interpreted with caution.

Future Research

Future research could consider looking at the different types of inferences and affective reactions associated with other emotion expressions. For example, sadness expressions are associated with perceptions of low dominance and high affiliation (Hareli et al., 2009; Hess et al., 2000; Knutson, 1996; Tiedens, 2001). Similar to anger expressions which I found to be high on one dimension of interpersonal perception (i.e. dominance) and low on the other (i.e. affiliation), sadness expressions are likely to have opposite behavioural effects which will depend on certain factors. For example, it has been suggested that sadness expressions increase helping behaviour in cooperative, but not competitive, interactions (Clark, Oullette, Powell, & Milberg, 1987; Van Kleef, De Dreu, & Manstead, 2010), when the expresser has low power (Sinaceur, Kopelman, Vasiljevic, & Haag, 2015), and when a future interaction is expected (Sinaceur et al., 2015). This could be because inferences of high affiliation, rather than inferences of low dominance, are more influential in these situations. Indeed, Sinaceur et al. (2015) found that greater other-concern (i.e. greater affiliation) mediated the relationship between sadness expressions and others' helping behaviour. Research has also found that high power attenuates the extent to which people experience reciprocal distress emotions and complementary compassion emotions in response to sadness expressions (Van Kleef et al., 2008). Empathic distress has been found to be associated with withdrawal whereas compassion is associated with other-oriented feelings and more prosociality (Singer & Klimecki, 2014). Hence, the type of inferences and affective reactions elicited by sadness expressions could also potentially lead to different interpersonal behavioural effects. Future research looking at the interpersonal effects of other emotion

expressions should also consider investigating the simultaneous mediating effects of different types of inferences and affective reactions associated with those emotion expressions.

It is worth investigating whether other potential moderators could determine the relative influence of different types of inferences and affective reactions. Van Kleef et al. (2010) propose that the relative cooperativeness or competitiveness of a situation can also determine whether inferential or affective processes are more influential, although this has not been tested empirically. They propose that in a cooperative situation, affective processes are likely to be more influential given that emotional contagion occurs more in cooperative compared to competitive situations (Lanzetta & Englis, 1989; Totterdell, 2000). In contrast, competitive situations are characterized by lower levels of trust (Deutsch, 1973). Emotional expressions can provide information about a competitor and hence inferential processes are likely to be more influential in competitive situations. Regarding different types of inferences and affective reactions, affiliation-related inferences have been found to be more salient than dominance-related inferences in cooperative situations (Battistich & Aronoff, 1985) suggesting that affiliation-related inferences are likely to be more influential in these situations. As for affective reactions, given that cooperative situations encourage open-mindedness and increase feelings of security (Tjosvold & Deemer, 1980), expressions of anger may be seen to violate these cooperative norms. People may therefore be more likely to respond with reciprocal anger rather than complementary fear to anger expressions in cooperative situations. Future research could further investigate how the relative cooperativeness or competitiveness of a situation determines the relative influence of affiliation- versus dominance-related inferences and reciprocal anger versus complementary fear reactions in increasing or reducing concessionary behaviours.

Future research could also explore the idea that one emotion may have many different complementary emotions depending on the situation. The present research suggests that guilt

could be a complementary emotion of anger in a transgression situation although previous research has found fear to be a common complementary emotion of anger. Other emotions may also have various complementary emotions. For example, disappointment expressions have been found to induce complementary feelings of guilt (Lelieveld et al., 2011). Research has shown that there are two types of disappointment which are person-related disappointment, in which disappointments stem from another person's unexpectedly undesirable behaviour, and outcome-related disappointment, in which disappointments stem from outcomes that are worse than expected (W. W. Van Dijk & Zeelenberg, 2002). Lelieveld et al.'s (2011) research looked at person-related disappointment which is similar to anger in that they both arise from another individual's morally wrong behaviour. In contrast, outcome-related disappointment is similar to sadness in that they both arise from events that are beyond an individual's control (W. W. Van Dijk & Zeelenberg, 2002). Given that a complementary emotion of sadness is sympathy (Eisenberg et al., 1989), it is possible that when disappointment is related to outcomes rather than persons, a complementary emotion would be sympathy rather than guilt. Future research could further investigate the different complementary emotions associated with anger and disappointment (and other emotions) when they are directed at different targets or in different situations.

Limitations

One limitation of the present research in providing a full empirical test of the EASI model could be the transgression situation. The transgression situation was initially introduced in order to investigate a new way of looking at the appropriateness of anger expressions. However, it is possible that the transgression situation was actually too strong such that it suppressed any potential effects of anger expressions on concessionary behaviour hence precluding a test of the EASI model. I found that a counterpart's perpetrator/victim role was a predictor of concessionary behaviour and that anger expression had mostly no

effect on concessionary behaviour when controlling for perpetrator/victim role. This suggests that anger expressions and the inferential and affective processes associated with anger expressions may be ineffective in transgression situations where the perpetrator and victim roles are clearly defined. Hence, the transgression context may be a boundary condition for the EASI model when applied to the relationship between anger expressions and concessionary behaviour. Future research looking into providing a full empirical test of the EASI model and how it applies to the relationship between anger expressions and concessionary behaviour with its various mediators could consider doing so in a context in which the roles of the two parties are not as clearly defined as in a transgression setting.

Another limitation to the test of the EASI model could be that the present research was conducted in the context of the Asian culture. Anger expressions are seen as inappropriate in Asian cultures (Adam et al., 2010) because display rules dictate that such a socially disengaging emotion expression should be suppressed in order to maintain social harmony (Kitayama, Mesquita, & Karasawa, 2006). This is supported by my finding that anger expressions were negatively associated with perceptions of appropriateness and that a counterpart's perpetrator/victim role only moderated the strength of this relationship, but not the sign. This could potentially explain why there were no moderating effects of perceived appropriateness given that anger expressions were generally seen as inappropriate in these studies. Future research could further investigate the proposed model in different cultures to provide a more robust test of the model and identify the effects that may be attributed to cultural differences.

