

ABSTRACT

Title of Dissertation: LINKING GOALS TO AVOIDANCE IN
INTERPERSONAL CONFLICT SITUATIONS:
A COGNITIVE APPROACH

Qi Wang, Doctor of Philosophy, 2006

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When an argument becomes overheated, is it better to insist on arguments until the other submits, or is it better to withdraw until both parties cool off? When a work team makes a decision, are the ideas offered always better than the ideas held back? Just as “the squeaky wheels get oiled,” conflict communication research has focused on *communicative* strategies in dealing with conflict, and the *non-communicative* strategy of *avoidance* has rarely been examined. Avoidance has been largely viewed as a passive and ineffective conflict strategy.

The goal of this dissertation is to develop and assess a cognitive model of conflict avoidance. A typology of conflict avoidance and a typology of goals in conflict situations are developed. Twelve hypotheses about how conflict goals determine individuals’ likelihood of using specific avoidance strategies are proposed.

In an experiment, the importance of a goal or a combination of goals was manipulated, and the likelihood of using specific avoidance strategies was measured.

Twelve goals or combinations of goals were induced in a role-playing situation. Each goal induction was placed in one of two hypothetical scenarios (an interpersonal conflict in a group project in school and a similar conflict at work). With two scenarios and 12 goal inductions, 24 experimental conditions were created. A total of 352 student participants were randomly assigned to the 24 conditions. Participants imagined interacting in the hypothetical conflict scenario, which was presented in writing; they then provided their responses on a questionnaire.

Results indicated that avoidance has various forms, some of which were caused by different levels of importance placed on different goals. Avoidance strategies were shown to have two components: communication avoidant strategies (withdrawal, passive competition, exit, and outflanking) and issue avoidant strategies (pretending and yielding). The former strategies were predicted by competitive goals, whereas the latter were predicted by cooperative goals. Interpretations and implications of the results, the limitations of the study, and future directions were discussed.

LINKING GOALS TO AVOIDANCE IN INTERPERSONAL CONFLICT
SITUATIONS: A COGNITIVE APPROACH

By

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Dedication

This dissertation is dedicated to my parents. I love you.

Acknowledgements

I never imagined that writing a dissertation would be such a thorny and unforgettable journey. I was full of lofty ideas because my bachelor's thesis involved translating a 252-page novel from Chinese to English and 50-page psychoanalysis of the main character in the novel. I was conceited for having the longest thesis among my undergrad friends. The master's thesis took me one semester to finish. "How hard can a dissertation be?" I thought to myself light-heartedly, when the proposal was still a castle in the air. "It may be that the proud people live for some time in their pride, but their time will come" (Jeremiah 50:31). God responded. A dissertation can be thought of anyway but light-heartedly. Although the dissertation is now completed, I no longer feel pompous. I am grateful for this bumpy journey, because it has made me learn to appreciate the people who have been offering support, help, and care so constantly that I almost took them for granted.

First of all, I would like to thank my husband, Xin, who has been in my life for almost 10 years. Some people may experience stress, like me, while working on a dissertation. Xin is an effective stress reliever. He has been my chauffeur to Ocean City dozens of times to let me feel how wonderful this world is and how little my troubles are. He was a dutiful listener to my complaints and an intellectual discussant about my dissertation. Several times when I felt stagnant in an idea and talked to him, he was able to help me make decisions. Importantly, if anything went wrong, I would have him to blame. When I needed to stay up, he stayed up with me like a guarding soldier. When I wanted to type in my secret base for 24 hours, he stayed there with me. Thank you, Xin, for always being there for me. I will be forever there for you too.

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combination of both intellectuality and the capability of transferring his knowledge to his students. Plus, his humor and optimism have influenced my way of life. I give my deepest appreciation to my two advisors.

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CHAPTER I

Introduction

“Hi, Sam, why did Chris get the promotion and not you? Everyone knows you
-are more qualified.”

“Well, what can I do about it? Chris and our boss graduated from the same
college, and they are good friends.”

“Why don’t you argue about it? It’s unfair!”

“I don’t want to offend him; I want to keep my job, Tom.”

“If I were you, I would definitely talk to him.”

This conversation is not unusual. Conflict is inevitable in interpersonal relationships. In the above situation, Sam has chosen to avoid talking to his boss about the perceived unfairness of a promotion because he fears he may lose his job, whereas Tom advises confrontation. Which method is better? Is avoidance or confrontation more beneficial to the employee’s job security? And which is more beneficial to the employee’s relationship with his boss? Under what circumstances do people choose avoidance over other ways of resolving conflict? In a society that stresses verbalization and directness such as the United States (Hall, 1959; Kim, Shin, & Cai, 1998), the answers to these questions likely would be biased against avoidance. Roloff and Ifert (2000) criticized research in interpersonal conflict for its failure to explain avoidance. Kim (2002), in discussing non-Western perspectives on communication, stated that avoidance had been largely overlooked by the mainstream research on conflict management strategies in the past four decades. Early research in conflict management such as by Blake and Mouton (1964) and by Filley and House

(1969) equated avoidance with inaction and considered avoidance to be a lose-lose strategy; their works have influenced students in conflict and communication to focus on conflict strategies other than avoidance (Kim & Leung, 2000). In the hypothetical conversation on page 1, however, is Sam's decision wrong to avoid the conflict with his boss?

In some situations, avoidance may be an effective or desirable strategy, such as when the cost of confrontation is too great or when there is insufficient justification to take action (Roloff & Ifert, 2000). In their situational theory of non-apologies, Bavelas, Black, Bryson, and Mullett (1988) and Bavelas, Black, Chovil, and Mullett (1990) argued that when all potential actions seem to bring negative consequences, individuals are likely to avoid the situation. Guerrero (1992) and Tavris (1982) found that individuals reported a tendency to use non-communicative acts such as holding grudges or trying to ignore angry feelings to prevent their partners' aggressive or violent behaviors in interpersonal relationships. Lewin (1935) compared a person's approaching or avoiding actions to an object experiencing attraction or repelling forces in a physical field. He argued that a positive stimulus pulls the person in (i.e., the person approaches the stimulus), whereas a negative stimulus repels the person (i.e., the person avoids the stimulus). When faced with two equally undesirable stimuli, the person is likely to take an avoidant action from both stimuli. The avoidant action may be leaving the field or doing something unrelated to the two negative options (Lewin, 1935).

Studies of interpersonal avoidance have begun to increase recently. Most of these studies focused on topic avoidance (e.g., Afifi & Guerrero, 2000; Caughlin &

Golish, 2002; Daily & Palomares, 2004; Roloff & Ifert, 2000). In examining conflict management through topic avoidance in close relationships, Roloff and Ifert (2000) stated that, “conflict avoidance deserves more attention than it has been afforded. Perhaps achieving successful relationships requires a balance between confrontation and avoidance” (p. 153). Afifi and Guerrero (2000) advocated the explorations of relationship-based, individual-based, and information-based motivations to understand people’s topic avoidance in close relationships. Research in topic avoidance has provided a good starting point to a systematic investigation of conflict avoidance.

Increased discussion of avoidance is also found in the research in cross-cultural comparisons on conflict styles (Cai & Fink, 2002; Kim & Leung, 2000). Although mixed results have been found regarding cultural differences on preferred use of avoidance, Cai and Fink indicated that an overall generalization is that “collectivists are more likely to be non-confrontational whereas individualists are more likely to be confrontational” (p. 71). Using a multidimensional scaling analysis, Cai and Fink demonstrated that this generalization is untrue: Individualists avoid more than collectivists do. Others have found that avoidance is a common strategy used in certain situations, about certain issues, and with people in certain relationships (e.g., Leung, 1988; Lu, 1998; Nicotera, 1993; Oetzel, Ting-Toomey, Yokochi, Masumoto, & Takai, 2000; Oetzel et al., 2001; Oetzel & Ting-Toomey, 2003; Roloff & Ifert, 2000; Tjosvold & Sun, 2002). Leung, Koch, and Lu (2002) argued, “Asch’s (1956) famous experiment on conformity and social influence has been replicated in many Western cultures, suggesting that conformity and conflict avoidance are

universal social phenomena and not solely the province of East Asian societies” (p. 216). Leung (1997) further advocated the study of cognitive processes in conflict research by stating that “the recent years have seen rising interest in the impact of cognitive factors on conflict behavior. For instance, the impact of cognitive biases on conflict processing has been widely documented (Bazerman & Neale, 1992)” (p. 562).

The research on avoidance about topic disclosure and cross-cultural comparisons on conflict styles suggested examining the cognitive processes of conflict avoidance in understanding people’s conflict behaviors. People use avoidance to achieve multiple goals (Afifi & Guerrero, 2000; Knobloch & Carpenter-Theune, 2004; Tjosvold & Sun, 2002). For example, Afifi and Guerrero (2000) found that topic avoidance was motivated by relational, identity, and information management goals. Leung (1988) found that material goals and relational goals predicted people’s decisions about confrontation or avoidance. Because a strategy is motivated by a goal or a group of goals (Greene, 1997; Wilson, 2005), an individual's likelihood of using avoidance in handling an interpersonal conflict should reflect the goal(s) behind it. ¹

The major purpose of this dissertation is to examine the links between goals and avoidance strategies in interpersonal conflict situations through a cognitive model. Before the links are examined, a typology of avoidance strategies and a typology of goals are developed. Because the study investigates the likelihood of using avoidance strategies through a goals approach, which is one of the ways to study cognitive processes (Folger, Poole, & Stutman, 1997), the assumptions for cognitive research apply to this study.

Wilson (2005) summarized four assumptions that cognitive theorists usually make. First, the individual is the unit of analysis. This study examines the goals that an individual uses for avoidance in an interpersonal conflict situation; the focus is placed on the actor's goals and strategies, not the other party's. Second, individuals interpret the environment and respond to it actively (Wilson, 2005). This study examines interpersonal conflict, and thus the goals activated by characteristics of interpersonal conflict situations are the foci. Personality or dispositional variables are not discussed. The active response to the environment also implies that conflict *strategies* to pursue the goals are more relevant in this study than are conflict *styles*, which are more appropriate to be discussed when the focus is to understand dispositions (e.g., Conrad, 1991).

Wilson (2005) defined a strategy as "an abstract category of behaviors that share a common feature or quality and that appear to pursue a goal" (p. 27). A conflict strategy is used to pursue goals arising from a conflict situation. A conflict style refers to the recurrent approaches to managing conflict across situations and is a socialization product, or in other words, a learned behavior for managing conflict (Ting-Toomey, 1994). Roloff and Ifert (2000) argued that avoidance can be an effective communicative choice and that the strategic use of avoidance does not make a person an avoider. Wang and Chen (2004) found that conflict strategies varied across situations and were not always consistent with conflict styles. Because the main purpose of this dissertation is to identify the goals that predict avoidance in a conflict situation, the dissertation examines avoidance as a strategy rather than a style.

The third assumption that cognitive researchers have made is about limited

cognitive capacity for understanding and responding to the environment (Wilson, 2005). This assumption applies to this study. The focus of the dissertation will be on the goals most relevant to interpersonal conflict. The goals that the actor may not be conscious of are not discussed. In other words, this study tests avoidance strategies as a means to achieve the ends that the actor has planned consciously.

Finally, the dissertation builds a cognitive model that may apply to various interpersonal conflict situations (Wilson, 2005). The dissertation does not examine the prior relationship between the actor and the other party or prior conversational episodes between the two. Attention is directed to goals that motivate avoidance strategies (i.e., the link between goals and avoidance strategies). Any variables that may influence the formation of goals or that may be affected by avoidance strategies are beyond the scope of this study. The link between goals and avoidance strategies should be found in various interpersonal conflict situations.

The following chapter reviews the literature on avoidance and goals. A rationale is provided to link goals to avoidance strategies in a cognitive model. Chapter 3 describes the pilot studies and the method used to test the model. Chapter 4 provides the results. Chapter 5 summarizes the study, interprets the results, and discusses the limitations of the study, directions to future research, and the significance of the study.

CHAPTER II

Linking Conflict Goals to Conflict Avoidance

Conflict Avoidance in Two-Dimensional Models of Conflict Behaviors

In interpersonal communication, conflict occurs when an individual perceives incompatibility between his or her own personal goals, needs, or desires and those of the other party (Pruitt & Rubin, 1987). Such experience can be emotion-laden (Ting-Toomey & Oetzel, 2001). In dealing with conflict, people use different strategies to accomplish their goals. Blake and Mouton (1964) proposed the managerial grid, which used two dimensions to predict conflict management styles by managers in organizations: the degree of concern for production and the degree of concern for people. When the degree of concern for production is high and for people is low, the actor is predicted to use *domination*, a strategy of acting like an authoritarian who tells the other party what to do and pushes his or her own way over the other party. When the degree of concern for production is low and for people is high, an individual is predicted to use *accommodation*, a strategy of giving in to satisfy the other party's needs (Blake & Mouton, 1964).

Moderate amounts of concern for both production and people predict the use of *compromise*, a strategy of finding concession or a common middle ground that both parties can accept. High degree of concerns on both dimensions predicts the use of *integration*, a strategy of maximizing gains by exploring both parties' needs to achieve an agreement beneficial to both. According to this managerial grid, low concern for both production and people predicts *avoidance*, a non-confrontational strategy of taking no action (Blake & Mouton, 1964).

Blake and Mouton's (1964) managerial grid is the foundation of other two-dimensional models that predict conflict management behaviors. Later revisions of the grid have maintained the dimensional structure and the spatial positioning of the five conflict styles (e.g., Kilmann & Thomas, 1977; Oetzel & Ting-Toomey, 2003; Pruitt & Carnevale, 1993; Pruitt & Rubin, 1987; Rhodes & Carnevale, 1999; Ruble & Thomas, 1976; Thomas, 1976; Ting-Toomey, 1988; Ting-Toomey & Kurogi, 1998). For example, Thomas and Kilmann (1974) used cooperativeness-noncooperativeness (to satisfy the other's needs) and assertiveness-nonassertiveness (to satisfy one's own needs) as two dimensions to generate the space for five conflict styles (dispositional orientations rather than strategies). Pruitt and Rubin (1987) reworked Blake and Mouton's (1964) managerial grid for the purpose of predicting negotiator's behaviors based on the negotiator's *concern for self-outcomes* and *concern for the other's outcomes*; again, a space of five conflict styles was similarly proposed as Blake and Mouton's managerial grid. Pruitt and Rubin's (1987) model is aptly referred to as the dual-concern model (also see Pruitt & Carnevale, 1993; Rhoades & Carnevale, 1999).

Across the two-dimensional models of conflict behaviors, avoidance has retained the same position it was placed by Blake and Mouton's (1964) managerial grid. (One exception is in the works of Ting-Toomey and colleagues discussed below.) Avoidance has been predicted by low levels of assertiveness and cooperation (Thomas & Kilmann, 1974), low concerns for self and other outcomes (Rhoades & Carnevale, 1999), or low concerns for people and production (Blake & McCauley, 1991; Blake & Mouton, 1964). These models have suggested that avoidance is an inactive and lose-lose strategy (e.g., Filley & House, 1969).

However, the association of avoidance with low levels of concerns for people's outcomes proposed in the two-dimensional model (e.g., Blake & Mouton, 1964) may have overstated the instrumental outcomes and ignored the possibility that people often use avoidance to achieve relational goals (Kim & Leung, 2000; Leung et al., 2002). Avoidance can be a motivated and desirable strategy to maintain relationships in some interpersonal contexts. Research on conflict communication in close relationships has found that under certain circumstances, the strategic use of avoidance helps maintain relational harmony and closeness (Caughlin & Golish, 2002; Dailey & Palomares, 2004). Avoidance is also positively linked to relational satisfaction and perceived closeness in intimate and acquaintance relationships (Dailey & Palomares, 2004; Pike & Sillars, 1985). In a sample of varied degrees of individualism-collectivism, Cai and Fink (2002) found that avoidance is the second most preferred conflict style along with accommodation (the most preferred style is integration). Therefore, avoidance is not necessarily a lose-lose or undesirable strategy.

In addition, the two-dimensional structure used to predict the space for the five conflict styles (e.g., Pruitt & Rubin, 1987) was not empirically supported. Cai and Fink used multidimensional scaling to test whether the five conflict styles proposed in the two-dimensional model (e.g., Blake & Mouton, 1964) would indeed form a two-dimensional structure. The five conflict styles were measured by Rahim's (1983) Organizational Conflict Inventory II. Results did not support a two-dimensional structure. The first three dimensions explained 50% of the variance in the space formed by the five conflict styles, and the remaining dimensions explained

the rest 50% of the variance. Seven dimensions were found to explain more variance than a single measurement item (Cai & Fink, 2002). An important implication in this study is that multiple rather than dichotomous dimensions predict conflict strategies.

Finally, the link between low concerns for one's own and the other's outcomes and high likelihood of avoidance has not received empirical support. In a hypothetical role-playing experiment, Rhoades and Carnevale (1999) manipulated low levels of concern for both self- and other-outcomes to motivate avoidance, yet the condition failed to produce avoidance as expected. Instead, participants reported a preference for discussion when the hypothetical other was described as using avoidance and a preference for accommodation when the other was described as using domination. In another hypothetical role-playing experiment, van de Vliert (1997) found that high concern for the other's outcomes increased the likelihood of avoidance. These findings suggest that avoidance is not a product of low concerns of one's own and the other's outcomes; high concern for the other's needs may also lead to it.

The positive link between high concern for the other and the likelihood of avoidance has received support in a number of cross-cultural communication studies in interpersonal conflict management (e.g., Gabrielidis, Stephan, Ybarra, Pearson, & Villareal, 1997; Oetzel et al., 2001; Oetzel & Ting-Toomey, 2003). A theoretical link between the motivation to satisfy the other's needs and the likelihood of avoidance has been established in Ting-Toomey's (1988) face-negotiation theory (also see Ting-Toomey & Kurogi, 1998).

In face-negotiation theory, Ting-Toomey and Kurogi (1998) defined face as a

person's claim of "favorable social self-worth" (p. 187) that the person wants others to see. People's face needs predict conflict strategies they would use (Ting-Toomey & Kurogi, 1998). Whereas high self-face concerns predict domination, high other-face concerns predict accommodation, avoidance, and to some degree, compromise (Ting-Toomey, 1988; Ting-Toomey & Kurogi, 1998; Ting-Toomey & Oetzel, 2001). The link between high other-face concern and the likelihood of using avoidance has received empirical support in several studies (e.g., Kim, Lee, Kim, & Hunter, 2004; Oetzel et al., 2000; Oetzel & Ting-Toomey, 2001, 2003; Ting-Toomey & Oetzel, 2001). Therefore, avoidance may occur because of concern for the other party, not from a lack of concern for both parties.

Cai and Fink (2002) examined the relationship between individualism-collectivism and conflict styles, and found that avoidance was highly associated with individualism. In other words, individuals who have higher concerns for their own "goals, needs, and rights over the goals, responsibilities, and obligations of the group" are more avoidant than those whose priorities are for their groups over their own (Cai & Fink, 2002, p. 70). This finding contradicts the findings based on the face-negotiation theory. However, both Ting-Toomey and colleagues' studies and Cai and Fink's (2002) study support the idea that avoidance does not necessarily result from a lack of concern.

Can the contradiction of the findings be caused by different types of avoidance strategies? For example, avoiding the issue but not the person may reflect high concern for the other party; but avoiding the person but not the issue may reflect high concern for self. How avoidance may be used to accomplish varying goals has

not been tested previously. The following sections first distinguish different types of avoidance strategies, and then examine the goals that may motivate these avoidance strategies.

Conflict Avoidance

Over the last two decades, several studies have examined interpersonal conflict avoidance. These studies have focused on topic avoidance in interpersonal relationships (e.g., Afifi & Guerrero, 2000; Caughlin & Golish, 2002; Dailey & Palomares, 2004; Knobloch & Carpenter-Theune, 2004; Roloff & Cloven, 1990; Roloff & Ifert, 2000) or antecedents of conflict avoidance in cross-cultural communication (Leung, 1988; Tjosvold & Sun, 2002). These studies have provided a foundation for a systematic examination of conflict avoidance.

Research in conflict avoidance has defined avoidance based either on *what* is avoided (e.g., topic avoidance, Afifi & Guerrero, 2000) or on *how* avoidance is enacted (e.g., conforming vs. outflanking; Tjosvold & Sun, 2002). Instead of labeling avoidance as inaction or going away (e.g., Blake & Mouton, 1964), Ting-Toomey and Oetzel (2001) defined conflict avoidance as “eluding the conflict topic, the conflict party, or the conflict situation altogether” (p. 46). Afifi and Guerrero (2000) defined topic avoidance as information withdrawal. Roloff and Ifert (2000) and Corcoran and Mallinckrodt (2000) defined avoidance as suppressing arguments or averting the topic for perceived inappropriateness. Tjosvold and Sun (2002) distinguished between conforming, which involves submissively giving in, and outflanking, which involves going sideways (e.g., resorting to a third party) to realize goals. Both conforming and outflanking are avoidant behaviors, but are motivated from different reasons

(Tjosvold & Sun, 2002). These conceptual definitions of avoidance provide a foundation for a typology of conflict avoidance. Such a typology assists theory building, operationalization, data analysis, and in general, social science research (Bailey, 1994).

Requirements for Developing a Typology

Development of a typology requires choosing multiple conceptual dimensions that are exhaustive and mutually exclusive to define a space for the targeted concept (Bailey, 1994). For example, three dimensions defining the physical world are length, width, and height. These three dimensions provide a basis for locating and comparing physical objects. Similarly, in the social sciences, studying a concept systematically requires the definition of the space in which the concept's various representations are found (Bailey, 1994; Fink, Cai, & Wang, 2006).

An example of typology development in social science research is found in Hage and Marwell (1968). To classify role relationships, Hage and Marwell (1968) proposed two general dimensions, elements and quantities, so that any role relationship can vary according to elements (i.e., what, who, where, when, and why) and quantities (i.e., scope, intensity, integration, and independence). The advantage of this approach is that a variety of role relationships can be compared and studied systematically in a unified space, unbounded by time and space. For example, doctor-nurse and teacher-student relationships are two distinctive role relationships. Different variables can be used to compare them, such as gender composition, social status difference, and degree of obligation. Using this variable-analytic approach, often research results from different studies are hardly comparable because

researchers may have chosen variables based on their idiosyncratic specific research purposes (Hage & Marwell, 1968). But results from studies using two role relationships located in a common space generated from the same dimensions can be compared because of the commonality of the dimensions. For example, the doctor-nurse relationship may have less scope and intensity and more independence than the teacher-student relationship. An additional advantage of using a unified space is that when a novel relationship is identified, it can be easily understood along the dimensions of the space and compared with existing role relationships. Similarly, although avoidance has various forms, identifying the dimensions for avoidance provides the basis for comparing types of avoidance strategies across studies.

Bailey (1994) suggested one caution in typology development: The dimensions could produce superfluous and impractical categories. Multiple dimensions could produce a large quantity of concept types (e.g., any M dichotomous dimensions results in 2^M cells; Bailey, 1994, p. 4). Further, theoretical classification could produce null cells (i.e., there may be types absent in actual data; Bailey, 1994). To solve these problems, Bailey (1994) suggested that only the cells of practical use be maintained. The cells developed theoretically are to be tested empirically. The cells that have no responses or no representations are to be deleted, and the remaining cells may be both theoretically and practically useful (Bailey, 1994).

