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INTERPERSONAL RELATIONSHIPS, EMOTIONS, AND HARMING: THE ROLE OF COOPERATIVE GOALS

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A thesis submitted in partial fulfilment of the requirements for

the Degree of Doctor of Philosophy

July, 2009

CERTIFICATE OF ORIGINALITY

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ABSTRACT

This study investigated how relationship quality in coworker dyads elicits interpersonal emotions (admiration, sympathy, envy, and contempt), which in turn trigger interpersonal harming behavior in teams, and at the same time, how this relationship-emotion-harming linkage is regulated by the team's cooperative goal (Model 1). Furthermore, I used social comparisons to explain why relationship quality is related to interpersonal emotions (Model 2). I examined the validity of the key constructs of the theoretical models using a sample of coworker dyads from a cosmetic company (Study 1). I tested the models using data from a sample of student teams (Study 2) and a sample of work teams from a telecommunication services company (Study 3). In both studies (Study 2 and Study 3), social relations analyses revealed that relationship quality was negatively related to interpersonal harming; positively related to admiration, sympathy, and envy; and negatively related to contempt. These effects of relationship quality on interpersonal emotions were especially strong in teams with a low cooperative goal and were mitigated in teams with a high cooperative goal. Under conditions of a high cooperative goal, good relationship quality induced admiration, which in turn suppressed interpersonal harming. In contrast, in teams with a low cooperative goal, poor relationship quality elicited contempt, which in turn triggered harming behavior.

Aside from replicating the results in Study 2, Study 3 also confirmed that social comparisons mediated the link between relationship quality and emotions. In particular, upward assimilation (i.e., compared with a higher performer and perceiving a similar

excellence) mediated the association between relationship quality and admiration; downward assimilation (i.e., compared with a lower performer and perceiving a similar fate) mediated the association between relationship quality and sympathy; and downward contrast (i.e., compared with a lower performer and perceiving that a similar fate is unlikely) mediated the association between relationship quality and contempt. However, upward contrast (i.e., compared with a higher performer and perceiving that a similar excellence is unlikely) did not mediate the association between relationship quality and envy. In addition, associations between relationship quality and social comparisons (upward assimilation, upward contrast, downward assimilation, and downward contrast) were buffered under conditions of a high cooperative goal. Specifically, these relationships were stronger under conditions of a low cooperative goal. Finally, I found that social comparisons mediated the interactive effects of relationship quality and cooperative goals on emotions.

These results suggested that the extent to which good or poor work relationships in coworker dyads can stimulate social comparisons and interpersonal emotions among teammates, as well as the extent to which such emotions will be translated into harming behavior toward the focal members are dependent on the team's cooperative context. This research clarifies the mediating mechanism and processes that account for previously established relationship between social exchange quality and reciprocal behavior. I also shed light on how this relationship is shaped by the team's cooperative goal.

ACKNOWLEDGEMENTS

First, I would like to express my wholehearted thanks to my supervisor Dr. Xu Huang who initiated my interest of doing research, which I found incredibly interesting and challenging. Without his encouragement, insightful advice to the theoretical development and design of this study, patient guidance on the analysis of the research data, and helpful comments and tireless revisions, completing this dissertation would have been impossible.

I wish to give my sincere gratitude to Prof. Gerben S. Van der Vegt who guided me gradually in learning and practicing the specific statistical programs of the Social Relations Model. Without his guidance, I would never have accomplished the statistical analyses for this thesis. I am grateful to my colleagues in the University of Groningen for their warm hospitality and instrumental and emotional support during my stay in the Netherlands.

Special thanks also go out to Dr. Warren Chiu for his valuable recommendations on this research. His encouragement and spiritual support made this academic journey more delightful for me. In addition, I would like to show my appreciation to all my classmates and colleagues from the Department of Management and Marketing of the Hong Kong Polytechnic University for their companionship and their advice and support.

Likewise, I would like to extend my thanks to the Remembrance of Grace Church, the pastors and members of the Rainbow Fellowship, old friends from the Wheat

Fellowship, and my coworkers and lovely little angels from the Youth Worship for all their prayers and spiritual support throughout this journey.

I would like to dedicate this dissertation to my parents and my family members for their endless encouragement, unfailing support, unconditional love throughout the years, and for allowing me to pursue my dreams.

Above all, I would like to thank God for giving me the courage, strength, ability, and wisdom to complete this difficult task. I have experienced His grace and faithfulness, and have tasted His heavenly gift during this tough journey. His love has been my strength, and it will always be with me.

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CHAPTER 1

INTRODUCTION

Interpersonal harming refers to behavior that goes against the legitimate interests of another individual (Fox & Spector, 1999; Robinson & Bennett, 1995). This behavior has tremendous negative impacts on organizations and employees in terms of lost productivity, increased costs, turnover, degraded employees' performance, and mental health (Chiaburu & Harrison, 2008; LeBlanc & Kelloway, 2002; Pearson & Porath, 2005). In fact, both practitioners and scholars have attempted to better understand the causes of this behavior. Most of these studies are guided by the social exchange theory, wherein it is argued that harming behavior often results from negative or poor exchange relationships (e.g., Venkataramani & Dalal, 2007). Poor relationships discourage cooperation and interpersonal helping, produce conflicts and misunderstanding, and lead to withdrawal and avoidance with contacts. What is still unclear, however, is the mechanism that transfers such negative experiences from a social exchange relationship to a reciprocal harming behavior.

Researchers have shown that interpersonal harming may be triggered by negative emotions such as anger (Fox & Spector, 1999; Judge, Scott, & Ilies, 2006) and envy (Cohen-Charash & Mueller, 2007). Emotions are brought into play by the actions of others, hence, influencing and being influenced by the course of interpersonal encounters (Parkinson, Fischer, & Manstead, 2005). Interpersonal interactions in a relationship inevitably trigger a variety of interpersonal emotions (Berscheid & Ammazzalorso, 2001; Elfenbein, 2008). Particularly, feelings of admiration, sympathy,

envy, and contempt may strongly influence interpersonal and intergroup behavior (Cuddy, Fiske, & Glick, 2007). Correspondently, even if dyadic relationship quality is conductive to harming behavior at least in part driven by emotions, the investigation of the possible mediating role of emotions in the relationship-harming link remains in its infancy stage.

Emotion theorists have also suggested that the interpretation of an emotion's meaning should involve the examination of the social context, which does not only influence how people experience emotions but also regulates how people behave in response to their emotions (Salancik & Pfeffer, 1978). In a similar vein, the social interactionist perspective on workplace aggression (Andersson & Pearson, 1999; Douglas et al., 2008) maintains that a better understanding of harmful behavior in the workplace requires attention to the role of the work context. Existing literature, nevertheless, has not yet explored how work context acting as a boundary condition regulates the association between relationship quality, emotion, and harming behavior.

In the current study, I used the appraisal theory of emotions (e.g., Arnold, 1960, Frijda, 1986; Lazarus, 1991; Roseman, Spindel, & Jose, 1990; Scherer, 1988; Smith & Lazarus, 1993) to clarify and discuss the mediating role of emotions. In addition, I introduced the concept of contextualization of emotion appraisals (Elfenbein, 2008; Manstead & Fischer, 2001; Parkinson, 2001) to delineate the moderating role of team context in the association between relationship quality and interpersonal harming.

Emotion as a Mediator

Appraisal theory of emotions suggests that emotional reactions depend on the way people interpret and evaluate dyadic relationships. The appraisal involving an

evaluation, whether the dyadic relationship is harmful or beneficial, will lead to a positive or negative affective direction of discrete emotions, which, in turn, may induce or suppress harmful tendencies to the focal person (Weiss, Suckow, & Cropanzano, 1999). For example, when people appraise the relationship (e.g., low-quality relationship) as threatening, stressful (Fox, Spector, & Miles, 2001), or frustrating (Fox & Spector, 1999; Spector, 1978), negative emotions like contempt and envy will be induced. Negative emotions representing immediate responses to the stimulus can energize and motivate subsequent behavior to eliminate threat in a destructive way. This action may harm another individual (Fox et al., 2001). In contrast, when people evaluate the relationship (e.g., high-quality relationship) as enhancing one's well-being, they may experience positive emotions (Spector & Fox, 2002). Given that positive emotions such as admiration and sympathy are especially effective in deterring harmful acts toward the favorable target, people who have experienced positive emotions in interpersonal relationships should be particularly averse to taking actions that would harm the target's interest (Alexander, Brewer, & Herrmann, 1999; Eisenberg et al., 1989; Neuberg & Cottrell, 2002; Smith, 1992). Thus, it is likely that emotions play a central role in the association between relationship quality and interpersonal harming behavior (Spector & Fox, 2002).

Team's Cooperative Goal as a Moderator

Lazarus (1991) and Elfenbein (2008) suggested that situational contexts (e.g., group norms) may provide a regulation process that may influence an individual's ongoing and revised evaluation on the appraisals (i.e., reappraisal), especially since social contexts entail attentional cues, feelings rules, and schemas. Such normative cues

in the social context may determine the interpretation of emotion information affecting the subsequent behavior (Ashforth, 1993; Morris & Feldman, 1996). Equally important, individuals use information from their immediate social environment to interpret events, develop appropriate attitudes, and understand expectations toward and anticipate consequences of their harming behavior (Robinson & O'Leary-Kelly, 1998; Salancik & Pfeffer, 1978). Based on this perspective, people use cues from their social environment to determine their emotional experiences and the extent to which harming behavior is appropriate.

In several studies, researchers have investigated the role that norms and team context play in predicting emotions (e.g., George, 2002; Hochschild, 1979) and harming behavior (e.g., Aquino & Lamertz, 2004). Team norms entailing emotion norms and feeling rules (Hochschild, 1979; Parkinson et al., 2005; Rafaeli & Sutton, 1987) pertain to how team members experience emotions in their interpersonal relationships. These ideas suggest that team members may deliberately suppress the negative feelings in their interpersonal relationship when explicit rules entailed in team norms prohibit such emotional experiences; in contrast, members would be more emotionally responsive when the feeling rules do not constrain such kinds of feelings.

Following this line of reasoning, felt emotions may relate to interpersonal harming depending on the team's context, which entails behavioral norms to suggest to team members whether harming the other is an appropriate means to release their emotions or not. Empirical studies have provided evidence that harming behavior is related to the observed or perceived frequency of their coworkers' engagement in this behavior (Aquino & Douglas, 2003; Glomb & Liao, 2003; Robinson & O'Leary-Kelly,

1998), the behavioral cues of team members in expressing negative emotions (Cole, Walter, & Bruch, 2008), and perceived norms toward organizational deviance (Tepper, Henle, Lambert, Giacalone, & Duffy, 2008). For example, Tepper et al. (2008) suggested that employees with low affective commitment are more likely to perform acts of harming when the organization deviance is normative. These works suggest that individuals may look for social cues (e.g., team's norms) to justify their harmful behavior in response to their felt emotions (Salancik & Pfeffer, 1978). Taken together, it is likely that a contextual factor (i.e., team's context) may modulate the experience of emotions in response to the interpersonal relationship, and likewise regulate the extent to which such interpersonal emotions translate into harming behavior.

For this purpose, I examined the development of harming behavior in coworker dyads within a team context. As team member interactions critically depend on the way team goals are structured (Tjosvold, 1988), I propose a multilevel theoretical model that casts teams' cooperative goals (i.e., members' shared belief that their goals are compatible; Tjosvold, Yu, & Hui, 2004) as mitigating the relationship between dyadic relationship quality, emotions, and interpersonal harming. I anticipate that a cooperative goal, fostering a cooperative context, which entails explicit feeling rules, shared perceptions, and norms of cooperation, will modulate the experience of emotions in response to their relationship quality with the target (George, 2002; Parkinson et al., 2005; Hochschild, 1979). In addition, I consider whether emotions can activate harming behavior, which will also depend on the cooperative behavioral cues in the work context (Salancik & Pfeffer, 1978). Therefore, I propose that cooperative goals play an important role in determining the extent to which good or poor work relationships

between actors and targets can stimulate interpersonal emotions of actors, as well as the extent to which such emotions can be translated into harming behavior toward the targets (see Figure 1 for an overview of the conceptual model 1).

Social Comparison Explanation

In team settings, high- and low-quality within-group relationships exist in a relative term (Henderson, Wayne, Shore, Bommer, & Tetrick, 2008), and individuals' emotional responses are influenced by comparison made between the individual and others in his/her reference group based on a relative standing within the social context and within-group relationships (Firebaugh, 1980; Kelley, 1968). From this perspective, high- or low- quality relationships within a group may result in different patterns of people's comparison with other team members, in turn affecting their emotional responses. In addition, work teams have been argued as mechanisms providing ample opportunities for social comparisons, while the team context can modulate the interpretation of comparison information determining the members' emotional responses (Greenberg, Ashton-James, & Ashkanasy, 2007; Robins & Boldero, 2003; Stapel & Koomen, 2005). Taken together, it is likely that a focal member's emotions toward the other can be partly explained by how he/she compares with others based on the high- or low-quality of relationship and the team context. Drawing from the social comparison theory (Festinger, 1954), I propose that different levels of team members' relationship quality and teams' cooperative goals may jointly influence the team members' comparison with each other, which in turn triggers interpersonal emotions. A social comparison perspective, which argues that the comparison elicited is based on dyadic relationships and teams' cooperative context, allows for a thorough examination

of why team members may feel good or bad toward some of their teammates but not toward others (see Figure 2 for an overview of the conceptual model 2).

Research Objectives and Contributions

In sum, the purposes of this thesis include the following: (1) to examine how quality of interpersonal relationship is related to various emotions and harming behavior; (2) to understand whether emotions mediate the relationship between relationship quality and harming behavior (mediation model); (3) to explore how relationship quality and team's cooperative goals jointly influence interpersonal emotions (moderation model); (4) to investigate how a cooperative goal regulates the mediation effects of emotions on the association between relationship quality and harming behavior in coworker dyads (moderated mediation); and (5) to test whether interpersonal social comparisons mediate the joint effect of relationship quality and cooperative goals on interpersonal emotions (mediated moderation). Figure 1 and Figure 2 depict this study's theoretical models.

This study provides six major contributions. First, this study contributes to the social exchange literature by providing a more refined and comprehensive framework in understanding emotional and behavioral reactions to social exchanges. It looks into the "black box" of social exchange by clarifying the mediating mechanism and processes that account for previously established relationship between social exchange quality and reciprocal behavior. Second, I examine whether interpersonal emotions shaped by the cooperative team goal account for at least part of the reason why coworkers' relationship quality determines a focal employee's harming behavior. This contributes to emotion literature by providing broader support for the argument that

interpersonal emotions are important for the study of behavior in work settings, partly since they provide a critical pathway through which interpersonal and organizational factors affect interpersonal behavior. Third, previous research has demonstrated that both interpersonal emotions (e.g., envy) and interpersonal relationships (e.g., affective relationship) can shape harming behavior in dyads (Cohen-Charash & Mueller, 2007; Venkataramani & Dalal, 2007). However, given that interpersonal relationships closely associate with emotional experiences (Berscheid & Ammazzalorso, 2001; Elfenbein, 2008), and both of them exert important influences on harming behavior, consideration of the role of emotions that may induce reciprocal harming in relational exchanges can better understand the development of interpersonal harming in work teams. Fourth, it contributes to the appraisal theory by showing the crucial role of contextual factors in the processes of relational exchanges and emotion appraisals (Parkinson, 2001; Johns, 2006), which in turn determine the extent to which members harm others. Fifth, this research opens a new avenue for social exchange research by adopting a cognitive perspective, which allows us to understand how both relationship quality and cooperative team goals jointly shape the cognitive processes of comparison, and in turn affect emotional responses in coworkers' exchange relationships. Finally, moving beyond the individual level of analysis into dyads and groups, this project examines a multilevel theoretical model to unveil the dyadic level effects of relationship quality, social comparisons, and emotions on interpersonal harming as contingent on a team's cooperative goal.

Structure of the Thesis

This thesis consists of seven chapters. Chapter 1 presents the introduction of this proposal. Chapter 2 offers a detailed review of previous literature and identifies the research gaps. Chapter 3 illustrates the rationales and theories for the hypotheses and two research models. Chapters 4, 5, and 6 describe the research method, results, and discussion for Study 1, Study 2, and Study 3, respectively. Study 1 (Chapter 4) introduces the specific social network analytical technique -- Social Relations Model (SRM; Kenny, 1994), and provides a construct validation for the two models. Study 2 (Chapter 5) examines Theoretical Model 1. Study 3 (Chapter 6) aims to replicate the results in Study 2 and tests Theoretical Model 2. The last chapter, Chapter 7, concludes the thesis and provides theoretical, methodological, and managerial implications, strengths and limitations, and future research directions.

Figure 1.1. Theoretical Framework 1 (Integrated Moderation and Mediation Model) for Study 2 and Study 3

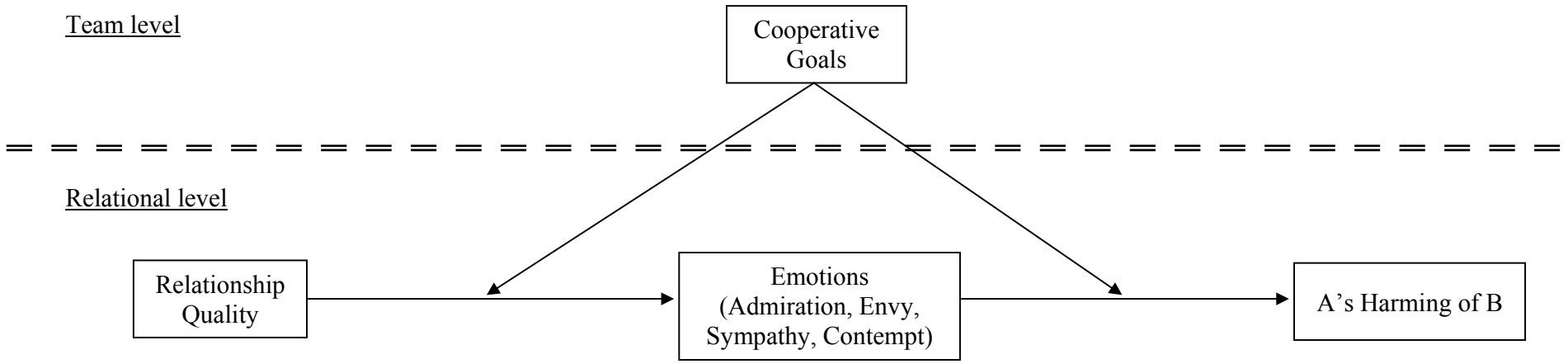
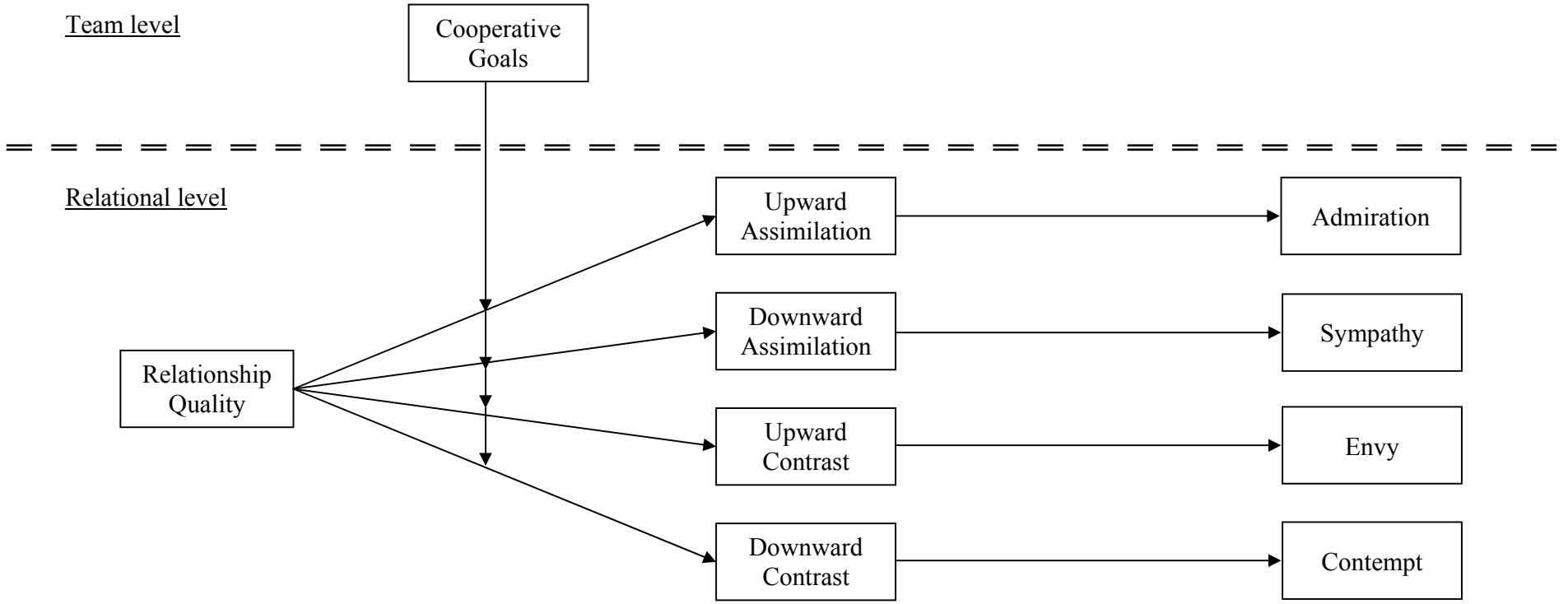


Figure 1.2. Theoretical Framework 2 (Mediated Moderation Model) for Study 3



CHAPTER 2

LITERATURE REVIEW

Before describing the development of the research models, I will briefly review the harming literature and social exchange theory delineating the explanatory framework of the link between relationship quality and reciprocal harming. Based on the appraisal theory of emotions, I will unravel the assumption that good or bad work relationships between actors and targets may stimulate the interpersonal emotions of the actors, which may be translated into harming behavior toward the targets. Drawing from the recent development in social comparison theory, I will describe the possible mediation role of social comparison between the relationship quality and interpersonal emotions. To fulfill the call for "more complex context theories" (Bamberger, 2008), I will introduce two multilevel theoretical models to describe the association of relationship quality, social comparison, emotions, and harming behavior contained within a team's contextual influence.

Interpersonal Harming Behavior

Workplace harming behavior refers to intentional employee behavior that is harmful to the legitimate interests of an organization or another individual (Dalal, 2005; Rotundo & Sackett, 2002). There are generally two types of harming behavior: organizational (actions directed to the organization) and interpersonal dimension (actions directed to a specific person). For example, avoiding work, doing task incorrectly, stealing, and damaging equipment at work are examples of organizational harming (Spector & Fox, 2002; Venkataramani & Dalal, 2007). Yelling at someone, interfering with others' work, getting into arguments and treating others with disrespect, and gossiping about others

behind their back can be classified as interpersonal harming (Cohen-Charash & Mueller, 2007; Venkataramani & Dalal, 2007). Interpersonal harming behavior may be subtle behavior including both active harming (e.g., talking to others about the bad nature of a person) and passive harming (e.g., looking with disrespect), which are directed at another person. Such behavior aims to hinder, over time, the ability of the targeted person to establish or maintain work-related success and favorable reputation. Our focus here is interpersonal harming behavior directed at another individual. In accordance to causal attribution, individuals tend to harm the person they perceive to be responsible for their negative outcomes rather than the general others (O' Leary-Kelly, Griffin, & Glew, 1996). Recently, researchers have paid increasing attention to the relational aspect of harming behavior oriented toward coworkers (Bowler & Brass, 2006; Cohen-Charash & Mueller, 2007). Considering a relational concern is important because harming behavior toward another person depends not only on the general tendency to harm but on interpersonal interactions as well. Thus, patterns of harming may vary according to the characteristics of dyadic relationships. Hubbard, Dodge, Cillessen, Coie, and Schwartz (2001) indicated that a large variance of harming behavior toward a peer could be explained by the context of dyadic relationships, that is, interpersonal harming behavior is a reaction of dyad-specific social experiences within interpersonal relations.

Interpersonal harming involves behavior that "go[es] against the legitimate interests of another individual in the organization" (Venkataramani & Dalal, 2007, p. 952). Similar types of behavior have alternatively been subsumed under labels like antisocial behavior (Robinson & O'Leary-Kelly, 1998), interpersonal aggression (Glomb & Liao, 2003), interpersonal deviance (Robinson & Bennett, 1995), undermining behavior (Duffy,

Ganster, Shaw, Johnson, & Pagon, 2006), and workplace incivility (Lim, Cortina, & Magley, 2008). Fox and Spector (2005) provided in-depth discussions on the similarities and differences between such constructs. Such negative, harmful behavior may degrade the coworkers' attitudes, performance, and mental and physical health (Chiaburu & Harrison, 2008; Lim, et al., 2008; Pearson, Andersson, & Porath, 2000), and it has tremendous negative impacts on an organization's effectiveness (Pearson & Porath, 2005).

Scholars have devoted much effort to uncovering the antecedents of interpersonal harming behavior. Traditionally, this work has focused on personal or situational determinants (Hershcovis et al., 2007). For example, research has shown the importance of individual differences such as negative affectivity, agreeableness, and self-control (Colbert, Mount, Harter, Witt, & Barrick, 2004; Hershcovis et al., 2007; Marcus & Schuler, 2004); of attitudes, feelings, and perceptions like job satisfaction, negative emotion, and perceived organizational justice (Fox, et al., 2001; Judge, et al., 2006; Skarlicki & Folger, 1997); and of contextual features such as the presence of harmful behavior in individuals' social surroundings (Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998).

More importantly, interpersonal harming may also depend on aspects of the dyadic relationship between the actor and the target (Aquino & Lamertz, 2004; Hershcovis & Barling, 2007). The few studies that have paid attention to relational determinants have shown that an actor's envy toward the target and related perceived unfairness (Cohen-Charash & Mueller, 2007), and the quality of relationship between the actor and the target (Venkataramani & Dalal, 2007) influence interpersonal harming. Therefore, the extent to which the actor will enact harmful acts toward the other may depend on the elicited emotion and the characteristics of their relational exchanges.

Social Exchange Processes of Interpersonal Harming

A handful of study adopting a dyadic perspective has shown that the quality of relationship between the actor and the target is negatively related to interpersonal harming (Venkataramani & Dalal, 2007). The theoretical underpinning of this association can be referred to as the social exchange theory (Blau, 1964) and the law of reciprocity (Gouldner, 1960).

Blau (1964) differentiated two types of exchange relationships: economic and social exchange relationships. Economic exchange relationships involve the exchange of economic benefits such as monetary rewards in exchange for work efforts. In contrast, social exchange relationships involve the exchange of socio-emotional benefits other than monetary benefits. These exchanges are associated with personal attachments and feelings of indebtedness, as well as obligations to reciprocate. Hence, people in a positive social exchange relationship tend to render favors to their partners, and such behavior tend to induce an obligation on their partners to reciprocate by providing certain favors in return.

In other words, social exchange refers to a situation wherein an individual does another a favor that will consequently create a feeling of indebtedness on the one who receives help to reciprocate. Norm of reciprocity includes the obligation to accept favors when offered and the obligation to repay by rendering favor (Befu, 1980). Given that favor rendering is especially effective in deterring harmful acts toward the favorable target, an individual who has experienced a positive exchange relationship with the target should be particularly averse to taking actions that would harm the target's interest (Westphal & Clement, 2008). Specifically, a high-quality relationship providing mutual trust, support, information exchange, and resource sharing (Kacmar, Witt, Zivnuska, & Gully, 2003;

Liden & Graen, 1980; Settoon & Mossholder, 2002; Venkataramani & Dalal, 2007) will reduce occurrences of harmful acts. In addition, Venkataramani and Dalal (2007) suggested that a high-quality relationship tends to reduce the likelihood of harming behavior as the cost of losing a valued relationship is higher than the cost of losing a low-quality relationship (Vetlesen, 1994). Moreover, Thau, Aquino, and Wittek (2007) suggested that as social exchange relationships build trust over time, such trust prohibits harming behavior by reducing self-interest and promoting the other's interest.

Although the norm of reciprocity can reduce harming behavior between team members, it also compels negative reciprocity resulting from the negative exchange in relationships (Gouldner, 1960; Westphal & Zajac, 1997). Negative reciprocity reflects a cognitive motivation to maintain balance or equity in social relationships (Greenberg, 1980; Westphal & Zajac, 1997). "Equity in social exchange is needed for continuous social interaction; when this expectation is frustrated, the social exchange situation is threatened" (Westphal & Zajac, 1997, p. 164). To reduce such threat, harmful acts as repayment for injury become likely. Therefore, individuals who experience a negative relationship may reciprocate harmful behavior toward the target in an effort to restore equity in the relationship (Bies & Tripp, 2005) and to defend themselves through acts of revenge or retaliation (Aquino & Thau, 2009). In addition, low-quality relationships usually manifest in dislikes and conflicts, eventually leading to such harming behavior (Venkataramani & Dalal, 2007).

In fact, the perceived obligation to positively or negatively reciprocate, and to reduce or increase harmful actions is particularly strong in repeated interactions and dyadic exchanges. Therefore, a person who engages in a high-quality exchange relationship with

another (i.e., the target) may exhibit less interpersonal harming toward the target, whereas a person who engages in a low-quality exchange relationship may display more harming behavior toward their counterpart.

Although the notion of reciprocity posits that people may deter or enact their harming behavior in good or poor dyadic relationships, we still know little about the psychological mechanism that translates such positive or negative experiences in the exchange relationship into forces that suppress or induce reciprocal harming behavior. Exchange theorists have suggested that emotion may be one of the key mechanisms to explain the relationship between social exchange and reciprocal behavior. For example, people tend to feel gratitude or liking (Westphal & Clement, 2008), and exhibit a "punitive sentiment" (Carpenter, Matthews, & Ong'ong'a, 2004, p. 415) or feelings of dislike (Venkataramani & Dalal, 2007) in response to the positive and negative experiences in social exchange relationships. Such kinds of feelings may motivate their positive reciprocity by deterring the harming and negative reciprocity by increasing their harmful actions, implying the possible mediation of emotions between the exchange relationship and the reciprocal harming behavior.

The Role of Emotions

The mediation role of emotions receives some support from the appraisal theory of emotions, which suggests that stimuli are appraised as harmful or valuable, challenging or threatening, desirable or undesirable, thus determining the person's emotional states (e.g., Arnold, 1960, Frijda, 1986; Lazarus, 1991; Scherer, 1988; Smith & Lazarus, 1993). Emotion elicitation involves two stages of appraisal processes (Weiss et al., 1999). In the first stage, an actor may assess whether his/her personal goals are enhanced or hindered in

a specific situation. This primary appraisal involves a gross evaluation of harm or benefit, which then leads to the general positive or negative affective direction of the emotion. The second stage involves the assessment of the causes of the goal enhancement or hindrance in light of the actions of another person. This secondary appraisal involves the attribution of the causes and the evaluation of the context of the stimulus in interpreting and understanding the meaning of the appraisal, consequently resulting in particular emotions (i.e., discrete emotions). Different emotional responses may in turn signal to individuals that different actions are required to deal with the current concern based on the appraisal processes. Accordingly, it suggests a causal relationship between appraisal, emotions, and behavior. When a focal individual is exposed to an eliciting stimulus and appraises the stimulus for its meaning, he/she will subsequently experience certain emotions, followed by behavioral consequences. This appraisal-emotion-behavior sequence suggests that the effects of cognitive appraisal on behavior may be mediated by emotions.

One of the greatest emotional impacts on workers relates to interactions with coworkers (Boudens, 2005). On-going interactions are considered as an integral relationship quality between two persons (actor and target), which may form an important source of the stimulus for appraisal. When the actor appraises the relationship as good, he/she is more likely to evaluate their relationship as beneficial to personal goal and attribute positive causes to the target, further resulting to more positive emotions toward the target. In contrast, when the actor assesses the relationship quality as poor and harmful, he/she is more likely to attribute such negative situation as caused by the target, consequently leading to more negative interpersonal emotions. Previous studies affirm this notion, showing that positive social relationships convey positive affect; however, negative

social relationships are more related to a large array of aversive emotional consequences (e.g., Baumeister & Leary, 1995; Homans, 1951; Thibaut & Kelley, 1959).