Another limitation of the present research could be that the studies are underpowered. Given limited resources, I was unable to recruit the desired minimal sample size required to detect the hypothesized moderating effect of perceptions of appropriateness on the proposed mediating effects, which could also explain the non-significant moderating effects of

perceived appropriateness found in these studies. The lack of power in the studies could also explain why many of the proposed mediating effects were found to be non-significant. Hence, future research could investigate these hypotheses again with studies which have greater power in order to fully test whether the non-significant findings in the present research are because these effects really do not exist or whether it is because the present studies were unable to detect these effects.

Finally, although I proposed that dominance-related inferences, affiliation-related inferences, reciprocal feelings of anger, and complementary feelings of fear and guilt are separate alternative mediators, it must be acknowledged that each of these mediators may be related to, and even elicit, one another. For example, affiliation-related inferences are closely associated with evaluative judgments of liking (Stel et al., 2010). This suggests that inferences of low affiliation associated with anger expressions can reduce liking which may subsequently elicit negative feelings of anger toward the expresser. Inferences related to dominance may also elicit fear reactions. Looking at the bivariate correlations (Tables 2 and 5) we can also see that many of the proposed mediators are correlated with one another. Although the correlations are not so high as to suggest multicollinearity, it is possible that the proposed mediators share variance and take away explanatory power from each other. Hence, it is worth noting that these alternative mediators may not be wholly independent from one another and future research could further attempt to disentangle the effects that can be attributed to each of these alternative mediators.

Although I did not find much support for the effects of alternative mediators on the relationship between anger expressions and others' concessionary behaviour, I believe that it is still important to consider different types of inferences and affective reactions to understand the different interpersonal effects that anger expressions can have. Future research could continue to explore other mediators and conduct full empirical tests of the EASI model

and its boundary conditions, taking into account the limitations of the present research. My hope is that the current research can help to broaden and strengthen the existing model and further advance understanding of the many nuances and intricacies that anger expressions, and other emotion expressions, can have on interpersonal behaviour.

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Tables and Figures

Table 1
Summary of Hypotheses Supported and Not Supported in Study 1 and 2

Hypotheses	**Study 1**	**Study 2**
Hypothesis 1a (Positive indirect effect of anger expressions on concessionary behavior via dominance-related inferences)	Supported	Supported
Hypothesis 1b (Negative indirect effect of anger expressions on concessionary behavior via affiliation-related inferences)	Not supported	Not supported
Hypothesis 1c (Negative indirect effect of anger expressions on concessionary behavior via anger reactions)	Not supported	Not supported
Hypothesis 1d (Positive indirect effect of anger expressions on concessionary behavior via fear reactions)	Not supported	Not supported
Hypothesis 2a (Moderating effect of perceived appropriateness on the relationship between anger expressions and dominance-related inferences, and on the mediating effect of dominance-related inferences)	Not supported	Not supported
Hypothesis 2b (Moderating effect of perceived appropriateness on the relationship between anger expressions and reciprocal anger reactions, and on the mediating effect of anger reactions)	Not supported	Not supported
Hypothesis 3 (Moderating effect of counterpart's perpetrator/victim role on the relationship between anger expressions and perceptions of appropriateness)	Supported	Not supported

Table 2

Means, Standard Deviations, and Correlations of All Focal Variables in Study 1

Variables	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Anger Expression 1	2.17	1.51										
2. Anger Expression 2	2.56	1.50	0.81***									
3. Perpetrator / Victim Role	0.50	0.50	-0.15*	-0.14								
4. Feelings of Anger	2.42	1.41	0.52***	0.60***	0.15							
5. Feelings of Fear	2.39	1.56	0.14	0.15*	-0.07	0.22**						
6. Feelings of Guilt	2.81	1.68	0.22**	0.26**	-0.41***	0.12	0.44***					
7. Perceived Dominance	0.46	3.53	0.33***	0.32***	0.05	0.23**	0.05	0.06				
8. Perceived Affiliation	3.09	4.08	-0.43***	-0.48***	-0.05	-0.49***	0.07	0.01	-0.41***			
9. Perceived Appropriateness	5.54	1.00	-0.35***	-0.29***	-0.24**	-0.39***	0.00	0.20**	-0.25**	0.55***		
10. Number of concessions	2.03	1.59	0.15*	0.17*	-0.08	0.20**	-0.02	0.12	0.18*	-0.20**	-0.07	
11. Concessions (Payoff Difference)	34.06	28.28	0.18*	0.18*	-0.20**	0.14	0.02	0.11	0.19*	-0.18*	0.02	0.68***

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Anger Expression 1 = A counterpart's anger expression. Anger Expression 2 = Perceptions of a Counterpart's Feelings of Anger. Perpetrator / Victim Role: 1 = Counterpart-as-perpetrator, 0 = Counterpart-as-victim.