A Typology of Conflict Avoidance

Borrowing Hage and Marwell's (1968) method of dimension development, three dimensions are used to categorize conflict avoidance. The first two dimensions involve Hage and Marwell's (1968) *elements* of *who* and *what*. To use these elements

in defining conflict avoidance, a person dimension (involving who) has polar ends of avoiding or not avoiding the other person. An issue dimension (involving what) has polar ends of avoiding or not avoiding the issue. These two dimensions are chosen also because who and what are two fundamental elements to any human interaction and central to communication research (Burke, 2000; Dodd, 1961; Hage & Marwell, 1968; Marwell & Hage, 1970).

Although Hage and Marwell (1968) proposed three additional elements, *where*, *when*, and *why* in defining role relationships, they are not chosen for dimension development in this study. The situational factors, *where* and *when*, are excluded because the dissertation focuses on individuals' cognitive processes of strategic choices in conflict rather than on context of the conflict episode. *Where* and *when* may be more important elements for studies with other purposes (e.g., interactional analysis in mediation and hostage negotiation; see Fink et al., 2006, for a summary).² The *why* element is also excluded because finding the goals for avoidance is the main purpose of the study; goals will be linked to avoidance in the proposed model presented below.

Along with the two dimensions involving avoiding or not avoiding a person or an issue, a third dimension is adapted from Hage and Marwell's (1968) *quantities* dimension. Hage and Marwell (1968) used scope (frequency), intensity (depth), integration (overlapping), and independence (alternative choices) to measure the quantities of social interaction between two people in a role relationship. The purpose of using quantities is to reflect *how much* interaction is involved (Marwell & Hage, 1970). For conflict avoidance, quantity may be viewed from a temporal perspective:

A person could choose to avoid a person or an issue in the immediate situation or over a long time. The temporal dimension is used because it reflects the amount or the duration of avoidance (situational or lasting). Therefore, three dimensions will be used to define the space for avoidance: person, issue, and time.

Across the three dimensions, avoidance of a person (i.e., who) or an issue (i.e., what) varies between two possibilities, to be avoided (0) or not avoided (1). To make a parsimonious and representational space (see suggestions in Bailey, 1994), the temporal dimension is dichotomized to immediate (0) and ongoing (1).³ Thus, eight cells (2 x 2 x 2) are created by the typology (Table 1).

Table 1

A Typology of Conflict Avoidance

		<i>Dimension 1: Person</i>			
		Avoided (1)		Not Avoided (0)	
		<i>Dimension 2: Issue</i>			
		Avoided (1)	Not Avoided (0)	Avoided (1)	Not Avoided (0)
<i>Dimension 3: Time</i>	Immediate Only (1)	Withdraw (1,1,1)	Passively Compete (1,0,1)	Pretend (0,1,1)	X ^a
	Ongoing (0)	Exit (1,1,,0)	Outflank (1,0,0)	Yield (0,1,0)	X ^a

^a Null cells: The two cells marked by Xs in the last column represent strategies to not avoid the person or the issue short term or long term. In other words, these two strategies are to confront the other about the issue and therefore are not avoidance strategies. These two cells are excluded in later analyses.⁴

Withdraw, passively compete, and pretend. Roloff and Ifert (2000) argued that a conflict situation involves a stimulus that arouses the perception of inappropriateness or violation. People may end an argument to avoid inappropriate responses. When an actor avoids an immediate situation, he or she may choose to avoid the person and the issue (to withdraw), the person but not the issue (to passively compete), or the issue but not the person (to pretend).

Consider the following situation and Tom's responses:

After dinner, Tom wanted to play a videogame but his wife asked him to help her wash dishes. They started to quarrel. Tom decided to stop quarreling.

Response 1: Tom left the house and drove off.

Response 2: Tom stopped arguing but began to play the videogame.

Response 3: Tom suggested, "Why don't we go out and see a movie?"

Response 1 exemplifies the strategy of *withdrawal* because Tom avoided his wife and the issue by leaving the scene. Whether withdrawal has a positive or negative value is arguable. Pearce and Cronen's (1980) coordinated management of meaning theory suggests that certain messages and behaviors are expected in an interaction according to its contextual factors. Ceasing to provide feedback in a conversation is a breach of this contract (also see Grice's, 1975, cooperation principles). Overt refusal of further discussion plus leaving the scene suggests an end to cooperation (Benoit & Benoit, 1987; Guerrero, 1992; Rusbult, 1987). In this sense, withdrawal may be viewed as a negative strategy because it violates interaction coordination rules.

On the other hand, withdrawal from an argument could also signal a trade-off in which the actor is willing to back off from undesirable arguments while retaining his or her viewpoint. The actor may temporarily leave the scene or avoid discussing the issue with the other party to either remain calm or to hold a grudge (Oetzel et al., 2000). Therefore, the strategy to withdraw may be assigned a positive or negative value depending on the actor's intention and situational features.

To *passively compete* is a strategy to avoid the person but not the issue. As exemplified in Response 2, Tom started playing the videogame and ignored his wife. Although this strategy differs from a domination strategy in which the actor attempts to use verbal tactics to defeat the other (Ting-Toomey & Oetzel, 2001), passive competition reveals the actor's goal to dominate regarding the issue. Similar to withdrawal, passive competition is also a breach of the interaction contract. Nevertheless, to passively compete is more aggressive than to withdraw because the actor acts out his or her will regardless of the other's needs or desires. Passive competition differs from *passive aggression* as described in Oetzel et al. (2000). Whereas the former refers to an avoidant strategy to carry out the actor's goals without verbal argument, the latter is a sideways attacking strategy to put the other person down rather than an avoidance strategy. An example statement of passive aggression is "I gave the person wrong information so he/she gets into trouble" (Oetzel et al., 2000, p. 408).

When an actor decides to avoid the issue but not the person in a conflict situation, the strategy is *pretending* because the actor carries out the conversation and acts as though the issue is not a source of conflict (see Ting-Toomey & Oetzel, 2001).

Pretending is similar to *dismiss*, a support-giving behavior described in the social support literature (e.g., Barbee & Cunningham, 1995). Dismiss describes an individual's supporting behavior through minimizing the problem or the significance of the problem that another person has encountered (Barbee & Cunningham, 1995; Burleson & Mortenson, 2003). In the hypothetical situation above, Tom's third response, switching the topic to an irrelevant issue is an example of pretending. The strategic use of pretending is more cooperative than either withdrawal or passive competition because the actor makes efforts to continue communication with the other party while avoiding the specific issue. The actor may suppress arguments or provide artificial agreement to smooth the interaction (Roloff & Ifert, 2000, p. 156). Reasons for pretending may include fear of violence or a cooperative goal such as protecting the other's image (e.g., Tavris, 1982; Ting-Toomey & Oetzel, 2001).

Exit, outflank, and yield. Enduring avoidance differs from temporary avoidance. Whereas avoidant behaviors in an immediate conflict situation may be more based on interactions, long-term avoidant behaviors reflect how the actor decides to handle the relationship and the issue involved in a conflict.

Consider the following example and Andrea's responses:

Andrea and Kelly were friends and colleagues in a same organization.

In a meeting, they disagreed on the plan of a project. After the meeting, Andrea decided to resolve the conflict.

Response 1: Andrea asked the boss to be removed from the project and she stopped being Kelly's friend.

Response 2: Andrea avoided talking to Kelly about the issue but

sought their boss's support.

Response 3: Andrea no longer insisted on her own views and remained Kelly's friend.

The avoidance strategy illustrated in Response 1 is *exit*, which refers to the actor's strategy to avoid both the person and the issue in the long run. Exit resembles the ending of a relationship: The actor decides to quit the issue and the other person once and for all. In Thibaut and Kelley's (1959) social exchange theory, a person may decide to break a relationship when he or she perceives the current relationship to be unsatisfactory and better alternatives are available. Exit can also be considered to be the actor's decision to resign from presently available options (Hirschman, 1970). An actor exits if he or she believes that the issue is unsolvable and that the relationship is no longer worth continuing (Hirschman, 1970). Examples of exit are job resignation or job transfer (Roloff, 1976).

To *outflank* implies more competition (promoting one's own goals on the issue) than exit. Outflanking refers to the strategy of avoiding confrontation with the targeted person while pursuing the issue indirectly (Response 2). Outflanking varies in the amount of effort and the gravity of consequences. Outflanking behaviors such as backstabbing, resorting to an authority (Tjosvold & Sun, 2002), and agreeing publicly but disagreeing privately (Hwang, 1997-1998) require less effort and fewer negative consequences than coalition formation, a process to build up a personal supportive network to "overthrow" the opponent to resolve the issue (Roloff, 1976). Imagine a student who had asked his or her teaching assistant (TA) to change a group grade from C to A but was refused. Because of this refusal, the student decides to

avoid the TA. The student could either complain to the course supervisor alone or talk other group members into complaining to the supervisor as a group. Compared with solo complaints, forming an alliance requires more effort, and group complaints are more likely to adversely affect the TA. Therefore, although outflanking is an avoidance strategy with regard to the other party, the efforts and consequences of the actor's behaviors regarding the issue make this avoidance strategy far from an inactive or passive strategy.

The third response in the Andrea and Kelly example is *yielding*, or avoiding the issue but not the person. This type of avoidance is an accommodating strategy because the actor maintains a relationship with the other party and gives up on the issue even if the underlying opinions are hidden.

Yielding is common in close relationships. Partners in the best relationships may hold different views on many things (Roloff & Cloven, 1990). To maintain their relationships, people often withhold complaints (see Roloff & Ifert, 2000, for a review). Dating partners choose to hide about 40% of complaints about their partners (Roloff & Cloven, 1990). The abandoned issues tend to be considered as either trivial or unsolvable (Afifi & Guerrero, 2000; Cloven & Roloff, 1994; Roloff & Ifert, 2000). Yielding is a gesture of sacrificing personal needs to satisfy the other's needs.

Examples of the six types of avoidance strategies (withdrawal, passive competition, pretending, exit, outflanking, and yielding) can be found in earlier empirical studies. Oetzel et al.'s (2000) study of facework strategies Q-sorted participants' responses to conflict situations. Except for passive competition, all the avoidance strategies in the proposed typology can be found in participants' statements

in Oetzel et al.'s study (2000, p. 408):

(1) To withdraw: "I politely ended the conversation because I didn't want to talk with the other person," and "I left the scene."

(2) To pretend: "I tried to fake that I wasn't upset," and "I ignored the conflict and behaved as if nothing happened."

(3) To exit: "I tried not to see the other person."

(4) To outflank: "I wanted to take our problems to our boss so that he/she could solve it," and "I said bad things about the person behind his/her back."

(5) To yield: "I backed down to solve the problem," and "I accepted whatever the other person said."

An example of passive competition could be, "I stopped arguing with the other person but started doing what I wanted."

Significance of the Typology

This typology provides a theoretical conceptualization of conflict avoidance. Researchers can use the typology to pinpoint the difference between any two avoidance strategies regarding the *who*, the *what*, and the *duration*. Moreover, some avoidance types can be compared with other conflict strategies proposed by the two-dimensional conflict models (e.g., domination, accommodation, compromise, and integration; Pruitt & Rubin, 1987). For example, pretending and yielding may be closely related to accommodation because the three strategies are all characteristic of giving in. In contrast, passive competition and outflanking may not be, or may be negatively related to accommodation because the former two are aggressive strategies even if they are not directly confrontational. Passive competition may also be

positively related to domination because both are strategies to push one's own way over the other party's. Thus, this typology may help explain why avoidance and accommodation sometimes overlap (e.g., Oetzel et al., 2001) but at other times they do not (e.g., Cai & Fink, 2002).

The differentiation of the six types of avoidance strategies provides the basis for understanding the goals that predict each type of avoidance strategy. Different avoidance strategies are likely to result from pursuing different goals. The next two sections review types of goals pursued in conflict, and then link goals to the types of avoidance.

Goals in Conflict

Goals, Strategies, and Conflict

A *goal* is defined as a cognitively structured end that an actor seeks to achieve (Dillard, Segrin, & Harden, 1989). Wilson (1990, 1995) proposed a cognitive rules model to describe how goals are activated in an interaction situation. The model suggests that knowledge about various types of goals and situational features are stored in a person's network of schemata through socialization and problem-solving experience. In a communication situation, goals that match the situational features are activated, and such activation becomes salient in directing a person's actions when it exceeds a threshold (Wilson, 1990, 1995).

A communicative strategy results from the attempt to achieve relevant communication goals (Cai & Wilson, 2000; O'Keefe, 1988; Samp, 2000; Schrader & Dillard, 1998). A *strategy* refers to a sequence of planned behaviors to actualize goals (Putnam & Jones, 1982). The cognitive process that links goals to strategies are

proposed in Schrader and Dillard's (1998) Goals-Planning-Action (GPA) model and Greene's (1984, 1997) Action-Assembly Theory (AAT).

Both the GPA model and the AAT specify how goals lead to strategies. Briefly, strategies can be considered as representations of how to achieve the actor's goals. Schrader and Dillard (1998) maintained that a primary goal "motivates planning and action, [and] explains what the interaction is about: It is what the actor is trying to accomplish" (p. 278). Secondary goals are generated by the primary goal, and are defined as the goals to help the actor achieve the primary goals while attending to other features of the situation (Schrader & Dillard, 1998). A strategy to fulfill these goals is then cognitively formed and produced in output presentations (Greene, 1997). Greene's (1984, 1997) AAT detailed the activation of goals, the assembly of goals, and the actualization of goals through strategies.

AAT maintains that situational features generate certain goals. The activated goals then lead the actor to create plans to realize these goals. These plans, when acted out, become strategies (Greene, 1997). The causal link from goals to their relevant strategies proposed in the GPA model and the AAT have received empirical support (e.g., Booth-Butterfield, 1987; Cai & Wilson, 2000; Greene, 1984; Greene & Cappella, 1986; Greene & Lindsey, 1989; Samp, 2000; Schrader & Dillard, 1998). Therefore, by examining strategies that people use, preceding goals can be inferred; by understanding the goals activated in a communication situation, subsequent strategies can be predicted (Wilson, 2005).

Past literature has used inductive methods to identify different type of goals activated in a conflict situation (e.g., Cody, Canary, & Smith, 1994; Dillard et al.,

1989; Nicotera, 1993; Samp & Solomon, 1998a). For example, in Samp and Solomon's (1998a) study, 174 participants were asked to write a recent problematic event, the subsequent conversations, and participants' intentions in the recalled conversations. Samp and Solomon's (1998a) pilot study generated 76 goal-relevant statements. Then 96 individuals from the same population as the pilot study sorted out seven themes (or seven types of goals) from the 76 statements. Two coders re-sorted the statements, confirmed the seven themes, and named each type of goal. This procedure served as an initial step to identify the universe of goals in conflict situations. In the present study, a deductive method is proposed: Theoretical dimensions of interpersonal conflict goals are developed, and then types of goals are generalized along these dimensions. Frey, Botan, and Kreps (2000) suggested that a deductive method complements and evaluates the observations in inductive research.

The first step to develop a typology of goals in interpersonal conflict (*conflict goals*) is to identify relevant conceptual dimensions (Bailey, 1994). Because conflict goals are activated in conflict communication, relevant dimensions can be generated from an examination of conflict, and then these dimensions can be used to define a universe of conflict goals and generate different types of conflict goals.

Characteristics of Conflict

Because this dissertation examines the relationship between the actor's goals and the strategic use of avoidance, interpersonal conflict is examined from the actor's perspective. Interpersonal conflict has three essential characteristics for the actor: *perceived interdependence* with the other party, *perceived incompatibility* of one's own goals with the other's goals, and *emotional arousal*. These three characteristics

are found in various definitions of conflict (e.g., Pruitt & Rubin, 1987; Thomas, 1976; Thompson, 1998; Ting-Toomey, 1985; Ting-Toomey & Oetzel, 2001; Wilmot & Hocker, 2000). For example, Thomas (1976) described conflict as an individual's frustrating experience regarding perceptions, emotions, and outcomes. Ting-Toomey (1985) viewed conflict as an emotion-laden dissonance between interdependent parties caused by incompatible goals, values, and ideas.

The three characteristics of conflict (i.e., perceived interdependence, perceived goal incompatibility, and emotional arousal) have been empirically observed. First, incompatibility is demonstrated in Kozan and Ergin's (1999) study of 435 participants (55% managers and 45% non-managers) working in public and private firms. The most frequently recalled conflict episodes featured perceived interferences or incompatibilities on such issues as unfulfilled responsibilities, unfair promotions or salaries, and incompatible personalities (p. 257). Second, interdependence has been identified as one of the major factors leading to interpersonal conflict in various communication contexts in Roloff's (1987) review of conflict literature.

Third, emotional arousal in conflict has also been documented. The emotions frequently associated with conflict are negative emotions such as anger, anxiety, and fear. Anger and anxiety tend to occur in goal-incongruent situations (Allcorn, 1994; Lazarus & Lazarus, 1994; Nabi, 1999, 2002; Planalp & Fitness, 1999), as does fear (Roloff & Cloven, 1990; Saarni, Mumme, & Campos, 1997; Sorenson, Morse, & Savage, 1999). When unsolvable family conflict endures, individuals tend to withdraw from conflict situations, internalize fear, and adopt self-protective behavior

(Crokenberg & Langrock, 2001; Saarni et al., 1997). In sum, three common features characterize the actor's perception of conflict: perceived interdependence, perceived goal incompatibility, and emotional arousal. The dimensions that define the universe of conflict goals should reflect these features.

A Typology of Conflict Goals

In an interpersonal conflict, perceived incompatibility of one's own goals and the goals of the other party may arouse competitive motivations, whereas perceived interdependence with the other may arouse cooperative motivations. In discussing cooperative versus competitive relations, Deutsch (1949, 1973) described cooperative relations in conflict as often associated with positive characteristics such as effective communication, friendliness, willingness of empowering the other, perceived agreement, and coordination of efforts. In contrast, competitive relations in conflict tend to be associated with impaired communication, obstruction, one's own empowerment, perceived disagreement, and perceived inability to divide tasks (Deutsch, 1949, 1973). Deutsch (1973) argued that an actor's perception of his or her gains in relation with the gains of the other with whom one is on conflict influences whether competition or cooperation occurs. If the actor's gain incurs the other's loss, the actor is likely to compete; if the actor's gains or losses are in the same direction with the other's gains or losses, the actor is likely to cooperate.

Similarly, Putnam and Wilson (1982) described distributive conflict strategies as competing strategies that diminish the other party's benefits to increase one's own benefits, and integrative strategies as cooperative strategies that maximize both parties' benefits. Putnam and Wilson (1982) also suggested that strategies that are

both competitive and cooperative are sometimes used (also see Johnson & Johnson, 1989). These competitive and cooperative strategies may be motivated by competitive and cooperative goals, respectively. In long-term business relationships, two involved parties often compete for resources but coordinate to reach an agreement (Robinson, Hewitt, & Harriss, 1999). Therefore, *competition* and *cooperation* are two dimensions along which conflict goals may vary.

Incompatible goals in conflict can be *instrumental* or *socioemotional* (see Leung et al., 2002; and Nicotera, 1993, for similar ideas). Socioemotional goals are goals to achieve emotional needs through social relationships. When a relationship in a conflict situation is important, emotions such as love, hate, anger, and fear are likely to be involved (Crokenberg & Langrock, 2001; Leung et al., 2002). Instrumental goals are the desires to realize material gains (Leung et al., 2002; Weber, 1913/1981). One type of instrumental goal is to gain material resources such as money and goods (Foa & Foa, 1974), which is easily recognized and tangible. However, not all instrumental goals are reflected in direct competition for material benefit. People may use relational maintenance to achieve instrumental goals as well.

Past literature has typically defined relational goals as goals to maintain or improve a relationship (e.g., Afifi & Guerrero, 2000; Leung, 1988). However, an individual may keep a relationship because of affection or because of the potential to use this relationship for material benefit. If relational maintenance is viewed as a means instead of an end (i.e., a goal), and emotional affection or instrumental benefit is viewed as the end that relational maintenance serves, the reason that an individual maintains a relationship may then be clarified.

Socioemotional and instrumental goals can be distinguished by using Foa and Foa's (1974) typology of social exchange. Foa and Foa classified six types of resources that people exchange in social interaction: love, status, information, service, goods, and money. A goal to exchange love or status may be considered as a socioemotional goal, because love refers to fondness, care, affection, or comfort, and status refers to esteem, respect, or prestige (Foa & Foa, 1974). A goal to achieve money and goods may be considered as an instrumental goal because these resources represent material benefit for exchange (Foa & Foa, 1974). Relational maintenance can be viewed as socioemotional if love or respect is the goal, and as instrumental if material benefit is the goal. Therefore, by adding emotional elements, a distinction is made clear about an individual's underlying purpose to maintain a relationship.

The competitive, cooperative, socioemotional, and instrumental dimensions proposed here capture the essential characteristics of social interaction in a conflict situation and hence are used to define the universe of conflict goals.⁵ A 2 x 2 x 2 x 2 typology of conflict goals is generated based on these dimensions (Table 2). Note that the four dimensions vary in degree, but are here treated dichotomously (see Bailey, 1994). The dichotomy of "Yes" and "No" used here may mean either the presence or absence of a property along the relevant dimension or a high or low degree of the relevant dimension.

Table 2

A Typology of Interpersonal Conflict Goals

		<i>Dimension 1: Cooperative</i>			
		No (0)	Yes (1)		
Column Label		<i>A</i>	<i>Dimension 2: Competitive</i>		
			<i>B</i>	<i>C</i>	<i>D</i>
	Row Label	No (0)	Yes (1)	No (0)	Yes (1)
<i>Dimension 3: Instrumental</i>	<i>Dimension 4: Socioemotional</i>				
No (0)	<i>A</i> No (0)	X ^a (0,0,0,0)	X ^a (0,1,0,0)	X ^a (1,0,0,0)	X ^a (1,1,0,0)
	<i>B</i> Yes (1)	X ^a (0,0,0,1)	Enmity goals (0,1,0,1)	Support goals (1,0,0,1)	Intimate reliance goals (1,1,0,1)
Yes (1)	<i>C</i> No (0)	X ^a (0,0,1,0)	Instrumental competitive goals (0,1,1,0)	Instrumental cooperative goals (1,0,1,0)	Instrumental reliance goals (1,1,1,0)
	<i>D</i> Yes (1)	X ^a (0,0,1,1)	Rivalry goals (0,1,1,1)	Cooperative goals (1,0,1,1)	Reliance goals (1,1,1,1)

^a Row A and Column A contain null cells, marked by Xs. Specifically, Row A contains four cells in which neither instrumental nor socioemotional goals are present. The lack of incompatibility either materialistically or socioemotionally fails to create a conflict (Wilmot & Hocker, 2000). Similarly, the cells in Column A indicate no competition or cooperation, thus indicating a lack of motivation to pursue a conflict. Therefore, these cells do not imply conflict. They are marked by Xs and are eliminated from further discussion.

Enmity, instrumental competitive, and rivalry goals. Column B within the table includes three cells high in competition but low in cooperation. In top-down order, the first cell, enmity goals, refers to the goals to compete for socioemotional superiority or to make the other feel inferior. Consider the following situation. A and B are adversaries and are in conflict. A is making a decision that could incur monetary gains for both A and B. There are two options. Option 1 says that if A agrees to accept \$200, then B will get \$50. Option 2 says that if A accepts \$250, then B will get \$240. Which option will A choose? If humans make decisions to maximize material gains, then Option 2 is preferred (e.g., Weber, 1913/1981). However, certain emotional and relational issues could lead to the preference of the Option 1. If A hates B, or A is a bitter rival to B, A may choose Option 1 just to deprive A of privileges as much as possible.