Emotional responses prepare the actor by setting body in an appropriate state of readiness for action (Frijda, Kuipers, & Schure, 1989). Harmful acts have been shown to be related to four particular discrete emotions: admiration, sympathy, envy, and contempt (Cuddy et al., 2007). Discrete emotions, different from the unidimensional view of positive and negative affect, are conceptualized as discretely different states having different implications on behavior (Roseman, Wiest, & Swartz, 1994). For example, admiration and sympathy have been shown to be more related to cooperative and pro-social behavior, which may reduce the likelihood to exhibit harming behavior to the other (Alexander et al., 1999; Eisenberg et al., 1989; Neuberg & Cottrell, 2002; Smith, 1992). Admiration, which reflects identification with the target, is seeing the target as an in-group member and role model (Cuddy et al., 2007; Lockwood & Kunda, 1997). Meanwhile, sympathy, which is a driving force for altruistic behavior (Eisenberg et al., 1989; Smith, 1992), aiming at alleviating others' distress, may inhibit the actor's passive or active harmful acts toward the target (Allred, Mallozzi, Matsui, & Raia, 1997; Baumeister & Boden, 1998; Cuddy et al., 2007).

Envy and contempt, categorized as antagonistic emotions (Tran, 2007), may enhance potential harming acts. Envy may increase harming because it constitutes an imminent threat to an individual's self-esteem and identity (Cohen-Charash & Mueller, 2007; De Dreu & Weingart, 2003; Salovey & Rodin, 1984; Smith et al., 1996; Smith, Parrott, Diener, Hoyle, & Kim, 1999). Contempt may be positively associated with

harming because it often develops on top of one's anger, implying the co-occurrence of the inclination to attack, derogate, and exclude a person (Fischer & Roseman, 2007).

Taken together, emotions may play a central role in the association between relationship quality and interpersonal harming behavior (Spector & Fox, 2002). Attesting to this notion, previous works have found that affective responses mediate the effects of appraisal on counterproductive behavior (Fox & Spector, 1999; Fox et al., 2001; Spector & Fox, 2002). Although these scholars have examined the role of emotions in counterproductive behavior, they have mainly focused on the antagonistic emotions with hostile characteristics such as anger. Much less is known about the influences of different discrete emotions on interpersonal harming, the ways in which emotions are generated in a relational context, and how they may be influenced in real-world settings (Roseman, 2001).

From the preceding discussion, we can see that relationship appraisals may trigger discrete emotions. However, we know little about the cognitive processes that may help better understand how such specific emotions develop in coworker dyad beyond that which is explained by the exchange relationship quality. I therefore propose that interpersonal social comparisons may provide some insights into understanding the associations between relationship quality and interpersonal emotions.

Social Comparison Theory

Social comparison theory suggests that people have the fundamental need to relate their attitudes, abilities, and performance to those around them (Festinger, 1954). More than 50 years of research has shed considerable light on the general processes by which people compare themselves to others (Buunk and Gibbons, 2007). As outlined in the review of Buunk and Gibbons (2007), early studies have generally found that individuals

perceive upward comparison (i.e., comparison with others who are doing better) as threatening and downward comparison (i.e., comparison with others who are doing worse) as self-affirmative. For this reason, upward comparison has been found to elicit defensive responses, whereas downward comparison has been found to elicit positive responses (e.g., Gibbons & Gerrard, 1991; Salovey & Rodin, 1984).

A growing body of research, however, has indicated that the affective consequences of a given social comparison may not be attributable to upward or downward directions (Buunk, Collins, Taylor, & VanYperen, 1990). Both upward and down comparisons may induce positive or negative affective responses. Buunk et al. (1990) argued that comparing with the other who is doing poorly may indicate one's own superiority, thus producing positive feelings. Nevertheless, it may remind one's possible worse future, thus inducing anxiety. Likewise, comparing with a similar other who is doing well may show one's own inferiority, which then leads to negative feelings. However, one may get inspired and motivated by this positive role model (Helgeson & Taylor, 1993). Apparently, both upward and downward comparisons may lead to positive or negative emotions, but they are not solely based on the simple upward or downward directions. Therefore, there is no simple answer to whether upward or downward comparisons are good or bad for individuals.

Indeed, recent findings have highlighted both upward and downward comparisons as having their "ups and downs" (Buunk et al., 1990). Their consequences have been shown to largely depend on the extent to which individuals perceive themselves as likely to become similar or dissimilar to the comparison target (i.e., "assimilation/contrast"; Brewer & Weber, 1994; Buunk & Gibbons, 2007; Buunk & Ybema, 1997; Van der Zee, Buunk, Sanderman, Botke, & van den Bergh, 2000). Assimilation refers to a comparison process

wherein people regard themselves as similar to the target, the feeling of attraction toward the target, and the perception that they will end up in a similar situation in the future. On the other hand, contrast refers to a comparison process wherein people focus on the differences between themselves and the target, and the attempt to distance away from the target (Ybema, Buunk, & Heesink, 1996). Specific types of social comparison may evoke discrete emotions (Buunk & Ybema, 1997; Carmona, Buunk, Peiró, Rodríguez, & Bravo, 2006; Smith, 2000). Specifically, upward assimilation may lead to positive emotions, such as admiration or inspiration, as people share the glory of successful others and perceive others' success as attainable for themselves (e.g., I may be as good as she is). Upward contrast may provoke envy or resentment as people view others as better off as competitors, reminding them that they are inferior (e.g., I am worse and I am unable to measure up). Downward assimilation may cause sympathy or pity because the actors view the failure of others who are worse off as a possible future for themselves, suggesting that their status may deteriorate (e.g., I may become as worse as she is). Downward contrast may elicit contempt as it prompts feelings of superiority together with a negative evaluation on the other (e.g., I am better and she is unable to measure up).

Another body of research studying the cognitive perspective of social comparison suggests that the activation of self-construals, which can be shaped profoundly by contextual factors, is important in determining social comparison (Gardner, Gabriel, & Hochschild, 2002; Kemmelmeier & Oyserman, 2001; Marx, Muller, & Stapel, 2005; Mussweiler & Ruter, 2003; Mussweiler, Rüter, & Epstude, 2004; Schwinghammer, Stapel, & Blanton, 2006; Stapel & Koomen, 2001). Social comparison responses are largely dependent on the activation of the independent self (I), relational self (We), or collective

self (We). The activation of self-construals can be explained by the mechanism of information accessibility during social comparison (Mussweiler et al., 2004). The selective accessibility model proposed by Mussweiler et al. (2004) suggests that social comparison involves a selective information search. When information on personal self-construal (independent self) is made accessible by priming the word "I," contrast effects of social comparison will be the likely result. On the contrary, when information on relational or collective self-construal (interdependent self) is made accessible by priming the word "We," assimilative effects of social comparison are more likely to occur (Stapel & Koomen, 2001). Assimilation may occur when the collective or relational self is dominant as the "We" priming is likely to activate an integration mindset, in which information focusing on the similarity with self and others is emphasized. Therefore self-perception is assimilated (perceived as similar) to the comparison target. On the other hand, contrast may occur when the independent self is dominant as the "I" priming is likely to activate a differentiation mindset, in which self-distinctiveness is emphasized, and information about dissimilarity between one and the other is focused. As a result, self-perception is contrasted (perceived as dissimilar) away from the comparison target. The aforementioned views have received some empirical support. For example, Gardner et al. (2002) found that priming relational or collective self-construal in a dyadic relationship or in a group situation leads to increasing assimilative comparisons and reducing contrastive comparisons.

In addition, emerging evidence suggests that self-construal can be largely shaped by external contexts such as relational context and group context (Gardner et al., 2002; Stapel & Koomen, 2001; Stapel & Koomen, 2005). For example, Aron, Aron, and Smollan (1992) suggested that when people are in a good relationship, their relational self often includes

overlapping connections with the closest other, resulting in assimilation to the self because the self-definition has been expanded to include those dyadic relationships as a core representation of self (Gardner et al., 2002). In high-quality relationships, assimilative comparisons (both upward and downward) are more likely expected. Contrastive comparisons (both upward and downward) are less likely to happen because positive relationships may activate shared schemas or relationship-specific interpersonal goals that will increase levels of identity with the target, as a part of their own self-identity (Aron, Aron, Tudor, & Nelson, 1991; Baldwin, 1992; Shah, 2003). In contrast, low-quality relationships may activate the independent self, resulting in increasing contrastive comparisons and decreasing assimilative comparisons (both upward and downward). As earlier noted, contrastive and assimilative comparisons may result in discrete emotions (e.g., admiration, empathy, envy, and contempt). Together, social comparison may play an important process, which can likewise uncover the drawing out of discrete emotions in relation to a high or low level of relationship quality.

So far, we have reviewed appraisal theory and social comparison theory. Both explain the mediation role of emotions and social comparisons in associations between relationship quality and interpersonal harming, and between relationship quality and interpersonal emotions, respectively. Recent literature, however, suggests that emotional processes and social comparison processes are deeply contextualized (Elfenbein, 2008; Stapel & Koomen, 2005). Thus, it is necessary to identify a more refined model showing the association of relationship quality, social comparison, emotions, and harming behavior among teammates in relation to the team, or the context by which such processes take place.

The Role of Team Context

Both emotion appraisal and social comparison theorists suggest that the interpretations of the meaning of the appraisal processes and the social comparison information should involve the examination of the social context that extends beyond the self and the other (Elfenbein, 2008; Buunk & Gibbons, 2007; Greenberg et al., 2007; Manstead & Fischer, 2001; Parkinson, 2001; Parkinson et al., 2005; Stapel & Koomen, 2005). First, according to the appraisal theory of emotions, Lazarus (1991) and Elfenbein (2008), for example, suggested that situational contexts may provide feeling rules and emotional schemas to regulate the appraisal processes (i.e., reappraisal). In other words, situational influences help individuals alter their emotions (Lazarus, 1991) and reevaluate the situation (e.g., cognitive change; see Gross, 1998; Spencer & Rupp, 2009), thus determining the subsequent behavior. Within such reappraisal process, people's emotions are shaped by the ambience in the work groups that provides guidance about which emotions are desirable to experience (i.e., feeling rules), because people often look to others for clues to how they should feel (Sutton, 1991). In addition, situational influences are capable of altering emotional schemas and cognitions (Gross, 1998) by providing new responses to the stimulus evaluations, especially when the stimulus is potentially harmful or beneficial to one's self-interests (Elfenbein, 2008). For example, a learning climate encourages students to reappraise mistakes as their own learning opportunities, while a group's service norm motivates service employees to view customers as small children who cannot be responsible for their bad behavior. Such kind of reappraisal engendered in the social context can effectively influence the experiences and meanings of emotions, and their downstream effects on behavior.

Stated differently, the context (e.g. group norms; Elfenbein, 2008) entails pre-existing conventions, feeling rules, and display rules which define what emotions are appropriate to feel and provide guidelines about proper emotional responses (Hochschild, 1979; Parkinson et al., 2005). In addition, social context may determine the interpretation of emotional information, which may affect the subsequent behavior (Ashforth, 1993; Morris & Feldman, 1996). Together, social context does not only influence how people experience and express emotions, it also regulates how people behave in response to their emotions (Salancik & Pfeffer, 1978). In this regard, social context acts as a regulation force in overriding automatic processing of appraisals, emotions, and behavior (Elfenbein, 2008; Grandey, 2000). According to this perspective, people use cues in their social environment to determine their emotional experiences and the extent to which harming behavior is appropriate. To recap, relationship appraisal may arouse distinct emotions, which may determine the levels of harmful behavior in dyads. In addition, this process is regulated by the social context.

Therefore, the extent by which emotional responses of exchange quality determine harming behavior depends on the contextual influence. However, empirical examination, which captures multiple levels of analysis including intra-individual, interpersonal, and group processes to predict harming, remains limited in existing literature. Such limitation emphasizes a need for a multilevel theoretical model to delineate the dyadic effects of both relationship quality and emotions on interpersonal harming, and the ways by which such relationship-emotion-harming linkage is context dependent.

Second, social comparison in response to the dyadic relationship quality may also be determined by the team context (Stapel & Koomen, 2005). Stapel and Koomen (2005)

extended the social comparison literature by showing self-construals as being activated by the external environment such as in cooperative contexts. This experimental study showed that when participants were told they were involved in a study of cooperative performance (cooperative context), upward comparison information could lead to more positive responses (upward assimilation). In contrast, when participants were told they were involved in a study of competitive performance (less cooperative context), upward comparison information led to less positive responses (upward contrast). Numerous studies have found that a cooperative group context activates an integrated mindset among group members, which may increase assimilative but reduce contrastive comparisons. Meanwhile, a less cooperative group context activates a differentiation mindset, which may increase contrastive but reduce assimilative comparisons (Buunk, Zurriaga, Peiro, Nauta, & Gosalvez, 2005; Stapel & Koomen, 2001; Stapel & Koomen, 2005). The team's cooperative context is a social-cognitive construct, referring to the "shared perceptions" of a workgroup that team members identify with, and thus molding the members' cognition of social comparison (Anderson & West, 1998; Buunk et al., 2005; Zohar & Luria, 2004). It is acknowledged that a social context may strongly determine the interpretation of comparison information (Stapel & Koomen, 2005). Such contextual influence (e.g., social and normative standards in team) may be a stronger predictor of cognitive and behavioral responses, which may overwhelm relational effects in relationships (Venkataramani & Dalal, 2007). Thus, a team's cooperative context may regulate how people compare with their co-team members depending on their relationship quality with the comparison target.

Currently, there is considerable and consistent evidence showing that assimilative or contrastive social comparison depends largely on one's self-concept, namely, the

interdependent self or the independent self. However, to the best of our knowledge, nearly all studies investigating the effects of self-construal activation on social comparison were conducted in experimental laboratories. They have never been empirically tested in real world settings, particularly in a work environment. In addition, assimilative or contrastive comparison may be jointly determined by cognitive-based contexts of cooperation and relationship among team members (Stapel & Moomen, 2005). However, research so far has not examined the interactive effects of relationship quality and cooperative team context on social comparison.

Conclusion

Based on the reviewed literature in this chapter, five research gaps are identified. First, although it is acknowledged that both emotions and relationship quality have impacts on interpersonal harming (Cohen-Charash & Mueller, 2007; Venkataramani & Dalal, 2007) while some conceptual works propose that emotions may play a mediating role to induce harming in the affective relationship (Averill, 1983; Vetlesen, 1994; Westphal & Clement, 2008), no attempt has been made in examining the emotional mechanisms that activate reciprocal harming in social exchange relationships. Second, some scholars have begun to pay attention to the role of emotions in counterproductive behavior; however, they mainly focus on antagonistic emotions such as anger (e.g., Spector, 1998). Much less is known about the influences of other types of emotions on interpersonal harming, the ways in which emotions are generated in a relational context, and how they may be influenced in real-world settings (Rosemen, 2001). Third, despite previous studies have revealed that how people appraise relationship quality in coworker dyad may elicit interpersonal emotions, there are only a few research considering the cognitive processes (e.g., social

comparison) in identifying specific emotions developed based on their exchange quality. Fourth, there exists ample evidence showing that the extent to which emotional and comparison responses of exchange quality determine harming behavior is context-dependent. Nevertheless, the vital role of context in the linkage of relationship quality, comparison, emotions, and interpersonal harming has been neglected in the current literature. What is lacking to date, is a multilevel theoretical examination moving beyond the individual level of analysis into dyads and groups to unveil the relational effects of relationship quality, comparison, and emotions on harming behavior in a team context. Finally, past studies on social comparison have suggested that comparison responses may be determined by the context of cooperation and relationship among teammates (e.g., Stapel & Moomen, 2005). However, none of these has considered the interactive effects of cooperative team context and relationship quality on social comparison, and how such comparison may in turn affect team members' emotions.

To address these research gaps, I propose to investigate four issues. First, consistent with the conceptual works of social exchange and the appraisal theory of emotions, I will examine how relationship quality elicits different emotions, which in turn determine the extent to which a team member engages in or avoids harmful acts to another member. Second, I propose that team context that casts cooperative team goals may regulate (1) how relationship quality is related to interpersonal emotions, and (2) the mediating effects of emotions on the association between relationship quality and harming behavior in coworker dyads. This is because a cooperative team context provides guidance about which emotions are desirable to experience (Elfenbein, 2008; Hochschild, 1979; Manstead & Fischer, 2001; Parkinson et al., 2005; Sutton, 1991) and what behavior is expected in a

team (Salancik & Pfeffer, 1978). Third, building on the social comparison theory, I suggest that relationship quality and cooperative team goals jointly influence the patterns of team members' comparison with others, which in turn may affect their interpersonal emotions. Finally, to move beyond the individual level of analysis to the framework of dyads and groups, I will examine a multilevel theoretical model to understand how a cooperative team goal influences interpersonal processes involving relationship quality, social comparison, emotions, and harming behavior. The development of the hypotheses will be presented in the next chapter.

CHAPTER 3

THEORY AND HYPOTHESES

The above review suggests a possible link between relationship quality, specific emotions, and harming behavior as contingent on a team's cooperative goal. More specifically, high- or low-quality relationship may trigger specific emotions resulting in harming behavior. Such mediation relationship depends on the team's cooperative goal. In addition, a team's cooperative goal may also regulate the association between relationship quality and social comparisons among team members that may result in different emotional responses. Therefore, in the present study, I investigate the following: (1) how the quality of interpersonal relationship is related to various emotions and harming behavior; (2) whether emotions mediate the relationship between relationship quality and harming behavior (mediation model); (3) how relationship quality and team's cooperative goals jointly influence interpersonal emotions (moderation model); (4) how cooperative goals regulate the mediation effects of emotions on the association between relationship quality and harming behavior in coworker dyads (moderated mediation); and (5) whether interpersonal social comparisons mediate the joint effect of relationship quality and cooperative goals on interpersonal emotions (mediated moderation).

Relationship Quality and Harming Behavior

Relationship quality, similar to the concept of friendship, refers to a close personal relationship characterized by openness, closeness, desirability to enjoy the other's company, and attachment, either for instrumental or emotional purpose in fullfiling personal objectives (Rawlins, 1992; Wong, Tinsley, Law, & Mobley, 2003). We investigate

interpersonal relationship in organizations where people interact and develop social relationships beyond the fulfillment of work duties.

Venkataramani and Dalal (2007) have suggested that the quality of relationship between the actor and the target is negatively related to interpersonal harming. The theoretical underpinning of this association is the social exchange theory (Blau, 1964) and the law of reciprocity (Gouldner, 1960). Social exchange refers to a situation when an individual does another a favor. Herein, the situation creates a feeling of indebtedness on the one who receives help to reciprocate. The norm of reciprocity includes the obligation to accept favors when offered and the obligation to repay by rendering favor (Befu, 1980). Given that favor rendering is especially effective in deterring harmful acts toward the favorable target, an individual who has experienced a positive exchange relationship with the target should become particularly averse to taking actions that would harm the target's interest (Westphal & Clement, 2008). Specifically, a high-quality relationship providing mutual trust, support, information exchange, and resource sharing (Kacmar et al., 2003; Liden & Graen, 1980; Settoon & Mossholder, 2002; Thau et al., 2007; Venkataramani & Dalal, 2007) will reduce the occurrence of harmful behavior.

Although the norm of positive reciprocity can reduce harming behavior between team members in a positive relationship, it compels negative reciprocity in response to the negative exchange relationship (Gouldner, 1960; Westphal & Zajac, 1997). Negative reciprocity reflects a cognitive motivation to maintain balance or equity in social relationships (Greenberg, 1980; Westphal & Zajac, 1997). "Equity in social exchange is needed for continuous social interaction. When this expectation is frustrated, the social exchange situation is threatened" (Westphal & Zajac, 1997, p. 164). To reduce such threat,

harmful acts as repayment for injury are likely to occur. Therefore, individuals who experience negative relationships are likely to exhibit harmful behavior toward the target in an effort to restore equity in the relationship (Bies & Tripp, 2005) and to defend themselves through acts of revenge or retaliation (Aquino & Thau, 2009).

Based on above reasoning, I predict that a person engaging in a high-quality exchange relationship with another (i.e. the target) will exhibit less interpersonal harming toward the target, whereas a person who engages in a low-quality exchange relationship with the target will display more harming behavior to the counterpart.

Hypothesis 1: Relationship quality is negatively related to interpersonal harming behavior in dyads.

Although the notion of reciprocity posits that people may deter or enact their harming behavior in good or poor dyadic relationships, we still know little about the psychological mechanism translating such positive or negative reciprocity into forces that suppress or induce harming behavior. Exchange theorists have suggested that emotion may be one of the key mechanisms in explaining the relationship between social exchange and reciprocal behavior. For example, people tend to feel gratitude or liking (Westphal & Clement, 2008), and exhibit a "punitive sentiment" (Carpenter, Matthews, & Ong'ong'a, 2004, p. 415) or feelings of dislike (Venkataramani & Dalal, 2007) in response to positive and negative experiences in social exchange relationships, respectively. Such feelings may motivate their positive reciprocity by deterring harming and negative reciprocity by increasing their harmful actions, implying the possible mediation role of emotion between the exchange relationship and the reciprocal harming behavior. Nevertheless, the investigation of this mediation relationship (and empirical testing thereof) is still in its

infancy. I propose that the appraisal theory provides a comprehensive explanatory framework delineating the intermediating role of interpersonal emotions in the association between relationship quality and harming behavior.

Interpersonal Relationships and Emotions

The appraisal theory of emotions suggests that the appraisal of the stimulus as harmful or valuable, challenging or threatening, desirable or undesirable may determine the person's emotional state (e.g., Arnold, 1960, Frijda, 1986; Lazarus, 1991; Scherer, 1988; Smith & Lazarus, 1993). Specifically, when the person appraises the stimulus as caused by the other person, particular emotions will be elicited and directed to that person (i.e., interpersonal emotions). Such interpersonal emotions can be categorized into "contacting emotions" or "attacking and excluding emotions." Contacting emotions (e.g., love, admiration, and sympathy) bring individuals to become attached and move toward the target, while attacking and excluding emotions (e.g., anger, envy, and contempt) drive people away from the target (Rosemen, 2001, p.71). Consequently, different emotional responses may signal individuals to manifest different interpersonal actions (e.g., harming the other), a means to deal with the current concern from the evaluation of the stimulus (Frijda et al., 1989; Lazarus & Folkman, 1984; Roseman, 1984).

A stimulus that can arouse appraisal need not literally be an occurring event but can also be a stable environment, particularly, when the environment involves other people (Elfenbein, 2008). One of the greatest emotional impacts on workers relates to stimuli from interactions with coworkers. Most of the previous research tended to focus implicitly on a particular interaction or incident that elicits emotions. For example, Fox et al. (2001) found that interpersonal conflicts in coworkers' relationships may be appraised as threatening,

and thus arouse negative feelings of anxiety and anger (Spector, 1998) toward the target. In reality, two individuals may deal with each other on a daily basis in the workplace and encounter many situations that trigger different emotions on an episodic basis, but they may not define their relationship with each other in terms of these episodic interactions. However, when both parties recognize the on-going interactions to be integral to their relationship, the ways by which they appraise their relationship quality may greatly affect the ways they feel toward their counterpart. This features longer duration of emotions and more patterning behavioral response than episodic interactions (Aquino & Lamertz, 2004). To support this notion, Boudens (2005) found that intense emotions could be evocated while maintaining relationships with coworkers. In other words, the social exchange relationship between two persons can form an important source of the stimulus for appraisal. In particular, because relationship quality can only be evaluated in conjunction with a corresponding target, the emotions elicited under the relationship appraisal are necessarily directed to the target. In a similar vein, research on emotions also suggests that emotions are typically target-directed and give rise to behavioral responses relevant to these targets (Frijda, 1993; Isen, 1984; Lazarus, 1991). Based on these rationales, I propose that how the actor appraises their relationship quality may determine in part the emotional responses (i.e. interpersonal emotions) toward the target (Fischer & Roseman, 2007). In addition, these interpersonal emotions, departed from episodic emotions of relatively brief duration (Ekman & Davidson, 1994; Frijda, 1994), are relatively long-lasting and may contribute to a more patterning behavioral response (Tran, 2007).

Studies on emotion and affect have traditionally focused on two broad affect variables (positive and negative affect) while giving little attention to specific emotions

(Weiss & Cropanzano, 1996). Departing from prior research, I focus on specific interpersonal emotions as distinct emotions can help provide wider explanations for specific interpersonal behavior (Lee & Allen, 2002). For example, anger and guilt are both negative emotions. Yet, whereas anger is related to aggression, guilt is not (Baron & Richardson, 1994). Therefore, ignoring specific emotions in favor of general positive and negative emotions will decrease their predictive power on behavior. Specifically, in the current study, I investigate the effects of two emotions from "contacting emotion category" (i.e., admiration and sympathy) and two emotions from "attacking and excluding emotion category" (i.e., envy and contempt) on interpersonal behavior.

Previous empirical studies have demonstrated that these four emotions can predict interpersonal behavior in groups or in relational contexts (Cuddy et al., 2007). In general, they may significantly influence organizational behavior (Forgas & George, 2001; Pelled & Xin, 1999) and, in particular, a harming behavior (Baumeister & Boden, 1998; Keltner, Ellsworth, & Edwards, 1993; Lee & Allen, 2002). Admiration and sympathy have been shown to be related more to cooperative and pro-social behavior, which may reduce the likelihood of exhibiting harming behavior to others (Alexander et al., 1999; Eisenberg et al., 1989; Neuberg & Cottrell, 2002; Smith, 1992). In contrast, envy and contempt, categorized as antagonistic emotions (Tran, 2007), may enhance potential harming acts.

For the purpose of examining the emotional consequences of dyadic relationship for interpersonal harming, I expect that relationship quality between two individuals may determine the extent to which they engage in interpersonal harming toward each other, at least in part, because their quality of relationship triggers specific interpersonal emotions (admiration, sympathy, envy, and contempt). These emotions may activate or suppress

harmful behavior (Cuddy et al., 2007). Consistent with the appraisal theory (Roseman & Smith, 2001), when people appraise the relationship as threatening and stressful (Fox et al., 2001) or frustrating (Fox & Spector, 1999; Spector, 1978) (e.g., low-quality relationship), attacking and excluding emotions such as envy and contempt will be induced. These negative emotions, representing immediate responses to the stimulus, energize and motivate subsequent behavior to eliminate threat in a destructive way. Under such circumstances, harming another individual is likely (Fox et al., 2001). On the contrary, when people evaluate the relationship as enhancing one's well-being (e.g., high-quality relationship), contacting emotions such as admiration and sympathy will be experienced (Spector & Fox, 2002). Given that these positive emotions are especially effective in deterring harmful acts toward the favorable target, people who have experienced these emotions in the interpersonal relationship should be more averse to taking actions to harm the target (Alexander et al., 1999; Eisenberg et al., 1989; Neuberg & Cottrell, 2002; Smith, 1992). Thus, emotions may play a central role in the association between relationship quality and interpersonal harming behavior (Spector & Fox, 2002).

In sum, from a social exchange perspective, relationship quality can induce positive or negative reciprocity which determines interpersonal harming. From an appraisal perspective, relationship quality can elicit interpersonal positive or negative emotions. Taken together, the dyadic social exchange signals the actor to reciprocate favor or harm to the target, while emotions elicited from relationship appraisal can motivate such reciprocal behavior. Specifically, positive reciprocity (decreased harming) is likely to happen when a high-quality relationship induces the feelings of admiration and sympathy; negative

reciprocity (increased harming) likely occurs when a low-quality relationship induces envy and contempt. Based on the above evidence, I draw the following hypotheses:

Hypothesis 2: Relationship quality is positively related to admiration (2a) and sympathy (2b), and negatively related to envy (2c) and contempt (2d).

Hypothesis 3: Emotions (admiration, sympathy, envy, and contempt) mediate the negative association between relationship quality and interpersonal harming behavior in dyads.

The Moderating Role of Team's Cooperative Goals

So far, I have established the link between relationship quality, emotions, and interpersonal harming. Appraisal theory also predicts reciprocal harming as a result of an exchange quality that may be mitigated (or intensified) when the social context facilitates the inducement of positive emotion (or negative emotion) and restrain negative emotions (or positive emotion). Recent research on emotion and appraisal emphasizes the fact that emotion appraisals and processes are strongly influenced by the context in which they emerge and develop (Elfenbein, 2008; Manstead & Fischer, 2001; Parkinson, 2001; Parkinson et al., 2005). Lazarus (1991) and Elfenbein (2008), for example, have suggested that the social environment, which engenders feelings rules, emotional schemas, and behavioral norms, does not only influence the ways people experience emotions in the appraisal processes, but it also regulates how people behave in response to their emotions (Salancik & Pfeffer, 1978). In a similar vein, the social interactionist perspective on workplace aggression (Andersson & Pearson, 1999; Douglas et al., 2008) maintains that a better understanding of harmful behavior in the workplace requires attention to the role of the work context. It is argued that individuals use information from their immediate social

environment to interpret events, develop appropriate attitudes, and understand expectations toward and consequences of their behavior (Salancik & Pfeffer, 1978). According to this perspective, people use cues in their social environment to determine their emotional experiences and the extent to which harming behavior is appropriate. Thus, a more complete theory of the association between relationship appraisal, emotions, and interpersonal harming among teammates requires a consideration of the team context in which such behavior takes place.

In the current study, I focus on the role of the team's cooperative goal because a number of emotion appraisal literature showed that appraisal processes may highly depend on the evaluation of goal relevance and goal congruence (Smith & Lazarus, 1993), and the facilitation of goal progress (Fitzsimons, 2006). In addition, a cooperative goal emphasizing team harmony, cohesion, mutual support, and shared identity discourages competitive and harming behavior (Buunk et al., 2005; Tjosvold, Hui, & Yu, 2003; Tjosvold et al., 2004). A cooperative team goal reflects the team members' shared belief that their individual goal achievements are positively related, and that they can reach their goals only when the others also reach their goals (Tjosvold et al., 2004). It is similar to the concept of cooperation (Deutsch, 1949, 1973) and positive goal interdependence (Johnson & Johnson, 1989). In laboratory studies, a cooperative goal induced by providing team members with group feedback, or with rewards for collective performance fosters cooperative context (Weldon & Weingart, 1993). A cooperative context provides explicit rules, cues, norms, and expectations, which constrain the process of appraisal, feelings of emotions, and rationalization of their work behaviors (Elfenbein, 2008; Parkinson et al,, 2005; Salancik & Pfeffer, 1978). Thus, I expect that a cooperative goal will (1) influence

how relationship quality is related to interpersonal emotions; and (2) determine the mediating effects of emotions on the association between relationship quality and interpersonal harming.

The interactionist model of emotion (Ashforth, 1993; Morris & Feldman, 1996) and recent appraisal literature (Manstead & Fischer, 2001; Parkinson et al., 2005) suggest that appraisals, experiences, and expressions of emotions are socially constructed. This means that people make sense of their emotions through their understanding of the social environment (Manstead & Fischer, 2001). Social environment tends to exert social influences on people. When a person feels attached to other team members in a group and believe that they can help achieve important goals, this person is more likely to want to gain and maintain social approval from the other team members. Therefore, this person will feel the pressure to comply with the group's wishes and expectations while bringing one's own thoughts, feelings, and behavior in line with others (George, 2002). Stated differently, team context, which entails pre-existing conventions, feeling rules, and display rules, defines the appropriate emotions and provides guidelines on proper emotional responses (Hochschild, 1979; Parkinson et al., 2005). Specifically, cooperative team context, which increases shared identity among team members, may encourage feelings of favorable and contacting emotions such as admiration and sympathy toward the other. In contrast, members in a less cooperative team context may tend to differentiate and perceive the other as out-group (Hogg, 2000). In this situation, they are more likely to experience negative and attacking emotions such as envy and contempt toward another member in the dyadic relationship (Buunk et al., 2005; Duffy, Shaw, & Schaubroeck, 2008; Stapel & Koomen, 2001; Stapel & Koomen, 2005). Thus, a cooperative goal may provide guidance in

identifying emotions that are desirable to experience (i.e., feeling rules) in response to the relationship appraisal.

In addition, a team's cooperative context is capable of altering emotional schemas by providing new responses to relationship evaluations, especially when the relationship is potentially harmful or beneficial to self-interests (Elfenbein, 2008). Put differently, cooperative goal, which entails a shared belief in a common goal among team members, encourages members to evaluate each other's relationship in a positive way, correspondingly leading to positive emotions (Manstead & Fischer, 2001). Together, the team's cooperative goal can greatly influence the ways people think and feel about their team members because it provides for feeling rules and the means to appraise their dyadic relationship, as it shapes their cognitive appraisal schema. Cooperative goals can influence the experience and feelings of emotion, and the relationship appraisal; thus, it is likely that it will also affect the link between relationship appraisal and emotion.