Table 3

Linear Mixed Effects Regression Analyses in Study 1 for a Counterpart's Anger Expression

Independent Variables	Model 1 DV: Number of Concessions	Model 2 DV: Concessions (Payoff Difference)	Model 3 DV: Perceived Dominance	Model 4 DV: Perceived Affiliation	Model 5 DV: Feelings of Anger	Model 6 DV: Feelings of Fear	Model 7 DV: Feelings of Guilt	Model 8 DV: Number of Concessions	Model 9 DV: Concessions (Payoff Difference)
Anger Expression 1	0.02 (0.09)	1.11 (2.00)	0.73** (0.25)	-0.68** (0.25)	0.43*** (0.09)	0.34** (0.11)	0.18 (0.11)	-0.09 (0.09)	-1.20 (2.14)
Perpetrator / Victim Role	-0.26 (0.17)	-10.75** (3.99)	0.62 (0.50)	-0.56 (0.49)	0.60*** (0.17)	-0.12 (0.22)	-1.28*** (0.23)	-0.20 (0.19)	-12.57** (4.43)
Perceived Dominance								0.06 (0.03)	1.10 (0.62)
Perceived Affiliation								-0.05 (0.03)	-0.61 (0.64)
Feelings of Anger								0.05 (0.09)	1.75 (1.88)
Feelings of Fear								-0.01 (0.07)	0.90 (1.54)
Feelings of Guilt								0.12 (0.07)	0.11 (1.45)
Chi-squared value	20.31*	19.70*	28.17***	53.30***	81.41***	30.90***	48.31***	32.94**	27.91*

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Anger Expression 1 = Counterpart's anger expression (group mean-centered). Perpetrator / Victim Role: 1 = Counterpart-as-perpetrator, 0 = Counterpart-as-victim. Control variables: Gender, buyer/seller norms, who started the negotiation. I conducted likelihood ratio tests (LRTs) to calculate the chi-squared values based on an evaluation of the difference between a model without predictors and a model with all the corresponding predictors.

Table 4

Linear Mixed Effects Regression Analyses in Study 1 for Perceptions of a Counterpart's Feelings of Anger

Independent Variables	Model 1 DV: Number of Concessions	Model 2 DV: Concessions (Payoff Difference)	Model 3 DV: Perceived Dominance	Model 4 DV: Perceived Affiliation	Model 5 DV: Feelings of Anger	Model 6 DV: Feelings of Fear	Model 7 DV: Feelings of Guilt	Model 8 DV: Number of Concessions	Model 9 DV: Concessions (Payoff Difference)
Anger Expression 2	0.11 (0.09)	2.04 (2.05)	0.74** (0.26)	-0.77** (0.25)	0.56*** (0.08)	0.45*** (0.11)	0.31** (0.11)	0.00 (0.10)	-0.68 (2.34)
Perpetrator / Victim Role	-0.23 (0.17)	-10.38* (3.97)	0.60 (0.51)	-0.58 (0.49)	0.64*** (0.16)	-0.09 (0.22)	-1.23*** (0.22)	-0.15 (0.19)	-12.25** (4.43)
Perceived Dominance								0.05 (0.03)	1.11 (0.62)
Perceived Affiliation								-0.04 (0.03)	-0.62 (0.65)
Feelings of Anger								0.02 (0.10)	1.81 (1.99)
Feelings of Fear								-0.01 (0.08)	0.79 (1.55)
Feelings of Guilt								0.12 (0.07)	0.20 (1.46)
Chi-squared value	22.12**	19.29*	26.10**	61.58***	109.84***	37.18***	52.67***	32.10**	27.08*

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Anger Expression 2 = Perceptions of a counterpart's feelings of anger (group mean-centered). Perpetrator / Victim Role: 1 = Counterpart-as-perpetrator, 0 = Counterpart-as-victim. Control variables: Gender, buyer/seller norms, who started the negotiation. I conducted likelihood ratio tests (LRTs) to calculate the chi-squared values based on an evaluation of the difference between a model without predictors and a model with all the corresponding predictors.

Table 5

Means, Standard Deviations, and Correlations of All Focal Variables in Study 2

Variables	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.
1. Anger Expression	0.49	0.50								
2. Perpetrator / Victim Role	0.49	0.50	-0.01							
3. Feelings of Anger	3.49	1.82	0.18*	0.30***						
4. Feelings of Fear	2.31	1.59	0.08	-0.06	0.14					
5. Feelings of Guilt	2.80	1.66	0.10	-0.45***	-0.07	0.45***				
6. Perceived Dominance	1.76	3.44	0.46***	0.07	0.31***	0.05	-0.02			
7. Perceived Affiliation	-2.38	4.04	-0.27***	-0.26***	-0.36***	0.05	0.17*	-0.43***		
8. Perceived Appropriateness	4.07	1.51	-0.24***	-0.45***	-0.57***	0.09	0.34***	-0.28***	0.52***	
9. Concessions (Payoff Difference)	24.81	30.73	0.11	0.15*	-0.00	0.08	-0.05	0.16*	-0.06	0.07

Note: * $p < 0.05$; *** $p < 0.001$. Anger Expression: 1 = Anger expression condition, 0 = Control condition. Perpetrator / Victim Role: 1 = Counterpart-as-perpetrator, 0 = Counterpart-as-victim.

Table 6

Ordinary Least Squares Regression Analyses in Study 2

Independent Variables	Model 1 DV: Concessions (Payoff Difference)	Model 2 DV: Perceived Dominance	Model 3 DV: Perceived Affiliation	Model 4 DV: Feelings of Anger	Model 5 DV: Feelings of Fear	Model 6 DV: Feelings of Guilt	Model 7 DV: Concessions (Payoff Difference)
Anger Expression	6.34 (4.37)	3.09*** (0.44)	-2.26*** (0.54)	0.61* (0.25)	0.19 (0.23)	0.34 (0.21)	3.51 (4.96)
Perpetrator / Victim Role	9.02* (4.34)	0.50 (0.44)	-2.07*** (0.54)	1.08*** (0.25)	-0.19 (0.22)	-1.47*** (0.21)	10.10 (5.15)
Perceived Dominance							1.38 (0.78)
Perceived Affiliation							0.13 (0.64)
Feelings of Anger							-2.08 (1.36)
Feelings of Fear							2.14 (1.60)
Feelings of Guilt							-0.78 (1.69)
Adjusted R^2	0.02	0.21	0.13	0.11	0.01	0.20	0.03
F-value	2.29	18.45***	10.99***	9.17***	1.99	17.06***	1.64

Note: * $p < 0.05$; *** $p < 0.001$. Anger Expression: 1 = Anger expression condition, 0 = Control condition. Perpetrator / Victim Role: 1 = Counterpart-as-perpetrator, 0 = Counterpart-as-victim. Gender was a control variable.