A decision based on *feelings*, which is in the emotion domain (e.g., Damasio, 1994), instead of maximizing *instrumental gains* is common. Research on the association between message framing and decision-making has found that how a message is framed influences the conclusions people reach because framing can influence people's perceptions or feelings (Denes-Raj & Epstein, 1994; Kahneman & Tversky, 1984; Tversky & Kahneman, 1974, 1981, 1983). In a study to test physicians' responses to positively versus negatively framed messages, Kahneman and Tversky (1984) found that people are more likely to adopt a positively than a negatively framed suggestion, despite that the outcomes of the two messages were exactly the same. In addition, people insist on their decisions even after they knew the messages were identical, and in some occasions, insisted on adopting the positively

framed message when they knew that the negatively framed message would bring more material benefit (e.g., Denes-Raj & Epstein, 1994). Instrumentality is not necessarily the determining force. Individuals often choose the option that makes them *feel* better even they *know* that the other option brings more instrumental gains (Denes-Raj & Epstein, 1994).

The cell below enmity goals represents *instrumental competitive goals*, which score high on the competitive and the instrumental dimensions and low on the socioemotional and the cooperative dimensions. These goals represent the desire to maximize an individual's own benefit through a competitive strategy and involve little or no socioemotional investment. The low level of socioemotional involvement implies that the relationship may be formal, structural, and regulated (Marwell & Hage, 1970). One example of instrumental competitive goals is reflected in the process of bargaining with a car dealer. The process may not involve relational or emotional needs. The core goal may be to get the best product and the best price. Some influence goals in a compliance-gaining situation (e.g., Cai & Wilson, 2000; Dillard et al., 1989; Schrader & Dillard, 1998) may be examples of instrumental competitive goals because the focus is placed on gaining the other person's compliance on the task.

The last cell in Column B represents goals to compete for both socioemotional and materialistic need, and is labeled *rivalry goals*. These goals indicate that the actor hopes to win over his or her rival both materially and socioemotionally. Consider a customer who demands a refund for a defective product but meets a store representative who projects angry attitude. The customer may raise his or her voice

and argue with the representative to obtain both a new product and respect.

Support, instrumental cooperative, and cooperative goals. As compared with the above three types of goals that are all competitive, the three cells in Column C are highly cooperative and low competitive. *Support goals* are high on the cooperative and socioemotional dimensions but low on the instrumental dimension. Support goals are defined as goals that convey affection or emotional support to fulfill the other party's needs. As indicated earlier, support goals may or may not overlap with *relational goals* (defined as goals with the intention to maintain or protect relationships, see, e.g., Afifi & Guerrero, 2000; Cai & Wilson, 2000; Clark & Delia, 1979; Knobloch & Carpenter-Theune, 2004; Samp, 2000; Samp & Solomon, 1998a, 1998b, 2005; Schrader & Dillard, 1998; Wilson, 1990; Wilson & Putnam, 1990). Support goals reflect the desire to support or help the other for the sake of affection needs, whereas relational goals reflect the need to maintain a relationship, which could be either affection-oriented or utility-oriented (e.g., maintaining a good relationship for future instrumental gains). When relationship maintenance originates from emotional support such as care and affection, then a relational goal and a support goal may overlap. When relationship maintenance originates from instrumental gains, then a relational goal may overlap with the next type of goal, an instrumental cooperative goal.

Instrumental cooperative goals represent high cooperative goals for instrumental but not for socioemotional purposes. If a person uses cooperation not because of care or affection, but to gain material resources, his or her goals are instrumental cooperative goals. The last cell in Column C represents *cooperative*

goals, the goals to cooperate and to achieve high instrumental and positive socioemotional outcomes. These goals are desirable because they could precede integrative strategies to maximize both parties' gains and to exchange positive socioemotional resources. Cai, Wilson, and Drake (2000) argued that there may exist an optimal solution for a negotiation situation, but negotiators do not necessarily see this solution. If negotiators have cooperative goals, they may find solutions that benefit both parties.

Certain conditions facilitate the activation of cooperative goals. Ben-Yoav and Pruitt (1984) found that the expectation of future cooperation encourages an actor to use integrative strategies to satisfy both parties' needs and preserve a positive relationship. Leung et al. (2002) also argued that high needs for both harmony and instrumentality predict integrative strategies.

Intimate reliance, instrumental reliance, and reliance goals. Column D contains three types of goals that reflect both competition and cooperation. Intimate reliance goals are high in competitive, cooperative, and socioemotional goals but low in instrumental goals. These goals are likely to exist in close relationships. Consider a couple who exchange their ideas about love. The couple may have different ideas about expressing affection. In an argument, they may compete with the other about their ideas of expressing love, yet their purpose is also cooperative—to enhance their relationship. The outcome may not involve instrumental benefit but only affection needs.

Instrumental reliance goals are competitive and cooperative goals in materialistic but not in socioemotional resources. Instrumental reliance goals are

found in structured collegial relationships. For example, in working on a group project, group members have to cooperate to have the project done, and their cooperation may involve competitive goals to maximize personal contribution. If these group members do not have a close relationship, then their competition and cooperation is more likely to be instrumental rather than socioemotional.

Negotiation goals in some business relationships represent instrumental reliance goals (see Wilson & Putnam, 1990, for a summary of the combined competitive and cooperative strategies between negotiators). Negotiators understand that they need to compete for their own interests, but their interests can only be realized through cooperation. If a long-term relationship is not a goal, then such competition and cooperation may involve more of an instrumental goal than a socioemotional goal.

Wilson and Putnam (1990) discussed three levels of goals: global, regional, and local. These three levels of goals may be related to the three elements of instrumental reliance goals (i.e., competitive goals, cooperative goals, instrumental goals). Wilson and Putnam (1990) defined *global* goals as the negotiators' plans of what to achieve overall (termed final goals in Donohue, 1990, and consummate goals in Benoit, 1990), the *regional* goals as the negotiators' plans of what to achieve in each encounter (intermediate goals in Donohue, 1990; and contributory goals in Benoit, 1990), and the *local* goals as the negotiators' plans of verbal tactics within each encounter. In each negotiation encounter, negotiators' local goals may be cooperative goals because these goals help regulate the flow of conversation. Negotiators' regional goals may be competitive goals because gaining ground in each

phase is important for the eventual outcome of the negotiation. Negotiators' global goals may be instrumental if the main purpose of the negotiation is material benefit. Therefore, instrumental reliance goals may be reflected in different levels of goals involved in a negotiation process.

The last cell in Column D represents *reliance goals*, which are high on all four dimensions. These goals have positive competitive, cooperative, instrumental, and socioemotional elements. A negotiation situation between two business partners with a long-term relationship could activate these goals. Both parties compete for material gains, but need to cooperate to realize them; although the goals are mainly instrumental, the business partners may want to develop a bond to facilitate future cooperation (Ben-Yoav & Pruitt, 1984). Consider the following situation for another example of reliance goals: Colleagues A and B are good friends. They are working on a project and the sizes of their contributions to the project will decide who will be promoted. In this situation, all four elements are relevant. If one actor, say A, values both career opportunity and the relationship with B, reliance goals may be activated.

Significance of the Typology

The typology of conflict goals contributes to the cognitive approach to conflict communication for at least three reasons. First, previous research has generalized a number of goal types based on inductive methods (see Cody et al., 1994; Dillard et al., 1989; Nicotera, 1993; Samp & Solomon, 1998a). By exploring goals through participants' responses in a conflict situation, Nicotera (1993) generalized three types of goals: self-oriented goals, other-oriented goals, and emotional-relational goals. Similarly, Samp and Solomon (1998a, 1998b) found seven

types of goals based on participants' responses (i.e., relational maintenance, acceptance of fault, managing self-positive face, avoiding addressing the event, managing the conversation, managing emotion, and restoration of self-negative face). The proposed typology uses a complementary deductive method: The theoretical dimensions about interpersonal conflict are identified, and a typology of interpersonal conflict goals is developed. The combination of inductive and deductive methods can provide a comprehensive understanding of interpersonal conflict goals. The goals generated through an inductive method (e.g., Nicotera, 1993; Samp & Solomon, 1998a, 1998b) may be analyzed along the four dimensions proposed in this study. For example, among Samp and Solomon's seven types of goals, relational maintenance, managing the conversation, acceptance of fault, and managing emotion may be cooperative goals because the effort is to maintain a smooth interaction; avoiding addressing the issue could be cooperative if communication is maintained or socioemotionally competitive if both the issue and communication are avoided (threatening to exit). Self-face management may be socioemotional and competitive if an individual emphasize self-face over other-face.

Second, the proposed typology allows a systematic investigation of interpersonal conflict goals. Deductively generating a typology provides an answer to the sampling problem that Fink et al. (2006) discussed. Fink et al. (2006) specified a sampling issue about the concept universe. For example, how can results from one conflict situation be generalized to other conflict situations? Unless the chosen situation is representative, such a claim cannot be made. Fink et al. (2006) suggested that researchers should specify the universe of that concept and use a representation

of the concept in a study. Doing so allows the researchers to use this representation to generalize their results to other forms of that concept. In the current typology, relevant dimensions to conflict are created to build a universe of conflict goals. Research findings of the conflict goals generated in this universe can be useful to generate an understanding of conflict goals in other situations.

Third, the proposed typology embraces emotion, an important element not sufficiently studied in past conflict research. A positive emotional need or a lack of it may help clarify people's cooperative behaviors. Inclusion of socioemotional goals allows researchers to recognize underlying purposes of relational maintenance. Relational maintenance without affection needs may be a means to achieve an instrumental cooperative goal, whereas relational maintenance with affection needs may be a means to achieve a support goal. Conflict strategies should not be solely determined by instrumental goals (e.g., Leung et al., 2002); rather, conflict strategies may reflect a combined effect of instrumental and socioemotional considerations.

A Cognitive Model of Conflict Avoidance

The model proposed here incorporates previous researchers' notion that in determining the conflict strategy to use, multiple goals can be present. (e.g., compliance-gaining strategies in Cody et al., 1994; conflict strategies in Ohbuchi, Fukushima, & Tedeschi, 1999). Ohbuchi and colleagues (e.g., Fukushima & Ohbuchi, 1996; Ohbuchi et al., 1999; Ohbuchi & Tedeschi, 1997) used samples from Japan and the United States to study the links between conflict goals and conflict strategies and found that most participants from both cultures considered multiple goals when deciding how to handle conflict.

Further, the model proposes that multiple goals are not necessarily carried out via multiple strategies. Instead, multiple goals may be addressed through a single strategy (Lim & Bowers, 1991). This point was elaborated in Lim and Bowers's (1991) research. A linguistic device may address multiple face needs (Lim & Bower, 1991). For example, asking for a dance in a question format, "Would you dance with me?" reflects the actor's intention to protect the other's positive face and negative face. Specifically, the request for a dance shows that the other is socially included (positive face) and that the other has autonomy to decide whether to accept the request (negative face). Similarly, one conflict strategy could reflect multiple conflict goals. Ohbuchi et al. (1999) found that a conciliation strategy "to consolidate one's own and the other's" needs (p. 58) reflected relational goals and economic goals simultaneously.

The current model also proposes that a particular strategy could result from different goals or a combination of goals. For example, a subordinate could use pretending in an argument with his or her boss to maintain their friendship (a support goal) or to gain a promotion (an instrumental cooperative goal); a husband could use passive competition to agitate his wife (an enmity goal) or to actualize his autonomy (an instrumental competitive goal). Therefore, different goals or different combinations of goals may be linked to the same strategy. Leung et al. (2002) also argued that one particular conflict management behavior may result from different goals. One of their exemplary conflict behaviors is giving or protecting face, which could result from the motivation to achieve both instrumentality and harmony, or from the motivation to achieve instrumentality alone (Leung et al., p. 213).

In Figure 1, relevant conflict goals or combinations of conflict goals are linked to different types of avoidance strategies. The rationale of the links is presented in the 12 hypotheses in next section. Because the typology of conflict goals is developed to reflect all relevant goals in conflict and not specifically avoidance strategies, some goals may not predict some avoidance strategies. In the sections that follow, the hypothesized relationships between conflict goals and avoidance strategies are presented.

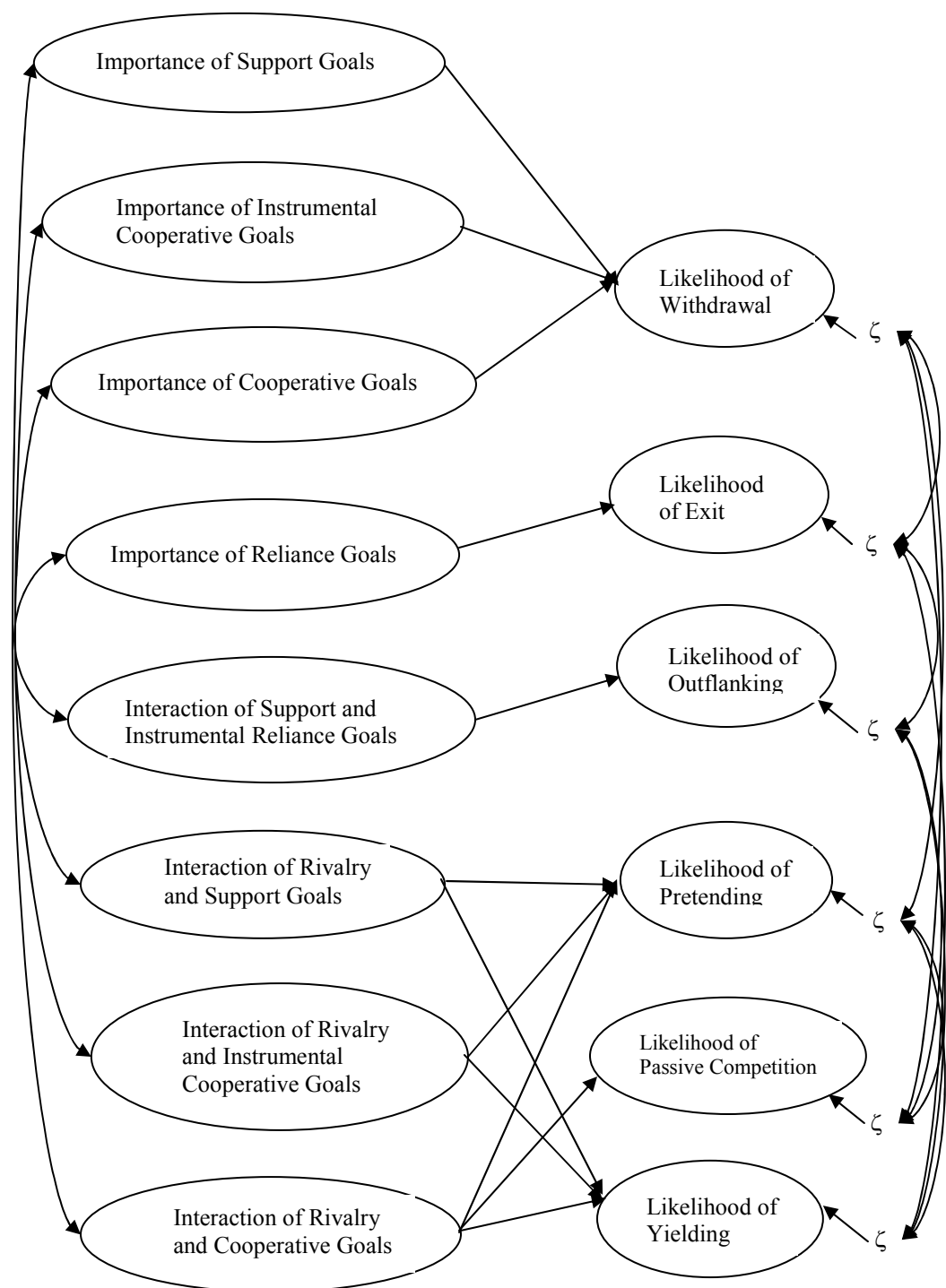


Figure 1. A cognitive model of conflict goals and avoidance strategies.

Hypotheses

To Withdraw

To withdraw is a strategy to evade both the person and the issue in the immediate situation. Withdrawal could be an effort to stop engaging in undesirable social interaction (Grice, 1975; Roloff & Ifert, 2000). Although withdrawal reflects the actor's dissatisfaction towards the other party, temporarily giving up an argument signals cooperation: Recall the earlier example of Tom and his wife, in which one of Tom's avoidance strategies is to leave the scene. The implied message in withdrawal may be that "I don't want to argue with you right now. Let's calm down." Therefore, cooperative rather than competitive goals may predict withdrawal. Roloff and Cloven (1990) found that a chilling effect, a phenomenon in which an actor refrains from revealing dissatisfaction with the other party in a close relationship, tends to occur when the actor perceives that the other party has, compared with oneself, more power or more alternative choices. Therefore, the actor's withdrawal is a signal of cooperation.

Depending on the relationship between the two parties, cooperation may come from an instrumental or a socioemotional source. If cooperation results from care about and affection for the other, support goals are primary. In contrast, if cooperation results from the utility of the other, instrumental cooperative goals are primary. A combination of support and instrumental cooperative goals may also predict withdrawal. The situation in which the interactants are competitors but also good friends, for example, represents such combination.

H1a: The importance of support goals positively predicts the likelihood of

withdrawal, *ceteris paribus*.

H1b: The importance of instrumental cooperative goals positively predicts the likelihood of withdrawal, *ceteris paribus*.

H1c: The importance of cooperative goals positively predicts the likelihood of withdrawal, *ceteris paribus*.

To Passively Compete

Passive competition is a conflict strategy to avoid the person but not the issue.

Passive competition can be considered as a nonverbal version of the domination strategy (i.e., employing verbal tactics to push one's own goals and ignoring the other's needs; see Ting-Toomey & Oetzel, 2001). Passive competition reflects high importance of competitive goals and low importance of cooperative goals placed on the issue because the actor acts out his or her volition on the issue. The level of cooperation is even lower in passive competition than in domination. Although domination is a competitive strategy, the use of argument at least provides the other with the actor's reasoning and suggests that the actor is making an effort to engage in the interaction. Passive competition suggests that the actor no longer wishes to be involved in the interaction process.

Further, passive competition is a bold face-threatening act, as it reflects the actor's goal to maintain his or her autonomy and ignores the other's autonomy. Such an act, according to Brown and Levinson (1987), requires that the actor use strategic linguistic devices such as metaphor, rhetorical questions, or understatement to minimize intrusion and to show respect to the other's autonomy. Passive competition violates the other party's face and uses no linguistic devices to protect the other's

face. Because face is closely related to an individual's claimed social image and social esteem (Brown & Levinson, 1987), passive competition is also a strategy reflecting competitive rather than cooperative goals along the socioemotional dimension. Therefore, passive competition reflects high importance of socioemotional competition and low importance of socioemotional cooperation.

H2: *Ceteris paribus*, the combined effect of high importance of rivalry goals and low importance of cooperative goals positively predicts the likelihood of passive competition.

To Pretend

Avoidance of the issue but not the person in a conflict situation indicates that the actor's primary goal is to cooperate with the other. Pretending is a gesture of giving up on the issue in the immediate situation, and thus, implies more cooperation than competition. Pretending indicates the actor's effort to maintain a positive relationship with the other party. These characteristics together reflect the low importance placed on enmity and instrumental competitive goals and the high importance placed on cooperative goals. However, whether such cooperation has a positive socioemotional basis such as affection or an instrumental cooperative basis such as future utility of the other is unknown.

H3a: The combined effect of low importance of rivalry goals and high importance of support goals positively predicts the likelihood of pretending, *ceteris paribus*.

H3b: The combined effect of low importance of rivalry goals and high importance of instrumental cooperative goals positively predicts the

likelihood of pretending, *ceteris paribus*.

H3c: The combined effect of low importance of rivalry goals and high importance of cooperative goals positively predicts the likelihood of pretending, *ceteris paribus*.

To Exit

To exit means that the actor gives up the issue and the relationship with the other for the long run. No matter how trivial or unsolvable the issue is (e.g., Afifi & Guerrero, 2000), the actor no longer maintains competitive or cooperative goals. The actor no longer maintains socioemotional or instrumental goals either, because exit means the end of a relationship. Based on these characteristics, exit resembles avoidance resulting from low concerns for both production and people (see Blake & Mouton's managerial grid, 1964). In other words, as long as the actor has any intention of competing or cooperating in emotion or materials, he or she will not exit.

H4: The importance of reliance goals negatively predicts the likelihood of exit, *ceteris paribus*.

To Outflank

To outflank is an avoidance strategy carried out in the long term and directed toward the issue rather than the person. The actor has a clear intention to compete on the issue. Trying to achieve his or her goals through ways other than confrontation reflects two additional intentions. First, the actor does not want to engage in an argument with the other, which reflects the actor's intention not to damage the relationship. Second, such relationship maintenance is likely to be instrumental rather than socioemotional, because going behind the other's back is a behavioral indicator

of neglect or lack of affection (Healey & Bell, 1990; Rusbult, 1987). Therefore, outflanking is a strategy reflecting high importance of instrumental cooperation and competition and low importance of support goals.

H5: The combined effect of low importance of support goals and high importance of instrumental reliance goals positively predicts the likelihood of outflanking, *ceteris paribus*.

To Yield

Yielding is avoiding an issue and maintaining interactions with the other in the long term. This type of avoidance signals surrender on the issue in exchange for continuing the relationship with the other. Consequently, the actor aims at cooperation instead of competition. The cooperation implied in yielding indicates that the actor does not compete instrumentally or socioemotionally. Again, however, such yielding could be relation-oriented or utility-oriented. If an individual gives in to satisfy the other person's needs, such yielding is similar to the term *loyalty*, referring to suppressing arguments and waiting for relational improvement (defined first by Hirschman, 1970; adapted later by Healey & Bell, 1990, and Rusbult, 1987). If such yielding is to gain future benefits from the other, then the cooperation is instrumental. The only difference between pretending and yielding is that pretending is a short-term avoidance strategy whereas yielding is a long-term avoidance strategy.

H6a: The combined effect of low importance of rivalry goals and high importance of support goals positively predicts the likelihood of yielding, *ceteris paribus*.

H6b: The combined effect of low importance of rivalry goals and high

importance of instrumental cooperative goals positively predicts the likelihood of yielding, *ceteris paribus*.

H6c: The combined effect of low importance of rivalry goals and high importance of cooperative goals positively predicts the likelihood of yielding, *ceteris paribus*.

CHAPTER III

Method

This chapter describes proposed stimulus messages and instruments, the pilot studies that tested these proposed materials, and the methods of the formal study. Four pilot studies were conducted to assess the effectiveness of the inductions and the measurements used in the final study. The formal study tested the proposed model and the hypotheses. The pilot studies and the formal study were approved by the University of Maryland Institutional Review Board on December 18, 2006, and data were collected between January and April, 2006.

Design, Stimulus Messages, and Instruments Prior to Pilot Tests

Overall Design

An experimental design was used to test the hypotheses. Overall, the importance of a goal or a combination of goals was manipulated, and the likelihoods of avoidance strategies were measured. Goal inductions consisted of 12 variations to correspond to the 12 hypotheses; each goal induction was then placed in one of two hypothetical scenarios. The first scenario described an interpersonal conflict in a group project in school, and the second described a similar scenario at work.

The reason for using two hypothetical conflict scenarios instead of one as the basis for goal variations was to exclude possible effects of the features intrinsic to any single scenario. Jackson (1992) maintained that a stimulus message used in an experimental design bears its own features, which may cause certain effects in the dependent variable. To enhance internal validity of the experiment, multiple versions of a treatment can be used. Further, the use of multiple versions of a message also

enhances the experiment's external validity because the results are more generalizable than those of a single treatment.