Furthermore, social and normative standards may play a stronger role that may overwhelm the relational effects from exchange quality in influencing behavioral and emotional responses between team members (Venkataramani & Dalal, 2007). Therefore, I propose that cooperative team context may compensate for the impacts of relationship quality on emotions. A cooperative goal conveys a sense of mutual support (Buunk et al., 2005) and shared identity (Schneider, 1990; Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005) among team members, which may reduce the threat of exploitation in dyadic relationships. When team members feel secure in their relationships, identify with their team members, and provide mutual support to each other, team cohesiveness tends to increase (Hogg, 1992), and individuals belonging to the group may feel pressured to

comply with the group's cooperative norms (George, 2002; Parkinson et al., 2005). In such circumstances, the association between dyadic relationship quality and emotion may be weakened, especially as people's experience of emotions is shaped and primed in a cooperative way; that is, people's feelings toward each other are shaped by their favorable, cooperative context, which enhances positive feelings, while it buffers negative feelings, irrespective of relationship quality. In other words, cooperative goal buffers the associations between relationship quality and interpersonal emotions. In contrast, under conditions of a less cooperative goal wherein team members focus less on common goals and cooperation, team members may become more emotionally responsive to their dyadic relationship appraisal because their emotions are less restricted by the cooperative norms. As such, a negative relationship appraisal may induce more attacking emotions such as envy and contempt, while positive relationship appraisal may enhance more contacting emotions such as admiration and sympathy. Hence, a less cooperative goal may strengthen the associations (both positive and negative) between relationship quality and emotions.

Hypothesis 4: Cooperative goals moderate the associations between relationship quality and admiration (4a), and sympathy (4b) in dyads: The positive associations between relationship quality and these emotions are stronger in teams with a lower cooperative goal than in a higher cooperative goal.

Hypothesis 5: Cooperative goals moderate the associations between relationship quality and envy (5a), and contempt (5b) in dyads: The negative associations between relationship quality and these emotions are stronger in teams with a lower cooperative goal than in a higher cooperative goal.

Furthermore, I propose that the cooperative goal of teams plays an important role in regulating the mediating effects of emotions in the relationship-harming linkage. That is, a cooperative goal moderates the indirect effect of relationship quality on harming behavior through the mediation mechanism of emotions. According to this study's framework, emotions should increase or reduce harming behavior, but not all individuals experiencing such emotions will engage in or avoid acts of harming toward other team members. It depends on the team's cooperative goal, which entails behavioral norms, to suggest to the team members whether harming the other is an appropriate means in releasing emotions. Empirical works provide evidence that individuals look for social cues for guidance as to what does and does not constitute harming behavior. These studies have shown that harming behavior is related to the observed or perceived frequency of their coworkers' engagement in this behavior (Aquino & Douglas, 2003; Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998), behavioral cues of team members to express negative emotions (Cole et al., 2008), and perceived norm toward organizational deviance (Tepper et al., 2008).

Previous works have proposed that an antisocial climate is conducive to individual harming behavior (Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998). Much less is known about how a positive team context (cf. Ashkanasy, 2003; Aquino & Douglas, 2003; Venkataramani & Dalal, 2007) such as a cooperative goal in team may mitigate such harmful behavior in a team. I argue that a cooperative goal may signal to employees whether interpersonal harming is appropriate in behaviorally expressing their emotions by assessing the extent to which their group's goal is collective. In teams with a high cooperative goal, team members generally would like each other to perform effectively

with each individual gaining success, especially as they perceive the outcomes between themselves and the other teammates as interdependent (Kelley & Thibaut, 1968). For this reason, I believe that when a cooperative goal is high, people experiencing unpleasant emotions (envy and contempt) in their low-quality dyadic relationships will have little motivation to execute harming behavior, as harming another team member would endanger one's own goal attainment. In contrast, those who experience favorable emotions (admiration and sympathy) in high-quality relationships may trigger positive evaluations of others (Stapel & Koomen, 2005) when cooperation is normative, thus reducing the likelihood of harming the other.

In teams where cooperative goal is low, however, individual interests will prevail over collective interests. In this regard, detrimental effects of unpleasant emotions (envy and contempt) that are experienced in low-quality relationships more likely increase interpersonal harming given that harming the target may reduce such negative feelings without endangering the actor's own goal achievement. In these circumstances, however, pleasant emotions elicited from high-quality relationships may not be related to interpersonal harming as a less cooperative team context activates differentiation mindset (Stapel & Koomen, 2001; Stapel & Koomen, 2005) in which self-distinctiveness is emphasized. Therefore, people are less likely to process favorable information for the other, and pleasant emotions may not generate positive evaluation on the target as means to eschew acts of harming. The preceding argument produces a framework in which emotions mediate the association between relationship quality and interpersonal harming; thus, I contend that a cooperative goal will conditionally influence the strength of the indirect relationship between relationship quality and interpersonal harming through emotions. In

other words, the mediation effects of emotions on the association between relationship quality and interpersonal harming may vary according to high or low levels of cooperative goal.

Hypothesis 6: Cooperative goals moderate the indirect effect of relationship quality on interpersonal harming through interpersonal emotions: The mediation effects of contacting emotions (6a: admiration and 6b: sympathy) on the association between relationship quality and interpersonal harming behavior in dyads are stronger when a team's cooperative goal is high but not when it is low. On the other hand, the mediation effects of attacking emotions (6c: envy and 6d: contempt) on this relationship are stronger when a team's cooperative goal is low but not when it is high.

The Mediating Mechanism between Relationship Quality and Emotions

Building upon the appraisal theory of emotions, I have elaborated on a team member's appraisal of his/her relationship quality with another in relation to their interpersonal emotions. What is still unclear, however, is the interpersonal process that may help in better understanding how such specific emotions develop in a coworker dyad beyond that what is explained by the social exchange theory. The purpose of this section is to clarify mediating mechanisms and processes that account for previously established relationships between exchange quality and emotions in coworker dyads in work teams. Drawing from the social comparison theory (Festinger, 1954), I propose that social comparison plays a mediating role between relationship quality and interpersonal emotions.

The Mediating Role of Social Comparison

Research in social comparison has shown that people like to repeatedly and automatically compare themselves with a particular similar or close other because it provides a routine standard for self-evaluation. Such comparison information is easy to use and efficient to obtain (Mussweiler & Ruter, 2003). As coworkers in work teams can be easily observed as targets for comparison, employees are then expected to compare themselves frequently and automatically with their coworkers. Moreover, individual members will likely experience simultaneously upward comparison with some teammates and downward comparison with other teammates, depending on certain contexts.

It has long been suggested in social comparison literature that upward comparison (i.e., comparison with others who are doing better) or downward comparison (i.e., comparison with others who are doing worse) will elicit negative or positive emotional responses depending on the extent to which individuals perceive themselves as likely to become similar or dissimilar to the comparison target (i.e., "assimilation/contrast"; Brewer & Weber, 1994; Buunk & Gibbons, 2007; Buunk & Ybema, 1997; Van der Zee et al., 2000). When individuals perceive a high level of assimilation (i.e., I will end up in a similar situation), upward comparison has been shown to result in positive feelings (e.g., admiration) as individuals regard the comparison target as a role model and assume that they can attain similar excellence (Lockwood & Kunda, 1997; Lockwood, Jordan, & Kunda, 2002). Downward comparison, in this situation, may engender assimilative emotions (e.g., sympathy) due to the prospect of falling prey to an equivalent fate (Lockwood et al., 2002). When individuals perceive a low level of assimilation (i.e., contrast – I will not end up in the similar situation), downward comparison has been shown

to prompt feelings of superiority and a negative evaluation of the other (e.g., contempt), whereas upward comparison induces feelings of inferiority (e.g., envy; Collins, 1996; Van der Zee et al., 2000). In sum, previous literature has identified four interpersonal emotions resulting from interpersonal social comparisons: upward assimilation – admiration, downward assimilation – sympathy, upward contrast – envy, downward contrast – contempt (Cuddy et al., 2007; Fiske, Cuddy, Glick, & Xu, 2002; Smith, 2000).

In team settings, people are nested within a network of relationships. In this respect, the characteristics of the dyadic relationship may have great impact on the comparison processes. The social cognitive perspective of social comparison (Mussweiler et al., 2004) suggests that social comparison is a process of search for selective information. When information on personal self-construal (the independent self, "I") is made accessible, contrast effects of social comparison will be the likely result. In contrast, when information on interdependent self-construal (relational self or collective self, "We") is made accessible, assimilative effects of social comparison are more likely to occur (Gardner et al., 2002; Stapel & Koomen, 2001). Assimilation is more likely to manifest when the interdependent self is dominant because it activates an integration of the mindset wherein information focusing on the similarity of one's self with others is emphasized. Therefore, self-perception is assimilated (perceived as similar) to the comparison target. On the other hand, contrast is more likely to occur when the independent self is dominant, especially because it is likely to activate a differentiation mindset wherein self-distinctiveness is emphasized, and information on dissimilarity between one and the other is focused on. As a result, self-perception is contrasted (perceived as dissimilar) away from the comparison target.

The aforementioned views have received some empirical support. To begin with, Gardner et al. (2002) found that priming the relational and collective self-construals in a dyadic relationship or in group situations has lead to increased assimilation effects and reduced contrast effects during social comparison. Moreover, Aron et al. (1992) suggested that people who are part of a good relationship see that their relational self often includes overlapping connections with the closest other [person], thus resulting in assimilation to the self, as such self-definition has been expanded to include such dyadic relationships as the core representation of one's self (Gardner et al., 2002). In a high-quality relationship, assimilative comparisons (both upward and downward) are more likely and contrastive comparisons (both upward and downward) are less likely to happen because a positive relationship may activate shared schemas or relationship-specific interpersonal goals that will increase levels of identity with the target, as a part of their own self-identity (Aron et al., 1991; Baldwin, 1992; Shah, 2003). In contrast, low-quality relationships may activate the independent self and manifest dissimilarities between people, resulting in increased contrastive comparisons and decreased assimilative comparisons (both upward and downward).

As argued earlier, social comparison can be viewed in relation to different emotional responses (Cuddy et al., 2007; Fiske et al., 2002; Smith, 2000). Taken together, the relationship quality of dyads may shape the patterns of social comparison which in turn elicit interpersonal emotions. Supporting this argument, Henderson et al. (2008) suggested that social comparison translates the effects of relationship quality between leader and member into stronger affective outcomes. Hence, I formulate the following hypotheses:

Hypothesis 7a: Upward assimilation mediates the association between relationship quality and admiration.

Hypothesis 7b: Downward assimilation mediates the association between relationship quality and sympathy.

Hypothesis 7c: Upward contrast mediates the association between relationship quality and envy.

Hypothesis 7d: Downward contrast mediates the association between relationship quality and contempt.

The Moderating Role of Cooperative Goal on the Association between Relationship Quality and Social Comparison

Recent social comparison research, however, emphasizes the fact that social comparisons are typically located in a social context (Buunk & Gibbons, 2007; Greenberg et al., 2007). In laboratory studies, cooperative context can activate interdependent self-construals and levels of cooperation in teams in order to increase assimilative comparisons and reduce contrastive comparisons (Stapel & Koomen, 2005). Cooperative team goal is a social-cognitive construct, referring to the "shared perceptions" of a work group that team members identify with, thus molding the members' cognition during social comparison (Anderson & West, 1998; Buunk et al., 2005; Zohar & Luria, 2004). Therefore, social context may strongly determine the interpretation of comparison information (Stapel & Koomen, 2005), and such contextual influence may have potency to override interfering signals sent by other relational variables in the work environment (Venkataramani & Dalal, 2007; Salancik & Pfeffer, 1978, p. 238-240). Hence, I suggest that relationship quality may have few implications on social comparisons in teams with a high cooperative goal.

A high cooperative team goal that emphasizes on team harmony, cohesion, mutual support, and shared identity discourages competition (Buunk et al., 2005; Tjosvold et al., 2003; Tjosvold et al., 2004). It activates a collective and integrated mindset among team members (Gardner et al., 2002; Stapel & Koomen, 2001), which may reduce the threat of exploitation in dyadic relationships and increase the sense of security in coworker relationships. As such, team members are more likely to identify with, be attracted by, perceive themselves to be similar to the comparison targets (more assimilative comparisons), and be less distant from their comparison targets during comparison processes (less contrastive comparisons). In other words, a high cooperative team goal tends to enhance assimilative comparisons and buffer contrastive comparisons in coworker dyads regardless of their relationship quality. Put simply, the effects of relationship quality on social comparisons will be attenuated in teams with a high cooperative goal. Thus, I expect that the relationship quality is less related to comparisons when the cooperative team goal is high.

In contrast, without such a strong cooperative goal, individuals are more likely to rely on their relationship quality in determining the ways by which they compare themselves with their team members. Under conditions of a less cooperative goal wherein team members are less focused on common goals and cooperation, members compete for resources, prestige, and status (Mettee & Smith, 1977). Therefore, team members are placed under the threat of resource exploitation from their coworkers. Perceptions of low levels of relationship quality are likely to intensify the perception of the acute threat of being exploited by another team member, and therefore activate the independent self, which then results to more contrastive comparisons and less assimilative comparisons. In

contrast, if the focal member perceives a high-quality relationship with the target, assimilative comparisons are more likely and contrastive comparisons are less likely to occur, respectively. This may be a result of a high-quality dyadic relationship, which may expand the relational self into one's self-definition. This makes people feel secure and attracted by the target, resulting in increased assimilative effects and decreased contrastive effects during social comparison (Aron et al., 1992).

In other words, if a strong cooperative goal exists, team members are likely to make more assimilative comparisons and less contrastive comparisons with other team members in accordance with established and shared cooperative perceptions regardless of their dyadic relationship quality. In contrast, member comparisons are less restricted by such integrated perception if they belong to teams with a weak cooperative goal. They are more likely to make comparisons depending on their levels of relationship quality with their dyad members. Taken together, the associations between relationship quality and social comparisons are expected to be attenuated in teams with a strong cooperative goal, whereas these relationships are exacerbated in teams with a weak cooperative goal. Herein, the following hypotheses are formulated:

> *Hypothesis 8*: Cooperative goals moderate the associations between relationship quality and assimilative comparisons (8a: upward assimilation, 8b: downward assimilation): The positive associations between relationship quality and assimilative comparisons are stronger in teams with a lower cooperative goal than in teams with a higher cooperative goal.
>
> *Hypothesis 9*: Cooperative goals moderate the associations between relationship quality and contrastive comparisons (9a: upward contrast, 9b: downward contrast):

The negative associations between relationship quality and contrastive comparisons are stronger in teams with a lower cooperative goal than in teams with a higher cooperative goal.

Social Comparison Mediates the Interactive Effects of Relationship Quality and Cooperative Goals

I contend that social comparisons may mediate the interactive effects of relationship quality and cooperative goals on emotions. As noted previously, relationship quality is expected to be more related to interpersonal emotions under conditions of a low cooperative goal because people's feelings toward others are more likely to vary according to the way on how they appraise their dyadic relationship when their emotions are less restricted by the cooperative feelings rules and norms. Similarly, individuals are more likely to make comparisons with their targets according to their relationship quality when they are less primed by the integrated mindset in teams with a low cooperative goal. In addition, social comparisons will generate specific emotions including admiration, sympathy, envy, and contempt. Thus, I believe that a cooperative goal may influence the effects of relationship quality on interpersonal comparisons in the same way as it influences the effects of relationship quality on interpersonal emotions. Specifically, relationship quality will be more related to social comparisons (positively related to upward assimilation and downward assimilation, and negatively related to upward contrast and downward contrast) and emotions (positively related to admiration and sympathy, and negatively related to envy and contempt) when the cooperative goal is low. However, in teams with a high cooperative goal, relationship quality will be less likely to trigger

interpersonal comparisons and emotions. Therefore, I predict a mediated moderation, as shown in the following hypotheses:

Hypothesis 10a: Upward assimilation mediates the interactive effects of relationship quality and cooperative goals on admiration.

Hypothesis 10b: Downward assimilation mediates the interactive effects of relationship quality and cooperative goals on sympathy.

Hypothesis 10c: Upward contrast mediates the interactive effects of relationship quality and cooperative goals on envy.

Hypothesis 10d: Downward contrast mediates the interactive effects of relationship quality and cooperative goals on contempt.

The models depicting the key theoretical relationships are presented in Figure 1 and Figure 2. The model in Figure 1 examines the following: (1) how relationship quality is related to interpersonal emotions and harming behavior; (2) whether emotions mediate the association between relationship quality and harming behavior; (3) how relationship quality and team's cooperative goals jointly influence interpersonal emotions; and (4) how cooperative goals regulate the mediation effects of emotions on the association between relationship quality and harming behavior. On the other hand, the model in Figure 2 investigates the following: (1) the mediating effects of social comparisons on the associations between relationship quality and emotions; (2) the interactive effects of relationship quality and cooperative goals on social comparisons; and (3) how social comparisons mediate the joint effects of relationship quality and cooperative goals on interpersonal emotions.

I examined the constructs' validity and tested the hypotheses in a series of three studies. Study 1 was a pilot study that examined and refined the measure instruments. Study 2 examined the Theoretical Model in Figure 1 using a sample of student teams. Study 3, representing a sample of work teams from a telecommunication services company, replicated the findings in Study 2 and tested the Theoretical Model in Figure 2. For each study, I presented the method, followed by the results, and finally the discussion.

In Study 1, construct validation was examined. In Study 2 (Model 1), Hypotheses 1, 2 (a-d), 3, 4 (a-b), 5 (a-b), and 6 (a-d), were tested. Study 3 replicated the findings in Study 2 and examined Model 2, including Hypotheses 7 (a-d), 8 (a-b), 9 (a-b), and 10 (a-d). I analyzed the data in Studies 2 and 3 using Kenny's (1994) social relations model (SRM) in order to isolate variance and to test the hypotheses across multiple levels of analysis. In addition, I also used Edwards and Lambert's framework (2007), an approach that combines moderated regression procedures with the path analytic framework, to test the mediation effects of emotions and social comparisons.

CHAPTER 4

STUDY 1: Social Relations Model and Construct Validation -- Methodological Issues

In this Chapter, I will first introduce a specific social network analytical technique used to analyze data, the Social Relations Model (SRM; Kenny, 1994). Second, in a pilot study (Study 1), I will examine the construct validation for the two Theoretical Models. Model 1 includes seven variables: A's relationship quality with B (i.e., overall effectiveness of the relationship between A and B); the four types of A's interpersonal emotions toward B (i.e., the extent to which A feels admirable, sympathetic, envious, and contemptuous toward B); cooperative goals (i.e., team members' shared perception about the cooperative goal in a group); and A's harming of B (i.e., the extent to which A will exhibit harmful behavior toward B). Model 2 includes ten variables: A's relationship quality with B; the four types of A's social comparison responses to B (i.e., upward assimilation, downward assimilation, upward contrast, and downward contrast); the four types of A's emotions toward B (i.e., admiration, sympathy, envy, and contempt); and cooperative goals.

I used data from Study 1 solely to pretest measures and to troubleshoot the survey--not to test the hypotheses. Study 1 serves two purposes. First, it is important to examine the factor structure of the models' variables as this study adopts items from different scales (e.g., interpersonal emotions) that are susceptible to overlaps in meaning. To check whether these variables are distinct from each other, I conducted three exploratory factor analyses to assess the construct validation of the theoretical models.

Second, based on these results, I selected items with the highest loadings of each variable in order to test the hypotheses in Studies 2 and 3. Questionnaires in both studies contained social network items that asked survey participants to respond to specific questions about each of their team members (i.e., round robin design). Such labor-intensive nature of rating all the team members precludes the use of the full version of every measure, because asking participants to respond to multiple items per measure about all their co-team members would be arduous and would result in respondents' fatigue and low response rates (Marsden, 1990). Therefore, following the common practice in social network studies (Bowler & Brass, 2006; Van Der Vegt, Bunderson, & Oosterhof, 2006; de Jong, Van der Vegt, & Molleman, 2007), I used the short version scale of the measures, which have been examined in this pilot study to collect data for Studies 2 and 3. Hypotheses were analyzed by the SRM.

Social Relations Model (SRM)

SRM is a model that examines the social perception and behavior between socially interacting partners in a dyadic relationship within social contexts (Kenny, 1994; Kenny & La Voie, 1984). Dyadic relations within groups are functions of multilevel effects: individual level effects (actor effect and target effect), dyad-level effects (relationship effects), and group-level effects. The SRM can partition the variance of perception and behavior into four major components: actor (member X), target (member Y), dyad (X and Y relationship), and group. Perceiver variance (actor variance) is a portion of variance that arises from the tendency of a perceiver to rate all other members in a particular way. This also refers to the extent to which a perceiver sees all targets as alike. The variance of perceiver effects is a measure of assimilation or a perceiver's tendency to judge similarly multiple targets that, in

fact, vary. For example, X tends to view everyone as helpful. This is related to individual differences among people. Target variance refers to the portion of variance arising from the tendency of a target to receive similar ratings from other members. This is also the extent to which a target is seen by all actors in a similar way. Variance of target effects is a measure of the consensus of the multiple perceivers' judgments of a common target. For example, everyone views Y as helpful. Dyadic variance arises from the particular relationship between the perceiver and the target. This is also the degree to which a given perceiver sees a specific target in a particular way. The variance of dyadic effects is a measure of the uniqueness of the perceiver's judgment of a specific target controlling for the perceiver and target effects. For example, X views Y as helpful because they have a long history of helping each other. Group variance arises from group membership, which is under the influence of group norms. For example, X and Y are in a group in which helping is a group norm.

In dyadic behavior, according to Kenny (1994) and Kenny, Mohr, and Levesque (2001), actor effect (perceiver effect) in general is a function of an actor's personality, skill, and characteristics. Meanwhile, target effect (partner effect) refers to the amount of perception and behavior that a person consistently elicits from others. Relationship effect appears when a unique relationship alters the response from one to another. More precisely, actor effect is defined as the consistency of an actor's behavior across interacting targets. For example, X's helping behavior depends on his/her personality. Target effect refers to the impact of an interacting partner on an individual's behavior. For example, X's helping action depends on Y's behavior. Relationship effect means the influence of a unique relationship of a dyad on their interacting behavior. For example, the degree to which X helps Y

depends on their relationship. The SRM also measures the extent of generalized reciprocity and dyadic reciprocity. General reciprocity is measured by the correlation between actor and target effects. For example, if X helps others, do the others help X in return? Dyadic reciprocity is measured by a correlation between relationship effects, such that if X helps Y, does Y help X in return?

Most of the SRM studies were not specifically interested in behavior but rather focused on the perception (Kenny et al., 2001). For example, previous research has found significant variances of perceiver effects in perception studies on stereotype and group bias (Boldry & Kashy, 1999; Kenny, 1994); partner/target effects in studies of trait-liked characteristics (Albright, Kenny, & Malloy, 1988; Kenny, Albright, Malloy, & Kashy, 1994; Kenny, Horner, Kashy, & Chu, 1992; Malloy & Albright, 1990; Malloy, Albright, Kenny, & Agatstein, 1997; Park & Judd, 1989; Paulhus & Reynolds, 1995) and leadership (Malloy & Janowski, 1992; Zaccaro, Foti, & Kenny, 1991); and relationship effects in liking judgment (Park & Flink, 1989), feeling of affiliation and control (Wright & Ingraham, 1986), peer preference (Whitley, Schofield, & Snyder, 1984), and co-orientation (Kenny & Kashy, 1994). Although the study of SRM in behavior has received considerably less attention in most literature, accumulated evidence suggests that social behavior is determined by relationship variances (Kenny et al., 2001; Malloy, Barcelos, Arruda, DeRosa, & Fonseca, 2005). Specifically, relationship effect and dyadic reciprocity effect are commonly found in behavioral research. For example, relationship effect is more substantial for behavior that reflects interaction dynamics such as conversation (Kenny et al., 2001). Dyadic reciprocity effect, referring to a correlation between relationship effects (X helps Y, and Y helps X in return), is more salient in talking behavior, pro-social behavior, gesturing, friendliness, and

involvement (Kenny et al., 2001). A recent study investigating expertness diversity, interpersonal commitment, and helping behavior reveals that a large proportion of interpersonal commitment variance (66%) and interpersonal helping variance (21%) is determined by dyadic relationships (Van Der Vegt, et al., 2006). Many interesting and important dyadic behaviors and interpersonal perception still await further exploration. For instance, harming behavior, the experience of interpersonal emotions, and perception of social comparison have not yet to be examined. Thus, in the present thesis, I will examine two theoretical models using SRM to isolate variance and test the hypotheses at multiple levels of analysis: actor, target, dyad, and group.

Data were collected using a round robin design (Warner, Kenny & Stoto, 1979) with at least three members in a team. Every member of the team rated and was rated by other team members. For example, in a group of 4 members, 12 direct assessments were obtained, as each member rated 3 targets.

Method

Sample and Procedures

The examination of a construct's validity does not require items in social network nature, I therefore did not use the round robin design to collect data for Study 1. Instead, I collected data from coworker dyads (i.e., participants in a work team were randomly paired up).

The survey was conducted in an organization operating in more than 60 cosmetic chain stores and counters in Hong Kong. The service-oriented work performed in these sites is complicated, such that communication and coordination are required in task completion. In addition, employees also have opportunities to be involved in some discretionary behaviors such as interpersonal harming. The aim of

Study 1 is to examine the constructs' validity of the current research project. This includes the following: A's relationship quality with B; A's social comparison responses to B; A's interpersonal emotions toward B; cooperative goals; and A's harming of B. Interpersonal harming was rated by the other teammate (i.e., member B), and it involved the harming he/she obtains from member A. The respondents were asked to answer specifically the questions based on their interactions with another member in the two weeks prior to the survey. Each questionnaire was coded with a researcher-assigned identification number so that the researcher could match the responses of the members of the dyads. I visited all the respondents in person to brief them about the purposes of the study and to explain the procedures for implementing the survey. The questionnaires were separately administered to the groups of member A and member B. The respondents received a cover letter explaining the study, a questionnaire, and a return envelope. To ensure confidentiality, the respondents were required to seal the completed questionnaires in the envelopes and returned them directly to the researcher on site. Out of 267 questionnaires, 238 usable questionnaires were returned, with a response rate of 89.1%. Ninety-five percent of the members were female, and 95% finished high school education or above. The mean age and organization tenure were 25.5 and 2.7, respectively.

Measures

Relationship quality

Relationship quality was measured by seven items taken from the work of Graen and Uhl-Bien (1995), which was adopted by Anderson and Williams (1996) and Sherony and Green (2002). This was conducted to capture exchange relationship quality between team members. Items were rephrased to gauge the

respondents' assessment of the overall effectiveness of the relationship between themselves and each of their teammates. Sample items are "How would you characterize your working relationship with this team member?" (1 = *extremely ineffective*, 5 = *extremely effective*) and "How well does this team member understand your job problems and needs?" (1 = *not a bit*, 5 = *a great deal*). The Cronbach's alpha was .87.

Social comparison responses

Social comparison responses (upward assimilation, downward assimilation, upward contrast, and downward contrast) were assessed using a 12-item social comparison identification-contrast scale developed by Van der Zee et al. (2000). Each response was measured by three items. Using a 5-point response scale ranging from 1 (*not at all*) to 5 (*always*), subjects were asked to indicate how likely they would respond to the following: (1) when B is doing better than they are (upward comparison) and (2) when B is doing worse than they are (downward comparison). A sample item of upward assimilation is "I am pleased that things can get better," while a sample item of downward assimilation is "I fear that my future will be similar." A sample item of upward contrast is "It is threatening to notice that I am doing not so well," while a sample for the downward contrast is "I am happy that I am doing so well myself." I averaged the three responses of every dimension of comparison to form an overall measure of each employee A's comparison with each employee B. The Cronbach's alphas for upward assimilation, upward contrast, downward contrast, and down assimilation were .86, .88, .88, and .93, respectively.

Emotions

Hypothesized emotions (admiration, sympathy, envy, and contempt) were examined using different scales. Through a 5-point response scale ranging from 1

(*never*) to 5 (*always*), the respondents were asked to indicate how often they experienced certain emotions while working with each of the other team members. Admiration was measured by two items based on previous research (Buunk et al., 1990) and two items from the work of Fiske et al. (2002). The items include "encouraged," "inspired," "admiring," and "respectful." Sympathy was measured using a four-item scale developed by Eisenberg et al. (1989), which includes items like "moved," "sympathetic," "compassionate," and "softhearted." Envy was measured by three items selected from the scale developed by Parrott and Smith (1993) and one more item from the study of Fiske et al. (2002). The items include "feeling of inferiority," "longing," "resentful," and "jealousy." Finally, contempt was measured by four items selected from Fiske et al.'s study (2002), including "contemptuous," "angry," "disgusted," and "hateful." The Cronbach's alphas for admiration, sympathy, envy, and contempt were .82, .84, .76, and .88, respectively. As we conceptualized that relationship quality can feature a longer duration of interpersonal emotions, we measured interpersonal emotions by self-reported items, which remain the central method to access the affective information (Tran, 2007).

Cooperative goals

Cooperative goals was measured by five items from Tjosvold et al. (2004). It was operationalized in team level. Using a 5-point response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), team members were asked to rate the following sample items: "Our team members 'swim or sink' together," "Our team members' goals go together," and "Our team members seek compatible goals." The Cronbach's alpha was .88.

Interpersonal harming behavior

I used a 12-item scale developed by Cohen-Charash and Mueller (2007) to assess interpersonal harming behavior. Respondents were asked to rate the extent to which the 12 types of harming behavior were represented in each of their teammates' behavior toward them. A 5-point response scale was used ranging from 1 (*not representative at all*) to 5 (*very representative*). Sample items are "[A] interferes with my performance" and "[A] is nasty to me." The term [A] was replaced by the name of a teammate, and the respective items were subsequently repeated for all members of the team. The Cronbach's alpha was .96.

Translation of Questionnaire Items

All measures used in the current analysis were developed originally in English and were translated to Chinese by a bilingual expert. Back translation from another bilingual expert was conducted. The back-translated English version was then compared with the original English draft for equivalency and agreement (Brislin, Lonner, & Thorndike, 1973).

Results

Exploratory Factor Analyses

I conducted two exploratory factor analyses to statistically discriminate the four dimensions of social comparison responses and the four dimensions of emotions. The 12 items that measured the social comparisons responses and the 16 items that measured emotions were submitted to a principal components analysis using varimax rotation, respectively. As shown in Table 4.1, four factors emerged for social comparisons with eigenvalues greater than 1 (2.67, 2.44, 2.41, and 2.67), accounting for 82.43% of the total variance. As expected, the items were loaded on four dimensions, representing upward assimilation, upward contrast, downward assimilation, and downward contrast. In addition, Table 4.2 shows the four factors

that emerged for emotions with eigenvalues greater than 1 (3.29, 2.85, 2.63, and 2.36), accounting for 69.52% of the total variance. The items were loaded on four dimensions, representing admiration, sympathy, envy, and contempt.

In addition, I conducted another exploratory factor analysis to examine the factor loadings and differentiate the constructs of relationship quality, cooperative goals, and harming behavior. Table 4.3 presents the factor loadings of relationship quality, cooperative goals, and interpersonal harming. Based on Tables 4.1, 4.2, and 4.3, I selected the items with the highest factor loadings to examine the models in Studies 2 and 3: 5 items from the relationship quality scale, 3 items from the cooperative goals scale, 6 items from the interpersonal harming scale, and 3 items from each emotion's scale. I used a full scale to measure the social comparison responses in Study 3.