Table 7
Linear Mixed Effects Regression Analyses in Study 2

Independent Variables	Model 1 DV: Demand Level	Model 2 DV: Demand Level	Model 3 DV: Demand Level
Anger Expression	-9.30	7.44	1.38
	(5.76)	(8.36)	(8.05)
Perpetrator / Victim Role	-41.46***	-21.60**	-35.85***
	(5.76)	(8.31)	(8.14)
Round	-4.72***	-3.21***	-3.21***
	(0.25)	(0.49)	(0.49)
Anger Expression X Perpetrator / Victim Role		-27.37*	-21.39
		(11.91)	(11.02)
Perpetrator / Victim Role X Round		-2.15**	-2.15**
		(0.70)	(0.70)
Anger Expression X Round		-1.22	-1.22
		(0.70)	(0.70)
Anger Expression X Perpetrator / Victim Role X Round		0.58	0.58
		(1.00)	(1.00)
Perceived Dominance			-0.52
			(0.92)
Perceived Affiliation			-1.32
			(0.75)
Feelings of Anger			6.33***
			(1.60)
Feelings of Fear			-8.50***
			(1.89)
Feelings of Guilt			-0.28
			(2.00)
Chi-squared value	346.79***	369.14***	411.00***

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Anger expression: 1 = anger expression, 0 = control. Perpetrator / Victim role: 0 = counterpart-as-victim; 1 = counterpart-as-perpetrator. I conducted likelihood ratio tests (LRTs) to calculate the chi-squared values based on an evaluation of the difference between a model without predictors and a model with all the corresponding predictors.