This experiment used two versions of an interpersonal conflict scenario. With 12 variations of goal inductions, a total of 24 experimental conditions were created. The complete description of the experimental conditions will be presented in the method section for the formal study. Table 3 depicts the high importance (marked with the "+" sign) and low importance (marked with the "-" sign) of goal manipulated in each experimental condition.

Note that five goals (i.e., rivalry goals, cooperative goals, intimate reliance goals, instrumental reliance goals, and reliance goals) are composite goals consisting two or more of the other four goals (i.e., enmity goals, instrumental competitive goals, support goals, and instrumental cooperative goals). The manipulations of the importance of the five composite goals were represented by the manipulations of each individual component goal comprising them. For example, rivalry goals have two components, enmity goals and instrumental competitive goals. To induce high importance of rivalry goals, the importance of enmity goals and the importance of instrumental competitive goals were both manipulated to be high. The high importance of rivalry goals was thus represented by the presence of high importance of both enmity goals and instrumental competitive goals. Refer to Table 2 for the components of other composite goals.

Table 3

Importance of Goals Induced in the 12 Experimental Conditions to Test Hypotheses

Experimental Condition	Abbreviated Hypotheses	A	B	C	D
Condition 1	H1a: The importance of support goals positively predicts the likelihood of withdrawal.			+	
Condition 2	H1b: The importance of instrumental cooperative goals positively predicts the likelihood of withdrawal.				+
Condition 3	H1c: The importance of cooperative goals positively predicts the likelihood of withdrawal.			+	+
Condition 4	H2: The combined effect of high importance of rivalry goals and low importance of cooperative goals positively predicts the likelihood of passive competition.	+	+	-	-
Condition 5	H3a: The combined effect of low importance of rivalry goals and high importance of support goals positively predicts the likelihood of pretending.	-	-	+	
Condition 6	H3b: The combined effect of low importance of rivalry goals and high importance of instrumental cooperative goals positively predicts the likelihood of pretending.	-	-		+
Condition 7	H3c: The combined effect of low importance of rivalry goals and high importance of cooperative goals positively predicts the likelihood of pretending.	-	-	+	+
Condition 8	H4: The importance of reliance goals negatively predicts the likelihood of exit.	-	-	-	-
Condition 9	H5: The combined effect of low importance of support goals and high importance of instrumental reliance goals positively predicts the likelihood of outflanking.		+	-	+
Condition 10	H6a: The combined effect of low importance of rivalry goals and high importance of support goals positively predicts the likelihood of yielding.	-	-	+	
Condition 11	H6b: The combined effect of low importance of rivalry goals and high importance of instrumental cooperative goals positively predicts the likelihood of yielding.	-	-		+
Condition 12	H6c: The combined effect of low importance of rivalry goals and high importance of cooperative goals positively predicts the likelihood of yielding.	-	-	+	+

Note 1. A = importance of enmity goals, B = importance of instrumental competitive goals, C = importance of support goals, D = importance of instrumental cooperation goals.

Note 2. High importance of a goal is represented by a “+” and low importance of a goal is represented by a “-.”

Hypothetical Interpersonal Conflict Scenarios

The two versions of a hypothetical interpersonal conflict scenario that served to induce different goals in this study need to meet several criteria. First, the scenarios used should be familiar to the participants. Second, avoidance should be a plausible strategy to deal with the conflict in the situation. Third, because three of the avoidance strategies proposed in the study involve a long-term relationship (i.e., to exit, to outflank, and to yield), the hypothetical other party should have the possibility of future interaction with the participant; scenarios that allow for one-time interaction cannot be used. Fourth, outflanking requires long-term involvement of a third party to solve a problem, so the scenarios should allow such a possibility. Finally, the scenarios employed should be able to involve competitive, cooperative, socioemotional, and instrumental goal elements, as required by the inductions of goals proposed in this study.

With these criteria, a secondary data analysis was performed on a study conducted earlier on conflict and anger (Cai, Fink, & Xie, 2005) to generate the two scenarios. In their study, Cai et al. (2005) enrolled 122 students from a large eastern university and asked participants to describe an actual situation in which they had conflict with another party. Participants were instructed to describe who the other party was, what occurred, and how they felt, thought, and behaved. These data produced five major types of conflict episodes: (a) 51 episodes with friends, best friends, boyfriends, or girlfriends (41.8%), (b) 30 episodes with roommates (24.6%), (c) 15 episodes with family members (12.3%), (d) 8 episodes with people at work such as colleagues or supervisors (6.6%), and (e) 6 episodes with classmates (4.9%).

About 9.8% of episodes were one-time interactions (e.g., conflict with service people) or intrapersonal conflict (e.g., being angry at having computer problems).

In Cai et al. (2005), roommates, friends, and family members were the most frequent interactants with whom conflict occurred. However, close relationships tend to involve more socioemotional than instrumental goals (Leung, 1988; Leung et al., 2002). This limitation could make induction of instrumental goals appear to be unrealistic. Therefore, conflict in close relationships was not used for the hypothetical scenarios.

Conflict with a team member best fits the study's criteria. Teamwork is not unusual for college students. In their conflict resolution guide for students, Burgess (2005) stated that group projects are assigned to students in grade school through graduate school; working in a group is important because ability in teamwork is frequently required in jobs. An instructor is an authoritative third party to whom students could resort if they decide to avoid confrontation with a teammate. Classmates may have a long-term relationship because they are usually in the same class for at least a semester. The four elements of conflict goals (competitive, cooperative, socioemotional, and instrumental) are relevant to classmate relationships, because (a) a common project involves both parties' interests, which have to be achieved through cooperation, and the process of discussion could involve competition, and (b) classmates have at least a certain degree of socioemotional connection because they have to maintain interaction to have a project done. Therefore, the first hypothetical scenario used an interpersonal conflict with a classmate in a group project in school.

The second scenario used conflict with a colleague in a group project at a workplace. Employment is not unusual for American college students. An annual national survey that the Higher Education Research Institute at the University of California at Los Angeles conducted among incoming freshmen found that about 47.2% freshman expected to work while attending college (Farrell, 2005). At a workplace, a supervisor functions like a professor at school when an employee seeks a third party to handle conflict. In doing a project, team members may have cooperative goals such as to produce high-quality teamwork or competitive goals such as to maximize personal performance to get a promotion, or both. Just like between classmates, a certain degree of involvement has to be maintained between colleagues while they are doing a project; such involvement can be socioemotional (e.g., friendly) or instrumental (e.g., interest-based). Therefore, the second hypothetical scenario used an interpersonal conflict with a colleague in a group project at a workplace.

Naming the hypothetical other party. In both hypothetical scenarios, a gender neutral name was used for the name of the other party. Using a name instead of “Person X” should make the scenario more realistic and easier for participants to relate to. Using a gender neutral name should also make participants freely relate the goals to the strategies, unconstrained by the perceived gender of the hypothetical other. A masculine or a feminine name may make the results tainted by cognitive processes associated specifically with interaction with one gender. El-Sheikh, Buckhalt, and Reiter (2000) found that people perceive different degrees of emotional arousal in the hypothetical other based on gender: Men perceive a male fictional

character to be more emotionally aroused than women perceive a female counterpart to be in a hypothetical situation. Because gender differences are not a focus in this study, a gender neutral name is used.

To decide the gender neutral for the hypothetical other party, two online resources that collect name data from the Social Security Administration were used (Baby Names Boy Girl, 2005; The Name Machine, 2005). Because participants in this study consisted of college students, the data about the popularity of gender neutral names in the 1980s to the 1990s were examined. The top two gender neutral names were *Jordan* and *Casey*. Both name engines reported that these two names were top choices when people were looking for a gender neutral name for their babies. Nonetheless, the Name Machine (2005) indicated that Casey was used almost equally by babies of both genders in the 1980s (35,931 boys and 27,900 girls), and *Jordan* was used more for boys (57,084) than for girls (13,772). Therefore, *Casey* was chosen for this study.

Exemplary descriptions of the hypothetical conflict scenarios. For the conflict situation with a classmate, the scenario reads as follows:

Casey is your classmate. You volunteer to do a project together. The grade of the project is important because it contributes 20% to your course grade. Both of you really want to do well in this project. However, you disagree on the blueprint of the project.

For the conflict situation with a colleague, the scenario reads:

Casey is your colleague at work. You volunteer to do a project together. The outcome of the project is important because the boss will use it to evaluate

your performance. Both of you really want to do well in this project.

However, you disagree on the blueprint of the project.

Following the hypothetical conflict scenario, different goals were induced in accordance with the hypotheses. The 12 goal inductions are listed in Table 4.

Note that the sentence, “In a meeting, the two of you have argued vehemently, but soon you realize that further argument may harm your relationship” was used for the hypotheses about three situational avoidance strategies: to withdraw, to passively compete, and to pretend. The sentence, “After a meeting in which you two argued vehemently,” was used for the hypotheses about three long-term avoidance strategies (to exit, to outflank, and to yield).

Table 4

Twelve Goal Inductions Prior to Pilot Studies

Condition (Hypothesis):	Actual Sentences Used in the Induction
<i>Importance of Goals</i>	
Condition 1 (H1a): To induce high importance of a support goal in an immediate conflict situation.	In a meeting, you two have argued vehemently, but soon you realize that further argument may harm your relationship. You cherish your friendship because you really care about how Casey feels. What will you do?
Condition 2 (H1b): To induce high importance of an instrumental cooperative goal in an immediate conflict situation.	In a meeting, you two have argued vehemently, but soon you realize that further argument may harm your relationship. You need to maintain a good relationship with Casey because you are assigned to another group project with Casey. What will you do?
Condition 3 (H1c): To induce high importance of a cooperative goal in an immediate conflict situation.	In a meeting, you two have argued vehemently, but soon you realize that further argument may harm your relationship. You cherish your friendship because you really care about how Casey feels. Besides, you are assigned to another group project with Casey. What will you do?
Condition 4 (H2): To induce high importance of a rivalry goal and low importance of a cooperative goal in an immediate conflict situation.	In a meeting, you two have argued vehemently, and soon you realize that further argument may harm your relationship. But you don't really care about how Casey feels, and you want to insist on your plan for the project. Having a good relationship or working with Casey in another project is the last thing you want. What will you do?
Condition 5 (H3a): To induce low importance of a rivalry goal and high importance of a support goal in an immediate conflict situation.	In a meeting, you two have argued vehemently, and soon you realize that further argument may harm your relationship. You cherish your friendship because you really care about how Casey feels. You don't want Casey to feel hurt, and as compared with your relationship with Casey, insisting on your plan for this project is not that important. What will you do?
Condition 6 (H3b): To induce low importance of a rivalry goal and high importance of an instrumental cooperative goal in an immediate conflict situation.	In a meeting, you two have argued vehemently, and soon you realize that further argument may harm your relationship. You need to maintain a good relationship with Casey because you are assigned to another group project with Casey. You don't want Casey to feel hurt, and as compared with your relationship with Casey, insisting on your plan for this project is not that important. What will you do?

Table 4 (Cont'd)

Twelve Goal Inductions Prior to Pilot Studies

Condition (Hypothesis): Importance of Goals To Be Induced	Actual Sentences Used in the Induction
Condition 7 (H3c): To induce low importance of a rivalry goal and high importance of a cooperative goal in an immediate conflict situation.	In a meeting, you two have argued vehemently, and soon you realize that further argument may harm your relationship. You cherish your friendship because you really care about how Casey feels. Besides, you are assigned to another group project with Casey. You don't want Casey to feel hurt, and as compared with your relationship with Casey, insisting on your plan for this project is not that important. What will you do?
Condition 8 (H4): To induce low importance of a reliance goal in long term.	After a meeting in which you two have argued vehemently, you realize that insisting on your plan for the project is not that important. In fact, you don't want to work with Casey any more. You even don't care to maintain a relationship with Casey. What will you do?
Condition 9 (H5): To induce low importance of a support goal and high importance of an instrumental reliance goal in long term.	After a meeting in which you two have argued vehemently, you decide that you want to insist on your plan for the project. You also realize that you need to maintain a good relationship with Casey because you are assigned to another group project. However, you know that you don't really care about how Casey feels at all. What will you do?
Condition 10 (H6a): To induce low importance of a rivalry goal and high importance of a support goal in long term.	After a meeting in which you two have argued vehemently, you decide that you cherish your friendship because you really care about how Casey feels. You don't want Casey to feel hurt, and compared with your relationship with Casey, insisting on your plan for this project is not that important. What will you do?
Condition 11 (H6b): To induce low importance of a rivalry goal and high importance of an instrumental cooperative goal in long term.	After a meeting in which you two have argued vehemently, you decide to maintain a good relationship with Casey because you are assigned to another group project with Casey. You don't want Casey to feel hurt, and compared with your relationship with Casey, insisting on your plan for this project is not that important. What will you do?
Condition 12 (H6c): To induce low importance of a rivalry goal and high importance of a cooperative goal in long term.	After a meeting in which you two have argued vehemently, you decide that you cherish your friendship because you really care about how Casey feels. Besides, you are assigned to another group project with Casey. You don't want Casey to feel hurt, and compared with your relationship with Casey, insisting on your plan for this project is not that important. What will you do?

Instruments

Manipulation checks. As indicated in Tables 2 and 3, five of the original nine types of goals (i.e., competitive goals, cooperative goals, instrumental reliance goals, intimate reliance goals, and reliance goals) are composite goals comprising the other four types of goals (i.e., enmity goals, instrumental competitive goals, support goals, and instrumental cooperative goals). Therefore, in the experimental conditions, only the latter four types of goals were manipulated, and items measuring these four types of goals were developed. Manipulation checks for the other five types of goals can be then inferred from the manipulation checks for the four baseline goals.

A total of 12 items were developed to test the perceived importance of the four baseline goals, with three items testing each type (see Appendix A). An example item is, “I need to make Casey submit to my ideas.” A 0 to 100 response scale was used where 0 = strongly disagree and 100 = strongly agree. The items were tested and revised with outcome of Pilot Studies 1 and 2.

Note that the manipulation check items have two functions. First, they assess the success of the experimental manipulations. Second, they are indicators of the importance of the four goals.

Likelihood of avoidance strategies. Likelihood of the six types of avoidance strategies was measured by 24 items developed for this study or adapted from Oetzel et al.’s (2000) and Ohbuchi et al.’s (1999) studies. A 0 to 100 probability scale was used where 0 = not likely at all and 100 = definitely. An exemplary item is, “I will stop arguing and leave the scene.” The complete list of items is included in Appendix B. The items were tested and revised based on outcomes of Pilot Studies 1 and 2.

Likelihood of other conflict strategies. Besides likelihoods of avoidance strategies, this study also measured likelihood of other conflict strategies brought up in the conflict management literature. In particular, four conflict strategies proposed in the two-dimensional conflict models—integration, compromise, domination, and accommodation—were also measured in the study (see, e.g., Pruitt & Carnevale, 1993; Pruitt & Rubin, 1987). Items for these four strategies were adapted from Rahim's (1983) Organizational Conflict Inventory II (ROCI-II). A 0 to 100 probability scale was used where 0 = not likely at all and 100% = definitely. An exemplary item is, "I will bargain with this person to get moderate profits." The complete list of items is included in Appendix C.

Summary. This section has introduced the overall experimental design and the operationalizations of the relevant constructs proposed for the study: the two hypothetical scenarios, the name choice of the hypothetical other, the descriptions of the 12 goal inductions, and three instruments—for manipulation checks, the likelihood of using each of the avoidance strategies, and the likelihood of using accommodation, domination, compromise, and integration. The realism of the experimental inductions and the effectiveness of the instruments proposed for this study (excluding the instruments adapted from ROCI-II, Rahim, 1983) were tested in four pilot studies, which are described below.

Pilot Studies

Four pilot studies were conducted in the winter term (January, 2006) and between February 1 and March 10, 2006. Each of the samples in the pilot studies consisted of undergraduate students enrolled at a large eastern university. Participants

received a small amount of extra course credit in exchange for their participation. Students who participated in the winter term pilot studies were informed not to participate in the other portions of this research study that would take place in the spring semester. Because all the participants had to sign up for the studies through an online participant pool program, students' online identification numbers were used to ensure that they could only participate in one of the studies.

Pilot Study 1: Testing Instruments

Purpose. The purpose of this pilot study was to test whether the instruments developed for the manipulation checks and for the avoidance strategies were effective.

Questionnaire. The questionnaire included two parts (see Appendix D). In the first part, the four types of goals (i.e., enmity, instrumental competition, support, and instrumental cooperation) were labeled as Goals A through D to exclude the effect that the actual naming could have on the test items. Goals A through D were defined. Three items were used to be indicators of each type of goal, making a total of 12 items. These 12 items were then randomly arranged and included in a table. Each item started a row, and the 12 items formed the leftmost column of the table. The next four columns were titled by Goals A through D, respectively. Participants were instructed to rate how well each item matched each goal. The rating scale had 0% = not matching at all and 100% = perfect match. Such an arrangement may reflect how well an item measures the targeted goal exclusively.

In the second part of the questionnaire, a similar strategy was used to test how well the items matched the six types of avoidance strategies. The six types of

avoidance strategies were labeled as Avoidance Strategies A through F. Each type of avoidance strategies was defined. Three or four items were used as indicators of each strategy, making a total of 22 items. The 22 items were then randomly arranged and included in a table. Each item started a row, and the 22 items formed the leftmost column of the table. The next six columns were titled by Avoidance Strategies A through D, respectively. Participants were instructed to rate how well each item matched each avoidance strategy. The rating scale had 0% = not matching at all and 100% = perfect match. Example ratings were provided in each part.

Sample and procedure. Four student volunteers enrolled in an undergraduate communication course participated. They were all Asian American females, and the mean age was 20.00 ($SD = 1.73$). Upon arrival, participants were issued the consent form. They were asked to sign the consent form if they agreed to participate in the study. Each participant was then asked to complete the questionnaire. Participants were asked to give verbal feedback after they turned in the questionnaires.

Results. Because of the small number of participants, descriptive statistics were used to assess the effectiveness of measurement items. For the 12 items representing the four types of goals, six items perfectly matched their corresponding goals (i.e., the percentage of the matching was 100% on the targeted goal and 0% on all others). Four items had high matching percentage on their intended goals (66.7%) and low percentages on the other four goals. Two items had almost equally low percentages across the four types of goals.

For the 22 items representing the six avoidance strategies, nine items perfectly matched their intended strategy types, 10 items had a high matching percentage on

their intended short-term avoidance strategies but also a high matching percentage on the long-term versions of these avoidance strategies (e.g., withdrawal and exit). This result suggested that clear time framing should be added to the items to distinguish between long-term and short-term avoidance strategies. Two items matched four types of strategies with a slightly higher matching percentage on their intended avoidance strategies. One item had almost equally low matching across the six types.

Participants provided oral feedback for the improvement of the items. Based on the results of this pilot study, items were revised and tested in Pilot Study 2.

Pilot Study 2: Testing Revised Instruments

Purpose. The purpose of this pilot study was to test the improved measurements for the manipulation checks and for the avoidance strategies.

Questionnaire. Items from Pilot Test 1 were kept, revised, or deleted, and new items were added. Instructions were revised as well. The new questionnaire included 16 items for the four types of goals (four items for each type) and 24 items for the six types of avoidance strategies (four items for each type). An expert (D. A. Cai, personal communication, February 15, 2006) pointed out the avoidance strategies for the short-term and long-term should be clarified with time-defining phrases, such as “on the spot” and “during the meeting” for the short-term strategies and “after the meeting” for the long-term strategies. See the questionnaire in Appendix E.

Sample and procedure. Participants were 10 undergraduate students enrolled at a large eastern university (six sophomores, two freshmen, and two juniors). Eight were females. The mean age was 19.80 ($SD = 2.62$). They were five Caucasian or Europe Americans, one Asian American, one Korean, one Hispanic or Latino

American, and one multiracial person (self-described). The procedure was the same as for Pilot Study 1.

Results. Overall, the items matched their intended constructs (see Tables 5 and 6). Two items appeared to match their constructs less satisfactorily than others (withdraw4 and outflank3; the actual statements of these items are found in Appendix E). One item (labeled withdraw4 in Table 6) was intended to measure withdrawal but was rated highly on pretending: “I will avert the discussion at the moment.” Students provided feedback that “avert” was an ambiguous word. The item was changed to “If the argument begins to turn into a breakdown, I will just step out.”

Another item (labeled outflank3 in Table 6) was intended to measure outflanking but was rated highly on yielding: “After the meeting, I decided not to argue with Casey again but to think of something else to solve the problem.” After consulting the participants, the item was changed to, “After the meeting, I’ll come up with some sideway strategy (talk to our professor [boss] or do something else) to actualize my ideas.” All the labels and actual statements are found in Appendix E.

Items with a matching percentage of their intended constructs lower than 80.00% were revised.

Table 5

Item Matching Percentages for Goal Constructs (N = 10), Pilot Study 2,

Questionnaire Found in Appendix E

Item Label	Importance of Goals			
	Enmity	Instrumental Competition	Support	Instrumental Cooperation
Enmity1	68.50%	46.00%	.00%	10.00%
Enmity2	80.00%	27.00%	.00%	10.00%
Enmity3	89.00%	12.00%	3.00%	1.00%
Enmity4	80.50%	37.50%	.00%	.00%
Instrumental Competition1	19.50%	80.00%	9.00%	5.50%
Instrumental Competition2	10.00%	50.00%	9.00%	41.00%
Instrumental Competition3	23.00%	87.50%	2.50%	.00%
Instrumental Competition4	15.00%	81.50%	5.00%	7.50%
Support1	1.00%	.00%	67.00%	56.00%
Support2	5.00%	.00%	69.50%	44.50%
Support3	7.50%	.00%	68.50%	23.00%
Support4	.00%	.00%	82.00%	29.00%
Instrumental Cooperation1	.00%	.00%	22.50%	90.50%
Instrumental Cooperation2	.00%	.00%	21.50%	92.50%
Instrumental Cooperation3	.00%	.00%	15.00%	99.00%
Instrumental Cooperation4	1.00%	.00%	39.00%	81.00%

Note. Bold values indicate the matching percentages of the indicators to their targeted

goal constructs. The actual items are found in Appendix E.

Table 6

Item Matching Percentages for Avoidance Strategy Constructs (N = 10), Pilot Study

2, Questionnaire Found in Appendix E

Item Label	Likelihood of Strategy					
	Withdraw	Passively Compete	Pretend	Exit	Outflank	Yield
Withdraw1	90.00%	.00%	.00%	21.00%	1.00%	.00%
Withdraw2	79.00%	.00%	10.00%	39.00%	.00%	10.00%
Withdraw3	85.00%	10.00%	10.00%	5.00%	.00%	10.00%
Withdraw4	24.00%	20.00%	55.00%	20.00%	.00%	5.00%
Passively Compete1	40.00%	60.00%	.00%	10.00%	2.00%	.00%
Passively Compete2	12.22%	53.33%	35.56%	2.22%	6.67%	2.22%
Passively Compete3	35.00%	50.00%	10.00%	.00%	.00%	20.00%
Passively Compete4	10.00%	60.00%	15.00%	10.00%	.00%	5.00%
Pretend1	6.00%	1.00%	99.00%	5.00%	.00%	20.00%
Pretend2	10.00%	.00%	90.00%	.00%	.00%	20.00%
Pretend3	10.00%	.00%	90.00%	.00%	5.00%	5.00%
Pretend4	.00%	.00%	100.00%	.00%	.00%	10.00%
Exit1	20.00%	.00%	.00%	80.00%	10.00%	.00%
Exit2	49.00%	.00%	.00%	79.00%	.00%	.00%
Exit3	20.00%	.00%	.00%	90.00%	.00%	10.00%
Exit4	25.00%	10.00%	10.00%	85.00%	.00%	.00%
Outflank1	.00%	30.00%	.00%	10.00%	60.00%	10.00%
Outflank2	.00%	10.00%	.00%	10.00%	90.00%	.00%
Outflank3	.00%	15.00%	10.00%	1.00%	20.00%	50.00%
Outflank4	5.00%	10.00%	.00%	10.00%	90.00%	.00%
Yield1	.00%	.00%	30.00%	.00%	1.00%	79.00%
Yield2	.00%	.00%	10.00%	9.00%	11.00%	95.00%
Yield3	.00%	.00%	25.00%	.00%	11.00%	90.00%
Yield4	.00%	.00%	15.00%	.00%	.00%	95.00%

Note. Bold values indicate the matching percentages of the indicators to their targeted

avoidance strategy constructs. The actual items are found in Appendix E.