Table 4.1. *Results of the Exploratory Factor Analysis for Social Comparison (Study 1)*

Items	Component 1	Component 2	Component 3	Component 4
C1: Upward assimilation	**α = .86**			
When I see him/her doing better than I…	**.89**	.22	.17	.04
It makes me happy realizing that it is possible for me to improve.	**.92**	.22	.15	.04
I am pleased that things can get better.	**.87**	.30	.12	-.04
I have good hope that my situation will improve.				
C2: Upward contrast		**α = .88**		
I sometimes feel frustrated about my situation.	.16	**.82**	.13	.24
It is threatening to notice that I am doing not so well.	.05	**.89**	.12	.16
I feel depressed realizing that I am not doing so well.	.23	**.86**	.07	.14
C3: Downward contrast			**α = .88**	
When I see him/her doing worse than I…				
I am happy that I am doing so well myself.	.09	.13	**.88**	.03
I feel relieved about my own situation.	.00	.05	**.91**	-.06
I realize how well I am doing.	-.04	.10	**.85**	.12
C4: Downward assimilation				**α = .93**
I fear that I will go along the same way.	.21	.23	-.03	**.84**
I fear that my future will be similar.	.29	.18	.02	**.83**
I experience fear that my status will decline.	.24	.16	.13	**.87**
% of variance explained	19.73	20.12	22.25	20.34

N = 238

Table 4.2. *Results of the Exploratory Factor Analysis for Emotions (Study 1)*

Items	Component 1	Component 2	Component 3	Component 4
C1: Admiration		**α = .82**		
How often you experience these emotions when you are working with B in the last two weeks?				
*Encouraged	-.02	**.76**	.23	.37
*Inspired	.00	**.79**	.10	.32
*Admiring	-.06	**.84**	.21	.05
Respectful	-.12	**.62**	.18	-.02
C2: Sympathy			**α = .84**	
Moved	-.05	.51	**.53**	.16
*Sympathetic	.09	.20	**.87**	.05
*Compassionate	.12	.22	**.86**	.11
*Softhearted	.17	.17	**.72**	.19
C3: Envy				**α = .76**
*Feelings of inferiority	.08	.30	.09	**.69**
*Longing	.11	.21	.22	**.75**
Resentment	.43	-.09	.30	**.56**
*Jealous	.38	.08	-.03	**.77**
C4: Contempt	**α = .88**			
Contemptuous	**.72**	.02	.02	.08
*Disgusted	**.89**	-.11	.13	.14
*Angry	**.89**	-.07	.12	.14
*Hateful	**.87**	-.07	.08	.22
% of variance explained	20.54	17.81	16.44	14.73

N = 238

Note. *Selected items for Studies 2 and 3

Table 4.3. *Factor Loadings of Relationship Quality, Cooperative Goals, and Interpersonal Harming (Study 1)*

Items		
Relationship quality		**α = .87**
1	Do you know where you stand with this team member…do you usually know how satisfied this team member is with what you do?	**.68**
2	*How well does this team member understand your job problems and needs?	**.74**
3	*Regardless of how much formal authority he/she has built into his/her position, what are the chances that this team member would use his/her power to help you solve problems in your work?	**.73**
4	*Again, regardless of the amount of formal authority this team member has, what are the chances that he/she would "bail me out," at his/her expense?	**.83**
5	I have enough confidence in this team member that I would defend and justify his/her decision if he/she were not present to do so?	**.73**
6	*How would you characterize your working relationship with this team member?	**.77**
7	*How well does this team member recognize your potential?	**.78**
Cooperative goals		**α = .88**
1	*Our team members "swim or sink" together.	**.83**
2	Our team members want each other to succeed.	**.82**
3	Our team members seek compatible goals.	**.82**
4	*Our team members' goals go together.	**.83**
5	*When our team members work together, we usually have common goals.	**.83**
Interpersonal harming		
To what extent has employee X intentionally engaged in activities to harm you?		**α = .96**
1	*Interferes with my performance	**.84**
2	Tries to sabotage my reputation	**.84**
3	Withholds work-related information from me	**.72**
4	*Creates coalitions against me	**.87**
5	Starts an argument with me	**.81**
6	Backstabs me	**.81**
7	*Blows the whistle on me	**.91**
8	*Be nasty to me	**.88**
9	Provides incorrect information to mislead me	**.81**
10	Slows down all correspondence to me	**.82**
11	*Talks to others about my bad nature	**.91**
12	*Looks at me with disrespect	**.87**

Note. *Selected items for Studies 2 and 3

Discussion

In conclusion, using a sample of 238 coworker dyads from an organization that operates more than 60 cosmetic chain stores and counters in Hong Kong, the construct validation of the two theoretical models was examined in Study 1. The labor-intensive nature of the round robin design (i.e., scoring all items for all the team members) for Studies 2 and 3 precluded the use of too many items per scale. Therefore, based on this study, I selected the items with the highest factor loadings to examine the Models in Studies 2 and 3: 5 items from the relationship quality scale, 3 items from the cooperative goals scale, 6 items from the interpersonal harming scale, and 3 items from each emotion's scale. I used a full scale to measure the social comparison responses for Model 2 in Study 3.

CHAPTER 5

STUDY 2: Interpersonal Relationships, Emotions, and Harming: The Moderating Role of Cooperative Goals (Model 1)

In Study 2, I examined Theoretical Model 1. The purposes of this study include the following: (1) to examine how the quality of interpersonal relationship is related to various emotions and harming behavior; (2) to understand whether emotions mediate the relationship between relationship quality and harming behavior (mediation model); (3) to explore how relationship quality and team's cooperative goals jointly influence interpersonal emotions (moderation model); and (4) to investigate how cooperative goals regulate the mediation effects of emotions on the association between relationship quality and harming behavior in coworker dyads (moderated mediation model). Based on these purposes, I developed the following hypotheses for Study 2:

Hypothesis 1: Relationship quality is negatively related to interpersonal harming behavior in dyads.

Hypothesis 2: Relationship quality is positively related to admiration (2a) and sympathy (2b), and negatively related to envy (2c) and contempt (2d).

Hypothesis 3: Emotions (admiration, sympathy, envy, and contempt) mediate the association between relationship quality and interpersonal harming behavior in dyads (mediation model).

Hypothesis 4: Cooperative goals moderate the associations between relationship quality and admiration (4a), and sympathy (4b) in dyads: The positive associations between relationship quality and these emotions are stronger in

teams with a lower cooperative goal than in teams with a higher cooperative goal (moderation model).

Hypothesis 5: Cooperative goals moderate the associations between relationship quality and envy (5a), and contempt (5b) in dyads: The negative associations between relationship quality and these emotions are stronger in teams with a lower cooperative goal than in teams with a higher cooperative goal (moderation model).

Hypothesis 6: Cooperative goals moderate the indirect effect of relationship quality on interpersonal harming through interpersonal emotions. The mediation effects of contacting emotions (6a: admiration and 6b: sympathy) on the association between relationship quality and interpersonal harming behavior in dyads are stronger when a team's cooperative goal is high but not when it is low. In contrast, the mediation effects of attacking emotions (6c: envy and 6d: contempt) on this relationship are stronger when a team's cooperative goal is low but not when it is high (moderated mediation).

Method

Sample and Procedures

Survey data for Study 2 were collected from undergraduate students at one of the educational institutes in Macau. Most of the participants were in their second or third year in their study of Tourism; thus, they knew each other quite well before the survey. As a required part of their study program, the students worked in teams of three to seven members to complete the team project (i.e., prepare a business plan) within a period of three months. Similar to company work teams, the team tasks required intense

member interaction and student teams embraced the networks of dyadic relationships. I collected data using a round robin design in which the team members provided self-descriptive information while rating all the other members (Warner et al., 1979). In addition to the self-ratings of relationship quality and interpersonal emotions, and aggregated scores of cooperative goals, I likewise captured interpersonal harming through other-rating scores.

I distributed paper-and-pencil surveys to 154 students across 32 teams. The participants returned the completed surveys directly to the researcher and were assured that their responses would be treated confidentially. The analysis strategy in the current study required a complete set of data from both individuals in the dyad. After omitting incomplete dyads, the final data set comprised of 141 students (555 dyadic relations) distributed across 30 teams. The effective response rate was 92%. The mean age of the respondents was 20 years. In total, 77 % were female, and the average length of the dyadic relationships (i.e., dyadic tenure) was 19 months.

Measures

The key measures, namely, relationship quality (α = .92), admiration (α = .91), sympathy (α = .90), envy (α = .82), contempt (α = .91), cooperative goals (α = .88), and interpersonal harming (α = .92), were the same as in Study 1. If necessary, these measures were translated to Chinese using a double-blind back-translation procedure.

Control variables

Demographic variables may influence harming behavior (Barling, Dupre, & Kelloway, 2009; Robinson & O'Leary-Kelly, 1998), so I controlled for the participants' gender (0 = *male*, 1 = *female*) and age. I also controlled for the dyadic tenure and team

size (as provided by the course coordinator) because these variables have been shown to influence group processes (Richter, West, van Dick, & Dawson, 2006). Finally, I controlled the actors' positive and negative affectivity because these personality traits are associated with the tendency to engage in harmful behavior (e.g., Barling et al., 2009; Duffy et al., 2006; Hershcovis et al., 2007). Positive affectivity and negative affectivity were measured using eight items ("interested," "excited," "enthusiastic," "active," "stressed," "scared," "upset," and "nervous") from the Positive and Negative Affect scale (PANAS; Watson, Clark, & Tellegan, 1988). The Cronbach's alphas for positive affectivity and negative affectivity were .86 and .78, respectively.

Statistical Analyses

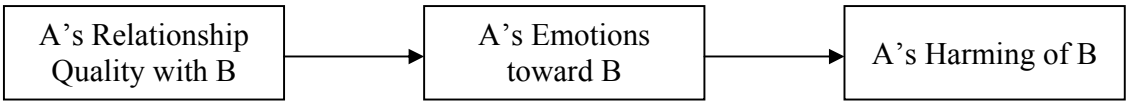
The round robin data collected for the purpose of this study have a complex nested structure, with relationships nested within dyads, and both individuals and dyads nested within work teams. This specific nested structure can be modeled in social relations model (SRM) by including crossed random effects for two individuals from the same relationship (see Snijders & Kenny, 1999, p. 472-473). Following prior research that examined dyadic relationships within work teams (e.g., Van der Vegt et al., 2006), I used a specific hierarchical linear modeling application of the SRM to analyze this study's data (see Snijders & Kenny, 1999, or Kenny, 1994, for technical details). This multilevel analysis estimates how much of the variance of harming behavior can be explained by the characteristics of the actor (e.g., unfriendly people harm others more often), the target (e.g., unfriendly people receive more harm from others), the dyad or relationship (e.g., only when both A and B are in unfriendly terms will they harm each other), and the team (e.g., an unfriendly manager will induce more

harming behavior in a team). I tested for a decrease in log-likelihood between each of the models by means of a chi-square difference test, which indicates how well a given model fits the data.

To test the hypothesized relationships, I first followed the causal steps approach proposed by Baron and Kenny (1986). Second, to examine the moderated mediation model (Hypotheses 6a-d), I provided a parallel test guided by Edwards and Lambert's path analytic framework (2007) in order to demonstrate the strength of the mediation effects of emotions on the association between relationship quality and harming (i.e., indirect effect of relationship quality on harming through emotions) varying across levels of the moderator – cooperative goals.

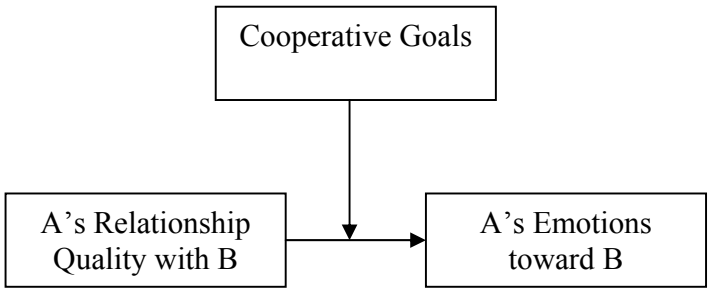
Tests of mediation. Collectively, Hypotheses 1 to 3 suggest a mediation model, whereby the association between A' relationship quality with B and A's harming of B is transmitted by A's interpersonal emotions toward B. Figure 5.1 illustrates this mediation model. Baron and Kenny (1986) proposed a three-step procedure to test this mediation model. First, relationship quality (the independent variable) should be related to interpersonal harming (the dependent variable); second, relationship quality (the independent variable) should be significantly related to emotions (the mediating variables); and third, emotions (the mediating variables) should be related to the interpersonal harming (the dependent variable) with relationship quality (the independent variable) controlled. If the beta weight of the independent variable is reduced and still significant in the final step, partial mediation is present. If the beta weight of the independent variable is not significant, full mediation is present.

Figure 5.1. Mediation Model (Study 2)



Tests of moderation. Hypotheses 4 and 5 suggest a moderation model, whereby the associations of A's relationship quality to B and A's emotions toward B depend on the levels of cooperative goals. Figure 5.2 illustrates this moderation model. Following Baron and Kenny (1986), the interactive effects of relationship quality (the independent variable) and cooperative goals (the moderating variable) on interpersonal emotions (the dependent variable) should be significant. Interactions were plotted by deriving separate equations for the high and low (one standard deviation above and below the mean) conditions of cooperative goals, as recommended by Aiken and West (1991).

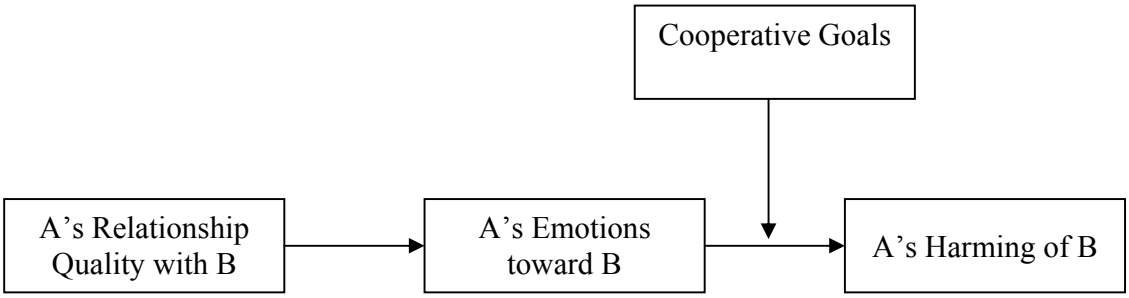
Figure 5.2. Moderation Model (Study 2)



Tests of moderated mediation. With regard to Hypothesis 6, I predict that the mediation effects of emotions on the association between A's relationship quality with B and A's harming of B (indirect effect of relationship quality on harming behavior through emotions) vary across levels of a cooperative goals. Figure 5.3 depicts this relationship. This moderated mediation model was tested using a series of hierarchical regressions based on a four-step procedure recommended by Baron and Kenny (1986).

The goal of step one is to establish the relationship between relationship quality (the independent variable) and interpersonal harming (the dependent variable). The second step demonstrates that relationship quality (the independent variable) and cooperative goals (the moderating variable) should interact to influence interpersonal harming (the dependent variable). The third step examines whether emotions (the mediating variables) are significantly related to interpersonal harming (the dependent variable), with the interactive effects of relationship quality and cooperative goals are controlled. The final step demonstrates that the coefficient of the initial variable (the interaction of relationship quality and cooperative goals) is reduced or insignificant when the mediator (the interaction of emotion and cooperative goals) is added to the model (see Langfred, 2004 for a review).

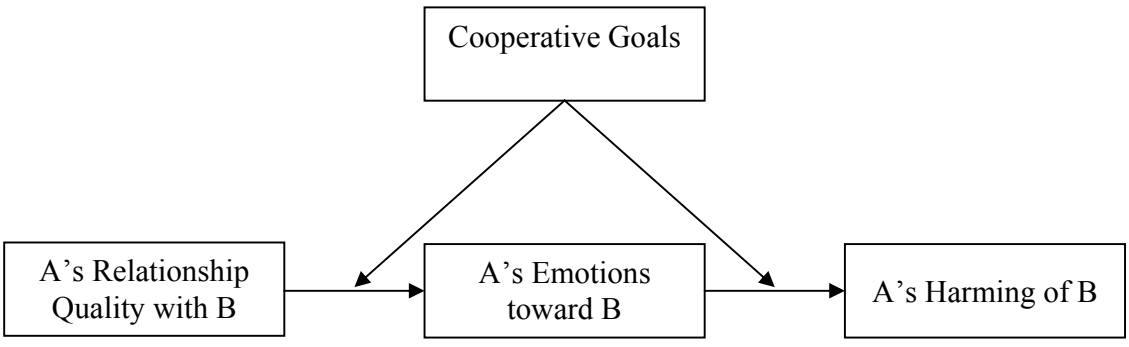
Figure 5.3. Moderated Mediation Model (Study 2)



However, the moderated causal steps approach (Baron & Kenny, 1986) I used above has some limitations. For example, the non-significant interaction between relationship quality and cooperative goals on A's harming of B does not rule out the possibility that cooperative goals exert moderating effects of opposite sign on the direct and indirect effects relating relationship quality and A's harming of B. That is, cooperative goals may weaken the direct effect of relationship quality on harming behavior (negative sign) but strengthen the indirect effect of relationship quality on

harming behavior through mediation effects of emotions (positive sign). In addition, the moderated causal steps approach does not directly estimate the extent to which cooperative goals influence the indirect effect of relationship quality on A's harming of B, which is transmitted through emotions (Edwards & Lambert, 2007). To address these limitations, I provided an additional analysis to further examine this study's combined moderation and mediation model using Edwards and Lambert's (2007) framework (see Figure 5.4). This analytical framework, which combines moderation and mediation, examines how a moderating variable (cooperative goals) influences the paths constituting a direct effect (relationship quality → harming), indirect effect (relationship quality → emotion → harming), and total effects (both direct and indirect effects) of the mediation model. This approach combines moderated regression procedures with the recommendations for testing mediation in a path analytic framework. I examined the path estimates using SRM and followed the procedures from Edward and Lambert's work to generate 1,000 bootstrap estimates and calculate the simple effects at high and low levels of cooperative goals.

Figure 5.4. Combined Moderation and Mediation Model (Study 2)



Results

Preliminary Analyses

Aggregating scores of cooperative goals

I calculated a single cooperative goal score for each team by aggregating the individual members' ratings. One-way analyses of variance revealed significant team effects on individuals' cooperative goal ratings ($F_{29, 508} = 9.11$, $p < .001$). Furthermore, the intraclass correlation coefficients exceeded the values typically recommended for team-level constructs ($ICC_1 = .62$, $ICC_2 = .89$), and the median within-group agreement values were above commonly used thresholds ($r_{wg(j)} = .95$).

Confirmatory factor analyses

Before testing the hypotheses, I conducted a confirmatory factor analysis to evaluate the convergent and discriminant validity of the four emotions using AMOS 6.0. The results suggested that the hypothesized four-factor model (CFI = .98, TLI = .97, RMSEA = .07) yielded a better fit than the two-factor model (CFI = .70, TLI = .63, RMSEA = .19), with a change in chi-square ($\Delta \chi^2 = 614.69$, $\Delta df = 5$, $p < .001$). A better fit was also noted compared with the one-factor model (CFI = .40, TLI = .26, RMSEA = .30), with a change in chi-square ($\Delta \chi^2 = 2646.08$, $\Delta df = 6$, $p < .001$).

In addition, I conducted another confirmatory factor analysis to distinguish statistically the six key variables in this study's model, namely, relationship quality, cooperative goals, and the four emotions. Specifically, the first model allowed items of relationship quality, cooperative goals, and emotions to load on one factor. Second was

the six-factor model with the items assigned to the six corresponding variables. Results showed that the six-factor model (CFI = .97, TLI = .96, RMSEA = .06) yielded a better fit than the one-factor model (CFI = .39, TLI = .32, RMSEA = .23), with a change in chi-square ($\Delta \chi^2 = 4579.85$, $\Delta df = 15$, $p < .001$).

Descriptive Statistics

Table 5.1 presents the descriptive statistics and bivariate correlations. As shown, A's harming of B was negatively related to cooperative goals ($r = -.25$, $p < .001$), relationship quality ($r = -.17$, $p < .001$), and A's admiration toward B ($r = -.13$, $p < .01$), and positively related to A's contempt toward B ($r = .11$, $p < .05$). Relationship quality was positively related to A's admiration ($r = .52$, $p < .001$), sympathy ($r = .25$, $p < .001$), and envy ($r = .31$, $p < .001$), and negatively related to A's contempt toward B ($r = -.21$, $p < .001$).

Table 5.1. *Means, Standard Deviations, and Intercorrelations of Measures (Study 2)*

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	.77	.42	-												
2. Age	19.77	1.32	-.17***	-											
3. Positive affectivity	2.87	.78	.08	.00	(.86)										
4. Negative affectivity	3.23	.82	.09*	-.15**	-.16***	(.78)									
5. Dyadic tenure	19.37	26.23	.01	.08	-.05	.12**	-								
6. Team size	5.39	.78	.08	-.04	-.05	-.06	-.20***	-							
7. Cooperative goals	3.64	.46	.02	-.25***	.19***	-.01	.07	-.23***	(.88)						
8. Relationship quality	3.03	.87	.06	-.09*	.22***	-.08	.21***	-.14**	.28***	(.92)					
9. Admiration	2.57	.97	.00	.01	.28***	.04	.04	-.10*	.13**	.52***	(.91)				
10. Sympathy	1.97	.85	-.10*	.09*	.06	.18***	.05	-.14**	-.05	.25***	.38***	(.90)			
11. Envy	1.85	.78	.02	.03	.09*	.13**	.02	-.07	.13**	.31***	.48***	.33***	(.82)		
12. Contempt	1.61	.78	.02	.04	-.10*	.23***	.00	-.10*	-.22***	-.21***	-.12**	.24***	.12**	(.91)	
13. A's harming of B	1.65	.76	.03	.05	-.06	.02	-.02	-.04	-.25***	-.17***	-.13**	-.03	-.05	.11*	(.92)

*$p < .05$
**$p < .01$
***$p < .001$

Variance Partitioning

Table 5.2 presents the partitioning of variance in A's harming of B and A's emotions toward B for the actor, target, dyadic, and group levels of analysis. For interpersonal harming behavior, 7% of the total variance was due to the differences between groups, 8% was attributable to the differences between actors, 37% was attributable to the characteristics of the target, and 47% was due to the unique dyadic characteristics. For emotions, 40% of the total variance in admiration, 47% in sympathy, 47% in envy, and 50% in contempt; all were attributable to dyadic characteristics. These findings indicated that most of the variance in interpersonal harming behavior and interpersonal emotions directed toward another depended on the characteristics of the dyadic relationship between the actor and the target.

Table 5.2. *Variance Partitioning for A's Interpersonal Harming of B and A's Emotions toward B (Study 2)*

Source of variance	A's harming of B		Admiration		Sympathy		Envy		Contempt	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Group variance	.04 (7%)	.03	.02 (2%)	.03	.03 (5%)	.03	.02 (2%)	.02	.00 (0%)	.00
Actor (A) variance	.05 (8%)	.02	.41 (44%)	.07	.32 (44%)	.06	.26 (42%)	.05	.23 (37%)	.04
Target (B) variance	.21 (37%)	.04	.13 (14%)	.03	.03 (4%)	.02	.05 (9%)	.02	.08 (13%)	.02
Dyadic variance	.27 (47%)	.02	.38 (40%)	.03	.35 (47%)	.03	.29 (47%)	.02	.31 (50%)	.03
Deviance	1118.93		1347.51		1245.71		1128.53		1186.67	

Note. $N = 141$ individuals in 555 dyads within 30 teams.

Tests of Mediation

After entering all the control variables, it was found that relationship quality was negatively related to A's harming of B (B = -.11, p < .01), lending support to Hypothesis 1. Meanwhile, supporting Hypotheses 2a, 2b, and 2d, relationship quality was positively related to A's admiration (B = .53, p < .001) and sympathy (B = .28, p < .001) toward B, and negatively related to A's contempt toward B (B = -.18, p < .001). Out of my expectation, relationship quality was negatively (rather than positively) related to A's envy toward B (B = .26, p < .001). Hypothesis 3 predicted that emotions mediate the relationship between relationship quality and A's harming of B. However, none of the emotions (admiration: B = -.05, n.s.; sympathy: B = -.05, n.s.; envy: B = .02, n.s.; contempt: B = .02, n.s.) was related to A's harming of B. Emotions were not related to A's harming of B and failed to fulfill the condition for testing the mediation effect of emotions. As such, Hypothesis 3 was not supported. Although the mediation model was not significant, it suggested the presence of a potential moderator regulating the mediation effects of emotions on A's harming of B.

Tests of Moderation

Table 5.3 presents the results for Hypotheses 4a, 4b, 5a, and 5b, which predicted that a cooperative goal moderates the associations between relationship quality and emotions. As shown in Table 5.3 (Model 2), the interactive effects of relationship quality and cooperative goals were significant for admiration (B = -.08, p < .01), sympathy (B = -.09, p < .01), envy (B = -.09, p < .001), and contempt (B = .09, p < .01).

Table 5.3. *Social Relations Model Analyses for A's Emotions toward B (Moderation Model, Study 2)*

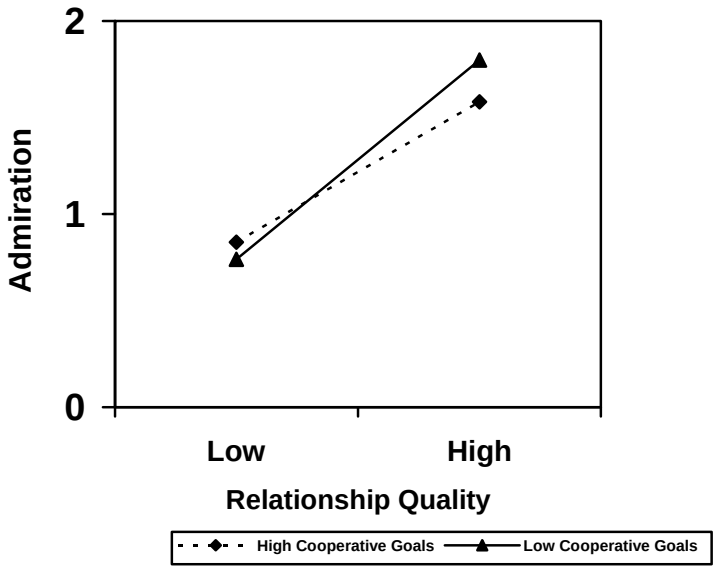
	Admiration				Sympathy				Envy				Contempt			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
Step and variables	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Control variables																
A's Gender	-.08	.13	-.08	.13	-.23	.13	-.24*	.11	.01	.12	.00	.12	.08	.11	.08	.11
A's Age	.05	.05	.05	.05	.08	.05	.09*	.04	.08	.04	.09	.04	.02	.04	.01	.04
Positive affectivity	.26***	.07	.25***	.07	.08	.08	.08	.07	.03	.07	.02	.07	.02	.07	.02	.07
Negative affectivity	.14	.06	.14	.06	.27***	.07	.27***	.06	.14**	.06	.14**	.06	.20***	.06	.20***	.06
B's Gender	-.14	.09	-.16	.09	.16*	.08	.13	.08	-.07	.08	-.09	.08	.08	.08	.10	.08
B's Age	-.03	.03	-.03	.03	.01	.03	.02	.03	-.03	.03	-.03	.03	.04	.03	.04	.03
Dyadic tenure	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Team size	-.01	.07	-.02	.07	-.05	.08	-.07	.07	-.01	.06	-.03	.06	-.12	.07	-.10	.07
Main effects																
Relationship quality (RQ)	.45***	.03	.44***	.03	.24***	.03	.24***	.03	.22***	.03	.22***	.03	-.14***	.03	-.14***	.03
Cooperative goals (CG)	-.03	.05	-.03	.05	-.08	.06	-.08	.05	.05	.05	.05	.04	-.12**	.05	-.11**	.05
$\Delta\chi^2(10)$	164.09***				50.64***				52.43***				24.72***			
Two-way interaction																
CG X RQ			-.08**	.03			-.09**	.03			-.09***	.03			.09**	.03
$\Delta\chi^2(1)$			7.489**				10.65**				11.11***				9.58**	

Note. $N = 555$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

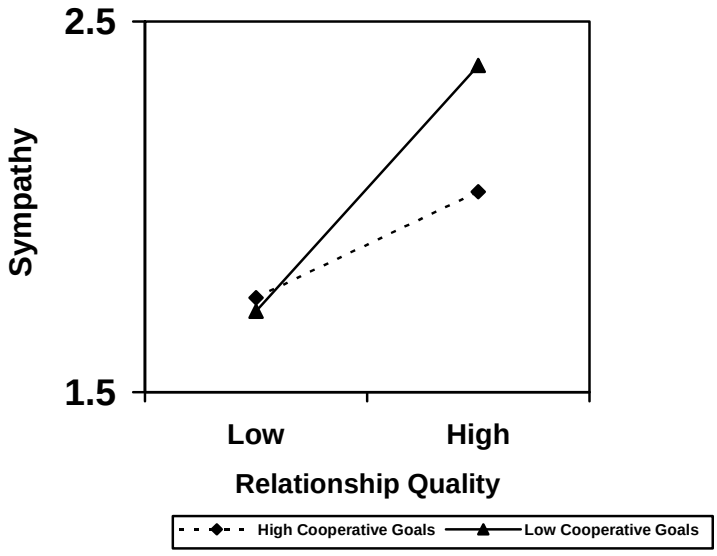
Figures 5.5a-d plot the interactive effects of relationship quality and cooperative goals on emotions following the procedures outlined by Aiken and West (1991) for testing simple slopes. As expected, under conditions of a low cooperative goal, relationship quality was positively related to admiration ($B = .52$, $p < .001$) and sympathy ($B = .33$, $p < .001$), while negatively related to contempt ($B = -.23$, $p < .001$). Again, relationship quality was positively (rather than negatively) related to envy ($B = .30$, $p < .001$) when a cooperative goal was low. In contrast, under conditions of a high cooperative goal, relationship quality was unrelated to sympathy ($B = .08$, *n.s.*), envy ($B = .04$, *n.s.*), and contempt ($B = -.04$, *n.s.*). In addition, as shown in Figure 5.5a, the positive relationship between relationship quality and admiration was relatively weaker in teams with a high cooperative goal ($B = .37$, $p < .001$) than in teams with a low cooperative goal ($B = .52$, $p < .001$). Therefore, Hypotheses 4a, 4b, and 5b received full support. Although the hypothesized moderating effect of cooperative goals on the association between relationship quality and envy (Hypothesis 5a) was significant, the pattern of results was somewhat different from what I had expected.

Figure 5.5. Interaction between Relationship Quality and Team's Cooperative Goals on Emotions (Study 2)

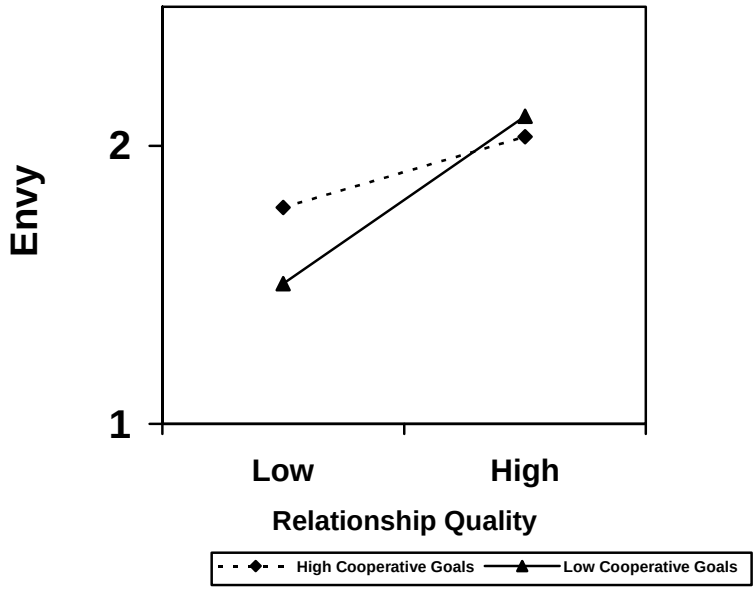
5.5a



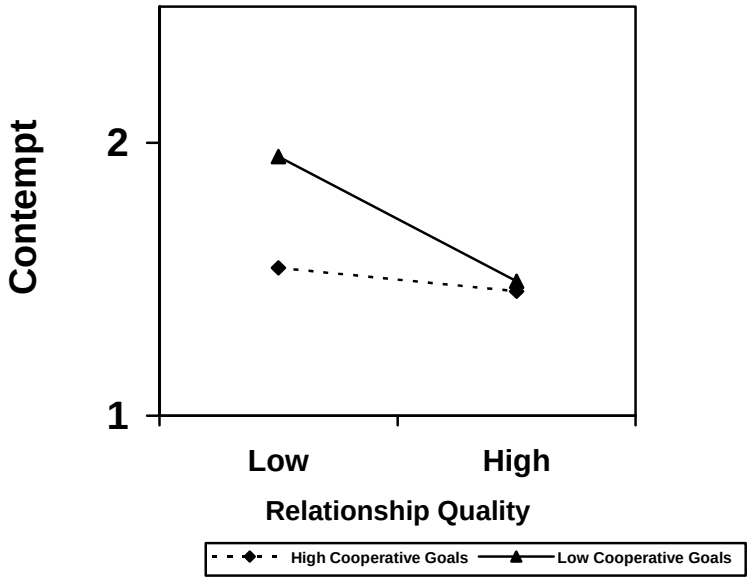
5.5b



5.5c


Envy
2
1
Low
High
Relationship Quality
High Cooperative Goals
Low Cooperative Goals

5.5d


Contempt
2
1
Low
High
Relationship Quality
High Cooperative Goals
Low Cooperative Goals

Tests of Moderated Mediation

Hypothesis 6 predicted that a cooperative goal moderates the indirect effect of relationship quality on A's harming of B through emotions such that the mediation effects of admiration (6a) and sympathy (6b) on the association between relationship quality and A's harming of B are stronger when the cooperative goal is high. In contrast, the mediation effects of envy (6c) and contempt (6d) on this association are stronger when the cooperative goal is low. As noted earlier, moderated mediation refers to a mediated effect (relationship quality → emotion → harming) that varies across levels of a moderator variable (cooperative goals). Following the procedure suggested by Baron and Kenny (1986), this moderated mediation effect on harming behavior will be confirmed if the initial variable (the interaction of relationship quality and cooperative goals) is reduced or found insignificant after the mediator (the interaction of emotion and cooperative goals) is added to the model.