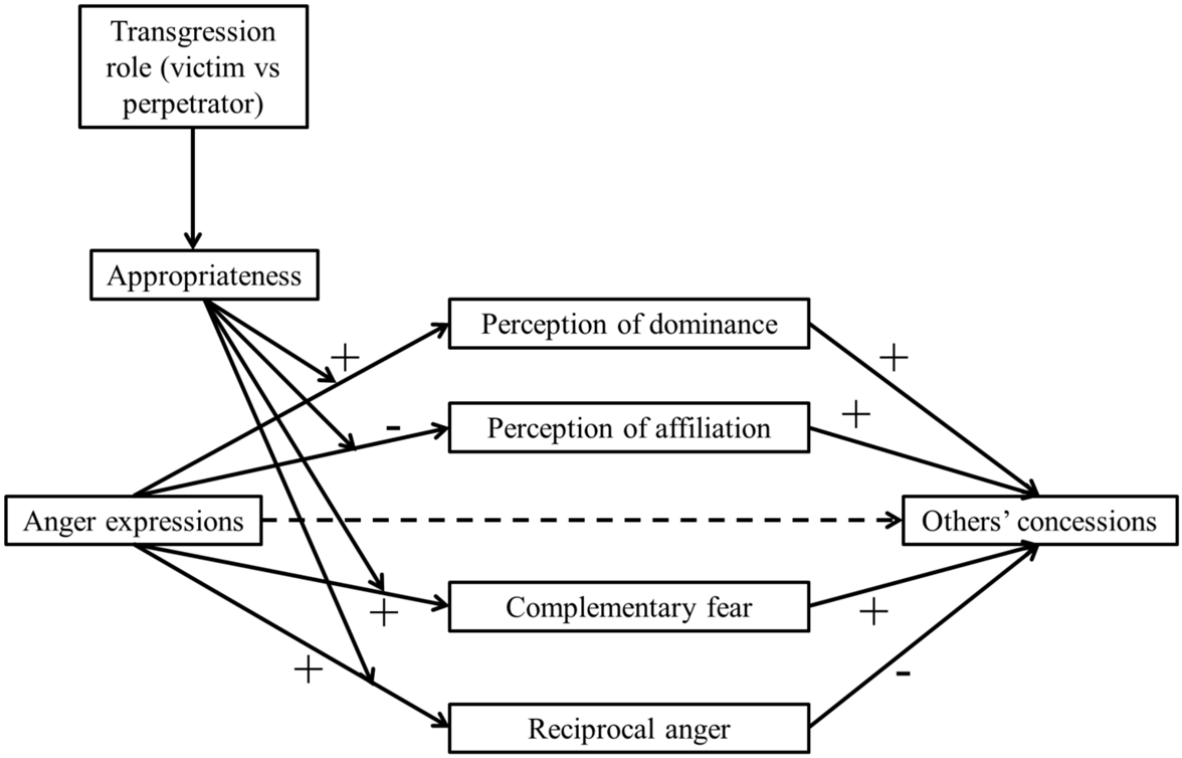

Figure 1: Proposed Theoretical Model

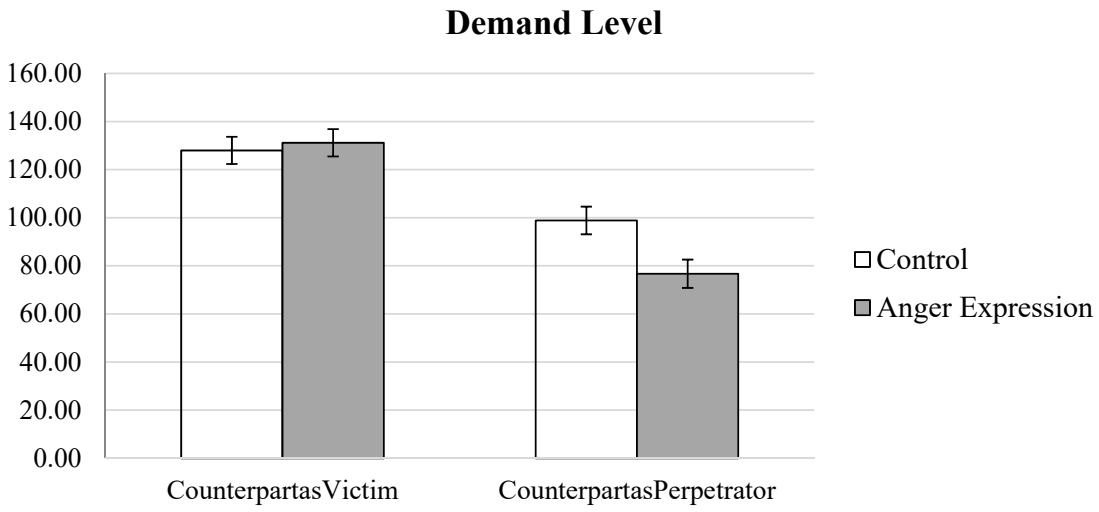

Figure 2: Two-way interaction effect between a counterpart's anger expression and perpetrator/victim role on demand level

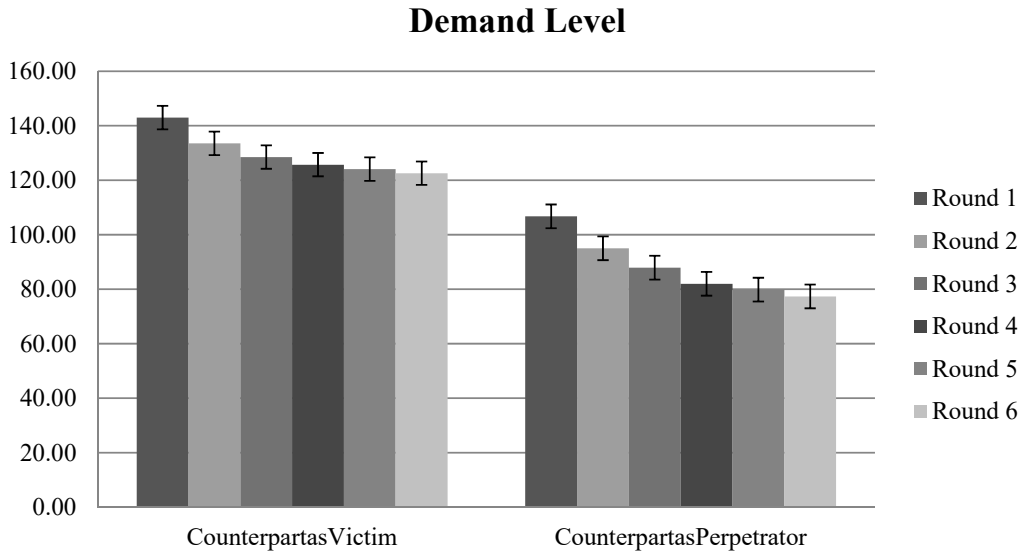

Figure 3: Two-way interaction effect between a counterpart's perpetrator/victim role and round on demand level

Appendix

Study 1 and 2 Measures

Buyer/seller norms (only in Study 1)

Please rate how much you agree with the following statements regarding the role of a buyer/seller in a transaction based on your experience.
(1 = Strongly disagree; 7 = Strongly agree)
It is normal for a buyer to commit a wrongdoing against a seller.
It is normal for a buyer to transgress against a seller.
It is normal for a buyer to treat a seller badly.
It is normal for a buyer to express anger.
It is normal for a seller to commit a wrongdoing against a buyer.
It is normal for a seller to transgress against a buyer.
It is normal for a seller to treat a buyer badly.
It is normal for a seller to express anger.

Counterpart's anger expression
Please rate the extent to which your counterpart expressed anger during the negotiation.
(1 = Not at all; 7 = Very much)

Perception of the counterpart's anger
Please rate how much you think your counterpart felt the following during the negotiation.
(1 = Not at all; 7 = Very much)
Angry
Irritated
Aggravated

Perception of the counterpart as a victim
Please rate how much you agree with the following statements.
(1 = Strongly disagree; 7 = Strongly agree)
I committed a wrongdoing against my counterpart during the negotiation.
I transgressed against my counterpart during the negotiation.
I treated my counterpart badly during the negotiation.

Perception of the counterpart as a perpetrator
Please rate how much you agree with the following statements..
(1 = Strongly disagree; 7 = Strongly agree)
My counterpart committed a wrongdoing against me during the negotiation.
My counterpart transgressed against me during the negotiation.
My counterpart treated me badly during the negotiation.

Perception of appropriateness
Please rate how much you agree with the following statements.
(1 = Strongly disagree; 7 = Strongly agree)
I felt that my negotiation partner's reaction was unjustified (reverse-coded).
My negotiation partner's reaction was ridiculous (reverse-coded).
I could understand why my negotiation partner reacted in this way.
My negotiation partner's reaction was inappropriate (reverse-coded).

My negotiation partner's reaction was justifiable.
My negotiation partner's reaction was incorrect (reverse-coded).

Participants' feelings of anger
Please rate how much you felt the following during the negotiation.
(1 = Not at all; 7 = Very much)
Angry
Irritated
Aggravated

Participants' feelings of fear
Please rate how much you felt the following during the negotiation.
(1 = Not at all; 7 = Very much)
Afraid
Afraid that my counterpart would retaliate
Fearful

Participants' feelings of guilt
Please rate how much you felt the following during the negotiation.
(1 = Not at all; 7 = Very much)
I felt bad about what I did.
I felt like apologizing.
I cannot stop thinking about the bad thing I did.
I felt tension about what I did.
I felt remorse, regret.