Pilot Study 3: Perceived Manipulation Realism

Purpose. The purpose of this pilot study was to examine whether the high or low importance of a goal or a combination of goals would be considered realistic in the two hypothetical scenarios that were developed.

Sample and procedure. Six students enrolled at a large eastern university participated in the study (four females and two males; $M_{\text{age}} = 20.00$, $SD = 1.67$). They were two seniors, two juniors, one sophomore, and one freshman. Three were Asian Americans, one was African American, one was Caucasian, and one was Indian American from Central Asia.

Participants were asked to read the consent form upon arrival. They were further asked to sign the consent form and answer the questionnaire if they agreed to participate. They were dismissed when they turned in the questionnaire.

Questionnaire. The questionnaire had two parts. Part I described the classmate scenario and Part II described the colleague scenario (Appendix F). Because among the 12 hypotheses, two groups of hypotheses (H3a through H3c and H6a through H6c) had the same goal induction but varied only in the temporal duration (i.e., short-term vs. long-term), only nine goal inductions were assessed. Two versions of the questionnaire were used. In one version, the classmate scenario was presented first. In the other version, the colleague scenario was presented first.

The questionnaire started with a description of the hypothetical conflict scenario with Casey. Instructions were given to rate the realism of goals that followed, where 0% = not realistic at all and 100% = completely realistic. For example, to test whether high importance of support goals was realistic, the

questionnaire said, “Casey is a friend you really care about. You have a goal to maintain your friendship.” Then a question followed, “How realistic is this goal?” Participants were further asked to provide reasons for their ratings in an open-ended question. The format for the questions in the classmate scenario was exactly the same as in the colleague scenario.

Results. Most of the goal inductions appeared realistic for this sample. Of nine goal inductions, two in the classmate situation appeared to be less realistic than 50%. All other seven goal inductions appeared to be realistic in both the classmate and colleague scenarios (see Tables 7 and 8). The participants’ responses to the goal inductions in the two scenarios did not differ by whether the classmate or the colleague scenario was presented first.

For the classmate situation, the less realistic goal inductions were high importance of rivalry goals and low importance of cooperative goals. Participants’ answers to the open-ended questions for these ratings were examined, and two possible reasons for this outcome were considered. First, the wording of the questionnaire was a little confusing because instead of asking participants “how realistic is this goal,” this question asked “how realistic is it for you to lack this goal in this scenario.” One participant rated the realism of the goal as 20% and wrote that “I would think that it is fairly realistic that I’d lack that.” The ambiguity of the wording may have caused the low rating of the realism of certain goals, although the answer may have reflected high realism. This type of response may suggest that revision of this question was necessary.

Second, in the classmate scenario, low importance of the cooperative goals

was perceived to be unrealistic. The reason for this result may be that the scenario wrote that the group project counted for 20% of the course grade; such a great portion of course grade could make most students want to cooperate. One student wrote that “you have to work well in this project to get it done and if you both produce a good result you can actually work together in the future.” To make realistically low importance of cooperative goals, the grade percentage of the group project needed to be lowered.

Four undergraduate students were consulted about whether they would give up a project that was worth 20% of a course grade; none of them said they would. They suggested that they might sacrifice a group project that was worth 10% if the other group member was “really nasty.” Therefore, the percentage of the teamwork grade was changed to 10%. Some other changes in wording and format were made. Further, because no large differences in realism were observed between the classmate and the colleague scenarios, it was decided to test the goal inductions in the next pilot study with only the classmate scenario. This decision did not contradict Jackson’s (1992) proposal of using multiple versions of a treatment because (a) Pilot Study 3 already indicated no apparent differences of the goal induction realism in the two versions of the hypothetical scenario, (b) the purpose of Pilot Study 4 was solely to test wording improvement based on the outcome of Pilot Study 3, which would be exactly the same for both scenarios, and (c) both scenarios would be still used in the formal study.

Table 7

*Realism Ratings of Goal Inductions in the Classmate Scenario (N = 6), Pilot Study 3,
Questionnaire Found in Appendix F*

Importance of Goals	<i>M (SD)</i>
<i>H1a:</i>	
High importance of support goals	84.17% (18.55%)
<i>H1b:</i>	
High importance of instrumental cooperative goals	82.50% (21.85%)
<i>H1c:</i>	
High importance of cooperative goals	91.00% (12.44%)
<i>H2:</i>	
High importance of rivalry goals	46.00% (35.07%)
Low importance of cooperative goals	36.00% (25.09%)
<i>H3a and H6a:</i>	
High importance of support goals	84.00% (18.15%)
Low importance of rivalry goals	65.00% (28.72%)
<i>H3b and H6b:</i>	
High importance of instrumental cooperative goals	92.00% (13.03%)
Low importance of enmity goals	85.00% (18.70%)
Low importance of instrumental competitive goals	59.00% (31.30%)
<i>H3c and H6c:</i>	
High importance of cooperative goals	96.00% (8.94%)
Low importance of enmity goals	92.00% (10.95%)
Low importance of instrumental competitive goals	61.40% (25.58%)
<i>H4:</i>	
Low importance of reliance goals	62.00% (35.63%)
<i>H5:</i>	
High importance of instrumental cooperative goals	76.00% (23.02%)
High importance of instrumental competitive goals	80.00% (15.81%)

Table 8

*Realism Ratings of Goal Inductions in the Colleague Scenario (N = 6), Pilot Study 3,
Questionnaire Found in Appendix F*

<i>Importance of Goals</i>	<i>M (SD)</i>
<i>H1a:</i>	
High importance of support goals	89.16% (17.44%)
<i>H1b:</i>	
High importance of instrumental cooperative goals	82.50% (17.24%)
<i>H1c:</i>	
High importance of cooperative goals	91.17% (12.00%)
<i>H2:</i>	
High importance of rivalry goals	70.00% (30.98%)
Low importance of cooperative goals	53.33% (36.14%)
<i>H3a and H6a:</i>	
High importance of support goals	80.00% (35.21%)
Low importance of rivalry goals	59.17% (41.28%)
<i>H3b and H6b:</i>	
High importance of instrumental cooperative goals	85.83% (20.10%)
Low importance of enmity goals	70.00% (25.29%)
Low importance of instrumental competitive goals	66.00% (28.15%)
<i>H3c and H6c:</i>	
High importance of cooperative goals	88.00% (13.04%)
Low importance of enmity goals	74.00% (26.07%)
Low importance of instrumental competitive goals	65.40% (26.38%)
<i>H4:</i>	
Low importance of reliance goals	68.67% (38.29%)
<i>H5:</i>	
High importance of instrumental cooperative goals	71.33% (29.03%)
High importance of instrumental competitive goals	78.33% (18.35%)

Pilot Study 4: Perceived Realism of Revised Manipulations

Purpose. Pilot Study 4 examined whether the changes based on the results of Pilot Study 3 improved the realism of the goal inductions.

Sample and procedure. Participants were 10 undergraduate students enrolled at a large eastern university ($M_{\text{age}} = 19.10$, $SD = 1.37$). Seven were female. Six were freshmen, three were sophomores, and one was a senior. They were five Caucasian Americans, one Pakistani American, one Asian American, one African American, one Hispanic American, and one multiracial American. The data collection procedure was the same as that in Pilot Study 3.

Questionnaire. The questionnaire used in Pilot Study 4 was a revised version of Pilot Study 3 questionnaire. The percentage of the teamwork grade was changed to 10%. Wording and format were changed to make the instructions and the purpose clearer. For example, “you two argued vehemently” was changed to “you two had a heated argument” because one participant asked the meaning of the word “vehemently” during the Pilot Study 3 data collection session. Further, special care was taken to test the importance of reliance goals. An induction of low importance of reliance goals was done by inducing low importance of all four baseline goals (i.e., enmity goals, support goals, instrumental competitive goals, and instrumental cooperative goals). One question, “how realistic is it for you to lack all these goals,” may be double-barreled if the participants perceived realism in one or some of these four goals but not in all. One student commented that “there has to be SOME [capitalization in original] goal.” In Pilot Study 4, low importance of reliance goals was separately measured by low importance of instrumental goals and low

importance of socioemotional goals: “You begin to lose motivation to do the project. How realistic is this description?” and “You begin to lose motivation to deal with Casey. How realistic is this description?” Separation of task-oriented goals from relation-oriented goals may make it easier for participants to indicate whether low importance of one type or both types of goals could be induced realistically. The questionnaire is found in Appendix G.

Results. As shown in Table 9, the realism in each goal induction was acceptable.

Table 9

Realism Ratings of Goal Inductions, Revised Version (N = 10), Pilot Study 4,

Questionnaire Found in Appendix G

	<i>M (SD)</i>
<i>H1a:</i>	
High importance of support goals	78.00% (26.68%)
<i>H1b:</i>	
High instrumental cooperative goals	58.50% (22.76%)
<i>H1c:</i>	
High importance of cooperative goals	90.30% (13.28%)
<i>H2:</i>	
High importance of rivalry goals	75.00% (24.72%)
Low importance of cooperative goals	87.00% (27.71%)
<i>H3a and H6a:</i>	
High importance of support goals	95.80% (9.29%)
Low importance of rivalry goals	83.50% (19.01%)
<i>H3b and H6b:</i>	
High importance of instrumental cooperative goals	57.50% (35.69%)
Low importance of enmity goals	76.30% (32.83%)
Low importance of instrumental competitive goals	60.50% (34.11%)
<i>H3c and H6c:</i>	
High importance of cooperative goals	94.00% (6.58%)
Low importance of enmity goals	97.80% (3.73%)
Low importance of instrumental competitive goals	83.50% (24.04%)
<i>H4:</i>	
Low importance of reliance goals for task	80.50% (22.91%)
Low importance of reliance goals for relationship	85.20% (27.97%)
<i>H5:</i>	
High importance of instrumental cooperative goals	50.50% (28.13%)
High importance of instrumental competitive goals	81.50% (17.17%)

The Formal Study

Data collection for the formal study was done between March 15 and April 6, 2006. This section introduces the analytical strategy, the determination of the sample size and the sample description, the variables of interest, the experimental design, and the data collection procedure.

Analytical Strategy

The hypotheses were tested with contrast analyses in analyses of variance and with structural equation modeling.

Analyses of variance (ANOVAs). To test how well the manipulations worked, planned contrast analyses were used to test the manipulation checks. In particular, the importance of the goals intended to be high or low or null were coded, and the differences between importance levels of these goals based on the codings were submitted to statistical significance tests.

Structural equation modeling (SEM). SEM was used to test the causal relationships proposed in the hypotheses. The 12 experimental conditions were represented by 11 dummy variables, which served as independent variables. The condition that manipulated low importance of all four types of goals was the reference condition: the condition coded “0” for all dummy variables (see Table 10). The mediating variables were the manipulation checks, which were the importance levels of the four baseline goals. The outcome variables were the likelihoods of the six avoidance strategies. The proposed model consisted of the links between the independent variables and the outcome variables via the mediating variables. An alternative model that comprised both direct and indirect links from the independent

variables to the outcome variables was compared against the fully-mediated model.

Goodness-of-fit indices showed how well the data fit the proposed model.

Testing total effects from the dummy variables to the outcome variables indicated whether the hypotheses were supported. Significant coefficients from the dummies to the importance of the goals indicated the extent to which the importance of each goal was manipulated successfully as compared with the reference condition; and significant coefficients from the importance of a goal to the likelihood of an avoidance strategy indicated the extent to which the importance of each goal predicted the likelihood of each avoidance strategy.

Table 10

Dummy Coding for the 12 Experimental Conditions for the Formal Study

Condition	Hypothesis	ξ_1	ξ_2	ξ_3	ξ_4	ξ_5	ξ_6	ξ_7	ξ_8	ξ_9	ξ_{10}	ξ_{11}
Condition1	H1a	1	0	0	0	0	0	0	0	0	0	0
Condition2	H1b	0	1	0	0	0	0	0	0	0	0	0
Condition3	H1c	0	0	1	0	0	0	0	0	0	0	0
Condition4	H2	0	0	0	1	0	0	0	0	0	0	0
Condition5	H3a	0	0	0	0	1	0	0	0	0	0	0
Condition6	H3b	0	0	0	0	0	1	0	0	0	0	0
Condition7	H3c	0	0	0	0	0	0	1	0	0	0	0
Condition8	H4	0	0	0	0	0	0	0	0	0	0	0
Condition9	H5	0	0	0	0	0	0	0	1	0	0	0
Condition10	H6a	0	0	0	0	0	0	0	0	1	0	0
Condition11	H6b	0	0	0	0	0	0	0	0	0	1	0
Condition12	H6c	0	0	0	0	0	0	0	0	0	0	1

Note 1. ξ_i = dummy variable i ; $i = 1$ to 11 .

Note 2. Bold font indicate the condition used as the base group.

Sample

Proposed sample size. Sample size was determined assuming that SEM would be used to analyze the data. Two sample size recommendations were used. The first sample size recommendation was based on the ratio of the number of indicators per factor (Gagné & Hancock, 2006), and the second was based on the estimated power desired of the model (Hancock, 2006).

Although five participants per parameter (e.g., Bentler & Chou, 1987) has been recommended for SEM, Gagné and Hancock (2006) recently reviewed the history of SEM sample size recommendations and argued that consideration of model quality is more important than consideration of number of people per variable or per parameter. Gagné and Hancock (2006) described a Monte Carlo simulation study done by Marsh, Hau, Balla, and Grayson (1998), in which Marsh et al. found that as the number of indicators per factor (p/f) increases, the sample size required for the model to converge decreases, and that “parameter estimate accuracy appeared to maximize once $p/f = 4$, improving marginally, if at all, as p/f increased” (Gagné & Hancock, 2006, p. 66). Building on Marsh et al.’s (1998) study, Gagné and Hancock (2006) further explored the relationship between model quality and sample size by considering a combination of the number of indicators per factor and their loading magnitudes.

Gagné and Hancock (2006) argued that low-quality indicators function differently from high-quality indicators in determining a measurement model’s quality. The operationalization of the measurement model quality can be represented by Hancock and Mueller’s (2001) coefficient H , expressed as follows:

$$H = \frac{\sum_{i=1}^k \frac{a_i^2}{(1-a_i^2)}}{1 + \sum_{i=1}^k \frac{a_i^2}{(1-a_i^2)}}, \quad (1)$$

where a_i = loading magnitude, $i = 1$ to k , and k = number of indicators. As Gagné and Hancock (2006) stated, H , called *maximal reliability* elsewhere (e.g., Raykov, 2004), represents the extent to which the indicators reflect the construct. H increases as the number of indicators increases; H also increases as loading magnitude increases. H is an index that demonstrates the proportion of the true score captured by the observed variables (Gagné & Hancock, 2006).

Because the current study has four indicators per factor, the ratio-based guideline for the sample size from Gagné and Hancock (2006) will only be used when the number of indicators equals four. Gagné and Hancock (2006) found that for a measurement model with homogeneous loadings, when $p/f \geq 4$, model convergence was acceptable with loading magnitudes $\geq .4$ and $N = 200$. For a measurement model with heterogeneous loadings, adding an additional indicator reduced the model convergence rate when $N \geq 50$. However, because of the large number of combinations of heterogeneous loading magnitudes, researchers can use both the sample size recommendation for homogeneous loadings and H to estimate the sample size for the indicators with heterogeneous loading magnitudes (Gagné & Hancock, 2006). When $p/f \geq 4$, an H between .701 ($N = 400$) and .776 ($N = 400$) is considered acceptable. With these indices and actual outcomes from Pilot Studies 1 and 2, a proposed N for the current study is estimated to be between 200 and 400.

In addition, Hancock (2006) discussed SEM power analysis and the technique

to determine the sample size for SEM based on power analysis related to the overall data-model fit. Central to the issue is to develop appropriate null and alternative hypotheses, to determine the test statistic to assess the null hypothesis, and to discuss the noncentral distributions for the designated value of the alternative hypothesis (Hancock, 2006).

Although the null hypothesis in SEM is that the theory-implied matrix ($\hat{\Sigma}$) and the population matrix (Σ) are the same, the test of the null and alternative hypothesis in SEM is rather limited in terms of results interpretation and power analysis. Whereas rejection of the null hypothesis implies an incorrect model, failing to reject the null only means that the proposed model is capable of reproducing the observed data, yet this model is not necessarily the true model and there may be other models reproducing the observed data just as well (Hancock, 2006). Furthermore, the exact model-fit test is over-demanding; a practically acceptable model could be rejected for trivial misspecifications (Hancock, 2006). Finally, because “statistical power refers to the probability of rejecting a hypothesized model rather than retaining it, relative to more traditional analytical scenarios, the power analysis for testing data-model fit as a whole in SEM must be reframed” (Hancock, 2006, p. 94).

Based on MacCallum, Browne, and Sugawara’s (1996) suggestion that a null hypothesis for model testing can be stated in terms of close or not close fit, Hancock (2006) recommended using the estimated root mean square error of approximation (RMSEA), $\hat{\varepsilon}$, as a data-model fit metric:

$$\hat{\varepsilon} = \sqrt{\frac{\chi^2 - df}{df(N - 1)}}. \quad (2)$$

Hancock (2006) further recommended using the value of ε_0 to represent the

threshold of acceptability of model fit, and to help develop appropriate null and alternative hypotheses for the power analysis purpose.

$H_0: \varepsilon = \varepsilon_0$, that the population data-model fit is at the threshold between acceptability and unacceptability. The alternative hypothesis in this case, $H_1: \varepsilon \neq \varepsilon_0$, contains two possibilities: $H_1: \varepsilon < \varepsilon_0$, that the data-model fit is acceptable, and $H_1: \varepsilon > \varepsilon_0$, that the data-model fit is unacceptable. For the purposes of power analysis, however, interest tends to be in being able to reject data-model fit at the threshold in favor of acceptable data-model fit. As such, we will hereafter define the alternative hypothesis as $H_1: \varepsilon < \varepsilon_0$, and hence the corresponding null hypothesis as $H_0: \varepsilon \geq \varepsilon_0$. (p. 95)

When $\hat{\varepsilon}_0 \geq .05$, the null hypothesis fails to be rejected, and when $\hat{\varepsilon}_0 < .05$ at the chosen α level (e.g., $\alpha = .05$), the null hypothesis is rejected. Thus, the alternative hypothesis is retained that the significance of the discrepancy between the theory-implied model and the observed model is statistically significant at $p = .05$ (Hancock, 2006).

Although ideally the theorized model would have an ε of .00, Hancock (2006) recommended that:

For researchers interested in planning to have sufficient power to reject $\varepsilon_0 \geq .05$ in favor of acceptable data-model fit, selecting $\varepsilon_1 = .02$ seems like a desirable balance between the generally unrealistic optimism of $\varepsilon_1 = .00$ and the frequent impracticality associated with the recommended sample size for $\varepsilon_1 = .04$. (p. 101)

With a recommended $\hat{\varepsilon} = .02$, the required sample size can be found in

Hancock (2006) when the degrees of freedom of the theoretical model is specified. In the current study, the structural relations in the theoretical model yields a df of $[(21 \times 22)/2] - 137 = 95$. The free parameters and relevant calculations can be found in Table 11. With $\hat{\epsilon} = .02$, $N = 220$ is needed for a power of .80, and $N = 307$ for a power of .95.

Therefore, based on Gagné and Hancock's (2006) and Hancock's (2006) recommendations, a sample size between 220 and 400 seems sufficient for the current study.

Table 11

Structural Equations of Fully Mediated Relations Between Goal Inductions and Avoidance Strategies

η	η_1	η_2	η_3	η_4	ξ_1	ξ_2	ξ_3	ξ_4	ξ_5	ξ_6	ξ_7	ξ_8	ξ_9	ξ_{10}	ξ_{11}	ζ
η_1	=							γ_{14}	γ_{15}	γ_{16}	γ_{17}		γ_{19}	$\gamma_{1,10}$	$\gamma_{1,11}$	ζ_1
η_2	=							γ_{24}	γ_{25}	γ_{26}	γ_{27}	γ_{27}	γ_{29}	$\gamma_{2,10}$	$\gamma_{2,11}$	ζ_2
η_3	=				γ_{31}		γ_{33}	γ_{34}	γ_{35}		γ_{37}	γ_{38}	γ_{39}		$\gamma_{3,11}$	ζ_3
η_4	=					γ_{42}	γ_{43}	γ_{44}		γ_{46}	γ_{47}	γ_{48}		$\gamma_{4,10}$	$\gamma_{4,11}$	ζ_4
η_5	=		β_{53}	β_{54}												ζ_5
η_6	=	β_{61}	β_{62}	β_{63}	β_{64}											ζ_6
η_7	=	β_{71}	β_{72}	β_{73}	β_{74}											ζ_7
η_8	=	β_{81}	β_{82}	β_{83}	β_{84}											ζ_8
η_9	=		β_{92}	β_{93}	β_{94}											ζ_9
η_{10}	=	$\beta_{10,1}$	$\beta_{10,2}$	$\beta_{10,3}$	$\beta_{10,4}$											ζ_{10}

Note 1. For the structural model, there are 21 free parameters in the \underline{B} matrix, 31 free parameters in the $\underline{\Gamma}$ matrix, 66 free parameters in the $\underline{\Phi}$ matrix (all exogenous variables are allowed to covary), and 19 free parameters in the $\underline{\Psi}$ matrix (10 error variances and 9 error covariances are allowed; refer back to Figure 1). Therefore,

$$\begin{aligned}
 df &= [(21 \times 22)/2] - (21 + 31 + 66 + 10 + 9) \\
 &= 231 - 137 \\
 &= 95.
 \end{aligned}$$

Note 2. ξ_1 through ξ_{11} are the 11 dummy coded variables as shown in Table 10. η_1 through η_4 represent importance of enmity goals, importance of instrumental competitive goals, importance of support goals, and importance of instrumental cooperative goals, respectively. η_5 through η_{10} represent likelihood of withdrawal, likelihood of passive competition, likelihood of pretending, likelihood of exit, likelihood of outflanking, and likelihood of yielding, respectively.

Sample. Participants were 352 students, mainly undergraduates (46.3% of freshmen, 28.4% of sophomores, 14.1% of juniors, 10.3% of seniors, and .3% of graduate students) recruited from an eastern university. The age range was 17 to 25 ($M = 19.38$, $SD = 1.34$, Median = 19.00, Range = 8.00). Two hundred and forty-eight participants were female (71.3%) and 95 were male. The majority were “White, Caucasian, and European” (51.4%), followed by “African American, African, or Black” (11.5%), and “Asian American, Pacific Islander, Chinese, Japanese, or Korean” (11.5%), and Jewish (9.2%). Approximately 5.0% of the participants checked both the Jewish and White categories, 4.6% checked the “Central Asian, Indian, or Pakistani” category, and 2.6% checked the “Hispanic, Latino, Mexican American, Cuban American, or Puerto Rican” category. About 3.5% reported other mixed cultural backgrounds or checked the category “other.”