Table 5.4 shows that upon the inclusion of the control variables and main effects in Model 1, the interaction term of cooperative goals and relationship quality in Model 2 and mediators in Model 3, the interaction coefficients of cooperative goal and admiration (B = -.11, p < .01) and contempt (B = -.12, p < .001) in Model 4 became significantly related to A's harming of B, while the interaction coefficient of cooperative goals and relationship quality became insignificant (B = .05, *n.s.*). Table 5.4 also shows that the interaction terms of cooperative goals and emotions (admiration and contempt) were related to A's harming of B causing an increase in model fit in the final step ($\Delta\chi^2(4) = 18.42$, $p < .001$). This implies that mediators (admiration and

contempt) were only significant in one part of the sample, that is, in teams with high or low levels of cooperative goals, respectively.

Table 5.4. *Social Relations Model Analyses for A's Harming of B (Moderated Mediation Model, Study 2)*

	Model 1		Model 2		Model 3		Model 4	
Step and variables	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Control variables								
A's Gender	.09	.08	.09	.08	.09	.08	.09	.08
A's Age	.01	.03	.01	.03	.01	.03	.01	.03
Positive affectivity	.00	.05	.00	.05	.01	.05	.00	.05
Negative affectivity	.02	.04	.02	.04	.02	.05	.01	.04
B's Gender	-.04	.11	-.02	.11	-.02	.11	-.04	.11
B's Age	.00	.04	.00	.04	.00	.04	-.01	.04
Dyadic tenure	.00	.00	.00	.00	.00	.00	.00	.00
Team size	-.05	.07	-.04	.07	-.04	.07	-.01	.07
Main effects								
Relationship quality (RQ)	-.08*	.03	-.08*	.03	-.08*	.04	-.08**	.04
Cooperative goals (CG)	-.15**	.05	-.15**	.05	-.15**	.06	-.22**	.10
$\Delta\chi^2(10)$	14.87***							
Two-way Interaction								
CG X RQ			.07*	.03	.07*	.03	.05	.04
$\Delta\chi^2(1)$			5.45*					
Mediation								
Admiration					-.02	.04	.02	.04
Sympathy					-.03	.03	-.02	.03
Envy					.04	.04	.04	.04
Contempt					.01	.03	.02	.03
$\Delta\chi^2(4)$					1.70			
Moderated mediation								
CG x Admiration							-.11**	.05
CG x Sympathy							.05	.03
CG x Envy							.05	.05
CG x Contempt							-.12***	.03
$\Delta\chi^2(4)$							18.42***	

Note. $N = 555$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Additional Analyses

To assess the magnitude of the mediated relationship at the different levels of cooperative goals, I further analyzed the moderated mediation model (mainly focusing on two significant emotions: admiration and contempt) using Edwards and Lambert's framework (2007). In path analytic terms, moderated mediation means that either or both of the paths from relationship quality to emotions (first stage of the model) and from emotions to harming (second stage of the model), which constitute the direct effect (relationship quality → harming) and indirect effect (relationship quality → emotions → harming) of relationship quality on harming, vary across levels of cooperative goals. Table 5.5 presents the coefficients of the first stage (path from relationship quality to emotions), second stage (path from emotions to harming), direct effect (path from relationship quality to harming), and indirect effect (path from relationship quality to harming through emotions) varying at low and high levels of cooperative goals.

As shown in Table 5.5 (mediator: admiration), when the cooperative goal was high, relationship quality was positively related to admiration ($P = .44$, $p < .001$); admiration was negatively related to A's harming of B ($P = -.16$, $p < .001$); and relationship quality had an indirect effect on A's harming of B ($P = -.07$, $p < .001$). This provided evidence that admiration mediated the association between relationship quality and A's harming of B when the cooperative goal was high. In contrast, under the condition of a low cooperative goal, relationship quality was positively related to admiration ($P = .61$, $p < .001$) and had a direct effect on A's harming of B ($P = -.22$, $p < .001$) but the path from admiration to A's harming of B was not significant ($P = .08$,

n.s.), nor was the indirect effect of relationship quality on A's harming of B (P = .05, *n.s.*). These results showed that admiration did not mediate the association between relationship quality and A's harming of B when the cooperative goal was low. In addition, Table 5.5 (mediator: contempt) shows that at a low level of cooperative goal, relationship quality was negatively related to contempt (P = -.30, $p < .001$); contempt was positively related to A's harming of B (P = .18, $p < .05$); and relationship quality had a direct (P = -.14, $p < .05$) and indirect effect (P = -.05, $p < .05$) on A's harming of B. This provided support that contempt mediated the association between relationship quality and A's harming of B when cooperative goal was low. However, when the cooperative goal was high, all paths were not significant, indicating that contempt did not mediate the abovementioned association.

In addition, as noted in Table 5.5 (mediator: admiration; see Difference), the moderating effects of cooperative goals were observed in the first stage (path from relationship quality to admiration, *Diff*: -.16, $p < .001$), second stage (path from admiration to harming, *Diff*: -.24, $p < .001$), direct effect (path from relationship quality to harming, *Diff*: .29, $p < .001$), and indirect effect (path from relationship quality to harming through admiration, *Diff*: -.12, $p < .01$). Meanwhile, for contempt, the moderating effects manifested in the first stage (path from relationship quality to contempt, *Diff*: .25, $p < .001$), second stage (path from contempt to harming, *Diff*: -.26, $p < .001$), direct effect (path from relationship quality to harming, *Diff*: .07, $p < .05$), and indirect effect (path from relationship quality to harming through contempt, *Diff*: .06, $p < .001$). Thus, cooperative goals moderated the direct effect of relationship quality on harming, the first stage, and the second stage of the indirect effect of

relationship quality on harming mediated by emotions (admiration and contempt). These patterns of results were exactly the same as the results found in the social relations analyses.

Table 5.5. *Direct and Indirect Effects of Relationship Quality on A's Harming of B at High and Low levels of Cooperative Goals through Admiration and Contempt (Study 2)*

Mediators	Moderator	Stage		Effect		
		First RQ→Emot	Second Emot→Harm	Direct RQ→Harm	Indirect RQ→Emot→Harm	Total
Admiration	High cooperative goals	.44***	-.16***	.07	-.07***	.00
	Low cooperative goals	.61***	.08	-.22***	.05	-.17***
	Difference	-.16***	-.24***	.29***	-.12**	.17**
Contempt	High cooperative goals	-.05	-.09	-.08	.00	-.07
	Low cooperative goals	-.30***	.18***	-.14**	-.05***	-.20***
	Difference	.25***	-.26***	.07*	.06***	.12*

Note. $N = 555$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

First stage: path from relationship quality (RQ) to emotion (Emot: admiration/contempt)

Second stage: path from emotions (Emot) to A's harming of B (Harm)

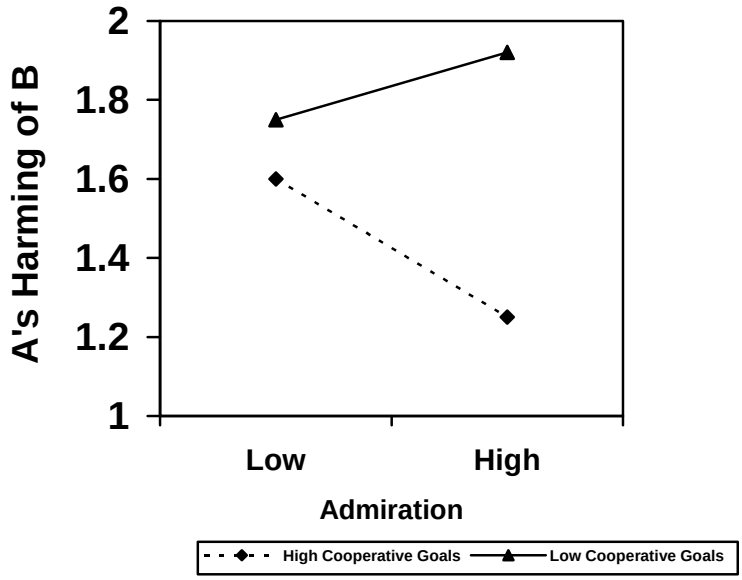
Direct effect: path from relationship quality (RQ) to A's harming of B (Harm)

Indirect effect: path from relationship quality to A's harming of B through emotions (RQ→ Emot → Harm)

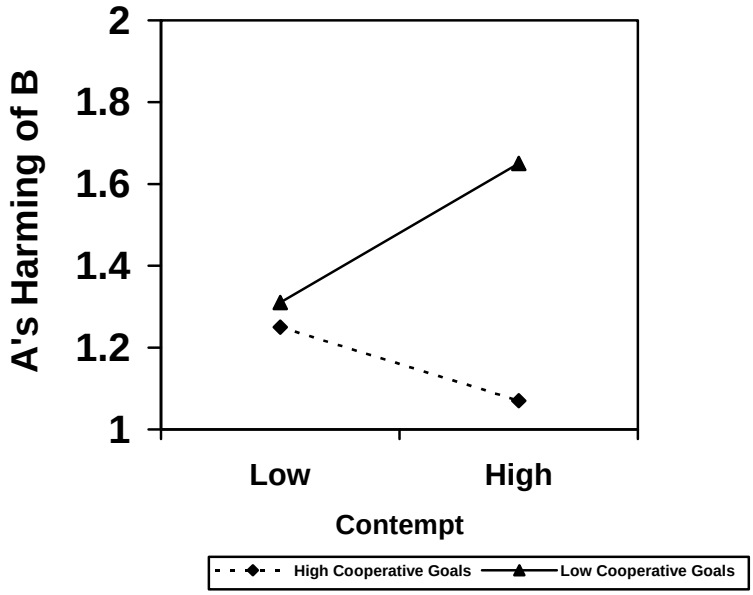
Figures 5.6a and 5.6b plot the interactive effects of emotions (admiration and contempt) and cooperative goals on interpersonal harming following the procedures outlined by Aiken and West (1991). As expected, the simple slopes tests showed that under the condition of a high cooperative goal, admiration was negatively related to interpersonal harming (B = -.16, p < .01), whereas this relationship was not significant (B = .08, *n.s.*) when a cooperative goal was low. In contrast, under the condition of a low cooperative goal, contempt was positively related to interpersonal harming (B = .17, p < .01), whereas this relationship was not significant (B = -.09, *n.s.*) when a cooperative goal was high.

Figure 5.6. Interaction between Emotions (Admiration and Contempt) and Team's Cooperative Goals on A's Harming of B (Study 2)

5.6a



5.6b

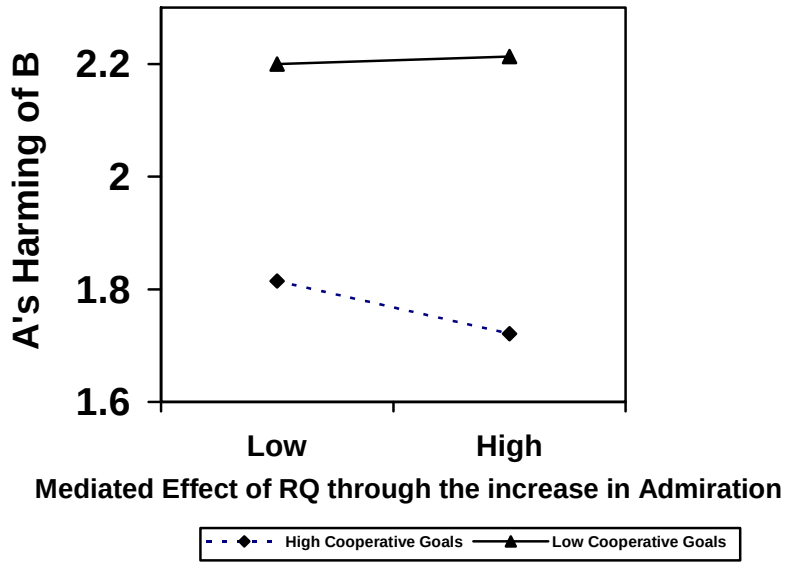


Figures 5.7a and 5.7b show the plots of the mediated effects of relationship quality through admiration (see Figure 5.7a) and contempt (see Figure 5.7b) on A's harming of B at ± SD around the mean of cooperative goals. As shown in Figure 5.7a, under conditions of a low cooperative goal, there was no relationship observed between the mediated effect of relationship quality (through admiration) and A's harming of B. However, A's harming of B decreased as the mediated effect of relationship quality increased through the increase in A's admiration toward B under the condition of a high cooperative goal.

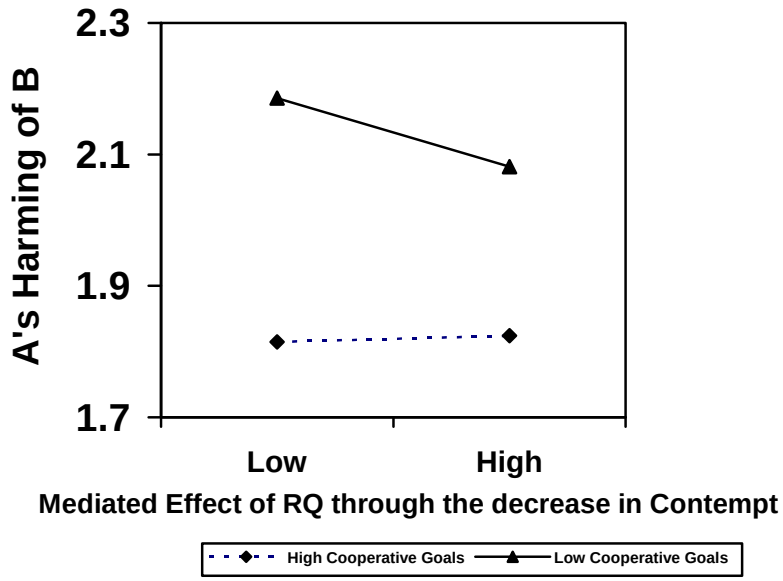
Figure 5.7b shows that when a cooperative goal was low, the mediated effect of relationship quality through the decrease in A's contempt toward B was negatively related to A's harming of B. In contrast, A's harming of B was not related to the mediated effect of relationship quality (through contempt) when the cooperative goal was high. In sum, the results provided support for Hypotheses 6a (admiration) and 6d (contempt), such that the mediation effect of admiration on the association between relationship quality and harming was stronger when the cooperative goal was higher. Meanwhile, the mediation effect of contempt on the association between relationship quality and harming was stronger when the cooperative goal was lower. However, Hypotheses 6b (sympathy) and 6c (envy) were not supported.

Figure 5.7. Interaction between the Indirect (Mediated) Effect of Relationship Quality (RQ) and Team's Cooperative Goals on A's Harming of B (Study 2)

5.7a



5.7b



Discussion

In Study 2, using a sample of student work teams consisting of 555 dyadic relations collected from Macau, I found that relationship quality was negatively related to A's harming of B (Hypothesis 1), positively related to admiration (Hypothesis 2a) and sympathy (Hypothesis 2b), and negatively related to contempt (Hypothesis 2d). Interestingly, relationship quality was found to be positively related rather than negatively related to envy (Hypothesis 2c). Furthermore, the associations between relationship quality and emotions were buffered when the cooperative goal was high, whereas these associations were exacerbated when the cooperative goal was low (Hypotheses 4a, 4b, 5a, and 5b).

This study found that emotions did not mediate the association between relationship quality and A's harming of B, indicating that Hypothesis 3 was not supported. However, both social relations analyses and Edwards and Lambert's path analytic analyses (2007) showed that the mediation effect of admiration on the association between relationship quality and A's harming of B was stronger when a team's cooperative goal was high but not when it was low (Hypothesis 6a). Similarly, the mediation effect of contempt on this relationship was stronger when a team's cooperative goal was low but not when it was high (Hypothesis 6d). On the other hand, the mediation effects of sympathy and envy on the association between relationship quality and A's harming of B were not significant regardless of the team's cooperative goal, indicating that Hypotheses 6b and 6c were not supported. Finally, the results from path analytic analyses confirmed the Theoretical Model 1 that cooperative goals moderated the direct effect of relationship quality on harming, the first stage, and the

second stage of indirect effect of relationship quality on harming mediated by emotions (admiration and contempt).

Significantly, this current study challenged the prevailing assumption in social exchange that exchange processes are solely responsible for reciprocal behavior. I ascertain that emotions constitute another vital role by which relationship quality elicits harming behavior. These results also confirm that the relationship-emotion-harming linkage is deeply contextualized. That is, a team's cooperative goal regulates the extent to which relationship quality is related to emotions and the mediation effects of emotions in the association between relationship quality and harming behavior.

Despite these encouraging observations, this study has its limitations. First, a student sample may not be representative of company work teams. Second, the cognitive processes that help understand the ways by which discrete emotions develop in dyad according to different levels of relationship quality remain unclear. In Study 3, I will fill these gaps using a sample of work teams from a telecommunication services company, to validate the initial results from Study 2, and further explore the possible mediating role of social comparison in the relationships between relationship quality and emotions.

CHAPTER 6

STUDY 3: Interpersonal Relationships and Emotions: The Mediating Role of Social Comparison

Study 3 consists of two parts. First, I attempted to replicate the findings from Study 2 by examining Hypotheses 1 to 6 of the Theoretical Model 1 using the data collected from sales teams in a stated-owned telecommunication services company. Second, I investigated the cognitive intermediary through which relationship quality relates to interpersonal emotions. In particular, this study proposes that social comparison accounts for at least part of the reason why interpersonal relationship leads to different interpersonal emotions. To test Theoretical Model 2, I examined the following: (1) the mediating effects of social comparison responses on the association between relationship quality and emotions (mediation model); (2) the interactive effects of relationship quality and cooperative goals on social comparison responses (moderation model); and (3) how social comparison responses mediate the joint effects of relationship quality and cooperative goals on interpersonal emotions (mediated moderation model). Based on these predictions, I developed additional hypotheses for Study 3.

Hypothesis 7a: Upward assimilation mediates the association between relationship quality and admiration (mediation model).

Hypothesis 7b: Downward assimilation mediates the association between relationship quality and sympathy (mediation model).

Hypothesis 7c: Upward contrast mediates the association between relationship quality and envy (mediation model).

Hypothesis 7d: Downward contrast mediates the association between relationship quality and contempt (mediation model).

Hypothesis 8: Cooperative goals moderate the associations between relationship quality and assimilative comparisons (8a: upward assimilation; 8b: downward assimilation). The positive associations between relationship quality and assimilative comparisons are stronger in teams with a lower cooperative goal than in teams with a higher cooperative goal (moderation model).

Hypothesis 9: Cooperative goals moderate the associations between relationship quality and contrastive comparisons (9a: upward contrast; 9b: downward contrast). The negative associations between relationship quality and contrastive comparisons are stronger in teams with a lower cooperative goal than in teams with a higher cooperative goal (moderation model).

Hypothesis 10a: Upward assimilation mediates the interactive effects of relationship quality and cooperative goals on admiration (mediated moderation model).

Hypothesis 10b: Downward assimilation mediates the interactive effects of relationship quality and cooperative goals on sympathy (mediated moderation model).

Hypothesis 10c: Upward contrast mediates the interactive effects of relationship quality and cooperative goals on envy (mediated moderation model).

Hypothesis 10d: Downward contrast mediates the interactive effects of relationship quality and cooperative goals on contempt (mediated moderation model).

Method

Sample and Procedures

Data were collected from sales associates who worked in teams of four to five members in a state-owned telecommunication services company in China. The main duty of the sales associates is to sell the telecommunication services package. Their weekly and monthly sales records are posted on the internal notice board to publicize individual performance. Apart from this selling duty, employees are required to work together as a team to achieve their administrative tasks including communication and coordination. In addition, employees have to fulfill their specific roles and responsibilities, interact with multiple members, engage in multiple interpersonal relations with other members for task accomplishment, and adhere to the norms of the group. This complicated work context may shape one's social comparison response, and in turn, affects work behavior.

Similar to Study 2, I collected data using a round robin design in which the team members provided self-descriptive information and rated all the other members (Warner et al., 1979) of the team. Relationship quality, social comparisons, and emotions where captured through self-ratings; cooperative goals through members' aggregate scores; and interpersonal harming through other-ratings. These data were used to corroborate the external validity of the findings from Study 2.

Paper-and-pencil surveys were distributed to 132 sales associates across 31 teams. The participants directly returned the completed surveys to the researcher, and all were assured that their responses would be kept confidential and would be used for research purposes only. After omitting 12 incomplete dyads, the final data set contained 128 individuals (408 dyadic relations) from 31 teams, yielding an effective response rate of 97%. The mean age and organizational tenure of the respondents were 25 and 1.2 years, respectively. Forty-four percent were female, and 44% had a high school education or above. The average length of the dyadic relationships was five months.

Measures

The key measures, namely, relationship quality (α = .91), admiration (α = .86), sympathy (α = .88), envy (α = .70), contempt (α = .88), cooperative goals (α = .87), interpersonal harming (α = .91), and all control variables were the same as in Study 2. Social comparison responses (upward assimilation: α = .89; upward contrast: α = .83; downward assimilation: α = .90; and downward contrast: α = .79) were the same as in Study 1. In measuring the mediation effects of social comparison in Theoretical Model 2, I also controlled the social comparison orientation because social comparison may depend on the individual difference in self-tendency of comparison with others (Buunk et al., 2005). An 11-item social comparison orientation scale developed by Gibbons and Buunk (1999) was used. A sample item is "I always pay a lot of attention to how I do things compared with how the others do things." The Cronbach's alpha was .64. When necessary, these measures were translated to Chinese using a double-blind back-translation procedure.

Statistical Analyses

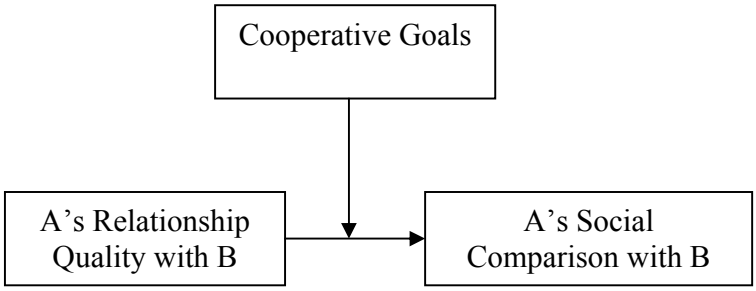
As in Study 2, I conducted two analyses to examine both Models 1 and 2. In the first analysis, I used the causal steps approach proposed by Baron and Kenny (1986) to test all hypothesized relationships. Furthermore, I provided an additional analysis following Edwards and Lambert's path analytic framework (2007) to demonstrate the moderated mediation relationship in Model 1 and the mediated moderation relationship in Model 2. The procedures to examine Model 1 were the same as those in Study 2. The procedures to examine Model 2 are listed below.

Tests of mediation. Hypotheses 7a-d suggest a mediation model, whereby the association between A's relationship quality with B and A's emotion toward B is transmitted by A's social comparison with B. Figure 6.1 illustrates this relationship. I followed Baron and Kenny's three-step procedure (1986), which is similar to that in Study 2 (see p. 83-84), to test this model.

Figure 6.1. Mediation Model (Study 3)

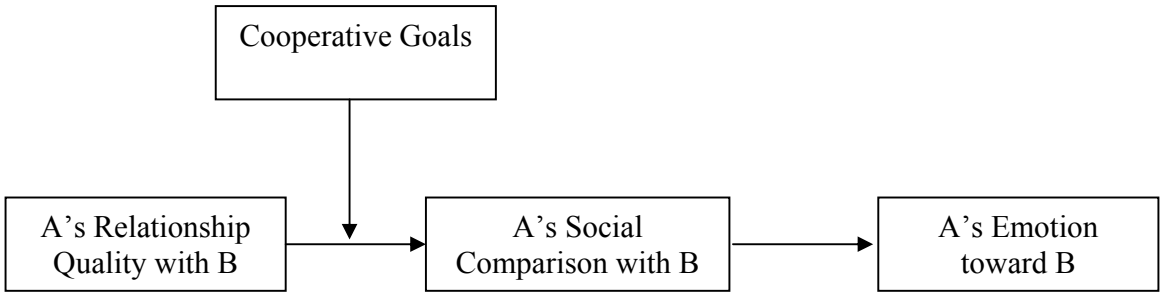
Tests of moderation. Hypotheses 8 and 9 suggest a moderation model, whereby the association between A's relationship quality with B and A's social comparison with B depends on the levels of cooperative goals. Figure 6.2 shows this moderation model. Again, I followed Baron and Kenny's procedure (1986) to test this moderation model as in Study 2 (see p. 84).

Figure 6.2. Moderation Model (Study 3)



Tests of mediated moderation. Hypotheses 10a-d predict that A's social comparison with B mediates the joint effects of relationship quality and cooperative goals on A's emotion toward B, as illustrated in Figure 6.3. Baron and Kenny (1986) suggested a three-step procedure to test this mediated moderation model. In the first step, the interactive effects of relationship quality (the independent variable) and cooperative goals (the moderating variable) on A's emotion toward B (the dependent variable) should be significant. In the second step, the interactive effects of relationship quality (the independent variable) and cooperative goals (the moderator variable) on A's social comparison with B (the mediating variable) should be significant. Lastly, A's social comparison with B (the mediating variable) should be significantly related to A's emotion toward B (the dependent variable), with the interactive effects of relationship quality and cooperative goals controlled for. Complete mediation occurs only when the interactive effects become non-significant in the third step. Partial mediation appears when the interactive effects decrease and become less significant.

Figure 6.3. Mediated Moderation Model (Study 3)



In addition, as in Study 2, an additional analysis using Edwards and Lambert's framework (2007) was conducted to provide support for this mediated moderation relationship.

Results: External Validation of Relationship-Emotion-Harming Linkage as Contingent on Cooperative Goals (Theoretical Model 1)

Preliminary Analyses

Aggregating scores of cooperative goals

One-way analyses of variance revealed significant team effects on individuals' cooperative goals ratings ($F_{30, 377} = 7.58$, $p < .001$). Furthermore, the intraclass correlation coefficients exceeded the values typically recommended for team-level constructs ($ICC_1 = .62$, $ICC_2 = .87$), and the median within-group agreement values were above commonly used thresholds ($r_{wg(j)} = .87$).

Confirmatory factor analyses

Before testing the hypotheses, I conducted a confirmatory factor analysis to evaluate the convergent and discriminant validity of the four emotions using AMOS 6.0. Results suggested that the hypothesized four-factor model (CFI = .96, TLI = .95, RMSEA = .07) yielded a better fit than the two-factor model (CFI = .62, TLI = .52, RMSEA = .21), with a change in chi-square ($\Delta \chi^2 = 829$, $\Delta df = 5$, $p < .001$). The model also achieved a better fit compared with the one-factor model (CFI = .35, TLI = .21, RMSEA = .27), with a change in chi-square ($\Delta \chi^2 = 1459.28$, $\Delta df = 6$, $p < .001$).

In addition, I conducted an additional confirmatory factor analysis to distinguish statistically the six key variables in our model, namely, relationship quality, cooperative goals, and the four emotions stated above. Specifically, the first model allowed the items of relationship quality, cooperative goals, and emotions to load on one factor. The second was a six-factor model, with the items assigned to six corresponding variables.

Results showed that the six-factor model (CFI = .95, TLI = .93, RMSEA = .07) yielded a better fit than the one-factor model (CFI = .42, TLI = .35, RMSEA = .20), with a change in chi-square ($\Delta \chi^2 = 2610.14$, $\Delta df = 15$, $p < .001$).

Descriptive Statistics

Table 6.1 presents the descriptive statistics and bivariate correlations. Herein, A's harming of B was negatively related to cooperative goals ($r = -.30$, $p < .001$) and relationship quality ($r = -.16$, $p < .01$), and positively related to A's contempt toward B ($r = .21$, $p < .001$). Furthermore, relationship quality was positively related to A's admiration ($r = .43$, $p < .001$), sympathy ($r = .18$, $p < .001$), and envy ($r = .12$, $p < .05$) but negatively related to A's contempt toward B ($r = -.22$, $p < .001$).

In addition, relationship quality was positively related to upward assimilation ($r = .50$, $p < .001$) and negatively related to downward contrast ($r = -.11$, $p < .05$). Cooperative goals were likewise positively related to upward assimilation ($r = .33$, $p < .001$) but negatively related to upward contrast ($r = -.14$, $p < .01$) and downward assimilation ($r = -.11$, $p < .05$). Moreover, upward assimilation was positively related to admiration ($r = .53$, $p < .001$) and sympathy ($r = .11$, $p < .05$), and negatively related to contempt ($r = -.16$, $p < .01$). Upward contrast, downward contrast, and downward assimilation were positively related to sympathy, envy, and contempt.

Table 6.1. *Means, Standard Deviations, and Intercorrelations of Measures (Study 3)*

Variable	M (Study 2)	SD (Study 2)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Gender	.44	.50	-																	
2. Age	25.24	5.15	-.09	-																
3. Positive affectivity	3.02	.75	-.14**	.19***	(.75)															
4. Negative affectivity	2.36	.73	.05	-.02	.07	(.70)														
5. Social comparison orientation	3.50	.76	-.10*	-.00	.14**	.20***	(.64)													
6. Dyadic tenure	5.07	8.24	-.01	.16**	.07	.09	.06	-												
7. Team size	7.82	5.42	.05	-.15**	-.07	.02	-.14**	-.01	-											
8. Cooperative goals	3.93	.58	-.11*	.00	.14**	-.26***	.07	.10	-.18***	(.87)										
9. Relationship quality	3.05	.92	-.12*	-.08	.23***	-.10*	-.02	.17**	-.09	.38***	(.91)									
10. Admiration	2.83	1.02	-.09	.13*	.47***	-.05	.07	.06	-.09	.29***	.43***	(.86)								
11. Sympathy	1.65	.79	-.15**	.03	.05	.17**	.11*	.12*	-.04	-.04	.18***	.12*	(.88)							
12. Envy	1.65	.67	-.10*	.06	.08	.15**	.10*	.02	.06	-.10	.12*	.20***	.30***	(.70)						
13. Contempt	1.37	.66	.02	.06	-.01	.24***	-.02	.11*	.12*	-.30***	-.22***	.00	.19***	.30***	(.87)					
14. Upward assimilation	3.28	.98	-.10	-16**	.38***	-.11*	.11*	.13*	-.10*	.33***	.50***	.53***	.11*	.05	-.16**	(.89)				
15. Upward contrast	2.00	.81	.13*	.02	-.04	.28***	.04	.06	.05	-.14**	-.03	.04	.13**	.39***	.29***	.05	(.83)			
16. Downward contrast	2.18	.88	.05	-.03	-.03	.22***	.03	.10	.01	-.09	-.11*	.05	.10*	.32***	.29***	.04	.39***	(.79)		
17. Downward assimilation	1.78	.89	-.07	.09	.08	.21***	.06	.18***	.03	-.11*	.00	.06	.31***	.46***	.33***	.08	.49***	.34***	(.90)	
18. A's harming of B	1.38	.67	-.05	.12*	.10*	.15**	-.03	.01	-.04	-.30***	-.16**	-.04	.01	.05	.21***	-.08	-.02	.05	.06	(.91)

*$p < .05$
**$p < .01$
***$p < .001$

Variance Partitioning

Table 6.2 presents the partitioning of variance in A's harming of B and A's emotions toward B for the actor, target, dyadic, and group levels of analysis. For interpersonal harming behavior, 14% of the total variance was due to the differences between groups, 11% for the differences between actors, 32% based on the characteristics of the target, and 43% due to the unique dyadic characteristics. For emotions, 35% of the total variance in admiration, 39% in sympathy, 54% in envy, and 61% in contempt were attributable to dyadic characteristics. These findings indicated that most of the variance in the harming behavior and interpersonal emotions that one team member directed toward another depended on the characteristics of the dyadic relationship between the actor and the target.