Perception of the counterpart's dominance and affiliation
Please rate how accurate you think the following words describe your counterpart.
(1 = Extremely inaccurate; 7 = Extremely accurate)
Assertive
Dominant
Shy
Unaggressive
Cunning
Sly
Uncunning
Unsly
Unsympathetic
Warmthless
Tender
Sympathetic
Unsociable
Introverted
Friendly
Outgoing
The measures of dominance and affiliation adapted from the IAR-S (Wiggins, Trapnell, & Phillips, 1988) were based on Knutson's (1996) measures and included the following trait adjectives: (assertive + dominant)/2 (PA); (shy + unaggressive)/2 (HI); (cunning + sly)/2 (BC); (uncunning + unsly)/2 (JK); (unsympathetic + warmthless)/2 (DE); (tender + sympathetic)/2 (LM); (unsociable + introverted)/2 (FG); (friendly +

outgoing)/2 (NO). The formula used to compute the dominance composite scores was: PA - HI + .707(NO + BC - FG - JK). The formula used to compute the affiliation composite scores was: LM - DE + .707(NO - BC - FG + JK).

Study 1 and 2 Manipulations

Transgression Role Manipulations

Study 1

[Counterpart-as-perpetrator condition]

Negotiation Task Instructions:

In this study, you will engage in a negotiation task with a randomly assigned counterpart. The negotiation task involves two issues.

You will negotiate regarding a price of a used textbook and the delivery time of course materials. A buyer of a used textbook online is unhappy with the purchase because the seller had sold it at its original price ($100) and promised that it was in brand new condition. However, when the buyer received the textbook, he/she found that the textbook was in poor condition. The textbook had its front cover, as well as several pages, missing. The textbook also had a lot of writing and drawings in it, some of which covered up the words in the textbook. The seller had also forgotten to send extra course materials, such as lecture slides and the seller's class notes, which he/she had promised would be included in the purchase.

In this negotiation, you are the buyer in this situation and your counterpart is the seller. You will negotiate regarding 1) a new price of the used textbook and 2) the delivery time of the extra course materials with your counterpart. In this negotiation, the more points you earn the better. You may determine what type of agreement will give you the most points by referring to the payoff chart below. Do not at any time tell the other person how many points you are getting. Do not let the other person see your payoff chart. This information is for you only. Also, due to the negative purchasing experience, you will begin the negotiation with a negative payoff.

You will engage in the negotiation task for 15 minutes or until you reach an agreement, whichever is shorter. At the end of all the study sessions, the top 3 participants with the highest payoff will get a reward of $2.50. During the negotiation, please record each time you make an offer or counteroffer and what your offer was.

Buyer's Payoff Chart:

Price	Delivery time
$0 (Payoff = 100 Points) ↓ $100 (Payoff = 0 Points)	0 days (Payoff = 100 Points) ↓ 10 days (Payoff = 0 Points)

Note 1: Due to the negative purchasing experience, YOU WILL START THE NEGOTIATION WITH A NEGATIVE PAYOFF OF -30 POINTS.

Note 2: The payoff for each issue will be calculated as follows:

Payoff for price = Maximum price payoff – (Negotiated price / Maximum price x Maximum price payoff)
Payoff for delivery time = Maximum delivery time payoff – (Negotiated delivery time / Maximum delivery time x Maximum delivery time payoff)
Total payoff = Initial payoff starting point + Payoff for price + Payoff for delivery time

E.g. If the negotiated price is $20, the payoff for price is 100 points – ($20/$100 x 100 points) = 80 points. If the negotiated delivery time is 5 days, the payoff for delivery time is 100 points – (5 days/10 days x 100 points) = 50 points. The total payoff is -30 points + 80 points + 50 points = 100 points.

Buyer's Negotiation Points:

Below are some arguments you may use in the negotiation to help you achieve the highest payoff you can. You may use these arguments or ignore them altogether. You may also come up with additional arguments and use them during the negotiation.

Price of used textbook
As the buyer of the used textbook, you would prefer to negotiate a lower price so that you can save more money. You think a lower price is fair given the poor quality of the textbook and how it is nearly un-usable. You also think you are being very generous in offering to still continue to purchase the textbook when you could have simply demanded a refund and returned the textbook.

Delivery time of extra course materials
You would prefer to receive the extra course materials as soon as possible so that you can be ready for the new semester. You had heard that the professor gives a pop quiz in the first week so you would like to be prepared. Receiving the materials instead of creating your own will save you a lot of time.

To ensure your understanding of the negotiation task, please answer the following questions about the task.
Which of the two issues has a higher utility for you, the buyer?
Price of the used textbook
Delivery time of extra course materials
Equal utility
If the negotiated price and delivery time is $20 and 2 days respectively, what is your total payoff as the buyer?
160 points
130 points
70 points
40 points
Which of these outcomes is best for you, the buyer?
High price, long delivery time

High price, short delivery time
Low price, long delivery time
Low price, short delivery time

[Counterpart-as-victim condition]

Negotiation Task Instructions:

In this study, you will engage in a negotiation task with a randomly assigned counterpart. The negotiation task involves two issues.

You will negotiate regarding a price of a used textbook and the delivery time of course materials. A buyer of a used textbook online is unhappy with the purchase because the seller had sold it at its original price ($100) and promised that it was in brand new condition. However, when the buyer received the textbook, he/she found that the textbook was in poor condition. The textbook had its front cover, as well as several pages, missing. The textbook also had a lot of writing and drawings in it, some of which covered up the words in the textbook. The seller had also forgotten to send extra course materials, such as lecture slides and the seller's class notes, which he/she had promised would be included in the purchase.