Variables

Independent variables. Although for the data analysis, the independent variables were the dummy variables presented in Table 10, the independent variables that operationalized the relevant constructs described in the hypotheses were the 12 goal inductions. With two hypothetical scenarios, there were 24 experimental conditions. This section describes the finalized two hypothetical conflict scenarios and the 12 variations of goal inductions in each scenario.

Based on the results from Pilot Studies 3 and 4, the two hypothetical scenarios were finalized, as presented in the next paragraphs. Note that phrases in parentheses were word variations for different experimental conditions to make the scenario sound more natural. For example, when support goals were to be induced, “Casey is a

classmate and friend you really care about” was used as the first sentence; when rivalry goals were to be induced, “Casey is a classmate and rival of yours” was used. All other scenario descriptions remained the same.

For the conflict situation with a classmate, the situation reads:

Casey is a classmate [*or* classmate and friend you really care about, *or* classmate and rival of yours]. You have volunteered [*or* been assigned] to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project.

For the conflict situation with a colleague, the situation read:

Casey is a colleague [*or* colleague and friend you really care about, *or* colleague and rival of yours] at work. You have volunteered [*or* been assigned] to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project.

At the end of a hypothetical scenario, sentences for goal inductions and a question were added. The following is an example of the complete experimental condition to induce high importance of support goals:

Casey is a friend you really care about. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one

is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship. Remember that Casey is a friend you like very much.

What would you do?

The 12 goal induction descriptions are found in Table 12. The 24 experimental conditions are found in Appendix H.

Table 12

Independent Variables: Importance of Goals Induced

Condition (Hypothesis): Importance of Goals To Be Induced	Actual Sentences Used in the Induction
Condition 1 (H1a): To induce high importance of a support goal in an immediate conflict situation.	In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship. Remember that Casey is a friend you like very much. What would you do?
Condition 2 (H1b): To induce high importance of an instrumental cooperative goal in an immediate conflict situation.	In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down. Remember that Casey is a NOT a friend of yours. However, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. What would you do?
Condition 3 (H1c): To induce high importance of a cooperative goal in an immediate conflict situation.	In a meeting, you two are having a heated argument, and no one seems is to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship. Remember that Casey is a friend you like very much. What's more, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. What would you do?
Condition 4 (H2): To induce high importance of a rivalry goal and low importance of a cooperative goal in an immediate conflict situation.	In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down. Remember that Casey is a rival of yours. That is, you want to compete with Casey and use YOUR plan to do the project. You and Casey are not friends. How Casey feels is not something you consider; what's more, you already know that you are not going to do any other teamwork with Casey again. What would you do?
Condition 5 (H3a): To induce low importance of a rivalry goal and high importance of a support goal in an immediate conflict situation.	In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship. Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Your relationship with Casey is more important than whose idea is used and the grade you receive on the project. What would you do?

Table 12 (Cont'd)

Independent Variables: Importance of Goals Induced

Condition (Hypothesis): Importance of goal to be induced	Actual sentences used in the induction
Condition 6 (H3b): To induce low importance of a rivalry goal and high importance of an instrumental cooperative goal in an immediate conflict situation.	In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down. Remember that you and Casey are NOT friends. However, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. You don't want to hurt Casey's feelings. Your relationship with Casey is more important than whose idea is used and the grade you receive on the project. What would you do?
Condition 7 (H3c): To induce low importance of a rivalry goal and high importance of a cooperative goal in an immediate conflict situation.	In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship. Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Plus, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. As compared with your relationship with Casey and your being able to work well on the next project, the grade of this project is less important. What would you do?
Condition 8 (H4): To induce low importance of a reliance goal in long term.	In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on. Remember that Casey is NOT a friend of yours and you already know you two are not involved in any other teamwork for this class. The continuous argument and Casey's stubbornness made you so exhausted that you feel that you can stand any grade for this project, as long as you don't have to do this with Casey any more. You also made a note to yourself that you don't want Casey to be a friend in your life.

Table 12 (Cont'd)

Independent Variables: Importance of Goals Induced

Condition (Hypothesis): Importance of goal to be induced	Actual sentences used in the induction
Condition 9 (H5): To induce low importance of a support goal and high importance of an instrumental reliance goal in long term.	In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on. Remember that Casey is NOT a friend of yours. You don't really care about how Casey feels. You really want to do this project according to your ideas because you believe your plan can make a grade of 10 out of 10 on this project. However, you already know that you two are assigned to another group project together, the grade of which constitutes 40% of your course grade. As compared with this project, the next group project is more important. What would you do?
Condition 10 (H6a): To induce low importance of a rivalry goal and high importance of a support goal in long term.	In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on. Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. As compared with your relationship with Casey, the grade of this project is less important. What would you do?
Condition 11 (H6b): To induce low importance of a rivalry goal and high importance of an instrumental cooperative goal in long term.	In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on. Remember that you and Casey are not friends. However, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. You don't want to hurt Casey's feelings. As compared with this project, the next group project is more important. What would you do?
Condition 12 (H6c): To induce low importance of a rivalry goal and high importance of a cooperative goal in long term.	In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on. Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Plus, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. As compared to/with your relationship with Casey and your being able to work well together on the next project, the grade of this project is less important. What would you do?

Dependent variables. The dependent variables include three groups of variables: a group of goal importance variables (the manipulation checks), a group of avoidance strategy likelihood variables, and a group of other conflict strategy likelihood variables (i.e., integration, compromise, accommodation, and domination). The indicators for these dependent variables are listed in Appendix I.

The instrument for manipulation checks from Pilot Studies 1 and 2 included 16 items, with 4 items measuring the importance of each type of goal. The scale in the formal study was the same response scale as used in the pilot studies, where 0 = strongly disagree and 100 = strongly agree.

The instrument for the six types of avoidance strategies was the improved version that resulted from Pilot Studies 1 and 2. The instrument contains 24 items, with 4 items measuring the likelihood of each avoidance strategy. A 0 to 100 probability scale was used, where 0 = not likely at all and 100 = definitely.

The instrument for the other four types of conflict strategies (accommodation, domination, compromise, and integration) was Rahim's (1983) ROCI-II: four items that measure domination, six items that measure accommodation, five items that measure integration, and five items that measure compromise; these ROCI-II items were not tested in the pilot studies. Rahim's (1983) ROCI-II used a 5-point Likert-type scale where higher number means greater use of the strategy. A 0 to 100 probability scale was used in this study, where 0 = not likely at all and 100 = definitely.

Experimental Design

As described in the overall design section, the experiment had 24 conditions.

It was a posttest only, independent groups design. Participants were randomly assigned to one of the 24 experimental conditions specific to the 12 hypotheses.

Procedure

The questionnaires had 24 versions, based on the two different hypothetical scenarios and 12 goal inductions. They were administered to participants randomly; 172 participants were in the 12 classmate-scenario conditions and 180 were in the 12 colleague-scenario conditions. All the data were collected in small groups (10 to 20 people) in two classrooms. The data were collected in 45 sessions. The total number of participants that signed up to participate was 394, and the actual number of participants that attended the data collection sessions was 352. Participants signed up for the study via an online participant pool program. The description of the study online stated that the study was to investigate how people handle conflict, and that participants would respond to a survey that took 20 to 30 minutes (the actual time length was about 25 to 30 minutes). The author managed all data collection sessions.

When participants arrived at the designated classroom, they were asked to read the consent form for the study and to sign the consent form if they agreed to participate in the study. Each participant was then asked to complete a questionnaire (see Appendix J for an example; the only difference for the other versions was the hypothetical scenario, and all of these scenarios are provided in Appendix H). There were 24 versions of the questionnaires. The stacks of questionnaires for each version were placed in a systematic random order and collated for distribution. After the participants completed their questionnaires, the author debriefed all the participants in that session by stating that the scenario they received was different from person to

person, and the purpose of the research was to see whether people would use different conflict strategies, especially avoidance strategies, when different goals were activated. The author further told the participants that if they felt uncomfortable about this induction and did not want their questionnaire to be included, they could indicate so by writing a note on the top of the first page of the questionnaire. Finally, the students were told that the study would be continuing, so it would be appreciated if they did not discuss the study with others. Participants were asked to turn their questionnaires face down and leave the classroom. Questionnaires were then collected and numbered. No participants wrote a note indicating that their questionnaires be excluded.

CHAPTER IV

Results

This chapter consists of three parts. The first part presents preliminary data analyses, including data preparation for the primary analyses, preliminary tests for possible intervening variables, reliability and confirmatory factor analyses for measurement models, and manipulation checks. The second part presents the primary data analyses and tests of hypotheses. The third part provides post-hoc data analyses.

Preliminary Analyses

Data Entry Checks

Frequencies of all the variables were examined to minimize data entry error. All frequencies fell in the preset range defined by the lower and the higher boundaries of each item or variable. Further, all the responses in the questionnaires were checked against the data entries. Out of 352 participants' data (with 81 variables in total), 5 errors were found, yielding an error rate of $5 \div (352 \times 81) = .00017$. The five incorrect inputs were corrected.

Missing Data

The questionnaires were numbered in the time order as they were turned in. Six participants had incomplete data. These missing data were random; that is, the missing data in each questionnaire did not show a systematic pattern. Kline (2005) argued that non-systematic missing data can be ignored. In such statistical analyses as principal component analyses, regression analyses, and analyses of variances, pairwise deletion was used to treat the missing data to maintain the statistical power and increase the effect size (e.g., Kline, 2005). However, for confirmatory factor

analyses and SEM, pairwise deletion may pose a problem, and listwise deletion is preferable when the number of cases with missing value is small:

When individual values in a covariance matrix are based on different numbers of cases, it is possible that some of the values are mathematically out of range; that is, it would be impossible to derive them if the covariances were all calculated using data from the same cases If an out-of-bounds correlation is part of a covariance matrix, then the matrix is nonpositive definite or singular, which means that certain mathematical operations with the matrix such as division (e.g., inverting the matrix) will fail because of problems such as denominators that equal zero. (Kline, 2005, p. 54)

Therefore, listwise deletion was used (i.e., the six cases with missing data were discarded) in conducting confirmatory factor analyses and SEM.

Data Transformations

As described in the method section, the importance of each of the four goals had four indicators. The likelihood of each of the six avoidance strategies also had four indicators. In addition, accommodation (6 indicators), domination (4 indicators), compromising (5 indicators), and integration (5 indicators) were measured with ROCI-II (Rahim, 1983). Therefore, the total number of indicators was 60.

The 60 indicators were submitted to a descriptive analysis. The skewness and kurtosis were examined to see whether data transformation would be needed. The ratio of skewness over the standard error was calculated, and an indicator's distribution is considered as skewed when the ratio is greater than 1.96 (see Frey et al., 2000).

Following the 1.96 cutoff rule, five of the 16 indicators that measure the importance of goals were not considered skewed, three were positively skewed and eight negatively skewed. For the 24 indicators that measure the likelihood of avoidance strategies, five were not skewed and 19 were positively skewed. For the 20 indicators that measure the likelihood of the other four conflict strategies in ROCI-II (Rahim, 1983), five indicators were not skewed, three indicators were positively skewed, and 12 were negatively skewed. Means, standard deviations, skewness, and kurtosis of the 60 indicators are found in Appendix K.

Because the data were to be used in SEM later, and maximum likelihood estimation assumes multivariate normality of data distributions (e.g., Kline, 2005), data transformations were performed to correct the skewness of the relevant variables. Data transformation also helps the assumption of homoscedasticity that is used in testing SEM (Kline, 2005). Homoscedasticity means that the variances of the residuals should be uniform across all levels of the independent variable. Kline (2005) suggested that “a transformation may remedy heteroscedasticity due to nonnormality” (p. 52). For positively skewed indicators, the natural logarithm function was used:

$$\text{New indicator} = \ln (\text{Original indicator} + c) + 50, \quad (3)$$

where c is a positive constant. For negatively skewed indicators, the exponential function was used:

$$\text{New indicator} = \text{Original indicator}^a - \text{Original indicator}^{a1} + c, \quad (4)$$

where a is a positive number greater than 1, $a1$ is a positive number slightly smaller than a , and c is a constant. The exact transformation formulae are found in Appendix

L, and means, standard deviations, skewness, and kurtosis of the 60 indicators after transformation are found in Appendix M. Later data analyses used transformed data.

Principal Component Analyses

Unrotated principal component analyses were performed for the purpose of obtaining component scores of the measured variables in this study. Because the study has 14 measured variables (4 importance levels of goals, 6 likelihoods of avoidance strategies, and 4 likelihoods of four other conflict strategies), 14 principal component analyses on the transformed data were performed separately on the indicators of these variables.

The first principal component was extracted from the indicators for each of the 14 variables. In every case the first principal component's eigenvalue was greater than 1. In every case the second and later components had eigenvalues less than 1. Eigenvalues and the percentages of variances explained by each principal component are found in Table 13.

Each component score was then used to represent its variable score in all later analyses when the variable score was treated as an observed variable. However, in testing the structural equation models, measurement items, not component scores, were used. The reason for using principal components instead of averages for composites is that the former come from weighted contributions from each indicator, and thus, the reliability of the measurement items is factored in.

The reason for using principal components instead of measurement items in the analyses other than structural equation modeling is to focus on the relationships between concepts and avoid unnecessary complications in expressing the results. In

later analyses such as analysis of variance, multivariate analysis of variance, principal component analysis among dependent variables, and regression analysis, a principal component represents the items with appropriate weights, and such a representation simplifies the analysis. Nonetheless, measurement items are preferred to composites in testing structural equation models because an inclusion of measurement models corrects unreliability incurred by measurement error (Kline, 2005).

Table 13

Eigenvalues of the 14 Extracted Principal Components with the Proportions of the Variance Explained by Each Principal Component Based on Transformed Data

Variable	Items (Labels) Based on	Eigenvalue	% Variance Explained
Importance of enmity goals	Enmity1 New Enmity2 New Enmity3 New Enmity4	2.44	61.07%
Importance of instrumental competitive goals	New Instrumental Competition1 New Instrumental Competition2 Instrumental Competition3 Instrumental Competition4	2.91	72.76%
Importance of support goals	New Support1 New Support2 Support3 Support4	1.92	47.94%
Importance of instrumental cooperative goals	New Instrumental Cooperation1 New Instrumental Cooperation2 New Instrumental Cooperation3 New Instrumental Cooperation4	2.58	64.50%
Likelihood of withdrawal	New Withdraw1 New Withdraw2 New Withdraw3 New Withdraw4	2.34	58.34%
Likelihood of passive competition	New Passive Compete1 New Passive Compete2 New Passive Compete3 New Passive Compete4	2.40	59.96%

Table 13 (Cont'd)

Eigenvalues of the 14 Extracted Principal Components with the Proportions of the

Variance Explained by Each Principal Component Based on Transformed Data

Variable	Items (Labels) Based on	Eigenvalue	% Variance Explained
Likelihood of pretending	New Pretend1 New Pretend2 Pretend3 Pretend4	2.28	56.87%
Likelihood of exit	New Exit1 New Exit2 New Exit3 New Exit4	2.45	61.34%
Likelihood of outflanking	New Outflank1 New Outflank2 Outflank3 Outflank4	2.07	51.76%
Likelihood of yielding	New Yield1 New Yield2 New Yield3 New Yield4	2.07	51.67%
Likelihood of domination	New Accommodate1 Accommodate2 Accommodate3 New Accommodate4 Accommodate5 Accommodate6	2.78	46.28%

Table 13 (Cont'd)

Eigenvalues of the 14 Extracted Principal Components with the Proportions of the Variance Explained by Each Principal Component Based on Transformed Data

Variable	Items (Labels) Based on	Eigenvalue	% Variance Explained
Likelihood of accommodation	Dominate1 New Dominate2 New Dominate3 New Dominate4	2.17	54.22%
Likelihood of compromise	New Compromise1 New Compromise2 New Compromise3 New Compromise4 New Compromise5	2.71	54.27%
Likelihood of integration	New Integrate1 New Integrate2 New Integrate3 New Integrate4 New Integrate5	3.06	61.28%

Note. The actual items are found in Appendix J. The transformation formulas for the transformed indicators are found in Appendix L. The descriptives for the transformed indicators are found in Appendix M.

Casey's Gender

The study used a gender neutral name, Casey. One question asked participants to indicate Casey's perceived gender. Two hundred and seventy-one (77.6%) participants reported Casey's gender to be female, 61 reported it to be male (17.3%), and 14 reported "not clear" (4.3%). Four people added a note (though they were not asked in the questionnaire) that Casey's gender did not matter. Twelve participants (3.4%) talked to the student researcher (i.e., the author) after their sessions and indicated that they liked the last question about Casey's gender. When the author asked what gender they were thinking about, those participants' responses showed an interesting pattern: Participants matched their gender with Casey's gender. A χ^2 test was performed to test this pattern. The crosstabulation of Casey's perceived gender by participants' gender is reported in Table 14.

Results indicated a significant gender difference in the perception of Casey's gender, $\chi^2(2, N = 346) = 25.37, p < .001$. Casey was perceived to be a female more often by females ($n = 212, 85.1\%$) than by males ($n = 58, 60.8\%$), but was perceived to be a male more often by males ($n = 32, 33.0\%$) than by females ($n = 21, 11.2\%$). Moreover, a slightly larger percent of males ($n = 6, 6.2\%$) reported being unclear about Casey's gender than did females ($n = 9, 3.6\%$).

These results indicate a gender difference in the perceived gender of Casey. Whether this perception affected the relationships between goals and strategies needed further examination. The next section reports a preliminary test of possible effects on dependent variables by Casey's perceived gender and two other variables: participants' gender and type of scenario.

Table 14

Crosstabulation of Casey's Perceived Gender by Participants' Gender (N = 346)

		Participant's Gender		
		Female	Male	<i>n</i>
Casey's Perceived Gender	Female	213 (85.10%)	58 (60.80%)	271
	Male	28 (11.20%)	32 (33.00%)	60
	Not clear	9 (3.60%)	6 (6.20%)	15

Multivariate Analysis of Variance and Data Merging

The hypothetical conflict scenarios used two versions, one for classmate and one for colleague. Previous χ^2 test study indicated a gender difference of Casey's perceived gender. Before further analyses, a few decisions had to be made: Should data from the two different hypothetical scenarios be merged or treated separately? How should participants' gender and perceptions of Casey's gender be treated? To solve these problems, a multivariate analysis of variance was performed.

In the analysis, type of scenario (2 levels: classmate vs. colleague), participants gender (2 levels: male vs. female), perceived Casey's gender (3 levels: male, female, or unclear), and experimental condition (12 conditions: goal inductions) were entered as the independent variables. The dependent variables were the six likelihoods of avoidance strategies, represented by their component scores. The purpose of the analysis was to test whether type of scenario, participants' gender, and Casey's gender had main effects or interaction effects with the experimental condition on the dependent variables. Further, any other interaction effects between the four variables were examined as well. If any of these effects were significant, then the corresponding variable should be considered to be an independent variable in later analyses.

Results indicated that type of scenario, participants' gender, and Casey's gender did not have a main effect or an interaction effect with experimental condition on the dependent variables. There was no significant two-way, three-way, or four-way interaction between the four variables either (Table 15). Multivariate analysis statistics on each dependent variable are found in Appendix N.⁶ Therefore, data from

the two hypothetical scenarios were merged. The three variables (type of scenario, participants' gender, and Casey's gender) were excluded as variables in later analyses.

Table 15

Results from Multivariate Analysis of Variance

Independent Variable	Wilks' Lambda	F	Hypothesis Degrees of Freedom	Error Degrees of Freedom	<i>p</i> Level
Condition	.55	2.29	66.00	1278.95	.00
Scenario	.98	.48	6.00	238.00	.82
Ps Gender	.96	1.30	6.00	238.00	.25
Cs Gender	.94	1.11	12.00	476.00	.34
Scenario × Condition	.75	1.02	66.00	1278.95	.41
Scenario × Ps Gender	.98	.63	6.00	238.00	.70
Scenario × Cs Gender	.98	.34	12.00	476.00	.98
Condition × Ps Gender	.75	1.05	66.00	1278.95	.37
Condition × Cs Gender	.62	1.07	108.00	1371.16	.28
Ps Gender × Cs Gender	.96	.81	12.00	476.00	.63
Scenario × Condition × Ps Gender	.75	1.17	60.00	1252.01	.17
Scenario × Condition × Cs Gender	.85	.69	54.00	1218.16	.95
Scenario × Ps Gender × Cs Gender	.98	.66	6.00	238.00	.67
Condition × Ps Gender × Cs Gender	.83	.79	54.00	1218.16	.85
Scenario × Condition × Ps Gender × Cs Gender	.98	.48	6.00	238.00	.81

Note 1. For independent variables, Condition = Experimental Condition, Scenario =

Type of Scenario, Ps Gender = Participants' Gender, Cs Gender = Casey's Gender.

Note 2. Dependent variables are likelihoods of withdrawal, passive competition, pretending, exit, outflanking, and yielding.

Reliability

Two sets of reliability tests for the 14 variables were done. First, Cronbach's alphas were calculated for unweighted item scores, listed in the third column of Table 16. These reliability coefficients provide information about measurement items if a researcher were to use the sum or the mean of the items for each variable. Second, the last column in Table 16 reports Cronbach's alphas for weighted item scores; the weights were determined by the component score coefficients gained in the earlier principal component analyses.

The second set of Cronbach's alphas is directly relevant for the current study, because this study used principal components that represented weighted measurement items. To obtain a Cronbach's alpha for weighted items that composed the principal component, the following procedure was performed: (a) The component score coefficient matrix was obtained; (b) each item score was standardized; (c) each coefficient of an item used to make up a component score was identified; (d) a new weighted score for this item was calculated by multiplying each item's standardized score by its coefficient; and (e) Cronbach's alpha was calculated for this component score with its four newly weighted item scores. As shown in Table 16, for both unweighted and weighted items, Cronbach's alphas for all 14 variables with their measurement items were moderately or highly acceptable

Table 16

Reliability Coefficients of Measured Variables, Transformed Data

Variables	Valid <i>N</i>	Cronbach's α (unweighted items)	Cronbach's α (weighted items)
Importance of the enmity goal	345	.785	.788
Importance of the support goal	347	.875	.876
Importance of the instrumental competitive goal	348	.633	.633
Importance of the instrumental cooperative goal	349	.812	.817
Likelihood of using withdrawal	351	.757	.762
Likelihood of using passive competition	349	.776	.777
Likelihood of using pretending	351	.743	.747
Likelihood of using exit	350	.791	.791
Likelihood of using outflanking	350	.685	.690
Likelihood of using giving in	350	.655	.690
Likelihood of using accommodation	348	.754	.767
Likelihood of using domination	348	.708	.719
Likelihood of using compromise	349	.787	.791
Likelihood of using integration	350	.838	.843

Note. The indicators for each variable are found in Appendix J. The transformation formulas for the transformed indicators are found in Appendix L. The descriptives for the transformed indicators are found in Appendix M.