Table 6.2. *Variance Partitioning for A's Interpersonal Harming of B and A's Emotions toward B (Study 3)*

Source of variance	A's harming of B		Admiration		Sympathy		Envy		Contempt	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Group variance	.06 (14%)	.04	.16 (15%)	.08	.00 (0%)	.00	.06 (14%)	.03	.03 (7%)	.03
Actor (A) variance	.05 (11%)	.02	.51 (49%)	.09	.36 (57%)	.06	.12 (27%)	.03	.11 (26%)	.03
Target (B) variance	.14 (32%)	.03	.02 (2%)	.03	.02 (4%)	.02	.02 (5%)	.02	.03 (6%)	.02
Dyadic variance	.19 (43%)	.02	.36 (35%)	.04	.24 (39%)	.03	.24 (54%)	.03	.26 (61%)	.03
Deviance	704.25		992.45		822.26		747.96		758.99	

Note. N = 128 individuals in 408 dyads within 31 teams

Tests of Mediation

After entering all the control variables, it was found that relationship quality was negatively related to A's harming of B (B = -.09, p < .01), lending support to Hypothesis 1. Meanwhile, supporting Hypotheses 2a, 2b, and 2d, relationship quality was positively related to A's admiration (B = .37, p < .001) and sympathy (B = .21, p < .001) toward B, but negatively related to A's contempt toward B (B = -.16, p < .001). As in Study 2, relationship quality was negatively (rather than positively) related to A's envy toward B (B = .13, p < .001). Hypothesis 3 predicted that emotions will mediate the relationship between relationship quality and A's harming of B. However, none of the emotions (admiration: B = -.02, *n.s.*; sympathy: B = -.01, *n.s.*; envy: B = .00, *n.s.*; contempt: B = .03, *n.s.*) was related to A's harming of B. As emotions were not related to A's harming of B, which failed to fulfill the condition for testing mediation effect of emotions, Hypothesis 3 was not supported. However, the non-significant mediation relationship suggested the presence of a potential moderator regulating the mediation effects of emotions on A's harming of B.

Tests of Moderation

Table 6.3 presents the results for Hypotheses 4a, 4b, 5a, and 5b, which predicted that cooperative goals moderate the associations between relationship quality and emotions. As shown in Table 6.3 (Model 2), the interaction coefficients of relationship quality and cooperative goals were significant for all types of emotions (admiration: B = -.07, p < .05; sympathy: B = -.09, p < .01; envy: B = -.11, p < .001; contempt: B = .06, p < .05.).

Table 6.3. *Social Relations Model Analyses for A's Emotions toward B (Moderation Model, Study 3)*

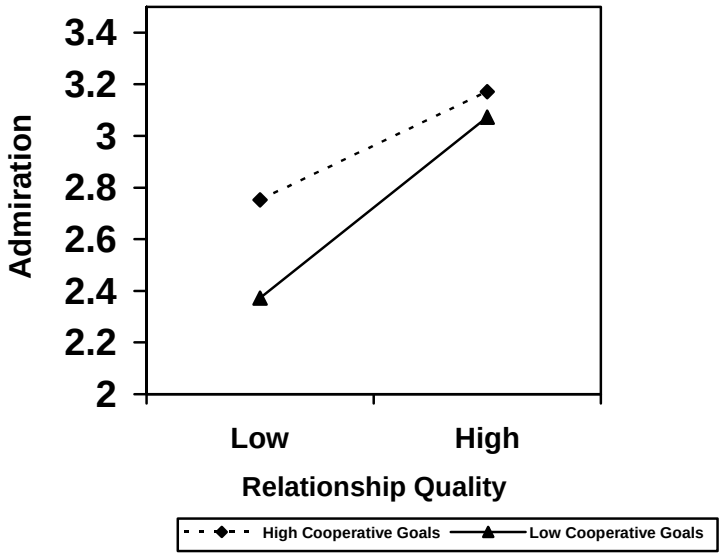
	Admiration				Sympathy				Envy				Contempt			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
Step and variables	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Control variables																
A's Gender	.03	.13	.04	.12	-.22	.12	.00	.01	-.15	.09	-.14	.09	-.05	.08	-.05	.08
A's Age	.02	.01	.01	.01	.00	.01	-.01	.08	.01	.01	.00	.01	.00	.01	.00	.01
Positive affectivity	.51***	.09	.53***	.09	-.04	.08	.21*	.08	.02	.06	.05	.02	.02	.06	.01	.06
Negative affectivity	-.01	.09	-.01	.09	.20*	.08	.10	.06	.10	.06	.11	.00	.13*	.06	.12*	.06
B's Gender	-.09	.07	-.09	.07	.09	.06	.00	.01	-.04	.06	-.04	.00	-.15**	.06	-.15**	.06
B's Age	.00	.01	.00	.01	.00	.01	.00	.00	.00	.01	-.01	.07	.00	.01	.00	.01
Dyadic tenure	.00	.01	.00	.01	.00	.00	.00	.01	.00	.00	.00	.06	.01	.00	.01	.00
Team size	.00	.01	.00	.01	.00	.01	.00	.01	.01	.01	.01	.18	.01	.01	.01	.01
Main effects																
Relationship quality (RQ)	.29***	.05	.28***	.05	.21***	.04	.18***	.04	.13***	.04	.11**	.04	-.12***	.04	-.12***	.04
Cooperative goals (CG)	.13	.07	.12	.07	-.08	.06	-.08	.06	-.11	.06	-.12	.06	-.134**	.05	-.13**	.05
$\Delta\chi^2(10)$	50.56***				28.63***				14.07***				25.37***			
Two-way interaction																
CG X RQ			-.07*	.04			-.09**	.03			-.11***	.03			.06*	.03
$\Delta\chi^2(1)$			3.90*				9.39**				13.01***				3.90*	

Note. $N = 408$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

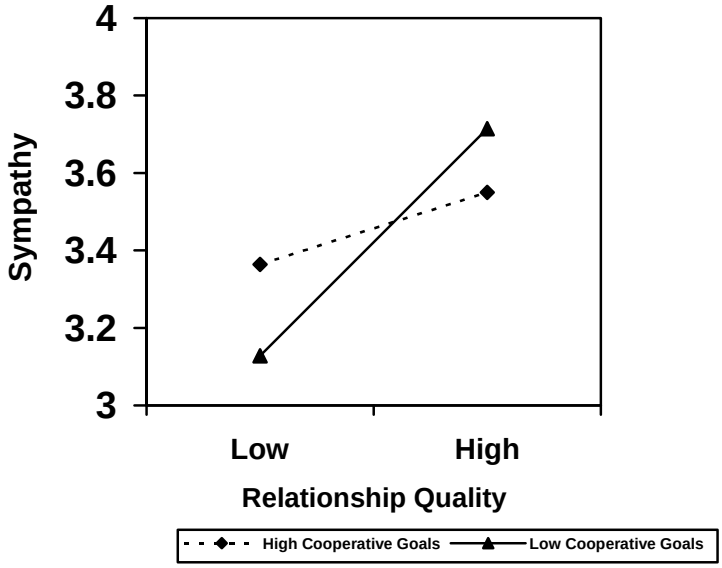
Figures 6.4a-d plot the interactive effects of relationship quality and cooperative goals on emotions following the procedures outlined by Aiken and West (1991) for testing the simple slopes. As expected, the simple slopes tests showed that under the condition of a low cooperative goal, relationship quality was positively related to admiration ($B = .34$, $p < .001$) and sympathy ($B = .27$, $p < .001$), but negatively related to contempt ($B = -.14$, $p < .001$). Again, relationship quality was positively (rather than negatively) related to envy ($B = .22$, $p < .001$) when a cooperative goal was low. In contrast, under conditions of a high cooperative goal, relationship quality was unrelated to sympathy ($B = .09$, *n.s.*), envy ($B = .00$, *n.s.*), and contempt ($B = -.09$, *n.s.*). In addition, as shown in Figure 6.4a, the positive relationship between relationship quality and admiration was relatively weaker in teams with a high cooperative goal ($B = .21$, $p < .01$) than in teams with a low cooperative goal ($B = .34$, $p < .001$). Therefore, Hypotheses 4a, 4b, and 5b received full support. Similar to Study 2, although the interaction term of relationship quality and cooperative goals on envy (Hypothesis 5a) was significant, the pattern of results was somewhat different from what I had expected.

Figure 6.4. Interaction between Relationship Quality and Team's Cooperative Goals on Emotions (Study 3)

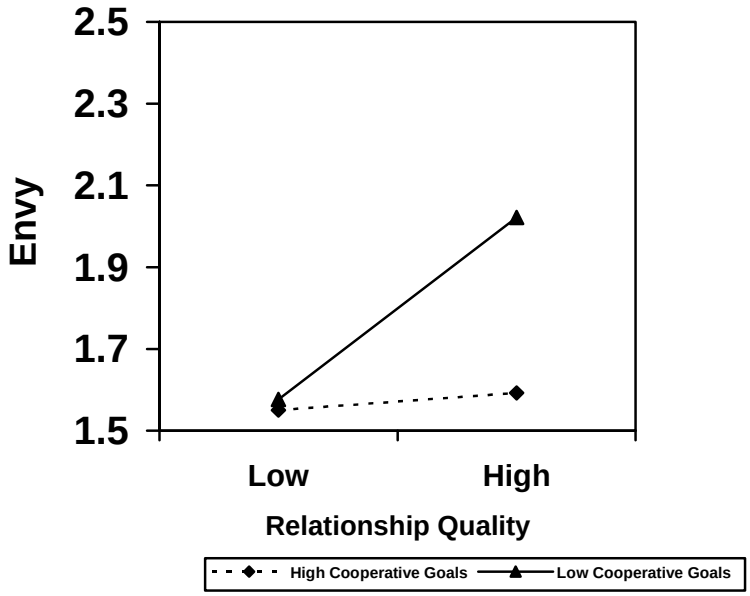
6.4a



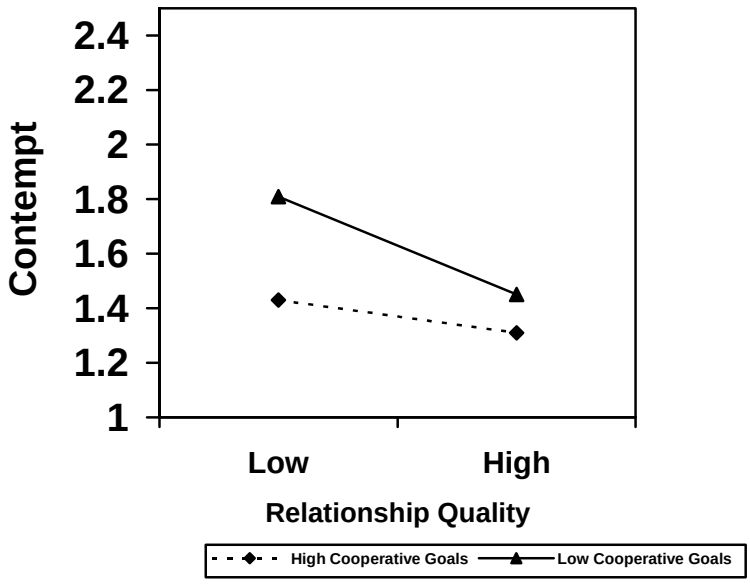
6.4b



6.4c


2.5
2.3
2.1
1.9
1.7
1.5
Envy
Low
High
Relationship Quality
High Cooperative Goals
Low Cooperative Goals

6.4d


2.4
2.2
2
1.8
1.6
1.4
1.2
1
Contempt
Low
High
Relationship Quality
High Cooperative Goals
Low Cooperative Goals

Tests of Moderated Mediation

Hypothesis 6 predicted that the cooperative goals moderate the indirect effect of relationship quality on A's harming of B through emotions, such that the mediation effects of admiration (6a) and sympathy (6b) on the association between relationship quality and A's harming of B are stronger when the cooperative goal is high, but the mediation effects of envy (6c) and contempt (6d) are stronger when the cooperative goal is low. As shown in Table 6.4, after entering the control variables, main effects (Model 1), interaction term of cooperative goals and relationship quality (Model 2), and mediators (Model 3), only the interaction coefficient of cooperative goals and admiration (Model 4) was significantly related to A's harming of B ($B = -.11$, $p < .001$). Although the interaction term of cooperative goals and relationship quality was not significant in Model 2 ($B = .01$, *n.s.*), recent methodologists (Kenny, Kashy, & Bolger, 1998; Shrout & Bolger, 2002) have suggested that it is not necessary for initial variable *a* (cooperative goals x relationship quality) to correlate with outcome variable *b* (A's harming of B). As discussed earlier, the non-significant interaction between relationship quality and cooperative goals on A's harming of B may due to the fact that cooperative goals exert moderating effects of opposite sign on the direct and indirect effects relating relationship quality and A's harming of B. It is recommended that mediation analyses should be based on formal significance tests of the indirect effect *a* to *b* through a mediator (*m*). Our previous tests on the moderation model already showed that the interaction term of cooperative goals and relationship quality (*a*) predicted interpersonal emotions (*m*); thus, these findings satisfied the condition of establishing mediation. Table 6.4 shows that the interaction term of cooperative goals

and admiration was related to A's harming of B, and there was an increase in model fit in the final step ($\Delta\chi^2(4) = 11.43$, $p < .05$). This implies that the mediation effect of admiration was only significant in one part of the sample, that is, in teams with a high cooperative goal.

Table 6.4. *Social Relations Model Analyses for A's Harming of B (Moderated Mediation Model, Study 3)*

	Model 1		Model 2		Model 3		Model 4	
Step and variables	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Control variables								
A's Gender	-.09	.07	-.09	.07	-.08	.07	-.09	.07
A's Age	.01	.01	.01	.01	.00	.01	.01	.01
Positive affectivity	.04	.05	.04	.05	.04	.05	.05	.05
Negative affectivity	.03	.05	.03	.05	.03	.05	.05	.05
B's Gender	.03	.09	.03	.09	.04	.09	.04	.09
B's Age	.00	.01	.00	.01	.00	.01	.00	.01
Dyadic tenure	.01	.00	.01	.00	.01	.00	.01	.00
Team size	-.01	.01	-.01	.01	-.01	.01	-.01	.01
Main effects								
Relationship quality (RQ)	-.17**	.06	-.17**	.06	-.17**	.06	.06	.12
Cooperative goals (CG)	-.07*	.03	-.70*	.03	-.07*	.04	-.08*	.04
$\Delta\chi^2(10)$	14.01***							
Two-way Interaction								
CG X RQ			.01	.03	.01	.03	.03	.03
$\Delta\chi^2(1)$			.05					
Mediation								
Admiration					.01	.04	.01	.04
Sympathy					.01	.04	.02	.04
Envy					.00	.05	-.01	.05
Contempt					.03	.05	.02	.06
$\Delta\chi^2(4)$					-.03			
Moderated mediation								
CG x Admiration							-.11***	.03
CG x Sympathy							-.06	.04
CG x Envy							.08	.05
CG x Contempt							.02	.04
$\Delta\chi^2(4)$							11.43*	

Note. $N = 408$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Additional Analyses

I further analyzed the moderated mediation model (mainly focusing on admiration) using Edwards and Lambert's framework (2007). This analytical framework that combines moderation and mediation examines how the moderator variable (cooperative goals) influences the paths constituting the direct, indirect, and total effects of the mediation model. Table 6.5 presents the coefficients of the first stage (path from relationship quality to admiration), second stage (path from admiration to harming), direct effect (path from relationship quality to harming), and indirect effect (path from relationship quality to harming through admiration) that varied at low and high levels of cooperative goals. Similar to Study 1, under the condition of a high cooperative goal, relationship quality was positively related to admiration ($P = .24$, $p < .001$); admiration was negatively related to A's harming of B ($P = -.15$, $p < .01$); and relationship quality had an indirect effect on A's harming of B ($P = -.04$, $p < .05$). This provided support that admiration mediated the association between relationship quality and A's harming of B when the cooperative goal was high. However, at low level of a cooperative goal, relationship quality was positively related to admiration ($P = .34$, $p < .001$), but all of the other paths were not significant. These findings suggested that admiration did not mediate the association between relationship quality and A's harming of B when the cooperative goal was low.

In addition, as can be seen in Table 6.5 (see Difference), the moderating effects of cooperative goals manifested in the first stage (path from relationship quality to admiration, *Diff*: -.10, $p < .05$), second stage (path from admiration to harming, *Diff*: -.24, $p < .05$), and indirect effect (path from relationship quality to harming through

admiration, *Diff*: -.07, $p < .05$). Thus, cooperative goals moderated the first stage and the second stage of the indirect effect of relationship quality on harming mediated by admiration. These patterns of results were exactly the same as those found in the social relations analyses.

Table 6.5. *Direct and Indirect Effects of Relationship Quality on A's Harming of B at High and Low levels of Cooperative Goals through Admiration (Study 3)*

Mediator	Moderator	Stage		Effect		
		First	Second	Direct	Indirect	Total
		RQ→Adm	Adm(Harm	RQ(Harm	RQ(Adm(Harm	
Admiration	High cooperative goals	.24***	-.15**	-.06	-.04*	-.10**
	Low cooperative goals	.34***	.09	-.14	.03	-.11
	Difference	-.10*	-.24*	.08	-.07*	.01

Note. $N = 408$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

First stage: path from relationship quality (RQ) to admiration (Adm)

Second stage: path from admiration (Adm) to A's harming of B (Harm)

Direct effect: path from relationship quality (RQ) to A's harming of B (Harm)

Indirect effect: path from relationship quality to A's harming of B through admiration (RQ→Adm→Harm)

Figure 6.5 plots the interactive effects of admiration and cooperative goals on interpersonal harming following the procedures outlined by Aiken and West (1991). As expected, the simple slopes tests showed that under the condition of a high cooperative goal, admiration was negatively related to interpersonal harming (B = -.15, p < .01), whereas this relationship was not significant (B = .09, *n.s.*) when a cooperative goal was low.

Figure 6.5. Interaction between Admiration and Team's Cooperative Goals on A's Harming of B (Study 3)

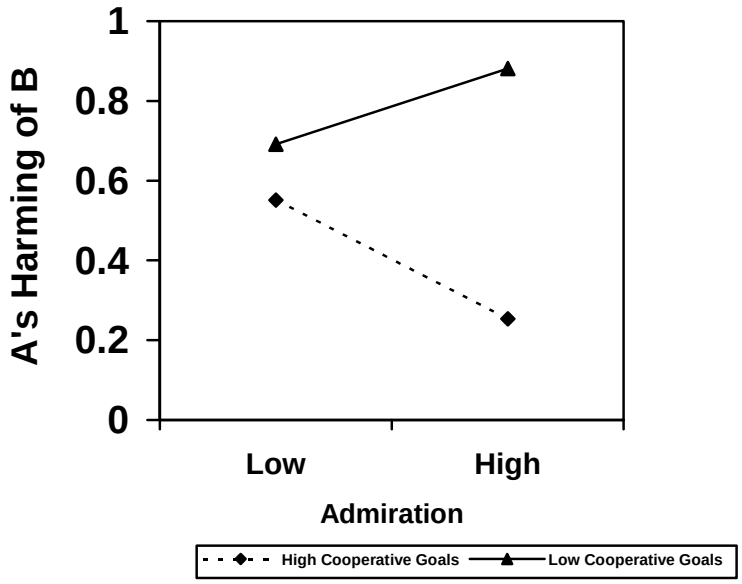
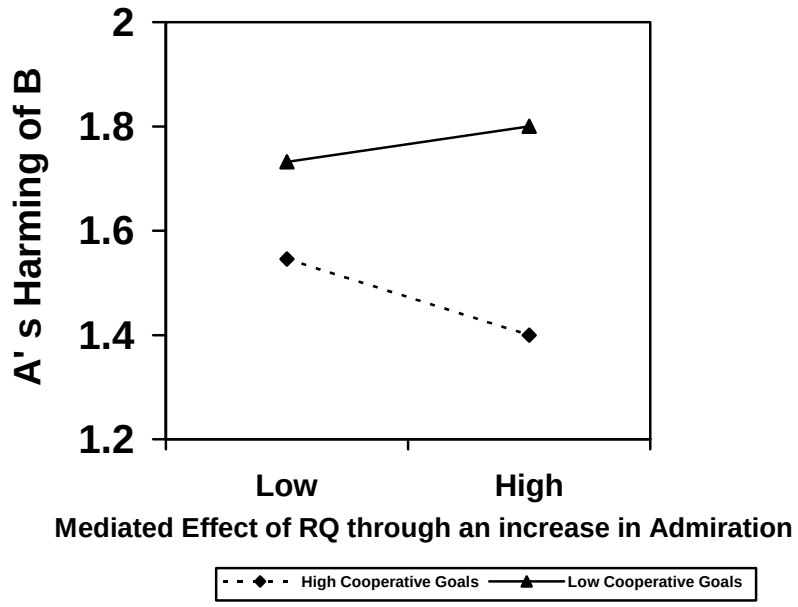


Figure 6.6 shows the plot of the mediated effects of relationship quality through admiration on A's harming of B at $\pm$ SD around the mean of cooperative goals. As shown, under the condition of a low cooperative goal, there was no relationship between the mediated effect of relationship quality (through admiration) and A's harming of B. However, A's harming of B decreased as the mediated effect of relationship quality increased through the increase in A's admiration toward B under the condition of a high cooperative goal. These results and those from Study 2 provided support for Hypothesis 6a (admiration) and partial support for Hypothesis 6d (contempt) as my predictions were confirmed in Study 2 but not in Study 3. However, Hypotheses 6b (sympathy) and 6c (envy) were not supported.

Figure 6.6. Interaction between the Indirect (Mediated) Effect of Relationship Quality (RQ) and Team's Cooperative Goals on A's Harming of B (Study 3)



Results: The Mediating Role of Social Comparison (Theoretical Model 2)

Preliminary Analyses

Confirmatory factor analyses

Before testing the hypotheses, I conducted a confirmatory factor analysis to evaluate the convergent and discriminant validity of the four social comparison responses using AMOS 6.0. The results suggested that the hypothesized four-factor model (CFI = .99, TLI = .99, RMSEA = .04) yielded a better fit than the two-factor model (CFI = .64, TLI = .55, RMSEA = .21), with a change in chi-square ($\Delta \chi^2$ = 898.61, $\Delta df = 5$, $p < .001$). It also gained a better fit compared with the one-factor model (CFI = .48, TLI = .36, RMSEA = .25), with a change in chi-square ($\Delta \chi^2$ = 1299.14, $\Delta df = 6$, $p < .001$).

In addition, I conducted another confirmatory factor analysis to distinguish statistically the seven key variables in our model, namely, relationship quality, cooperative goals, the four emotions, and social comparison. Specifically, the first measurement model allowed the items of relationship quality, cooperative goals, emotions, and parcels of social comparison to load on one factor. The second was a seven-factor measurement model, with the items and parcels assigned to the seven corresponding variables. Results showed that the seven-factor model (CFI = .91, TLI = .88, RMSEA = .08) yielded a better fit than the one-factor model (CFI = .40, TLI = .34, RMSEA = .18), with a change in chi-square ($\Delta \chi^2 = 2817.21$, $\Delta df = 21$, $p < .001$).

Variance Partitioning

Table 6.6 presents the partitioning of variance in A's comparison with B for the actor, target, dyadic, and group levels of analysis. Forty-two percent of the total

variance in upward assimilation, 34% of the total variance in downward assimilation, 40% of the total variance in upward contrast, and 36% of the total variance in downward contrast were due to dyadic effects. In addition, 51% of the total variance in upward assimilation, 48% in downward assimilation, 48% in upward contrast, and 56% in downward contrast could be attributed to the actor effects. These results indicated that the comparison of one team member to the others depended largely on the characteristics of that fellow team member and on the characteristics of the dyadic relationship.

Table 6.6. *Variance Partitioning for A's Comparison with B (Study 3)*

	Upward Assimilation		Downward Assimilation		Upward Contrast		Downward Contrast	
Source of variance	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Group variance	.06 (7%)	.06	.11 (14%)	.00	.03 (4%)	.03	.02 (2%)	.02
Actor (A) variance	.49 (51%)	.09	.37 (48%)	.04	.32 (48%)	.06	.42 (56%)	.05
Target (B) variance	.01 (1%)	.03	.03 (4%)	.02	.05 (8%)	.02	.05 (6%)	.02
Dyadic variance	.40 (42%)	.05	.27 (34%)	.03	.27 (40%)	.03	.27 (36%)	.02
Deviance	991.75		811.67		866.87		896.35	

Note. N = 128 individuals in 408 dyads within 31 teams

Tests of Mediation

Hypothesis 7 states that social comparisons can mediate the associations between relationship quality and emotions. Before testing the mediation effects, I firstly

examined the associations between relationship quality and social comparisons. After entering all the control variables, I found that relationship quality was positively related to upward assimilation (B = .44, p < .001) and downward assimilation (B = .08, p < .05), but negatively related to downward contrast (B = -.16, p < .001). However, it was not related to upward contrast (B = .07, n.s.). Therefore, Hypothesis 7c (mediating role of upward contrast on the association between relationship quality and envy) was not supported. The significant effects of upward assimilation, downward assimilation, and downward contrast fulfilled the first requirement of mediation. Thus, this study only examined the mediation effects of these three social comparison responses on the associations between relationship quality and emotions. Table 6.7 presents the results. As shown in Model 1, relationship quality was positively related to admiration (B = .34, p < .001) and sympathy (B = .22, p < .001), and negatively related to contempt (B = -.16, p < .001); thus, the second requirement for mediation was met. As reported in Model 2, upward assimilation was significantly related to admiration (B = .23, p < .001) while the coefficient of relationship quality decreased (B = .24, p < .001). Similarly, downward assimilation was positively related to sympathy (B = .18, p < .001) while the coefficient of relationship quality decreased (B = .17, p < .001). In addition, upward contrast (B = .10, p < .05), downward contrast (B = .14, p < .001), and downward assimilation (B = .13, p < .001) were positively related to contempt while the coefficient of relationship quality decreased (B = -.13, p < .001). The Sobel test results showed that upward assimilation partially mediated the association between relationship quality and admiration (z = 4.41, p < .001); downward assimilation partially mediated the association between relationship quality and sympathy (z = 2.14,

$p < .05$); and downward contrast partially mediated the association between relationship quality and contempt ($z = -2.56$, $p < .05$). Therefore, Hypotheses 7a, 7b, and 7d were supported.

Table 6.7. *Social Relations Model Analyses for A's Emotions towards B (Mediation Model, Study 3)*

	Admiration				Sympathy				Envy				Contempt			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
Step and variables	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Control variables																
A's Gender	.03	.13	.01	.12	-.20	.12	-.19	.12	-.14	.09	-.13	.07	-.06	.08	-.06	.08
A's Age	.01	.01	.01	.01	.01	.01	0	.01	.01	.01	.01	.01	0	.01	.01	.01
Positive affectivity	.52***	.09	.45***	.08	-.06	.08	-.09	.08	0	.07	.02	.05	0	.06	.03	.06
Negative affectivity	-.06	.09	-.08	.09	.21*	.08	.19*	.08	.11	.06	-.01	.05	.17	.06	.08	.06
Social Comparison Orientation	.05	.08	.03	.08	.06	.08	.04	.07	.04	.06	.04	.05	-.06	.06	-.06	.05
B's Gender	-.10	.07	-.08	.07	.10	.06	.10	.06	-.03	.06	-.01	.05	-.14	.06	-.13	.05
B's Age	0	.01	0	.01	0	.01	0	.01	0	.01	0	.01	0	.01	0	.01
Dyadic tenure	0	.01	-.01	.01	0	0	0	0	0	0	-.01	0	.01	0	.01	0
Team size	0	.01	0	.01	0	.01	0	.01	.01	.01	.01	.01	.01	.01	.01	.01
Main effects																
Relationship quality (RQ)	.34***	.05	.24***	.05	.22***	.04	.17***	.04	.13***	.04	.18***	.04	-.16***	.04	-.13***	.04
$\Delta\chi^2(10)$	92.20***				43.7***				20.19*				44.45***			
Mediation																
Upward assimilation			.23***	.05			.09	.05			-.10**	.04			-.06	.04
Downward assimilation			.04	.06			.18***	.05			.23***	.04			.13***	.04
Upward contrast			.03	.06			0	.05			.13**	.04			.10*	.05
Downward contrast			.09	.05			0	.05			.16***	.04			.14***	.04
$\Delta\chi^2(1)$			32.06***				22.56***				103.32***				50.44***	

Note. $N = 408$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Tests of Mediated Moderation (Social Comparison as a Mediator)

As shown in the previous analyses (Table 6.3), the interaction of relationship quality and cooperative goals had significant effects on emotions. The results fulfilled the first requirement of mediated moderation. Table 6.8 presents the results for Hypotheses 8a, 8b, 9a, and 9b, which predicted that cooperative goals moderate the associations between relationship quality and social comparisons. As shown in Table 6.8 (Model 2), the interaction coefficients of relationship quality and cooperative goals were significant for upward assimilation (B = -.08, p < .05), downward assimilation (B = -.14, p < .001), upward contrast (B = -.13, p < .001), and downward contrast (B = .06, p < .05). These results met the second requirement of mediated moderation.