In this negotiation, you are the seller in this situation and your counterpart is the buyer. You will negotiate regarding 1) a new price of the used textbook and 2) the delivery time of the extra course materials with your counterpart. In this negotiation, the more points you earn the better. You may determine what type of agreement will give you the most points by referring to the payoff chart below. Do not at any time tell the other person how many points you are getting. Do not let the other person see your payoff chart. This information is for you only. Also, due to the initial earnings you received, you will begin the negotiation with a positive payoff.

You will engage in the negotiation task for 15 minutes or until you reach an agreement, whichever is shorter. At the end of all the study sessions, the top 3 participants with the highest payoff will get a reward of $2.50. During the negotiation, please record each time you make an offer or counteroffer and what your offer was.

Seller's Payoff Chart:

Price	Delivery time
$0 (Payoff = 0 points) ↓ $100 (Payoff = 100 points)	0 days (Payoff = 0 points) ↓ 10 days (Payoff = 100 points)

Note 1: Due to the initial earnings you received from the initial purchase, YOU WILL START THE NEGOTIATION WITH A POSITIVE PAYOFF OF +30 POINTS.

Note 2: The payoff for each issue will be calculated as follows:

Payoff for price = Negotiated price / Maximum price x Maximum price payoff
Payoff for delivery time = Negotiated delivery time / Maximum delivery time x Maximum delivery time payoff
Total payoff = Initial payoff starting point + Payoff for price + Payoff for delivery time

E.g. If the negotiated price is $20, the payoff for price is $20/$100 x 100 points = 20 points. If the negotiated delivery time is 5 days, the payoff for delivery time is 5 days/10 days x 100 points = 50 points. The total payoff is 30 points + 20 points + 50 points = 100 points.

Seller's Negotiation Points:

Below are some arguments you may use in the negotiation to help you achieve the highest payoff you can. You may use these arguments or ignore them altogether. You may also come up with additional arguments and use them during the negotiation.

Price of used textbook
As the seller of the used textbook, you would prefer to negotiate a higher price so that you can earn more money. You think that it is fair to sell the textbook at a higher price because you had bought it brand new yourself. You also think the writings in the textbook actually provide additional useful information for the class and would be helpful to the buyer.

Delivery time of extra course materials
It is going to take a lot of effort and time to compile the extra course materials so it would be better for you to negotiate a longer delivery time. Furthermore, the school semester does not start for another week so you think there is still plenty of time before the buyer actually needs the extra course materials.

To ensure your understanding of the negotiation task, please answer the following questions about the task.
Which of the two issues has a higher utility for you, the seller?
Price of the used textbook
Delivery time of extra course materials
Equal utility
If the negotiated price and delivery time is $20 and 2 days respectively, what is your total payoff as the seller?
160 points
130 points
70 points
40 points
Which of these outcomes is best for you, the seller?
High price, long delivery time
High price, short delivery time
Low price, long delivery time
Low price, short delivery time

Study 2

[Counterpart-as-perpetrator condition]

Negotiation task instructions:

In this study, you will engage in a negotiation task with a randomly assigned counterpart. The negotiation task involves two issues.

JK had lent his/her laptop that had cost $1000 to MN for one day because MN had left his/her laptop at home. However, MN accidentally damaged JK's laptop by spilling a cup of coffee on it. It is nearing the end of the semester when several projects and assignments are due and JK does not have any other laptop or personal computer device to work on his/her assignments. JK and MN have agreed to negotiate how much money MN should give to JK as compensation, as well as a duration of time during which MN will lend his/her own laptop to JK.

In this negotiation task, you are JK in this situation and your counterpart is MN. You will negotiate 1) the amount of money that MN will compensate to JK and 2) the duration of time that MN will lend his/her own laptop to JK. In this negotiation, the more points you earn the better. You may determine what type of agreement will give you the most points by referring to the payoff chart below. Do not at any time tell the other person how many points you are getting. Do not let the other person see your payoff chart. This information is for you only. Also, due to the damage done to JK's laptop, you will begin the negotiation with a negative payoff.

You will engage in the negotiation task for 15 minutes or until you reach an agreement, whichever is shorter. At the end of all the study sessions, the top 3 participants with the highest payoff will get a reward of $2.50. You and your counterpart will also get an opportunity to send a message to each other after each offer.

JK's Payoff Chart:

Compensation	Duration
$0 (Payoff = 0 points)	0 days (Payoff = 0 points)
↓	↓
$1000 (Payoff = 100 points)	10 days (Payoff = 100 points)

Note 1: Due to the damage done to JK's laptop, YOU WILL START THE NEGOTIATION WITH A NEGATIVE PAYOFF OF -30 POINTS.

Note 2: The payoff for each issue will be calculated as follows:

Payoff for compensation = Negotiated compensation / Maximum compensation x Maximum compensation payoff
Payoff for duration = Negotiated duration / Maximum duration x Maximum duration payoff
Total payoff = Initial payoff starting point + Payoff for compensation + Payoff for duration

E.g. If the negotiated compensation is $100, the payoff for compensation is $100/$1000 x 100 points = 10 points. If the negotiated duration is 10 days, the payoff for duration is 10 days/10 days x 100 points = 100 points. The total payoff is -30 points + 10 points + 100 points = 80 points.

JK's Negotiation Points:

Below are some arguments you may use in the negotiation to help you achieve the highest payoff you can. You may use these arguments or ignore them altogether. You may also come up with additional arguments and use them during the negotiation.

Money as compensation
You would prefer to get more money for compensation because it would help you purchase a new laptop. You believe a higher amount of compensation is fair since it is MN's fault that your laptop is now damaged. You also think that you are being reasonable in asking for some money for compensation instead of demanding that MN buy you a new laptop.