Confirmatory Factor Analyses

Confirmatory factor analyses (CFAs) were performed using LISREL 8.70 (Jöreskog & Sörbom, 2004) to test measurement model fit. The goodness-of-fit criteria were based mainly on Hu and Bentler's (1998, 1999) recommendation of $RMSEA \leq .06$, $SRMR \leq .08$, and $CFI \geq .95$. Hu and Bentler (1998, 1999) made this recommendation based on extensive simulation research, and the criteria have been largely accepted (e.g., Hancock, 2006). In addition, Hancock and Mueller's (2001) H was calculated to estimate the information captured by the indicators (the maximal reliability of each measurement model). Tables 17 through 19 present each variable's indicator loadings and the measurement model quality indices. The four importance levels of goals (i.e., manipulation checks) are found in Table 17, the likelihoods of the six avoidance strategies are found in Table 18, and the likelihoods of accommodation, domination, compromise, and integration are found in Table 19.⁷

Table 17

Importance of Goals, Indicator Loadings and Measurement Model Indices

Importance of Goals and Indicators	Unstandardized Loadings (standardized)
<i>Enmity Goals</i>	
I don't mind hurting Casey's feelings.	1.00 (.68)*
I don't need to worry whether my words would humiliate Casey; the more important thing is to get my way on this project.	0.02 (.72)*
I want to make Casey feel inferior.	0.10 (.54)*
I do not care if Casey would feel upset because of my words.	0.03 (.84)*
$\chi^2(2, N = 346) = 11.72, p < .01, RMSEA = .12, SRMR = .03, CFI = .97. H = .825.$	
<i>Instrumental Competitive Goals</i>	
I need to defend my position on the issue.	1.00 (.54)*
I need to think of ways to actualize my plan on this project.	1.91 (.52)*
I need to make Casey submit to my ideas.	27.67 (.60)*
I should plan on doing this project according to my ideas.	27.57 (.55)*
$\chi^2(2, N = 346) = 6.29, p = .05, RMSEA = .08, SRMR = .03, CFI = .97. H = .640.$	
<i>Support Goals</i>	
I care about how Casey feels because I want to maintain a good relationship with Casey.	1.00 (.81)*
I will be careful not to hurt Casey because I truly care how Casey feels.	0.73 (.92)*
It is important for me to let Casey feel my affection and care.	11.20 (.70)*
It is important for me to protect Casey's feelings.	11.95 (.75)*
$\chi^2(2, N = 346) = 21.69, p < .001, RMSEA = .17, SRMR = .03, CFI = .97. H = .906.$	
<i>Instrumental Cooperative Goals</i>	
I should avoid words or actions that might make our communication break down because I need to work with Casey again.	1.00 (.89)*
I need to keep good communication with Casey because we have to work together.	11.02 (.67)*

Table 17 (Cont'd)

Importance of Goals, Indicator Loadings and Measurement Model Indices

Importance of Goals and Indicators	Unstandardized Loadings (standardized)
<i>Instrumental Cooperative Goals</i>	
I should plan on keeping the communication going just for the sake of future teamwork with Casey.	13.02 (.52)*
I should be careful with word choice because I need to work with Casey again in the future.	0.94 (.58)*
$\chi^2(2, N = 346) = 5.75, p = .07, RMSEA = .07, SRMR = .02, CFI = .99. H = .834.$	

* $p < .01$.

Note. Unstandardized coefficients resulted from the analyses of relevant covariance matrix. The LISREL syntax is found in Appendix O. Bold values represent unstandardized loadings of reference indicators.

Table 18

*Likelihoods of Avoidance Strategies, Indicator Loadings and Measurement Model**Indices*

Likelihood of Avoidance Strategies and Indicators	Unstandardized Loadings (standardized)
<i>Withdrawal</i>	
In the rest of the meeting, I will stop arguing and leave the scene.	1.00 (.58)*
In the rest of the meeting, I'll just shut up and stop responding.	1.30 (.79)*
I'll just sit there and zip my mouth in the rest of the meeting.	1.35 (.83)*
If the argument begins to turn into a breakdown, I will just step out.	0.06 (.43)*
$\chi^2(2, N = 346) = 31.64, p < .001, RMSEA = .21, SRMR = .08, CFI = .86. H = .821.$	
<i>Passive Competition</i>	
In the rest of the meeting, I will stop arguing with Casey but start doing what I want, pretending not to hear Casey's nagging.	1.00 (.64)*
I'll focus on doing the project as I want and don't have to argue back.	0.07 (.60)*
In the rest of the meeting, I'll play deaf and do the project as I have planned.	1.08 (.75)*
On the spot, even though I will stop arguing, I will start doing the project as I want.	1.15 (.74)*
$\chi^2(2, N = 346) = 1.00, p = .61, RMSEA = .00, SRMR = .01, CFI = .99. H = .790.$	
<i>Pretending</i>	
If the argument begins to turn into a breakdown, I will pretend nothing's wrong by talking about something else.	1.00 (.69)*
If the argument begins to turn into a breakdown, I'll switch the topic on the spot.	1.31 (.88)*
On the spot, I will stop arguing and suggest we say or do something else.	40.97 (.48)*
In the rest of the meeting, I will try to keep the communication going by shifting the topic.	43.68 (.55)*
$\chi^2(2, N = 346) = 1.48, p = .48, RMSEA = .00, SRMR = .01, CFI = .99. H = .835.$	
<i>Exit</i>	
After the meeting, I will ask the instructor (boss) to remove me from the team. I will also make sure that I won't have Casey as a friend.	1.00 (.74)*
It is fine for me to move on without this project or Casey in my life.	0.99 (.70)*

Table 18 (Cont'd)

*Likelihoods of Avoidance Strategies, Indicator Loadings and Measurement Model**Indices*

Likelihood of Avoidance Strategies and Indicators	Unstandardized Loadings (standardized)
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Exit

I'll give up my ideas on this project and maybe never talk to Casey again.	0.84 (.67)*
After the meeting, I won't want to be discussing anything, or even talking with Casey any more.	0.95 (.67)*

$\chi^2(2, N = 346) = 2.72, p = .26, RMSEA = .03, SRMR = .02, CFI = .99. H = .775.$

Outflanking

After the meeting, I will try to solve the problem indirectly without having to discuss it with Casey again.	1.00 (.43)*
After the meeting, I will talk to our professor (boss) about my ideas without any more discussion with Casey.	1.66 (.69)*
After the meeting, I'll come up with some sideway strategy (talk to our professor [boss] or do something else) to actualize my ideas.	174.00 (.74)*
After the meeting, I'll try something else to actualize my plan for the project but not through another debate with Casey.	122.93 (.53)*

$\chi^2(2, N = 346) = 3.95, p = .14, RMSEA = .05, SRMR = .02, CFI = .99. H = .732.$

Yielding

After the meeting, I will restrain myself from arguing about the project with Casey in our future conversations.	1.00 (.20)*
After the meeting, I'll give up my ideas and remain Casey's friend.	0.04 (.59)*
I want to be, or remain, Casey's friend and will never mention our different ideas about the project again.	0.04 (.83)*
After the meeting, I'll be, or remain, Casey's friend but I'll be careful not to mention our argument on the project in our conversations.	5.30 (.72)*

$\chi^2(2, N = 346) = 5.42, p = .07, RMSEA = .07, SRMR = .03, CFI = .99. H = .794.$

* $p < .01.$

Note. Unstandardized coefficients resulted from the analyses of relevant covariance matrix. The LISREL syntax is found in Appendix O. Bold values represent unstandardized loadings of reference indicators.

Table 19

*Likelihoods of Accommodation, Domination, Compromise, and Integration, Indicator**Loadings and Measurement Model Indices*

Likelihood of Conflict Strategies Measured by ROCI-II	Unstandardized Loadings (standardized)
<i>Accommodation</i>	
I will try to satisfy Casey's needs during the meeting.	1.00 (.61)*
I will not give in to Casey's wishes.	16.77 (.47)*
I will try to satisfy Casey's expectations.	26.68 (.74)*
I will not bend over backwards to accommodate Casey's wishes.	0.12 (.29)*
I will like going along with Casey's suggestions.	20.22 (.59)*
I will accommodate Casey's needs.	29.05 (.80)*
$\chi^2(9, N = 346) = 24.21, p = .004, RMSEA = .07, SRMR = .04, CFI = .97. H = .821.$	
<i>Domination</i>	
I will exert pressure on Casey to reach a solution leaning towards my ideas.	1.00 (.71)*
I will use my power to get my way.	0.01 (.81)*
I will not use influence to get my ideas accepted.	0.03 (.38)*
I will use my expertise to make Casey accept my ideas.	0.04 (.59)*
$\chi^2(2, N = 346) = 4.22, p = .12, RMSEA = .06, SRMR = .02, CFI = .99. H = .789.$	
<i>Compromise</i>	
I will try to find a middle course or compromise to solve the problem.	1.00 (.54)*
If deadlock happens, I will take a moderate position to resolve the conflict.	15.52 (.51)*
I will bargain with Casey to get a middle ground.	10.92 (.72)*
I will try to work out a compromise that gives both of us some of what we want.	11.19 (.82)*
I will try to give and take so that moderate profits can be obtained.	11.21 (.72)*
$\chi^2(5, N = 346) = 4.16, p = .53, RMSEA = .00, SRMR = .02, CFI = .99. H = .833.$	

Table 19 (Cont'd)

*Likelihoods of Accommodation, Domination, Compromise, and Integration, Indicator**Loadings and Measurement Model Indices*

Likelihood of Conflict Strategies Measured by ROCI-II	Unstandardized Loadings (standardized)
<i>Integration</i>	
I do not want to collaborate with Casey to make decisions.	1.00 (.47)*
I will work with Casey to find a solution that satisfies the expectations of both of us.	139.52 (.78)*
I will work closely with Casey for a proper understanding of what both of us want.	10.47 (.80)*
I am willing to exchange information openly with Casey to reach the best solution.	205.98 (.77)*
I will bring all our concerns out in the open to reach an agreement in the best possible way.	21.56 (.75)*
$\chi^2(5, N = 346) = 17.76, p = .003, RMSEA = .08, SRMR = .03, CFI = .98, H = .864.$	

* $p < .01$.

Note. Unstandardized coefficients resulted from the analyses of relevant covariance matrix. The LISREL syntax is found in Appendix O. Bold values represent unstandardized loadings of reference indicators.

As shown in Tables 17 through 19, most of the measurement models had a good fit according to the model fit indices (Hu & Bentler, 1998, 1999). Five measurement models for avoidance strategies had a good fit; the exception was the model for withdrawal. The measurement model for withdrawal had the largest χ^2 among all measurement models presented here. Its RMSEA was greater than .10 and CFI less than .90. The wording of two measurement items of withdrawal may need improvement: “In the rest of the meeting, I’ll just shut up and stop responding,” and “I’ll just sit there and zip my mouth in the rest of the meeting.” All four items were kept in the measurement model, however, because more items were preferred than fewer items in SEM (Gagné & Hancock, 2006, Marsh et al., 1998). Each additional item reduces the sample size needed to make the model converge (Gagné & Hancock, 2006; Marsh et al., 1998). Further, each additional item increases the maximal reliability of the measurement model because the information about the construct captured by the observed items is increased (Gagné & Hancock, 2006; Hancock & Mueller, 2001).

The measurement models for instrumental competitive goals and instrumental cooperative goals were acceptable, and fit better than the models for enmity and support goals. The measurement models for the other conflict strategies measured by ROCI-II had acceptable or good fit.

For H (Hancock & Mueller, 2001), with a sample of 352, an acceptable magnitude equals .719 (using interpolation based in Table 3 in Gagné & Hancock, 2006) for a measurement model with four indicators. Using this criterion, only the model for the instrumental competitive goals was a little lacking ($H = .640$); all other

models had an H greater than .719. Because the other fit indices for instrumental competitive goals were acceptable, the corresponding measurement model was considered adequate in the overall analysis.

Manipulation Checks

To check whether the 12 experimental conditions effectively induced the desired importance levels in the targeted goals, four analyses of variances with planned contrasts were performed. In all four analyses, the independent variable was the experimental condition with planned contrast coefficients. The dependent variables were the importance levels of the four goal types, each tested in a separate analysis. The first component scores for goal importance from earlier principal component analyses were used to represent the dependent variables.

Table 20 indicates how each type of goal was coded to reflect the manipulation of an experimental condition that tested each specific hypothesis. For example, H1a states that importance of support goals positively predicts likelihood of withdrawal; thus the other three types of goals have a coefficient of 0 and the coefficient for support goals is positive. H2 states that importance of rivalry goals positively yet importance of cooperative goals negatively predicts likelihood of passive competition. Because rivalry goals comprise enmity goals and instrumental competitive goals, and cooperative goals comprise support goals and instrumental cooperative goals, the coefficients for enmity goals and instrumental competitive goals were coded as positive whereas the coefficients for support goal and instrumental cooperative goal were coded as negative. Using the same logic, the four types of goals in each condition were assigned a positive, negative, or null value.

The magnitude of each coefficient was determined such that the sum of the induction coefficients for the same goal across 12 conditions equals zero. For example, because enmity goals were not manipulated in Conditions 1, 2, 3, and 9 (in testing H1a, H1b, H1c, and H5), were manipulated to be high in Condition 4 (in testing H2), and were manipulated to be low in Conditions 5, 6, 7, 8, 10, 11, 12 (in testing H3a, H3b, H3c, H4, H6a, H6b, and H6c), a coefficient of 0 was assigned for the importance of enmity goals in Conditions 1, 2, 3, and 9, .98 in Condition 4, and -.14 in Conditions 5, 6, 7, 8, 10, 11, and 12, respectively. The sum of the coefficients for the importance of enmity goals across the 12 conditions equals 0. The same logic was used to assign coefficients for the other three types of goals.

Table 20

Coding Coefficients in Contrast Analyses

Dependent Variable	Condition	Hypothesis	Enmity Goals	Instrumental Competitive Goals	Support Goals	Instrumental Cooperative Goals
Withdrawal	1	H1a	0	0	.17	0
Withdrawal	2	H1b	0	0	0	.14
Withdrawal	3	H1c	0	0	.17	.14
Passive competition	4	H2	.98	.49	-.34	-.49
Pretending	5	H3a	-.14	-.14	.17	0
Pretending	6	H3b	-.14	-.14	0	.14
Pretending	7	H3c	-.14	-.14	.17	.14
Exit	8	H4	-.14	-.14	-.34	-.49
Outflanking	9	H5	0	.49	-.34	.14
Yielding	10	H6a	-.14	-.14	.17	0
Yielding	11	H6b	-.14	-.14	0	.14
Yielding	12	H6c	-.14	-.14	.17	.14
Sum of coefficients			0	0	0	0

Four ANOVAs with planned contrasts were performed to test whether the experimental condition had a main effect on each of the dependent variables based on the contrast codings. Results indicated that the manipulations were all successful. In all four analyses, Levene's statistics of homogeneity was non-significant at the .05 level, and thus the hypothesis of population homoscedasticity was not rejected (all $ps > .20$). For the importance of enmity goals, the experimental condition had a significant effect with planned contrast coefficients, $F(11, 333) = 7.09, p < .001, \eta^2 = .19$. For the importance of instrumental competitive goals, the experimental condition had a significant effect, $F(11, 337) = 10.44, p < .001, \eta^2 = .25$. For the importance of support goals, the effect of the experimental condition was significant, $F(11, 338) = 26.59, p < .001, \eta^2 = .46$. For the importance of instrumental cooperative goals, the effect of the experimental condition was significant, $F(11, 333) = 7.09, p < .001, \eta^2 = .19$. The manipulations, therefore, were successful overall.

Model Assessment and Hypotheses Testing

The hypotheses were tested with structural equation modeling (SEM) using LISREL 8.70 (Jöreskog & Sörbom, 2004). The model included structural and measurement components. Two hierarchical models were tested to see whether manipulations in the 12 experimental conditions had both direct and indirect effects on the likelihoods of avoidance strategies, or had indirect effects via manipulation checks only.

Model Assessment

Model A (Figure 2) illustrates the proposition that all the links from experimental conditions to the outcome variables were mediated through

manipulation checks. Model B (Figure 3) illustrates the proposition that not all effects from manipulations to outcome variables are through manipulation checks; rather, a manipulation may have a direct effect on its corresponding outcome variable. These two propositions were tested through a nested model comparison. Model specifications for Models A and B are listed in Tables 21 and 22, separately.

Note that Figures 2 and 3 only describe the structural model of the relationships between conflict goals and avoidance strategies. The measurement models of the goals and strategies are not included in the figure although they are included in the model. Also, in Figures 2 and 3, two groups of errors of predictions were allowed to covary. The first group includes error covariances within the same time frame: The errors for the three short-term avoidance strategies, withdrawal, passive competition, and pretending, were allowed to covary, and the errors for the three long-term avoidance strategies, exit, outflanking, and yielding, were allowed to covary. The reason for allowing such covariances is that, according to Pilot Studies results, phrases that define time duration appeared important to distinguish different strategies. Therefore, phrases such as “in the meeting,” “on the spot,” and “in the rest of the meeting” were used in the items that measure the three short-term avoidance strategies. “After the meeting” was used in the items that measure the three long-term avoidance strategies. Such similar wording in time framing may have an effect on the avoidance strategies in the same time frame above and beyond the covariances explained by the independent variables.

The second group of errors allowed to covary includes the error covariances of the avoidance strategies that differ only along the time frame (i.e., short-term vs.

long-term): withdrawal and exit, passive competition and outflanking, and pretending and yielding. For avoidance strategies that only differ in time duration, goals (the independent variables) explain some of their covariances, but other factors such as personality characteristics (shyness, disliking direct communication, not being argumentative, and so on) may also be reasons for an individual to use one avoidance strategy both short-term and long-term. In this case, allowing the corresponding pair of errors for avoidance strategies to covary is appropriate.

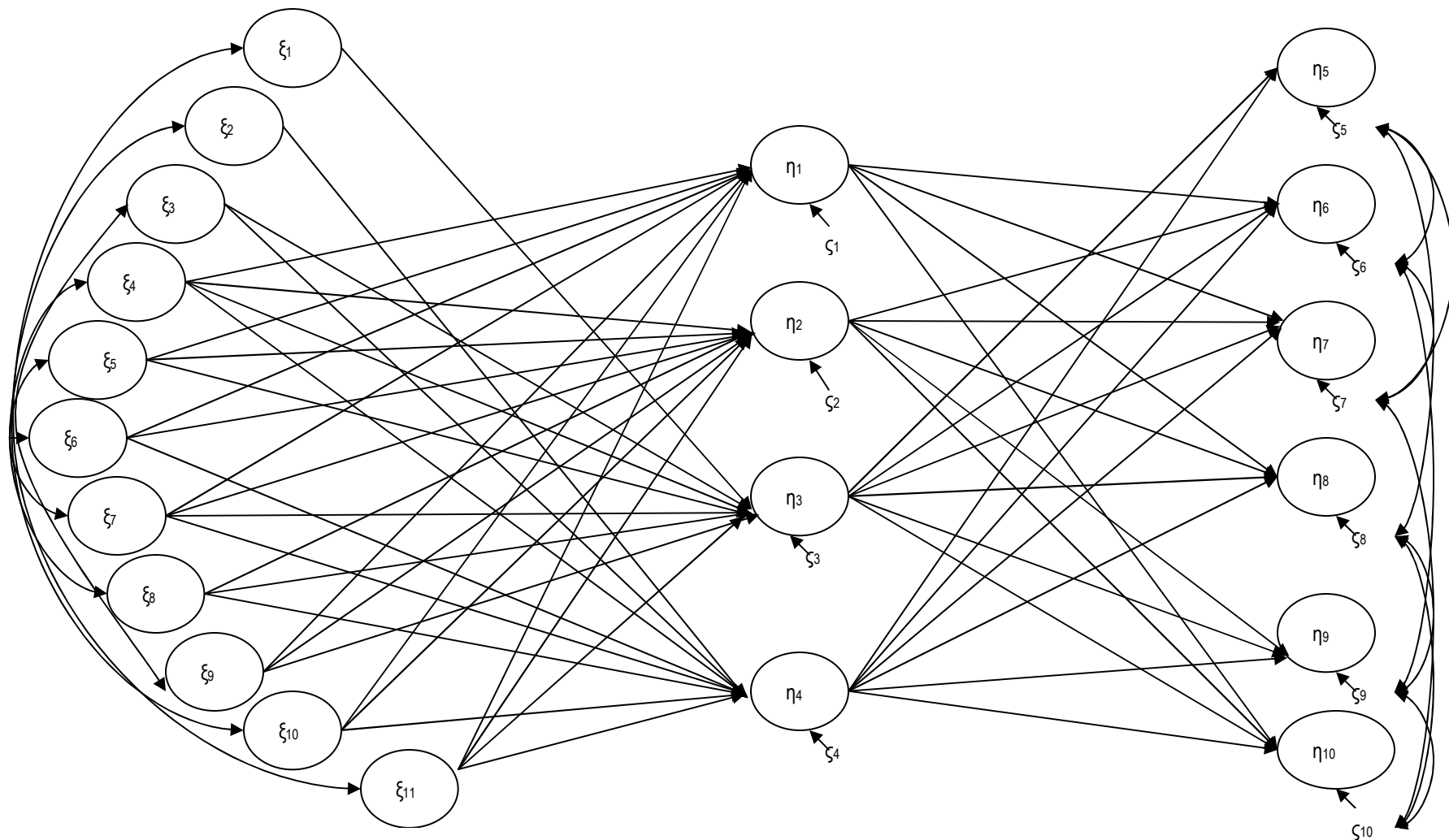


Figure 2. Structural relations between manipulations and avoidance strategies mediated fully through manipulation checks (Model A: covariance matrix in Appendix O).

Table 21

Structural Equations of Fully Mediated Relations between Goal Inductions and Avoidance Strategies (Model A)

η	η_1	η_2	η_3	η_4	ξ_1	ξ_2	ξ_3	ξ_4	ξ_5	ξ_6	ξ_7	ξ_8	ξ_9	ξ_{10}	ξ_{11}	ζ
η_1	=							γ_{14}	γ_{15}	γ_{16}	γ_{17}		γ_{19}	$\gamma_{1,10}$	$\gamma_{1,11}$	ζ_1
η_2	=							γ_{24}	γ_{25}	γ_{26}	γ_{27}	γ_{27}	γ_{29}	$\gamma_{2,10}$	$\gamma_{2,11}$	ζ_2
η_3	=				γ_{31}		γ_{33}	γ_{34}	γ_{35}		γ_{37}	γ_{38}	γ_{39}		$\gamma_{3,11}$	ζ_3
η_4	=					γ_{42}	γ_{43}	γ_{44}		γ_{46}	γ_{47}	γ_{48}		$\gamma_{4,10}$	$\gamma_{4,11}$	ζ_4
η_5	=		β_{53}	β_{54}												ζ_5
η_6	=	β_{61}	β_{62}	β_{63}	β_{64}											ζ_6
η_7	=	β_{71}	β_{72}	β_{73}	β_{74}											ζ_7
η_8	=	β_{81}	β_{82}	β_{83}	β_{84}											ζ_8
η_9	=		β_{92}	β_{93}	β_{94}											ζ_9
η_{10}	=	$\beta_{10,1}$	$\beta_{10,2}$	$\beta_{10,3}$	$\beta_{10,4}$											ζ_{10}

Note. ξ_1 through ξ_{11} are the 11 dummy coded variables as shown in Table 10. η_1 through η_4 represent importance of enmity goals, importance of instrumental competitive goals, importance of support goals, and importance of instrumental cooperative goals, respectively. η_5 through η_{10} represent likelihood of withdrawal, likelihood of passive competition, likelihood of pretending, likelihood of exit, likelihood of outflanking, and likelihood of yielding, respectively.