Table 6.8. *Social Relations Model Analyses for A's Comparison with B (Moderation Model, Study 3)*

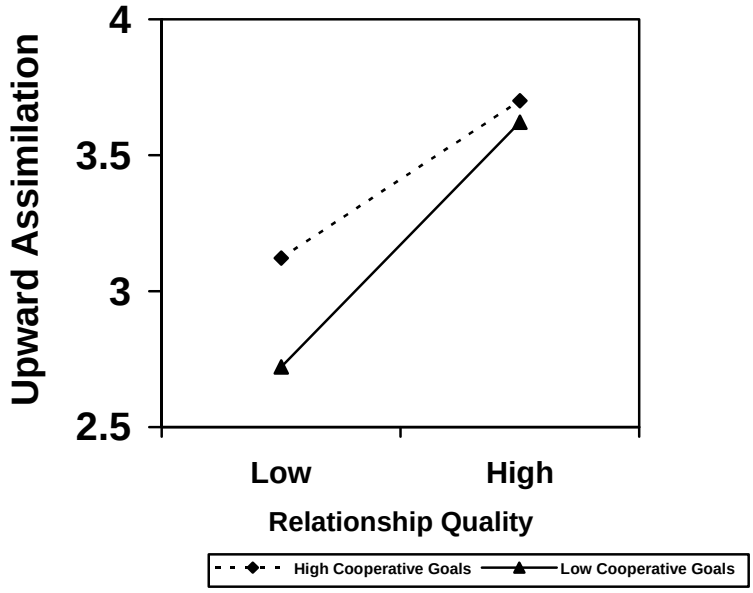
	Upward Assimilation				Downward Assimilation				Upward Contrast				Downward Contrast			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
Step and variables	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Control variables																
A's Gender	.08	.12	.08	.12	-.14	.13	-.13	.13	.19	.12	.21	.12	.08	.13	.08	.13
A's Age	.03	.01	.03	.01	.01	.01	0	.01	.01	.01	0	.01	-.01	.01	-.01	.01
Positive affectivity	.31***	.08	.33***	.08	.08	.10	.11	.09	-.04	.08	-.01	.08	.08	.09	.09	.09
Negative affectivity	-.10	.08	-.09	.08	.18	.09	.20*	.09	.27**	.08	.28***	.09	.21*	10	.22*	.09
Social Comparison Orientation	.14	.08	.13	.08	.04	.09	.03	.09	.03	.08	.02	.08	0	.09	0	.09
B's Gender	-.03	.07	-.03	.07	-.02	.07	-.01	.07	-.08	.07	-.07	.07	-.09	.07	-.09	.07
B's Age	0	.01	0	.01	0	.01	0	.01	0	.01	0	.01	-.01	.01	-.01	.01
Dyadic tenure	0	.01	0	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Team size	0	.01	0	.01	.01	.02	.01	.02	.01	.01	.01	.01	0	.01	0	.01
Main effects																
Relationship quality (RQ)	.39***	.04	.37***	.04	.08*	.04	.04	.04	.07	.04	.04	.04	-.15***	.04	-.15***	.04
Cooperative goals (CG)	.12*	.06	.12*	.06	-.11	.09	-.12	.09	-.08	.07	-.09	.07	-.08	.08	-.08	.08
$\Delta\chi^2(11)$	123.16***				19.88*				27.56**				27.63**			
Two-way interaction																
CG X RQ			-.08*	.04			-.14***	.03			-.13***	.03			.06*	.03
$\Delta\chi^2(1)$			4.95*				19.54***				15.88***				3.98*	

Note. $N = 408$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

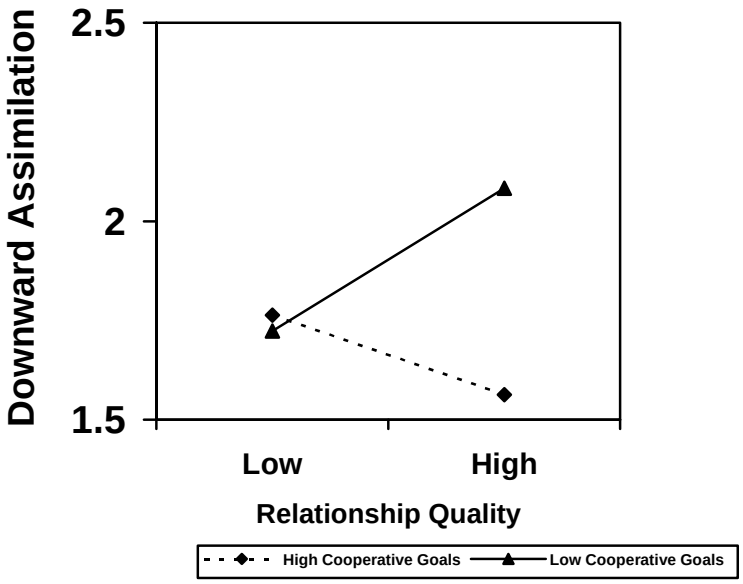
The interactive effects are plotted in Figures 6.7a to d. The simple slope analyses showed that under the condition of a low cooperative goal, relationship quality was positively related to upward assimilation ($B = .44$, $p < .001$) and downward assimilation ($B = .18$, $p < .001$), and negatively related to downward contrast ($B = -.13$, $p < .01$). Similar to the result in envy, relationship quality was positively (rather than negatively) related to upward contrast ($B = .18$, $p < .001$) when a cooperative goal was low. In contrast, under the condition of a high cooperative goal, relationship quality was unrelated to downward assimilation ($B = -.10$, *n.s.*), upward contrast ($B = -.08$, *n.s.*), and downward contrast ($B = -.10$, *n.s.*). In addition, the positive relationship between relationship quality and upward assimilation was relatively weaker in a high cooperative goal ($B = .29$, $p < .001$) than in a low cooperative goal ($B = .44$, $p < .001$). Essentially, we found the same pattern of interactions for comparisons as we found for emotions. Therefore, Hypotheses 8a, 8b, and 9b received full support. Although the interaction term of relationship quality and cooperative goals on upward contrast (Hypothesis 9a) was significant, the pattern of results was somewhat different from what I had expected.

Figure 6.7. Interaction between Relationship Quality and Team's Cooperative Goals on A's Comparison with B (Study 3)

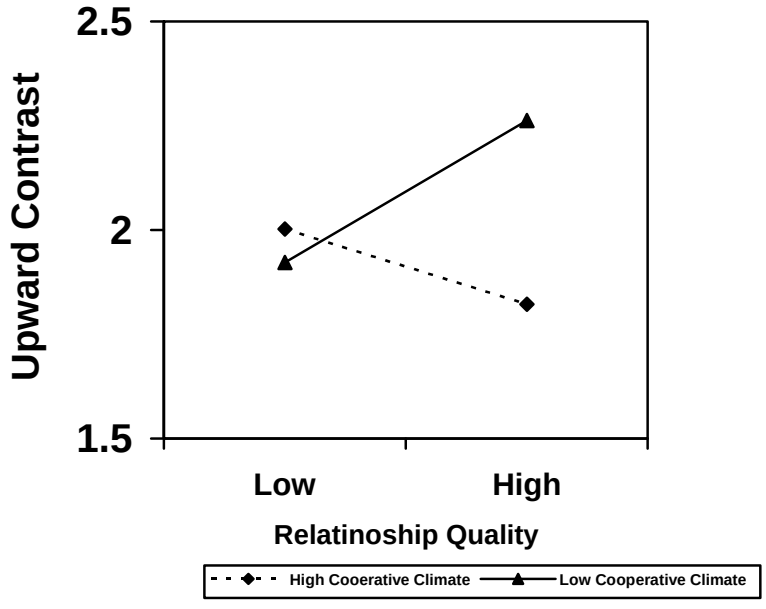
6.7a



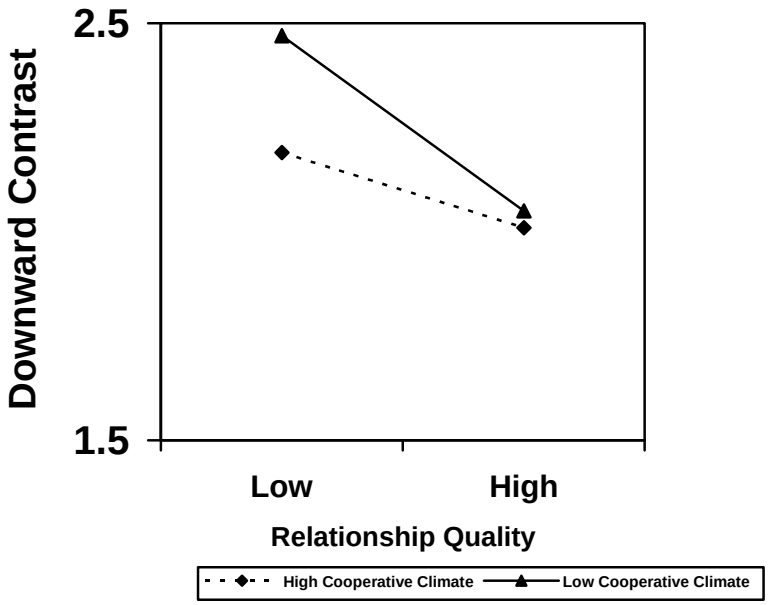
6.7b


Downward Assimilation
2.5
2
1.5
Low
High
Relationship Quality
High Cooperative Goals
Low Cooperative Goals

6.7c


Upward Contrast
2.5
2
1.5
Low
High
Relatinoship Quality
High Cooerative Climate
Low Cooperative Climate

6.7d


2.5
1.5
Downward Contrast
Low
High
Relationship Quality
High Cooperative Climate
Low Cooperative Climate

Next, Table 6.9 (Model 3) reveals significant effects of the upward assimilation on admiration ($B = .22$, $p < .001$); upward assimilation ($B = .09$, $p < .05$) and downward assimilation ($B = .16$, $p < .001$) on sympathy; upward assimilation ($B = -.10$, $p < .01$), downward assimilation ($B = .22$, $p < .001$), upward contrast ($B = .12$, $p < .01$), and downward contrast ($B = .16$, $p < .001$) on envy; and downward assimilation ($B = .14$, $p < .001$), upward contrast ($B = .10$, $p < .05$), and downward contrast ($B = .14$, $p < .001$) on contempt. These met the third requirement for mediated moderation. The interaction of relationship quality and cooperative goals was no longer significant for admiration ($B = -.04$, *n.s.*) and contempt ($B = .02$, *n.s.*), and its significance was reduced for sympathy ($B = -.06$, $p < .05$) and envy ($B = -.06$, $p < .05$) after all comparisons were controlled. These findings met the fourth requirement of mediated moderation. The Sobel test results showed that upward assimilation completely mediated the interaction effects on admiration ($z = -2.28$, $p < .05$). Similarly, downward contrast fully mediated the interaction effects on contempt ($z = 1.96$, $p < .05$). In addition, downward assimilation partially mediated the interaction effects on sympathy ($z = -2.64$, $p < .01$), while upward contrast partially mediated the interactive effects on envy ($z = -2.47$, $p < .05$). Therefore, Hypotheses 10a, 10b, 10c, and 10d were supported.

Table 6.9. *Social Relations Model Analyses for A's Emotions toward B (Mediated Moderation Model, Study 3)*

	Admiration						Sympathy					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
Step and variables	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Control variables												
A's Gender	.04	.13	.05	.12	.03	.12	-.21	.12	-.21	.12	-.19	.12
A's Age	.02	.01	.01	.01	.01	.01	.00	.01	.00	.01	.00	.01
Positive affectivity	.50***	.09	.53***	.09	.45***	.09	-.04	.08	-.02	.08	-.06	.08
Negative affectivity	-.02	.09	-.02	.09	-.04	.09	.19*	.09	.19*	.08	.17*	.08
Social comparison Orientation	.04	.08	.04	.08	.02	.08	.07	.08	.06	.08	.05	.08
B's Gender	-.09	.07	-.09	.07	-.07	.07	.09	.06	.10	.06	.10	.06
B's Age	.00	.01	.00	.01	.00	.01	.00	.01	.00	.01	.00	.01
Dyadic tenure	.00	.01	.00	.01	.00	.01	.00	.00	.00	.00	.00	.00
Team size	.00	.01	.00	.01	.00	.01	.00	.01	.00	.01	.00	.01
Main effects												
Relationship quality (RQ)	.29***	.05	.28***	.05	.20***	.05	.21***	.04	.18***	.04	.15***	.04
Cooperative goals (CG)	.13	.07	.12*	.07	.10	.06	-.08	.07	-.09	.06	-.08	.06
$\Delta\chi^2(11)$	95.84***						45.35***					
Two-way Interaction												
CG X RQ			-.07*	.04	-.04	.04			-.09**	.03	-.06*	.03
$\Delta\chi^2(1)$			3.91*						9.22***			
Mediation												
Upward assimilation					.22***	.05					.09*	.04
Downward assimilation					.03	.06					.16***	.05
Upward contrast					.03	.06					-.02	.05
Downward contrast					.10	.05					.01	.05
$\Delta\chi^2(4)$					29.01***						17.61**	

	Envy						Contempt					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
Step and variables	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Control variables												
A's Gender	-.14	.09	-.13	.09	-.13	.08	-.06	.08	-.06	.08	-.06	.08
A's Age	.01	.01	.00	.01	.01	.01	.00	.01	.00	.01	.00	.01
Positive affectivity	.01	.07	.04	.07	.04	.06	.03	.06	.02	.06	.03	.06
Negative affectivity	.09	.06	.10	.07	-.02	.06	.14	.06	.14	.06	.04	.06
Social comparison Orientation	.05	.06	.05	.06	.05	.05	-.05	.05	-.05	.05	-.05	.05
B's Gender	-.04	.06	-.04	.06	-.01	.06	-.15*	.06	-.15*	.06	-.14**	.05
B's Age	.00	.01	-.01	.01	.00	.01	.00	.01	.00	.01	.00	.01
Dyadic tenure	.00	.00	.00	.00	.00	.00	.01	.00	.01	.00	.01	.00
Team size	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Main effects												
Relationship quality (RQ)	.13***	.04	.11***	.04	.17***	.04	-.13***	.04	-.12***	.04	-.10*	.04
Cooperative goal (CG)	-.11	.06	-.12*	.06	-.08	.05	-.13**	.05	-.13**	.05	-.10*	.04
$\Delta\chi^2(11)$	23.58*						52.34***					
Two-way Interaction												
CG X RQ			-.11***	.03	-.06*	.03			.06*	.03	.02	.03
$\Delta\chi^2(1)$			12.91***						3.90*			
Mediation												
Upward assimilation					-.10**	.04					-.05	.04
Downward assimilation					.22***	.04					.14***	.04
Upward contrast					.12**	.04					.10*	.05
Downward contrast					.16***	.04					.14***	.04
$\Delta\chi^2(4)$					92.74***						52.54***	

Note. $N = 408$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Additional Analyses

I further analyzed the mediated moderation model using Edwards and Lambert's framework (2007). This analytical framework, which combines moderation and mediation, examines how the moderator variable (cooperative goals) influences the paths constituting the direct, indirect, and total effects of the mediation model. Table 6.10 presents the coefficients of the first stage (path from relationship quality to social comparisons), second stage (path from social comparisons to emotions), direct effect (path from relationship quality to emotions), and indirect effect (path from relationship quality to emotions through social comparisons), which varied at low and high levels of cooperative goals.

As shown, the mediation effects of social comparisons on the relationships between relationship quality and emotions mainly occurred under the condition of a low cooperative goal. When the cooperative goal is low, relationship quality was positively related to upward assimilation ($P = .46$, $p < .001$), downward assimilation ($P = .23$, $p < .001$) and upward contrast ($P = .23$, $p < .001$), but negatively related to downward contrast ($P = -.13$, $p < .001$). Meanwhile, upward assimilation was positively related to admiration ($P = .31$, $p < .001$); downward assimilation was positively related to sympathy ($P = .17$, $p < .001$); upward contrast was positively related to envy ($P = .33$, $p < .001$); and downward contrast was positively related to contempt ($P = .54$, $p < .001$). In addition, relationship quality showed indirect effects on admiration ($P = .14$, $p < .001$), sympathy ($P = .04$, $p < .01$), envy ($P = .08$, $p < .001$), and contempt ($P = -.07$, $p < .001$). These results showed that social comparisons mediated the associations between relationship quality and emotions under the condition of a low cooperative goal. When the cooperative goal was high, upward assimilation mediated the association between relationship quality and admiration (indirect effect: $P = .08$, p

< .001). However, relationship quality had no indirect effects on sympathy (*P* = -.01, *n.s.*), envy (*P* = -.02, *n.s.*), and contempt (*P* = -.01, *n.s.*), showing that social comparisons did not mediate the associations between relationship quality and these three types of emotions under conditions of a high cooperative goal.

Comparing the first and second stages of indirect effects for high or low cooperative goals (moderating effect; see Difference in Table 6.10), it was observed that the first stages of indirect effect (path from relationship quality to social comparisons) were stronger under the condition of a low cooperative goal for admiration (*Diff* = -.14, $p < .01$), sympathy (*Diff* = -.28, $p < .001$), envy (*Diff* = -.29, $p < .001$), and contempt (*Diff* = -.02, $p < .05$). Meanwhile, the second stages (path from social comparison to emotions) did not differ under the condition of a high or low cooperative goal for admiration (*Diff* = -.04, *n.s.*), sympathy (*Diff* = .06, *n.s.*), and envy (*Diff* = -.06, *n.s.*). Only contempt achieved a significant second stage of indirect effect, which was also stronger when cooperative goal was low (*Diff* = -.49, $p < .001$). In addition, the direct effects (path from relationship quality to emotions) were stronger under conditions of a low cooperative goal for admiration (*Diff* = -.04, $p < .05$), sympathy (*Diff* = -.17, $p < .001$), envy (*Diff* = -.19, $p < .001$), and contempt (*Diff* = .10, $p < .01$). By combining the direct effects with the indirect effects under conditions of a low cooperative goal, relationship quality produced a larger total effect for admiration (*Diff* = -.10, $p < .05$), sympathy (*Diff* = -.21, $p < .001$), envy (*Diff* = -.29, $p < .001$), and contempt (*Diff* = .16, $p < .05$). Thus, cooperative goals moderated the direct effect of relationship quality on emotions and the first stage of the indirect effect of relationship quality on emotions mediated by social comparisons. These results provided full support for the Theoretical Model 2.

Table 6.10. *Direct and Indirect Effects of Relationship Quality on A's Emotions toward B at High and Low levels of Cooperative Goals through Social Comparisons (Study 3)*

Emotions (Dependent variable)	Social Comparison (Mediator)	Cooperative Goals (Moderator)	Stage		Effect		
			First RQ→SC	Second SC→Emot	Direct RQ→Emot	Indirect RQ→SC→Emot	Total
Admiration	Upward Assimilation	High cooperative goals	.32***	.27***	.15**	.08***	.24***
		Low cooperative goals	.46***	.31***	.19***	.14***	.33***
		Difference	-.14**	-.04	-.04*	-.05	-.10*
Sympathy	Downward Assimilation	High cooperative goals	-.06	.23***	15**	-.01	.14
		Low cooperative goals	.23***	.17***	.31***	.04**	.35***
		Difference	-.28***	.06	-.17***	-.05	-.21***
Envy	Upward Contrast	High cooperative goals	-.07	.27***	.07	-.02	.05
		Low cooperative goals	.23***	.33***	.26***	.08***	.33***
		Difference	-.29***	-.06	-.19***	-.09	-.29***
Contempt	Downward Contrast	High cooperative goals	-.15	.05	-.05**	-.01	-.06**
		Low cooperative goals	-.13***	.54***	-.15***	-.07***	-.23**
		Difference	-.02*	-.49***	.10**	.06***	.16*

Note. $N = 408$ dyads. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

First stage: path from relationship quality (RQ) to social comparisons (SC: upward assimilation/downward assimilation/upward contrast/downward contrast)

Second stage: path from social comparisons (SC) to emotions (Emot: admiration/sympathy/envy/contempt)

Direct effect: path from relationship quality (RQ) to emotions (Emot)

Indirect effect: path from relationship quality to emotions through social comparisons (RQ→SC→Emot)

Discussion

In Study 3, using a sample of work teams consisting of 408 dyadic relations collected from a state-owned telecommunication services company in China, I found similar results for the Theoretical Model 1 compared with Study 2. Relationship quality was negatively related to A's harming of B (Hypothesis 1), positively related to admiration (Hypothesis 2a) and sympathy (Hypothesis 2b), and negatively related to contempt (Hypothesis 2d). Again, relationship quality was positively related (rather than negatively) to envy (Hypothesis 2c). Furthermore, the associations between relationship quality and emotions were buffered when a cooperative goal was high, but these associations were stronger when a cooperative goal was low (Hypotheses 4a, 4b, 5a, and 5b).

I found that emotions did not mediate the association between relationship quality and A's harming of B. Therefore, Hypothesis 3 was not supported. For the moderated mediation model, both social relations analyses and Edwards and Lambert's path analytic analyses (2007) showed that the mediation effect of admiration on the association between relationship quality and A's harming of B was stronger if a team's cooperative goal was high but not when it was low. Thus, Hypothesis 6a was supported. On the other hand, the mediation effects of sympathy, envy, and contempt on the association between relationship quality and A's harming of B were not significant regardless of the team's cooperative goal. Thus, Hypotheses 6b, 6c, and 6d were not supported. Finally, the analytical framework confirmed the Model 1 that the cooperative goal moderated both first and second stages of indirect effect of relationship quality on harming mediated by emotion (admiration).

In examining Theoretical Model 2, I found that upward assimilation mediated the association between relationship quality and admiration (Hypothesis 7a); downward

assimilation mediated the association between relationship quality and sympathy (Hypothesis 7b); and downward contrast mediated the association between relationship quality and contempt (Hypothesis 7d). I further confirmed Hypotheses 8a, 8b, 9a, and 9b that the associations between relationship quality and social comparisons (upward assimilation, upward contrast, downward assimilation, and downward contrast) were buffered under conditions of a high cooperative goal. However, these relationships were intensified under conditions of a low cooperative goal. Furthermore, I found that social comparisons mediated the interactive effects of relationship quality and cooperative goals on emotions. Specifically, upward assimilation mediated the interactive effects of relationship quality and cooperative goals on admiration (Hypothesis 10a); downward assimilation mediated the interactive effects of relationship quality and cooperative goals on sympathy (Hypothesis 10b); upward contrast mediated the interactive effects of relationship quality and cooperative goals on envy (Hypothesis 10c); and downward contrast mediated the interactive effects of relationship quality and cooperative goals on contempt (Hypothesis 10d).

Additionally, I used Edwards and Lambert's framework (2007) to conduct a parallel test and found that the mediation effects of social comparisons on the associations between relationship quality and emotions were stronger when the cooperative goal was low but not when it was high. In order words, cooperative goals buffered the mediation effects of social comparisons on the associations between relationship quality and emotions. Finally, this analytical framework confirmed the Theoretical Model 2 that cooperative goals moderated the direct effect of relationship quality on emotions, and the first stage of the indirect effect of relationship quality on emotions mediated by social comparisons.

In the next chapter, I will discuss about the theoretical implications, methodological implications, managerial implications, and strengths and limitations. Future research directions will be proposed.

Table 6.11 and Table 6.12 summarize the hypotheses and results of Model 1 and Model 2.

Table 6.11. *Summary of Hypotheses and Results of Model 1*

Hypotheses	**Descriptions**	**Study 2**	**Study 3**
H1	Relationship quality is negatively related to harming behavior in dyads	S	S
H2a	Relationship quality is positively related to admiration	S	S
H2b	Relationship quality is positively related to sympathy	S	S
H2c	Relationship quality is negatively related to envy	NS	NS
H2d	Relationship quality is negatively related to contempt	S	S
H3	Emotions (admiration, sympathy, envy, and contempt) mediate the negative association between relationship quality and interpersonal harming behavior in dyads (mediation model)	NS	NS
H4a	Cooperative goals moderate the association between relationship quality and admiration in dyads (moderation model)	S	S
H4b	Cooperative goals moderate the association between relationship quality and sympathy in dyads (moderation model)	S	S
H5a	Cooperative goals moderate the association between relationship quality and envy in dyads (moderation model)	PS	PS
H5b	Cooperative goals moderate the association between relationship quality and contempt in dyads (moderation model)	S	S
H6a	Cooperative goals moderate the indirect effect of relationship quality on interpersonal harming through admiration (moderated mediation model)	S	S
H6b	Cooperative goals moderate the indirect effect of relationship quality on interpersonal harming through sympathy (moderated mediation model)	NS	NS
H6c	Cooperative goals moderate the indirect effect of relationship quality on interpersonal harming through envy (moderated mediation model)	NS	NS
H6d	Cooperative goals moderate the indirect effect of relationship quality on interpersonal harming through contempt (moderated mediation model)	S	NS

S = supported, PS = partially supported, NS = not supported

Table 6.12. *Summary of Hypotheses and Results of Model 2*

Hypotheses	**Descriptions**	**Study 3**
H7a	Upward assimilation mediates the association between relationship quality and admiration (mediation model)	S
H7b	Doward assimilation mediates the association between relationship quality and sympathy (mediation model)	S
H7c	Upward contrast mediates the association between relationship quality and envy (mediation model)	NS
H7d	Downward contrast mediates the association between relationship quality and contempt (mediation model)	S
H8a	Cooperative goals moderate the association between relationship quality and upward assimilation (moderation model)	S
H8b	Cooperative goals moderate the association between relationship quality and downward assimilation (moderation model)	S
H9a	Cooperative goals moderate the association between relationship and upward contrast (moderation model)	PS
H9b	Cooperative goals moderate the association between relationship and downward contrast (moderation model)	S
H10a	Upward assimilation mediates the interactive effects of relationship quality and cooperative goals on admiration (mediated moderation model)	S
H10b	Downward assimilation mediates the interactive effects of relationship quality and cooperative goals on sympathy (mediated moderation model)	S
H10c	Upward contrast mediates the interactive effects of relationship quality and cooperative goals on envy (mediated moderation model)	S
H10d	Downward contrast mediates the interactive effects of relationship quality and cooperative goals on contempt (mediated moderation model)	S

S = supported, PS = partially supported, NS = not supported

CHAPTER 7

DISCUSSION

The impetus for the present dissertation is to investigate the frequently overlooked mechanisms between interpersonal exchange quality and reciprocal harming behavior, and how such interpersonal processes are regulated by a team context. As a general expectation, the extent to which relationship quality in coworker dyads elicits interpersonal emotions, and whether such emotions will be translated into harming actions to the focal member are regulated by the teams' cooperative goal. Furthermore, drawing from the social comparison theory, I also anticipated social comparisons among team members explaining the processes wherein relationship quality elicits interpersonal emotions and that the cooperation goal may influence the associations between relationship quality and social comparisons which in turn affect interpersonal emotions. To systematically investitage these relationships, I conducted three empirical studies, the details of which were reported in the preceding chapters. In the next section, I will provide an overview of the results, followed by a discussion of the theoretical, methodological, and practical implications. Consequently, the strengths and limitations of these three studies will be discussed. This chapter will end with the suggestions for future research and an overall conclusion.

Overview of the Results

In Study 1, the convergent and discriminant validity of the theoretical models' key variables, which include relationship quality, emotions, social comparisons, cooperative goals, and harming behavior, were examined. Based on these results, the highest loading items were selected to test Model 1 and Model 2 in Studies 2 and 3.

Across the two studies (Study 2: sample of student teams; Study 3: sample of work teams in telecommunication services company), social relations analyses revealed

that relationship quality was positively related to admiration, sympathy, and envy, but negatively related to contempt and interpersonal harming. The effects of relationship quality on interpersonal emotions were stronger in teams with a low cooperative goal and were buffered in teams with a high cooperative goal. In addition, across the two studies, both social relations analyses and path analytical analyses (Edwards & Lambert, 2007) showed that admiration mediated the association between relationship quality and interpersonal harming only when the teams' cooperative goal was high but not when it was low. In contrast, contempt mediated the association between relationship quality and interpersonal harming only when the teams' cooperative goal was low but not when it was high as in Study 2, albeit the mediation effects of contempt was not significant in Study 3. These results showed that emotions constitute a vital role by which relationship quality determines harming behavior. This relationship-emotion-harming linkage is dependent on the teams' cooperative goal. Specifically, a team's cooperative goal regulates the extent to which relationship quality triggers interpersonal emotions. It also affects the mediation of emotions in the association between relationship quality and interpersonal harming.

In Study 3, I found that social comparisons (upward assimilation, downward assimilation, and downward contrast) mediated the association between relationship quality and interpersonal emotions (admiration, sympathy, and contempt). However, I did not find relationship quality to be related to upward contrast, suggesting that a possible moderator could mask the effect of relationship quality on upward contrast. Confirming this prediction, I found cooperative goals to moderate the linkage between relationship quality and the four types of social comparison (upward assimilation, upward contrast, downward assimilation, and downward contrast). Specifically, the associations between relationship quality and social comparisons were stronger in teams

with a low cooperative goal and weaker in teams with a high cooperative goal. Finally, the teams' cooperative goals moderated the associations between relationship quality and social comparisons, as the same way it moderated the associations between relationship quality and emotions. This showed that social comparisons mediated the interactive effects of relationship quality and the teams' cooperative goal on emotions. These results proved that relationship quality could influence social comparisons among teammates, which in turn triggered their interpersonal emotions. Again, this relationship was modulated by the teams' cooperative goal.

The pattern of results with regard to relationship quality, envy, and upward contrast turned out to be more complex than expected. In contrast to what is suggested in the appraisal theory of emotions wherein envy belongs to the negative and antagonistic type of emotion and may thus be elicited from an appraised low relationship quality, I found that relationship quality was positively (rather than negatively) related to envy. This positive relationship was even stronger in teams with a low cooperative goal. Likewise, I found that relationship quality was positively (rather than negatively) related to upward contrast, an unfavorable comparison, which was strongly associated with envy. An initial explanation for the unexpected positive relationships between relationship quality and envy, and between relationship quality and upward contrast is that people tend to compare themselves unfavorably with friends they have intimate relationships with rather than with casual acquaintances (Mussweiler & Ruter, 2003). This may be a result of people interacting more frequently with teammates whom they share good relationships with; thus, the pain of unfavorable comparison is experienced repeatedly. Hence, envy is generally more acute in a good work relationship (Alicke & Zell, 2008). The second possible explanation lies in the fact that individuals in close and high-quality relationship are more likely to compete

for the same resources. Such competitive situations induce unfavorable comparison (upward contrast) and feelings of envy when being outperformed by a good friend (Alicke & Zell, 2008).

Results from this research indicate that interpersonal emotions may not necessarily mediate the association between relationship quality and interpersonal harming. Such mediation effects depend on the teams' cooperative goal, suggesting that the interpersonal processes of relationship-emotion-harming are highly contextualized. Specifically, admiration and contempt have significant mediating effects on the association between relationship quality and interpersonal harming when the teams' cooperative goal is high or low, respectively. However, sympathy and envy do not mediate the relationship-harming link, irrespective of the levels of the teams' cooperative goal. These results suggest that only certain emotions may account for the linkage between relationship quality and reciprocal harming in coworker dyads as teams' context changes, thus supporting the notion that discrete emotions may play different implications on interpersonal behavior (Lee & Allen, 2002; Roseman et al., 1994).

High or low teams' cooperative goals may facilitate the inducement of favorable emotions like admiration and sympathy, or unfavorable emotions like contempt and envy, thus determining the mediation effects of emotions on relationship-harming linkage. Under conditions of a high cooperative goal, admiration is more likely to mediate the relationship-harming link because admiration reflects identification with the target. The target is seen as an in-group member and role model (Cuddy et al., 2007; Lockwood & Kunda, 1997), thus enhancing the favorable information processing for the target (Baumeister & Leary, 1995) and ultimately inhibiting the actor's passive or active harmful acts toward the target (Allred et al., 1997; Baumeister & Boden, 1998;

Cuddy et al., 2007). In contrast, harming behavior resulting from relationship quality may not be mediated by sympathy. Although sympathy may enhance an altruistic motive to reduce harming, it may also be associated with disrespect or sadness leading to avoidance, neglect, or dismissive behavior (Cuddy et al., 2007) that may offset its suppression effects on harming. In this situation, sympathy is not related to harming; therefore, I did not find a significant mediation effect of sympathy on the relationship-harming linkage.

Under the condition of a low cooperative goal, contempt has significant mediation effects on relationship-harming link because feelings of contempt imply an extreme negative view of the other person resulting from previous unpleasant interactions (Fischer & Roseman, 2007). The typical behavioral outcomes are social exclusion, silent treatment, gossip, and derogation (passive harming). In addition, contempt often develops on top of one's anger, implying the co-occurrence of the inclination to attack, derogate, and exclude a person. Therefore, when one has started to appraise the relationship as threatening, stressful (Fox et al., 2001), or frustrating (Fox & Spector 1999; Spector, 1978) (e.g., low-quality relationship), attacking and excluding emotions like contempt will be induced. This negative emotion, representing immediate response to reduce threat, may motivate harmful actions toward the other. However, envy is less likely to mediate the relationship-harming link because envy sometimes may not have destructive, but rather constructive, effects on behavior. Envious employees may be motivated to improve their own performance rather than sabotage their envied target's performance (Takahashi et al., 2009). For example, Latham and Locke (1991) suggested that envy, a drive of seeking equalization of outcomes with the similar other (Heider, 1958), often leads to the setting of a higher performance goal that may stimulate performance enhancement. Supporting this notion, Schaubroeck and

Lam (2004) found that employees who report of having a higher level of envy when seeing their newly promoted colleagues tend to perform better than their less envious counterparts five months later. In the current thesis, envy experienced in the interpersonal relationship may be a motivation for envious members to improve their own performance rather than harm the other. Therefore, envy may not relate to harming behavior, and its mediation effect on relationship-harming linkage is not significant.

Viewed together, these findings indicate that how relationship quality influences interpersonal processes (social comparisons and emotions) and the outcome (interpersonal harming) is dependent on the teams' cooperative goal. These results show that the effects of good or poor work relationships in coworker dyads on social comparisons and emotions are more salient in teams with low cooperative goals. In addition, under these interpersonal emotions, admiration experienced in dyadic relationship, for example, may defer harming behavior when the teams' cooperative goal is high, whereas contempt may induce harming behavior when teams' cooperative goal is low. As will be discussed below, these results extend knowledge by demonstrating the mediation mechanism that account for previously established relationship between relationship quality and reciprocal behavior, and equally important is that such interpersonal processes are evidently context-dependent. These results are also of practical value because the teams' cooperative goal, which can buffer the negative effects of interpersonal interactions, are placed under the control of the managers. This will be discussed further in the managerial implications section.