Duration of time for borrowing MN's laptop
You would prefer a longer duration of time for borrowing MN's laptop because it would give you more time to work on your assignments. You think a longer duration of time is fair because it is MN's fault that you are now no longer able to work on your assignments. You also know that MN has a personal computer at home which they can use whereas you do not have one.

To ensure your understanding of the negotiation task, please answer the following questions about the task.
Which of the two issues has a higher utility for you, JK?
Money as compensation
Duration of time for borrowing MN's laptop
Equal utility
If the negotiated compensation amount and duration is $700 and 2 days respectively, what is your total payoff as JK?
140 points
110 points
90 points
60 points
Which of these outcomes is best for you, JK?
More compensation money, long lending duration
More compensation money, short lending duration
Less compensation money, long lending duration
Less compensation money, short lending duration

Offers from counterpart: $100 / 2 days (Round 1), $150 / 2 days (Round 2), $150 / 3 days (Round 3), $200 / 3 days (Round 4), $200 / 4 days (Round 5), $250 / 4 days (Round 6)

[Counterpart-as-victim condition]

Negotiation task instructions:
In this study, you will engage in a negotiation task with a randomly assigned counterpart. The negotiation task involves two issues.

MN had lent his/her laptop that had cost $1000 to JK for one day because JK had left his/her laptop at home. However, JK accidentally damaged MN's laptop by spilling a cup of coffee on it. It is nearing the end of the semester when several projects and assignments are due and

MN does not have any other laptop or personal computer device to work on his/her assignments. JK and MN have agreed to negotiate how much money JK should give to MN as compensation, as well as a duration of time during which JK will lend his/her own laptop to MN.

In this negotiation task, you are JK in this situation and your counterpart is MN. You will negotiate 1) the amount of money that JK will compensate to MN and 2) the duration of time that JK will lend his/her own laptop to MN. In this negotiation, the more points you earn the better. You may determine what type of agreement will give you the most points by referring to the payoff chart below. Do not at any time tell the other person how many points you are getting. Do not let the other person see your payoff chart. This information is for you only. Also, due to the fact that JK has a working laptop whereas MN does not, you will begin the negotiation with a positive payoff.

You will engage in the negotiation task for 15 minutes or until you reach an agreement, whichever is shorter. At the end of all the study sessions, the top 3 participants with the highest payoff will get a reward of $2.50. You and your counterpart will also get an opportunity to send a message to each other after each offer.

JK's Payoff Chart:

Compensation	Duration
$0 (Payoff = 100 points) ↓ $1000 (Payoff = 0 points)	0 days (Payoff = 100 points) ↓ 10 days (Payoff = 0 points)

Note 1: Due to the fact that JK has a working laptop whereas MN does not, YOU WILL START THE NEGOTIATION WITH A POSITIVE PAYOFF OF +30 POINTS.

Note 2: The payoff for each issue will be calculated as follows:

Payoff for compensation = Maximum compensation payoff – (Negotiated compensation / Maximum compensation x Maximum compensation payoff)
Payoff for duration = Maximum duration payoff – (Negotiated duration / Maximum duration x Maximum duration payoff)
Total payoff = Initial payoff starting point + Payoff for compensation + Payoff for duration

E.g. If the negotiated compensation is $100, the payoff for compensation is 100 points – ($100/$1000 x 100 points) = 90 points. If the negotiated duration is 10 days, the payoff for duration is 100 points – (10 days/10 days x 100 points) = 0 points. The total payoff is 30 points + 90 points + 0 points = 120 points.

JK's Negotiation Points:

Below are some arguments you may use in the negotiation to help you achieve the highest payoff you can. You may use these arguments or ignore them altogether. You may also come up with additional arguments and use them during the negotiation.

Money as compensation
You would prefer to negotiate a lower amount of money for compensation because you cannot afford to pay a lot of money as an undergraduate student. You think it is fair to compensate a lower amount because the laptop seemed quite old and you think it is no longer worth $1000. You also think that it would be unfair to ask you to compensate a lot of money because the spilling of coffee was accidental and everyone makes mistakes.

Duration of time for lending JK's laptop
You would prefer a shorter duration of time for lending your laptop to MN because it would be an inconvenience for you not to have your laptop. You think a shorter duration of time is fair because you also have assignments to complete and many of your important files are in your laptop and not in your personal computer device at home. You also think you are being very generous in offering to lend your laptop in the first place and that MN should not take advantage of your generosity.

To ensure your understanding of the negotiation task, please answer the following questions about the task.
Which of the two issues has a higher utility for you, JK?
Money as compensation
Duration of time for lending JK's laptop
Equal utility
If the negotiated compensation amount and duration is $700 and 2 days respectively, what is your total payoff as JK?
140 points
110 points
90 points
60 points
Which of these outcomes is best for you, JK?
More compensation money, long lending duration
More compensation money, short lending duration
Less compensation money, long lending duration
Less compensation money, short lending duration

Offers from counterpart: $900 / 8 days (Round 1), $850 / 8 days (Round 2), $850 / 7 days (Round 3), $800 / 7 days (Round 4), $800 / 6 days (Round 5), $750 / 6 days (Round 6)

Emotion Expression Manipulations

[Anger expression condition]

This offer makes me really angry. I am going to offer $850 / 8 days ($150 / 2 days).
This is really getting on my nerves. I am going to offer $800 / 7 days ($200 / 3 days).
I am going to offer $750 / 6 days ($250 / 4 days) because this negotiation pisses me off.

[Control condition]

I am going to offer $850 / 8 days ($150 / 2 days).
I am going to offer $800 / 7 days ($200 / 3 days).
I am going to offer $750 / 6 days ($250 / 4 days).