Theoretical Implications

The first and main theoretical implication is that the two studies (Studies 2 and 3) indicate that interpersonal relationship in work teams can significantly influence interpersonal emotions and harming behavior. These effects are particularly strong in

teams with a low cooperative goal and are buffered in teams with a high cooperative goal. First, these results contribute to the appraisal theory in which the relationship quality between two persons forms an important source of the stimulus for appraisal. The appraisal theory of emotions suggests that an evaluation of the stimulus, either harmful or beneficial, may determine the person's emotional state (e.g., Frijda, 1986; Lazarus, 1991; Scherer, 1988; Roseman, et al., 1990). Previous studies have tended to focus implicitly on a person's appraisal of a particular interaction or incident that elicits emotions (e.g., Spector, 1998). Nevertheless, no study has ever considered that intense emotions can be evocated in evaluating the relationship quality with the close other. My studies' results show that when both parties recognize the on-going interactions to be an integral part of their relationship, the means by which they appraise their relationship quality may feature a longer duration of emotions and a more patterned behavioral response than in episodic interactions (Aquino & Lamertz, 2004). Second, my dissertation contributes to both emotion and appraisal literature by showing solid evidence that appraisals, experiences, and expressions of emotions are socially constructed (Ashforth, 1993; Manstead & Fischer, 2001; Morris & Feldman, 1996; Parkinson et al., 2005). The contextual variable, teams' cooperative goals, can largely determine how team members experience their emotions toward others in response to their dyadic relationship quality.

The second implication also stems from Studies 2 and 3. Both reveal that the mediation effects of emotions on the relationship quality-harming linkage are also modulated by the cooperative team goal (Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998). These findings are consistent with the thesis that people may look for normative information in determining whether interpersonal harming is an appropriate way to behaviorally express their emotions (Tepper et al., 2008). More importantly,

departing from the previous studies that investigate negative norms (e.g., antisocial norms), the current studies also suggest that people's emotional and behavioral responses from a social exchange may also be regulated by a positive team norm. These results contribute to the literature in two ways. First, it extends the literature on social exchange by providing new insights into the psychological mechanisms that explain the established relationship between exchange quality and reciprocal harming behavior. Second, it contributes to context theories (Bamberger, 2008) by showing the essential role of social context (John, 2006), signaling emotional and behavioral norms to regulate the exchange and emotion processes, thus accounting for the harming behavior. Specifically, cooperative norms may serve as an antidote to the negative impacts of poor relationship quality and unfavorable interpersonal emotions on interpersonal harming behavior.

The third implication mainly comes from Study 3. Results show that social comparisons among team members may be the cognitive processes, which explain why relationship quality in coworker dyads may elicit different emotions. These findings open a new avenue for social exchange research by adopting a cognitive perspective, which allows us to understand better the development of interpersonal emotions in work teams. In addition, following the pleas for "more ex ante theory building" for social comparison (Goodman & Haisley, 2007, p. 114), this study advances current knowledge by theorizing the organizational antecedents and boundary conditions that may initiate the social comparisons among team members accounting for workplace emotions. These results provide new insights into the social comparison processes, which illustrate the impacts of interpersonal relationship on employees' emotions. It also highlights the aspects of relationships between organizational factors and social

comparison processes that remain relatively unexplored to date (Goodman & Haisley, 2007).

Methodological Implications

The current research also contributes to the better understanding of the development of interpersonal social comparisons and harming in work teams by showing that a substantial proportion of the variance in social comparisons, emotions, and harming behavior within work teams was located in members' dyadic relations. These results imply that the reasons for individual team members' decision to make different comparisons, experience different emotions, and behave toward specific other members in a negative and harmful manner are largely dependent on the characteristics of the dyadic relationships. As such, the literature on social comparison, interpersonal emotions, and workplace harming should broaden their traditional focus on individual or situational antecedents (Buckingham & Alicke, 2002; Hershcovis et al., 2007) and devote greater attention to relationships at the dyadic level of analysis (see also Aquino & Lamertz, 2004; Hershcovis & Barling, 2007; Kenny, 1994; Klein, 1997, 2003).

A broader methodological implication is that future studies could use the Social Relations Model (SRM) methodology to investigate relational level effects within organizational settings. Although this approach requires a good deal of trust from the respondents, the results from the two studies testify that it can be done. Certainly, these results imply that the use of SRM can open new opportunities for researchers.

Finally, the approach of studying relational level foundations, as well as the group level relations, provides more in-depth insight into the processes operating within the team. Answering the call for "more complex context theories" (Bamberger, 2008), the results demonstrate a cross-level (dyadic-level and group level) interaction effect of relationship quality and the teams' cooperative goal on interpersonal emotions. It also

focuses on the mediation effects of emotions on the relationship between exchange quality and interpersonal harming as contingent on teams' cooperative goals. Consequently, apart from using a multilevel, multisource, and multimethod approach, researchers may benefit by simultaneously employing a multistudy approach, as what has been done in this thesis.

Managerial Implications

The findings offer important implications for the management of workplace emotions and interpersonal harming in work teams. The present findings indicate that great proportions of variance in interpersonal emotions and harming between specific individuals can be explained by their relationship characteristics. Given the difficulty in designing selection tools that assess an individual's tendency to develop good or poor relationship quality with specific others, it was found that situational interventions might be crucial. Managers may need to take conscious steps to actively encourage positive relationships among coworkers and prevent the formation of negative relationships to minimize interpersonal harming.

Even though a low-quality relationship in coworker dyads, social comparisons, and emotions among team members may be unavoidable within work teams, managers can curtail the negative implications by harnessing the teams' cooperative goal. Results show that a cooperative goal directly diminishes interpersonal harming (i.e., a main effect), reduces the consequences of interpersonal emotions and social comparisons (i.e., a moderating effect), and enhances the mediation effects of pleasant emotion (admiration) in eschewing harming behavior in response to exchange relationships. As Tjosvold (1988) demonstrated, team members' sense of a shared purpose and common tasks critically advances the development of cooperative goals. Managers may promote these features, for example, through specific leadership behaviors (e.g., articulating a

shared vision and emphasizing a collective identity) that raise the intrinsic value of shared goals, provide team members with a common purpose, and enhance members' identification with and attachment to their teams (e.g., Shamir, Zakay, Breinin, & Popper, 1998). To the extent that managers succeed in creating and fostering a cooperative goal, they can likewise prevent negative impacts of interpersonal processes (i.e., interpersonal exchange, emotional processes, and social comparison processes) among team members by diverting interpersonally harmful behavior to maintain positive team outcomes.

Strengths and Limitations

Despite some notable strengths (e.g., peer-rating data sources, validation of the initial results in a second independent study), the current research also has some limitations. First, these findings should not be interpreted as unambiguously indicating causality. Even though the hypotheses were developed on a strong theoretical background, and the results were replicated in two studies, spurious relationships based on unmeasured third variables may still account for the findings, as is common in field studies. Moreover, I used some self-reporting measures (e.g., relationship quality, social comparisons, and emotions) that may introduce common method bias. However, confirmatory factor analyses showed that relationship quality and emotions were statistically discriminant across Study 2 and Study 3; and relationship quality, social comparisons, and emotions were three distinct variables in Study 3. In addition, I found relationship quality and teams' cooperative goal to interact in determining emotions and social comparisons. It would be difficult to attribute the significant two-way interactions found to common method bias (Evans, 1985). Nevertheless, this thesis acknowledges the need for further evidence based on data from different sources and by

measuring all the variables at each point in time before claims of causality can be defendable.

Second, the generalizability of the findings may be a concern. Although I obtained the same pattern of results both in student teams and in company work teams, sampling different types of teams or using data from different industries may yield differing outcomes. Similarly, the generalizability of these findings to other cultural contexts is limited because I collected data for both studies in China. The Chinese culture, for example, is characterized by high collectivism (Hofstede, 2001), potentially reducing the likelihood that employees engage in interpersonal harmful behavior in response to unfavorable emotions, thus rendering the hypotheses tests more conservative. However, this would seem to make my results more compelling because the hypothesized predictors (relationship quality, emotions, and cooperative goals) can still significantly predict interpersonal harming even though the respondents are less prone to harming behavior. Results would have been even stronger had I conducted this research in other countries. Certainly, scholars may benefit from replicating the present investigation in different teams, industries, and cultures.

Future Research Directions

The present study suggests several interesting directions for future research. First, the current study looks only at relationship quality as antecedent. However, it is possible that relationship characteristics (relational variable) interact with individual differences or attitudes (individual variable) and teams' cooperative goal (group variable) in affecting emotions, social comparisons, and harming behavior. For example, trait anger (Douglas & Martinko, 2001) and trait hostility (Judge, et al., 2006), neuroticism (Van der Zee, Oldersma, Buunk, & Bos, 1998), social comparison orientation (Buunk, Oldersma, & de Dreu, 2001), and perceived similarity to the

comparison target (Tesser & Campbell, 1982) may determine the actors' emotional response to comparison information and shape his/her harming behavior. Forming an additional theory in the future followed by empirical research would be useful in identifying such interaction.

In addition, it is worthwhile to investigate other candidates that may be the mediators of the relationship—harming behavior linkage. For example, exchange quality may lead to various affective outcomes, such as interpersonal trust (de Jong et al., 2007) and commitment (Van Der Vegt et al., 2006). Both of them are very likely to suppress harming behavior. Similarly, counterproductive behavior literature suggests that interpersonal conflict and interactional justice perception which depend on the relationship quality of coworkers' dyads, may be conducive to harming actions toward one another (Fox & Spector, 1999; Fox et al., 2001; Spector, 2009). Investigating other candidates that may mediate the relationship-harming link promotes a broader depiction of the social dynamics that spark interpersonal harming and outlines the underlying mechanism and processes in more details from different perspectives.

It is also likely that receiving interpersonal harming may create negative attitudes, trigger incivility spirals in teams, and affect team performance adversely. Thus, exploring the individual attitudinal outcomes, reciprocal harming in teams, and team performance-related consequences of receiving interpersonal harming would be a fruitful area for future research.

Study 3 showed that social comparisons only partially mediate the associations between relationship quality and emotions. This suggests that other variables may also influence this relationship. Future research may therefore consider the role of other mediating variables such as forgiveness and willingness to sacrifice (e.g., Wieselquist, Rusbult, Foster, & Agnew, 1999).

These research results indicate that cooperative goals may function as a reappraisal process that regulates the actor's emotional response on relationship quality appraisal. As such, an actor's cognitive reappraisal may be a potential mediating factor through which the actor responds to the teams' goal and social exchange responses. Thus, it would be interesting to implicate an actor's cognitive reappraisal in future research to further advance the understanding of how a cooperative team goal could influence a team member's cognition of the interpersonal process and their subsequent work behavior.

Drawing from the theory of cooperation and competition (Deutsch, 1949; Tjosvold, 1988), people in teams with cooperative goals believe that their goals are positively related (i.e., as one person accomplishes his/her goals, other move towards achieving their goals). In contrast, people in teams with competitive goals believe that their goals are negatively related (i.e., as an individual achieves his/her goals, others find it more difficult to achieve their goals). In this perspective, cooperation and competition may be polar opposites on a single continuum. While the current study shows a buffering effect of a cooperative goal context on the interpersonal processes, a competitive goal context may exacerbate such processes, such that the effects of relationship quality on emotions, comparison cognitions, and behavior may be intensified in a more competitive goal context than in a less competitive goal context. On the other hand, some studies on interpersonal conflict proposed that cooperation and competition are two different variables that may have different or interactive effects on interpersonal dynamics. For example, Tjosvold, Johnson, Johnson, and Sun (2003) also suggested that competition might exist in a cooperative context in which cooperation and competition may jointly influence interpersonal behavior in organizations. Therefore, future research may benefit from examining the possible enhancing effects

of a competitive context and the interactive effects of cooperative and competitive contexts on interpersonal processes.

Scholars may extend the models by investigating other forms of emotion regulation mechanisms (e.g., strategies that deliberately control emotional experience and behavioral expression of emotion) that may buffer the adverse impacts of negative relationship quality on interpersonal emotions and emotions on interpersonal harming (Gross, 1998).

An additional area of study can be related to how individuals deal with interpersonal situations that place conflicting demands in terms of harming. For example, team members with different relationship configurations in teams at different times may have different implications on interpersonal harming in teams. Therefore, it would be interesting to examine how team members' relationships evolve over time and eventually attain stability. This could be extended using a longitudinal research design to examine the developing rather than established relationships. Specifically, a longitudinal study may address how time contributes to the development of interpersonal emotions and harming behavior.

In addition, I propose that a feedback loop may exist, especially as emotions may trigger interpersonal harming (e.g., Fox et al., 2001; Spector & Fox, 2002), which, in turn, may negatively affect relationship quality. Poor relationship quality may be conducive to interpersonal harming. Furthermore, interpersonal harming may also be negatively related to pleasant emotions but positively related to unpleasant emotions (Cole et al., 2008), which in turn affect interpersonal relationship quality. Good or poor relationship may then further defer or enact harming behavior. Panel data with repeated measurements of harming, emotions, and relationships quality are needed to fully explicate these feedback effects.

Concluding Remarks

The results of this dissertation clearly demonstrate that the scarcely investigated aspects of mediation mechanism of interpersonal exchange quality and reciprocal harming are contingent on teams' cooperative goals. This research further clarifies the relationship between exchange quality and interpersonal emotions by implicating the cognitive processes of social comparison. The empirical studies went further than merely investigating the main effects and showing the interaction effects of relationship quality in dyadic level and teams' cooperative goals in the group level. Both are important in predicting social comparisons and interpersonal emotions that may account for interpersonal harming behavior in teams. Taken together, these findings not only contribute to the scholarly understanding of interpersonal relationship characteristics on harming but also provide strong incentives for investigating dyadic phenomena in future research. Additionally, I hope to have provided practitioners with some practical recommendations with which they can manage coworkers' relationships effectively and recognize the importance of establishing a cooperative team goal. Lastly, the results clearly indicate a need for more research to take on a more complex view of the social exchange theory beyond the one that currently exists. This thesis provides a good starting point in terms of both methods and insights for studies examining the effects of social exchange among coworkers with considerations on contextual influences on teamwork.

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APPENDICES

Appendix 1: Questionnaire for Study 1 (Chinese Version)

香港理工大學人力資源研究
調查問卷

您好！首先，衷心感謝各位參與此專案研究。這份調查問卷是由香港理工大學管理及市場學系所設計，旨在研究零售行業的顧客服務與品牌效應。**所有資料只作科學研究，調查資料將會保密，研究結果只展現組織狀態，不涉及任何個人資訊。**

研究結果的可信賴度取決於閣下對問題的認真和客觀回答，請您填寫此問卷時，細心閱讀各項問題，**真實地表達您的感受**，您所提供的資料對我們的研究會有很大的幫助，最後請將問卷放入預先提供的信封，密封後再交回負責同事。

閣下如希望進一步瞭解研究結果，或您對此項研究有任何疑問和建議，請通過下列聯繫方式與本人聯繫。

最後，再次對您的參與及幫助表示衷心的感謝！

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編號:_____

問卷 A 部分

第一部分：以下問題是關於您對您目前的工作團隊的感受。請您仔細閱讀以下句子，並在適當的數字上劃圈。	非常不同意	有點不同意	不能確定	有點同意	非常同意
例題：我的團隊鼓勵「團結一致」的態度	1	2	3	(4)	5
1. 我的團隊成員能同舟共濟	1	2	3	4	5
2. 我的團隊成員希望每位團員都能成功	1	2	3	4	5
3. 我的團隊成員尋求互相配合的目標	1	2	3	4	5
4. 我的團隊成員的目標一致	1	2	3	4	5
5. 當我的團隊成員一起工作時，我們通常擁有共同目標	1	2	3	4	5

問卷 B 部分：本部分請您評價您與另一位同事之間的關係。請細心閱讀以下每一個句子，並在相應的數字上劃圈。

另一位同事的姓名: _____

您已經與您的這位同事一起工作了多久？_____年_____月

第二部分：本部份請您評價您與這位同事之間的關係。 請在下列每個問題的五個選項答案中, 選出一個您認為最恰當的, 並在相應的答案上劃圈。

例題：她/他對您的潛力瞭解有多少?
沒有　有些　一般　較多　(很多)

1. 您知不知道您在這位同事心目中的位置……您通常知道他 (她) 對您所辦的事感到滿意
很少　偶然　有時　較多時候　經常

2. 這位同事對您在工作時所遇到的困難及需要瞭解多少?
沒有　有些　一般　較多　很多

3. 無論這位同事的職權有多大, 他 (她) 都會行使權力去為您解決問題之可能性有多大?
沒有　有些　一般　較大　很大

4. 無論這位同事的職權有多大, 他 (她) 都會不惜任何代價去維護您的可能性有多大?
沒有　有些　一般　較大　很大

5. 我對這位同事很有信心, 即使他 (她) 不在場, 我也會為他 (她) 所做的決定辯解。
非常不同意　不同意　中立　同意　非常同意

6. 您怎樣形容您和這位同事的關係?
很不好　不太好　一般　比較好　很好

7. 這位同事對您的潛力瞭解有多少?
沒有　有些　一般　較多　很多

第三部分：請描述在過去兩星期的工作中，您如何與這位同事比較。請仔細閱讀以下句子，並在相應的答案上劃圈。	從來沒有	較少	有時	經常	總是這樣
當我看見她/他比我做得更好時，					
1. 我意識到有改進的可能，因此而感到高興	1	2	3	4	5
2. 我會因事情可變得更好而感到愉快	1	2	3	4	5
3. 我為我的情況將會得到改善而寄予厚望	1	2	3	4	5
當我看見她/他比我做得更好時，					
4. 有時我會為自己的情況感到沮喪	1	2	3	4	5
5. 我會為自己做得不好而感到受威脅	1	2	3	4	5
6. 我會因自己做得不好而感到沮喪	1	2	3	4	5
當我看見她/他比我做得更差時，					
7. 我為自己做得出色而更高興	1	2	3	4	5
8. 我為自己的現況感到放心	1	2	3	4	5
9. 我就會覺得自己也做得不錯	1	2	3	4	5
當我看見她/他比我做得更差時，					
10. 我害怕我會遇到同樣的命運	1	2	3	4	5
11. 我害怕我的將來也會是類似的	1	2	3	4	5
12. 我害怕自己的情況也會變差	1	2	3	4	5

第四部分: 請描述在過去兩星期的工作中，您與這位同事相處時出現以下情緒的頻密程度。請仔細閱讀,並在相應的答案上劃圈。	從來沒有	較少	有時	經常	總是這樣
例題：憐憫	1	(2)	3	4	5
1. 受感動	1	2	3	4	5
2. 同情	1	2	3	4	5
3. 憐憫	1	2	3	4	5
4. 心軟	1	2	3	4	5
5. 感到自己不如別人	1	2	3	4	5
6. 渴望得到別人所擁有的	1	2	3	4	5
7. 憤憤不平	1	2	3	4	5
8. 妒忌	1	2	3	4	5
9. 受到激勵	1	2	3	4	5
10. 得到啟發	1	2	3	4	5
11. 欣賞	1	2	3	4	5
12. 尊敬	1	2	3	4	5
13. 藐視	1	2	3	4	5
14. 反感	1	2	3	4	5
15. 憤怒	1	2	3	4	5
16. 討厭	1	2	3	4	5

第五部分: 以下各項描述了這位同事於過去兩星期的一些行為表現，您是否同意？請仔細閱讀，並在適當的數字上打圈。	不可能	不大可能	很難說	有可能	很可能
例題：企圖破壞我的名譽	1	(2)	3	4	5
1. 損害我的工作表現	1	2	3	4	5
2. 企圖破壞我的名譽	1	2	3	4	5
3. 不告訴我有關工作的訊息	1	2	3	4	5
4. 聯合別人對抗我	1	2	3	4	5
5. 與我爭執	1	2	3	4	5
6. 背後講我壞話	1	2	3	4	5
7. 篤我背脊	1	2	3	4	5
8. 對我很差	1	2	3	4	5
9. 提供錯誤資訊誤導我	1	2	3	4	5
10. 拖延與我的通信聯絡	1	2	3	4	5
11. 對別人講我的壞話	1	2	3	4	5
12. 蔑視我	1	2	3	4	5

最後, 請回答下列有關<u>您的個人資訊</u>。 您提供的**所有資料只供研究, 絕對保密**, 請放心回答。 請在每項適當的選項上打勾 "✓"及填上答案。請把問卷放入回郵信封密封，交回給我們的研究員。

1. 性別: □ 男 □ 女

2. 年齡: □20 以下 □20-29 □30-39 □40-49 □50-59 □60 或以上

3. 教育: □中三或以下 □中四至中七 □大專 □大學本科或以上 □其它（請注明）: _____

4. 您總共接受了多少年教育？ 共 _____ 年教育

5. 您的職位：_____ □全職 □兼職

6. 你在本公司工作了多久？ □少於 1 年 □1-2 年 □3-4 年 □5-6 年 □7- 8 年 □9- 10 年 □10 年或以上

非常感謝您完成這份調查問卷

Appendix 2: Questionnaire for Study 2 (Chinese Version)

香港理工大學人力資源研究
調查問卷

您好！首先，衷心感謝各位參與此專案研究。這份調查問卷是由香港理工大學管理及市場學系所設計，旨在研究旨在研究大學生之間的人際關係。**所有資料只作科學研究，調查資料將會保密，研究結果只展現組織狀態，不涉及任何個人資訊。**

研究結果的可信賴度取決於閣下對問題的認真和客觀回答，請您填寫此問卷時，細心閱讀各項問題，**真實地表達您的感受**，您所提供的資料對我們的研究會有很大的幫助，最後請將問卷放入預先提供的信封，密封後再交回負責同事。

閣下如希望進一步瞭解研究結果，或您對此項研究有任何疑問和建議，請通過下列聯繫方式與本人聯繫。

最後，再次對您的參與及幫助表示衷心的感謝！

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問卷 A 部分

第一部分：以下的形容詞是形容您過去一星期在學校中的感受與情緒。請您仔細閱讀，並在適當的數字上劃圈。	完全沒有	甚少程度上	某程度上	相當大程度上	非常大程度上
1. 感到有趣	1	2	3	4	5
2. 感到有壓力	1	2	3	4	5
3. 興奮	1	2	3	4	5
4. 失望	1	2	3	4	5
5. 驚惶	1	2	3	4	5
6. 熱心	1	2	3	4	5
7. 緊張	1	2	3	4	5
8. 起勁	1	2	3	4	5

第二部分：以下問題是關於您對<u>您所屬的 **Project Team** </u>的的整體感受。請您仔細閱讀以下句子，並在適當的數字上劃圈。 **(請將你的 <u>Project Team</u> 看成一個整體)**	非常不同意	有點不同意	不能確定	有點同意	非常同意
1. 我的團隊成員之間同舟共濟	1	2	3	4	5
2. 我的團隊成員的目標一致	1	2	3	4	5
3. 當我的團隊成員一起工作時，我們通常擁有共同目標	1	2	3	4	5

請回答下列有關<u>您的個人資訊</u>。 您提供的**所有資料只供研究, 絕對保密**, 請放心回答。 請在每項適當的選項上打勾“✓”及填上答案。

1. 性別: □ 男 □ 女
2. 年齡: _____

本問卷 A 部分到此結束，請翻到下一頁繼續回答 B 部分。

問卷 B 部分：本部分請您評價您與另一位同學之間的關係。請細心閱讀以下每一個句子，並在相應的數字上劃圈。

另一位同學的姓名：_____(編號：　　)

您已經與您的這位同學認識了多久？_____年_____月

第三部分：本部份請您評價您與這位同學之間的關係。 請在下列每個問題的五個選項答案中, 選出一個您認為最恰當的, 並在相應的答案上劃圈。

例題：她/他對您的潛力瞭解有多少?
沒有　有些　一般　較多　(很多)

1. 這位同學對您在學業上所遇到的困難及需要瞭解多少?
沒有　有些　一般　較多　很多

2. 無論在任何情況下, 他 (她) 都會想辦法去為您解決問題之可能性有多大?
沒有　有些　一般　較大　很大

3. 無論在任何情況下, 他 (她) 都會不惜任何代價去維護您的可能性有多大?
沒有　有些　一般　較大　很大

4. 您怎樣形容您和這位同學的關係?
很不好　不太好　一般　比較好　很好

5. 這位同學對您的潛力瞭解有多少?
沒有　有些　一般　較多　很多

第四部分: 請描述在過去兩星期中，您與這位同學相處時出現以下情緒的頻密程度。請仔細閱讀,並在相應的答案上劃圈。	從來沒有	較少	有時	經常	總是這樣
1. 同情	1	2	3	4	5
2. 憐憫	1	2	3	4	5
3. 心軟	1	2	3	4	5
4. 感到自己不如別人	1	2	3	4	5
5. 渴望得到別人所擁有的	1	2	3	4	5
6. 妒忌	1	2	3	4	5
7. 受到激勵	1	2	3	4	5
8. 得到啟發	1	2	3	4	5
9. 欣賞	1	2	3	4	5
10. 反感	1	2	3	4	5
11. 憤怒	1	2	3	4	5
12. 討厭	1	2	3	4	5

第五部分: 以下各項描述了這位同學於過去兩星期的一些行為表現，您是否同意？請仔細閱讀，並在適當的數字上打圈。	不可能	不大可能	很難說	有可能	很可能
1. 損害我的表現	1	2	3	4	5
2. 聯合別人對抗我	1	2	3	4	5
3. 對我很差	1	2	3	4	5
4. 篤我背脊	1	2	3	4	5
5. 對別人講我的壞話	1	2	3	4	5
6. 蔑視我	1	2	3	4	5

Appendix 3: Questionnaire for Study 3 (Chinese Version)

香港理工大学人力资源研究
调查问卷

您好！首先，衷心感谢各位参与此项目研究。这份调查问卷是由香港理工大学管理及市场学系所设计，旨在研究企业员工团队行为及情绪。**所有数据只作科学研究，调查资料将会保密。研究结果只展现组织状态，不涉及任何个人信息。**

研究结果的可信赖度取决于阁下对问题的认真和客观回答，请您填写此问卷时，细心阅读各项问题，**真实地表达您的感受**，您所提供的资料对我们的研究会有很大的帮助，最后请将填妥的问卷交回负责同事。

阁下如希望进一步了解研究结果，或您对此项研究有任何疑问和建议，请通过下列联系方式与我们联系。

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问卷 A 部分

第一部分：以下描述了一些您的个人想法。请根据您自己的实际情况进行评判，并在适当的数字上划圈。	非常不同意	有点不同意	不能确定	有点同意	非常同意
1. 我常常比较自己与别人做事的方法	1	2	3	4	5
2. 如果我想知道自己做得如何，我会比较自己所做的及别人所做的	1	2	3	4	5
3. 我经常与别人比较自己的社交表现(例如社交技巧，受欢迎程度)	1	2	3	4	5
4. 我不是常与别人比较的人	1	2	3	4	5
5. 我经常与别人比较自己人生中的成就	1	2	3	4	5
6. 我经常喜欢与别人谈论大家的意见及经验	1	2	3	4	5
7. 我经常尝试接触与我有相似问题的人，从而了解他们的想法	1	2	3	4	5
8. 我常常想知道其它人在相似情况下的做法	1	2	3	4	5
9. 如我想对一些事情有更多的了解，我会尝试了解别人的想法	1	2	3	4	5
10. 我经常将我所爱的人(例如男/女朋友，家人)的事情与别人的事情比较	1	2	3	4	5
11. 我从不会将自己的处境与他人比较	1	2	3	4	5

第二部分：以下的形容词是形容您过去一星期在工作中的感受与情绪。请您仔细阅读，并在适当的数字上划圈。	完全没有	甚少程度上	某程度上	相当大程度上	非常大程度上
1. 感到有趣	1	2	3	4	5
2. 感到有压力	1	2	3	4	5
3. 兴奋	1	2	3	4	5
4. 失望	1	2	3	4	5
5. 惊惶	1	2	3	4	5
6. 热心	1	2	3	4	5
7. 紧张	1	2	3	4	5
8. 起劲	1	2	3	4	5

第三部分：以下问题是关于您对<u>您目前的工作团队</u>的感受。请您仔细阅读以下句子，并在适当的数字上划圈。 (将你的工作团队看成为一个整体)	非常不同意	有点不同意	不能确定	有点同意	非常同意
1. 我的团队成员之间同舟共济	1	2	3	4	5
2. 我的团队成员的目标一致	1	2	3	4	5
3. 当我的团队成员一起工作时，我们通常拥有共同目标	1	2	3	4	5

请回答下列有关<u>您的个人信息</u>。 您提供的**所有资料只供研究, 绝对保密**, 请放心回答。 请在每项适当的选项打勾“✓”及填上答案。

1. 性别: ☐ 男 ☐ 女
2. 年龄: ___
3. 教育: ☐初中 ☐高中 ☐大专 ☐大学本科或以上 ☐其它（请注明）: _
4. 您总共接受了多少年教育？ 共 _____ 年教育

5. 在本公司服务年资共 _____ [年] _____ [月]
6. 您的职位是：☐全职 ☐兼职

~ 本 问 卷 A 部 分 到 此 结 束 ， 请 翻 到 下 一 页 继 续 回 答 B 部 分 。 ~

(续后页)

问卷 B 部分：本部分请您评价您与另一位队员之间的关系。请细心阅读以下每一个句子，并在相应的数字上划圈。

另一位队员的姓名：_____

您已经与您的这位队员一起工作了多久？_____月

第四部分：本部份请您评价您与这位队员之间的关系。 请在下列每个问题的五个选项答案中, 选出一个您认为最恰当的, 并在相应的答案上划圈。

1.	这位队员对您在工作时所遇到的困难及需要了解多少?				
	没有	有些	一般	较多	很多
2.	无论这位队员的职权有多大, 他 (她) 都会行使权力去为您解决问题之可能性有多大?				
	没有	有些	一般	较大	很大
3.	无论这位队员的职权有多大, 他 (她) 都会不惜任何代价去维护您的可能性有多大?				
	没有	有些	一般	较大	很大
4.	您怎样形容您和这位队员的关系?				
	很不好	不太好	一般	比较好	很好
5.	这位队员对您的潜力了解有多少?				
	没有	有些	一般	较多	很多

第五部分：请描述在过去两星期的工作中，您如何与这位队员比较。请仔细阅读以下句子,并在相应的答案上划圈。	**从来没有**	**较少**	**有时**	**经常**	**总是这样**
当我看见她/他比我做得更好时，					
1. 我意识到有改进的可能，因此而感到高兴	1	2	3	4	5
2. 我会因事情可变得更好而感到愉快	1	2	3	4	5
3. 我为我的情况将会得到改善而寄予厚望	1	2	3	4	5
当我看见她/他比我做得更好时，					
4. 有时我会为自己的情况感到沮丧	1	2	3	4	5
5. 我会为自己做得不好而感到受威胁	1	2	3	4	5
6. 我会因自己做得不好而感到沮丧	1	2	3	4	5
当我看见她/他比我做得更差时，					
7. 我为自己做得出色而更高兴	1	2	3	4	5
8. 我为自己的现况感到放心	1	2	3	4	5
9. 我就会觉得自己也做得不错	1	2	3	4	5
当我看见她/他比我做得更差时，					
10. 我害怕我会遇到同样的命运	1	2	3	4	5
11. 我害怕我的将来也会是类似的	1	2	3	4	5
12. 我害怕自己的情况也会变差	1	2	3	4	5

第六部分: 请描述在过去两星期的工作中，您与这位队员相处时出现以下情绪的频密程度。请仔细阅读,并在相应的答案上划圈。	**从来没有**	**较少**	**有时**	**经常**	**总是这样**
1. 同情	1	2	3	4	5
2. 怜悯	1	2	3	4	5
3. 心软	1	2	3	4	5
4. 感到自己不如别人	1	2	3	4	5
5. 渴望得到别人所拥有的	1	2	3	4	5

1.	妒忌	1	2	3	4	5
2.	受到激励	1	2	3	4	5
3.	得到启发	1	2	3	4	5
4.	欣赏	1	2	3	4	5
5.	反感	1	2	3	4	5
6.	愤怒	1	2	3	4	5
7.	讨厌	1	2	3	4	5

第七部分：以下各项描述了这位队员于过去两星期的一些行为表现，您是否同意？请仔细阅读，并在适当的数字上打圈。		**不可能**	**不大可能**	**很难说**	**有可能**	**很可能**
1.	损害我的工作表现	1	2	3	4	5
2.	联合别人对抗我	1	2	3	4	5
3.	对我很差	1	2	3	4	5
4.	打小报告	1	2	3	4	5
5.	对别人讲我的坏话	1	2	3	4	5
6.	蔑视我	1	2	3	4	5