Table 22

Structural Equations of Partially Mediated Relations between Goal Inductions and Avoidance Strategies (Model B)

η	η_1	η_2	η_3	η_4	ξ_1	ξ_2	ξ_3	ξ_4	ξ_5	ξ_6	ξ_7	ξ_8	ξ_9	ξ_{10}	ξ_{11}	ζ
η_1	=							γ_{14}	γ_{15}	γ_{16}	γ_{17}		γ_{19}	$\gamma_{1,10}$	$\gamma_{1,11}$	ζ_1
η_2	=							γ_{24}	γ_{25}	γ_{26}	γ_{27}	γ_{27}	γ_{29}	$\gamma_{2,10}$	$\gamma_{2,11}$	ζ_2
η_3	=				γ_{31}		γ_{33}	γ_{34}	γ_{35}		γ_{37}	γ_{38}	γ_{39}		$\gamma_{3,11}$	ζ_3
η_4	=					γ_{42}	γ_{43}	γ_{44}		γ_{46}	γ_{47}	γ_{48}		$\gamma_{4,10}$	$\gamma_{4,11}$	ζ_4
η_5	=		β_{53}	β_{54}	γ_{51}	γ_{52}	γ_{53}									ζ_5
η_6	=	β_{61}	β_{62}	β_{63}	β_{64}			γ_{64}								ζ_6
η_7	=	β_{71}	β_{72}	β_{73}	β_{74}				γ_{75}	γ_{76}	γ_{77}					ζ_7
η_8	=	β_{81}	β_{82}	β_{83}	β_{84}											ζ_8
η_9	=		β_{92}	β_{93}	β_{94}							γ_{98}				ζ_9
η_{10}	=	$\beta_{10,1}$	$\beta_{10,2}$	$\beta_{10,3}$	$\beta_{10,4}$								$\gamma_{10,9}$	$\gamma_{10,10}$	$\gamma_{10,11}$	ζ_{10}

Note. ξ_1 through ξ_{11} are the 11 dummy coded variables as shown in Table 10. η_1 through η_4 represent importance of enmity goals, importance of instrumental competitive goals, importance of support goals, and importance of instrumental cooperative goals, respectively. η_5 through η_{10} represent likelihood of withdrawal, likelihood of passive competition, likelihood of pretending, likelihood of exit, likelihood of outflanking, and likelihood of yielding, respectively.

Overall model fit and model comparisons. For Model A, $\chi^2(1,113, N = 346) = 2,176.78, p < .05$, RMSEA = .052 with a 90% CI of (.049, .055), SRMR = .07, CFI = .94, TLI = .93. Although the χ^2 estimate was enormous, the model was retained for three reasons. First, as compared with the null model where a zero covariance was assumed between any pair of constructs, Model A had a significantly better fit. For the null model, $\chi^2(740, N = 346) = 4,016.79, p < .05$, RMSEA = .11 with a 90% CI of (.11, .12), SRMR = .21, CFI = .87, TLI = .86. A model comparison indicated that Model A was significantly improved from the null model, $\Delta\chi^2 (N = 346) = 1,840.01, \Delta df = 373, p < .001$.

Second, Model A has a decent goodness of fit when taking multiple fit indices into consideration. SEM researchers (e.g., Bollen, 1989) have recommended using multiple fit indices to estimate the fitness of a model because all the fit indices have their advantages and disadvantages. Again, based on Hu and Bentler's (1998, 1999) recommended use of RMSEA $\leq .06$ and SRMR $\leq .08$, the current model suggested a close fit of the data to the proposed model. Hu and Bentler (1998, 1999) have also shown that CFI and TLI perform well in samples of different sizes when the estimation is based on maximum likelihood estimation; indeed, they recommended using these two indices for a sample with $N \geq 250$.

Hu and Bentler (1995) suggested a cutoff point of .90 for CFI and TLI for an acceptable fit. Hu and Bentler (1999) raised the bar of CFI and TLI to .95 for a stable acceptable fit (e.g., across different samples). This criterion, however, has been criticized for being too restrictive (e.g. Marsh, Hau, & Wen, 2004). Model A has a CFI of .94 and a TLI of .93, and small RMSEA and SRMR indices. When these

multiple fit indices were taken into account, Model A was acceptable.

Third, χ^2 is sensitive to the sample size. Kenny (2003) argued that χ^2 is a reasonable measure of model fit with a sample of 75 to 200, but should not be used as a measure of model fit when $N > 200$. Kline (2005) argued that for $N > 100$, the ratio of χ^2/df is an effective measure of fit, and a ratio of less than 3.00 is acceptable. For the current model, $\chi^2/df = 1.95$. Based on the examination of multiple indices and recommendations for a large sample size, the proposed model appeared to have a good fit.

Next, Models A and B were compared to see whether the manipulations had direct effects on the outcome variables above and beyond the mediating effects through manipulation checks. For Model B, which had both direct and indirect links to the dependent variables, $\chi^2(1,102, N = 346) = 2,168.58, p < .05$, SRMR = .07, RMSEA = .052 with a 90% CI of (.049, .056), CFI = .94, TLI = .93. A nested model comparison indicates that Model B did not fit better than Model A, $\Delta\chi^2(N = 346) = 8.20, \Delta df = 11, p > .05$. Because the fit indices of Model B were not better than those for Model A, Model A was preferred to Model B because Model A was more parsimonious. Unstandardized structural coefficients are reported in Table 23. Error variances and covariances are reported in Table 24.

Table 23

Unstandardized Structural Coefficients in Model A

η	η_1	η_2	η_3	η_4	ξ_1	ξ_2	ξ_3	ξ_4	ξ_5	ξ_6	ξ_7	ξ_8	ξ_9	ξ_{10}	ξ_{11}
η_1								29.47*	-3.79	3.56	-11.04*		1.51	-1.07	-4.97
η_2								8.47*	-0.93	2.74	-3.73*	-2.21	-0.82	1.06	-2.90
η_3					19.52*		21.08*	-25.94*	22.50*		26.63*	0.08	25.92*		24.92*
η_4						8.94*	5.14	-35.78*		8.37*	13.16*	12.94*		12.57*	13.28*
η_5			-0.01	-0.05											
η_6	-0.04	1.10*	-0.01	-0.09*											
η_7	-0.37*	0.92*	-0.13	0.09											
η_8	0.40*	1.34*	-0.48*	0.01											
η_9		1.04*	-0.05	0.07											
η_{10}	0.09	-0.14	0.17*	-0.01											

* $p < .05$.

Note. ξ_1 through ξ_{11} are the 11 dummy coded variables as shown in Table 10. η_1 through η_4 represent importance of enmity goals, importance of instrumental competitive goals, importance of support goals, and importance of instrumental cooperative goals, respectively. η_5 through η_{10} represent likelihood of withdrawal, likelihood of passive competition, likelihood of pretending, likelihood of exit, likelihood of outflanking, and likelihood of yielding, respectively.

Table 24

Error Variances and Covariances for Mediating and Outcome Variables in Model A

	ζ_1	ζ_2	ζ_3	ζ_4	ζ_5	ζ_6	ζ_7	ζ_8	ζ_9	ζ_{10}
ζ_1	411.26*									
ζ_2		52.81*								
ζ_3			298.96*							
ζ_4				431.74*						
ζ_5					65.93**					
ζ_6					29.50**	104.71**				
ζ_7					45.54**	33.83*	303.40**			
ζ_8					45.68**			81.96**		
ζ_9						32.45**		-3.69	97.66**	
ζ_{10}							14.85*	-3.38	4.23	12.41

* $p < .05$, ** $p < .01$.

Note. ζ_1 = Error term of the importance of enmity goals; ζ_2 = Error term of the importance of instrumental competitive goals; ζ_3 = Error term of the importance of support goals; ζ_4 = Error term of the importance of instrumental cooperative goals; ζ_5 = Error term of likelihood of withdrawal; ζ_6 = Error term of the likelihood of passive competition; ζ_7 = Error term of the likelihood of pretending; ζ_8 = Error term of likelihood of exit; ζ_9 = Error term of the likelihood of outflanking; ζ_{10} = Error term of likelihood of yielding.

Interpretations of significant structural loadings. Structural coefficients that represent the relations between the dummy variables (ξ s) and the importance of goals (η_1 through η_4), and between the importance of goals (η_1 through η_4) and the likelihood of avoidance strategies (η_5 through η_{10}) are reported in Table 23. Because the dummy coding system used the group of which the importance of the four goals to be all low (Condition 8, to predict exit strategy) as the reference group, each γ coefficient from a ξ to one of the first four η s reflects the predicted difference in that η between the manipulated condition represented by the ξ and the reference group. Each β coefficient represents how many units of the likelihood of the relevant strategy increase as the importance of the goal increases by one unit, holding all else constant.

The significance tests for γ s, as shown in Table 23, were based on a comparison with the reference group in Condition 8. Condition 1 created high importance of support goals and instrumental cooperative goals. Condition 3, in manipulating cooperative goals, only created high importance of support goals, but fell short in creating high importance of instrumental cooperative goals. Condition 4 created high importance of rivalry goals (both enmity and instrumental competitive goals) and low importance of cooperative goals (both support and instrumental cooperative goals).

Conditions 5, 6, and 7 were all intended to induce low importance of rivalry goals. Condition 5, 6, and 7 were also intended to induce high importance of support goals (Condition 5), instrumental cooperative goals (Condition 6), and cooperative goals (Condition 7). For Condition 5, the importance of enmity goals and

instrumental competitive goals were both non-significant, but the importance of support goals was successfully induced. Similarly, for Condition 6, the importance of enmity goals and instrumental competitive goals were not significant, but the high importance of instrumental cooperative goals was created. Condition 7 successfully created low importance of enmity goals and instrumental competitive goals, as well as high importance of support goals and instrumental cooperative goals.

Condition 9 was intended to induce low importance of support goals and high importance of instrumental reliance goals. One component of the instrumental reliance goals—instrumental cooperative goals—was significant in the planned direction. The condition did not create high importance of instrumental competitive goals and low importance of support goals.

Condition 10, 11, and 12 had the same manipulations of goals as in Conditions 5, 6, and 7, respectively; the two groups of conditions vary only in the temporal duration (i.e., short-term vs. long-term). For Conditions 10 through 12, the importance of enmity goals and instrumental competitive goals were not induced in the intended direction. However, the importance of cooperative goals was successfully induced: High importance of support goals was created in Condition 10, high importance of instrumental cooperative goals was created in Condition 11, and high importance of cooperative goals was created in Condition 12.

The β coefficients in Table 23 reflected the changes in the likelihoods of avoidance strategies brought about by changes in the importance of goals. Withdrawal was hypothesized to be positively influenced by importance of cooperative goals, but neither support goals nor instrumental cooperative goals had a

significant effect. Passive competition was caused by high importance of instrumental competitive goals and low importance of instrumental cooperative goals; enmity goals and support goals were not significant causes.

Pretending was caused by high importance of instrumental competitive goals and low importance of enmity goals. Importance of support goals and importance of instrumental cooperative goals were not significant causes of pretending. Exit was caused by high importance of enmity goals and instrumental competitive goals and low importance of support goals. Importance of instrumental cooperative goals was not a significant cause of exit. Outflanking was caused by high importance of instrumental competitive goals; importance of support goals and importance of instrumental cooperative goals were not significant causes of this strategy. Yielding was caused by high importance of support goals. Importance levels of enmity goals, instrumental competitive goals, and instrumental cooperative goals were not significant causes of yielding.

Hypotheses Testing

To test the 12 hypotheses that state the relationships between the importance of goals and the likelihoods of avoidance strategies, the total effects of the experimental conditions on their relevant outcome variables were examined.

H1a states that the importance of support goals positively predicts the likelihood of withdrawal, *ceteris paribus*. The hypothesis was not supported. The total effect from Condition 1 to unresponsiveness was not significant, total effect $b = -0.01$, $z = -0.03$, $p > .05$.

H1b states that the importance of instrumental cooperative goals positively

predicts the likelihood of unresponsiveness, *ceteris paribus*. The hypothesis was not supported. The total effect from Condition 2 to unresponsiveness was not significant, total effect $b = -0.45, z = -1.40, p > .05$.

H1c states that the importance of cooperative goals positively predicts the likelihood of unresponsiveness, *ceteris paribus*. The hypothesis was not supported. The total effect from Condition 3 to unresponsiveness was not significant, total effect $b = -0.27, z = -0.47, p > .05$.

H2 states that *ceteris paribus*, the combined effect of high importance of rivalry goals and low importance of cooperative goals positively predicts the likelihood of passive competition. The hypothesis was supported, total effect $b = 11.65, z = 4.85, p < .01$. The total effect from Condition 4 to passive competition was significant.

H3a states that the combined effect of low importance of rivalry goals and high importance of support goals positively predicts the likelihood of pretending, *ceteris paribus*. The total effect from Condition 5 to pretending was not significant, total effect $b = -2.35, z = -1.15, p > .05$. The hypothesis was not supported.

H3b states that the combined effect of low importance of rivalry goals and high importance of instrumental cooperative goals positively predicts the likelihood of pretending, *ceteris paribus*. The total effect from Condition 6 to pretending was not significant, total effect $b = 1.99, z = 1.41, p > .05$. The hypothesis was not supported.

H3c states that the combined effect of low importance of rivalry goals and high importance of cooperative goals positively predicts the likelihood of pretending, *ceteris paribus*. The total effect from Condition 7 to pretending was not significant,

total effect $b = -1.53$, $z = -0.76$, $p > .05$. The hypothesis was not supported.

H4 states that the importance of reliance goals negatively predicts the likelihood of exit, *ceteris paribus*. Because the condition to test H4 was used as the reference group in the dummy coding, the coefficients from the importance of the four goals to exit, instead of a total effect, were examined. Although the importance of support goals ($b = 0.48$, $z = -7.02$, $p < .01$) negatively predicted exit, the importance of enmity goals ($b = 0.40$, $z = 3.44$, $p < .01$) and instrumental competitive goals ($b = 1.34$, $z = 4.14$, $p < .01$) positively predicted exit. The importance of instrumental cooperative goals ($b = 0.01$, $z = 0.07$, $p > .05$) did not predict exit. Therefore, the hypothesis was not supported. Even if the total effect from Condition 8 to exit were significant, the directions of some individual coefficients were not in accordance with the hypothesis.

H5 states that the combined effect of low importance of support goals and high importance of instrumental reliance goals positively predicts the likelihood of outflanking, *ceteris paribus*. The total effect from Condition 9 to outflanking was not significant, total effect $b = -1.43$, $z = -1.01$, $p > .05$. The hypothesis was not supported.

H6a states that the combined effect of low importance of rivalry goals and high importance of support goals positively predicts the likelihood of yielding, *ceteris paribus*. The total effect from Condition 10 to yielding was significant, total effect $b = 4.78$, $z = 2.88$, $p < .01$. The hypothesis was supported.

H6b states that the combined effect of low importance of rivalry goals and high importance of instrumental cooperative goals positively predicts the likelihood

of yielding, *ceteris paribus*. The hypothesis was not supported: The total effect from Condition 11 to yielding was not significant, total effect $b = 0.20$, $z = 0.35$, $p > .05$.

H6c states the combined effect of low importance of rivalry goals and high importance of cooperative goals positively predicts the likelihood of yielding, *ceteris paribus*. The total effect from Condition 11 to yielding was significant, total effect $b = 4.19$, $z = 2.86$, $p < .01$. The hypothesis was supported.

Post-Hoc Analyses

Three post-hoc analyses were conducted to further explore the relationships between interpersonal conflict goals and the likelihood of conflict strategies. First, principal component analyses were performed on the types of goals and the types of avoidance strategies to identify the characteristics of the principal component(s) formed in each group; a follow-up SEM was performed to investigate the relationships between the extracted principal components. Second, the importance levels of the four goals were used to predict the likelihoods of the other four conflict strategies proposed in the previous two-dimensional conflict strategy literature (i.e., accommodation, domination, compromise, and integration; Rahim, 1983). Finally, to explore the relationships between the avoidance strategies and the other conflict strategies, a principal component analysis was performed among all the conflict strategies used in the study.

Goals and Avoidance Strategies

Interrelations among avoidance strategies. To test the interrelationships among the six types of avoidance strategies, a principal component analysis with oblique rotation was performed. As indicated earlier (i.e., in Table 10), the six

variables were represented by their first principal components extracted from their indicators. Two components with an eigenvalue above 1 were maintained. The scree plot is shown in Figure 4.

Four strategies that appear to be passively aggressive, or involving a communication breakdown, loaded highly together on the first component: withdrawal, passive competition, exit, and outflanking. The second component contained two avoidance strategies that involve communication maintenance: pretending and yielding (see Table 25). Thus, the first component, with an eigenvalue of 2.76 explaining 46.01% of the total variance, was labeled communication avoidant strategies. The second component, with an eigenvalue of 1.25 explaining 20.79% of the variance, was named issue avoidant strategies. The correlation between the two components was .14 ($p < .05$).

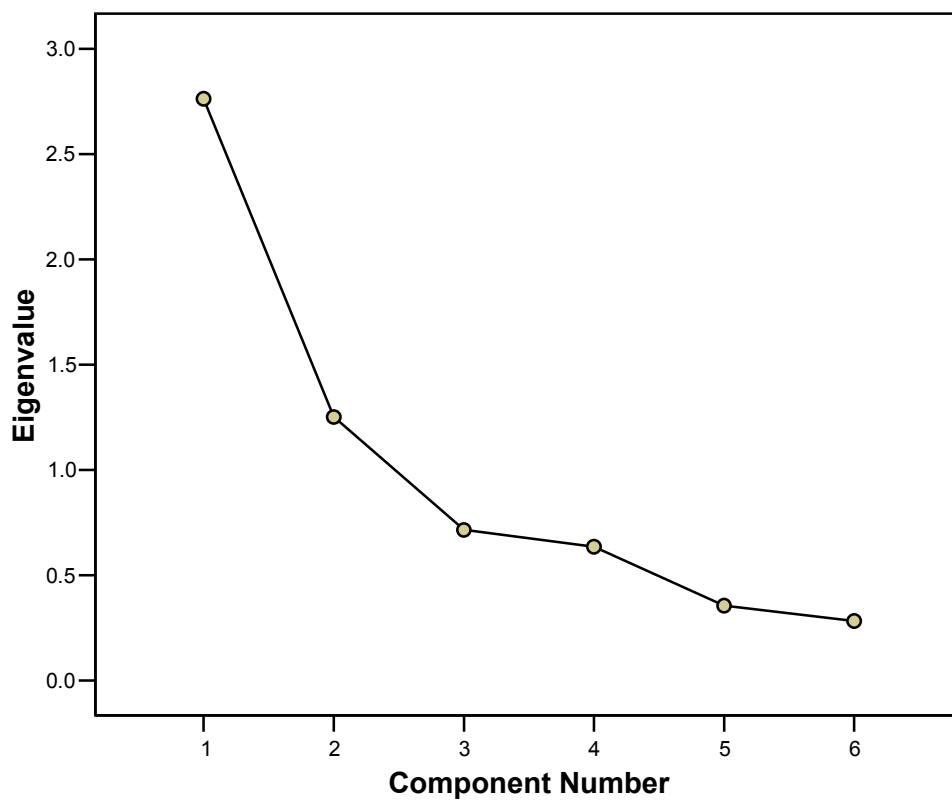


Figure 4. Scree plot for the principal components extracted from the likelihood of the six avoidance strategies. Each variable was represented by its first component scores extracted from its indicators as shown in Table 10.

Table 25

*Loadings of Likelihoods of Six Avoidance Strategies on Two Principal Components**(Oblique Rotation)*

	Component	
	1	2
Withdrawal	.723	.351
Passive Competition	.870	-.016
Pretending	.380	.601
Exit	.857	-.201
Outflanking	.677	-.023
Yielding	-.217	.895
Eigenvalue	2.76	1.25
% Variance Explained	46.01%	20.79%

Interrelations among goals. Another principal component analysis was performed on the four types of goals. Again, as indicated earlier (i.e., in Table 10), the four variables were represented by their first component scores extracted from their indicators. One component with an eigenvalue of 2.33, explaining 58.23% of the total variance, was extracted with Kaiser's rule (see the scree plot in Figure 5). The two competitive goals (enmity goals and instrumental competitive goals) had high negative loadings on this component, whereas the two cooperative goals (support goals and instrumental cooperative goals) had high positive loadings (Table 26). Therefore, the data suggest that competitive goals and cooperative goals are at the ends of one component. This component was labeled cooperation-competition.

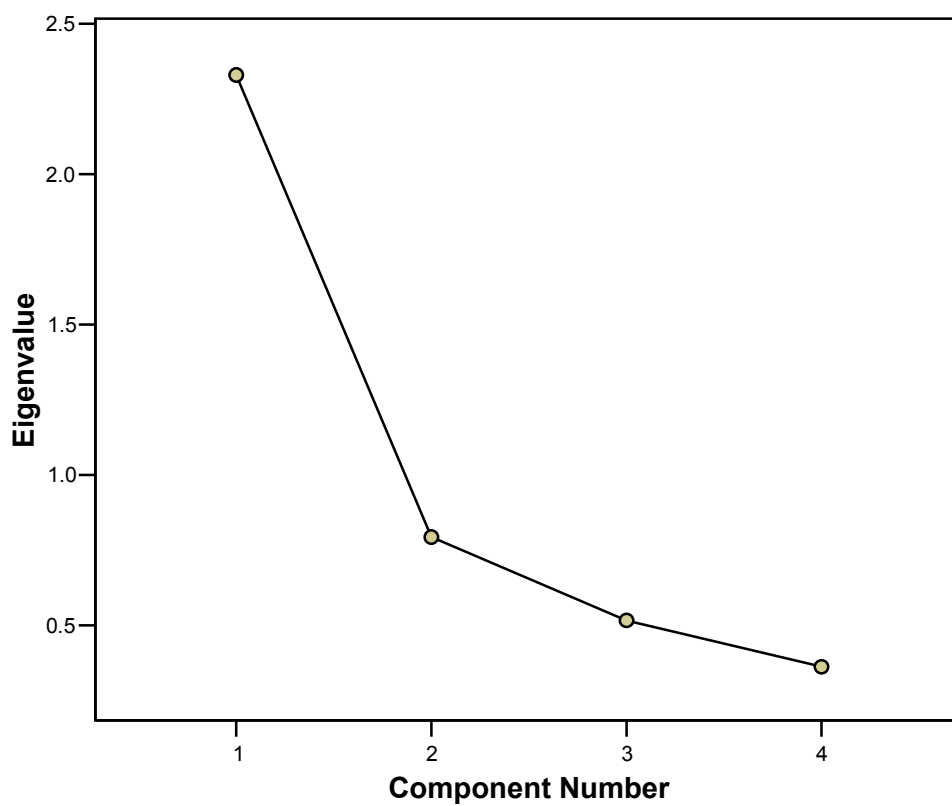


Figure 5. Scree plot for the principal components extracted from the importance of the four goals. Each variable was represented by its first component scores extracted from its indicators as shown in Table 10.

Table 26

Loadings of the Four Goal Importance Variables on One Principal Component

	Component
	1
Enmity Goals	-.860
Instrumental Competitive Goals	-.634
Support Goals	.804
Instrumental Cooperative Goals	.735
Eigenvalue	2.33
% Variance Explained	58.23%

Relationships among the three extracted components. To further explore the relationship between the two avoidance components and the goal component, SEM was performed using LISREL 8.70. The three variables were represented by their principal components separately. The extracted principal component of cooperation-competition was entered as the independent variable; the extracted principal components of communication avoidant strategies and issue avoidant strategies were entered as the dependent variables. Errors were allowed to covary. The model was just-identified.

Both structural coefficients from cooperation-competition to the communication avoidant strategies ($b = -.46, z = -9.64, p < .001, R^2 = .276$) and to the issue avoidant strategies ($b = .42, z = 8.45, p < .001, R^2 = .176$) were significant (Figure 6). Importance of cooperative goals positively predicted whereas importance of competitive goals negatively predicted likelihood of issue avoidant strategies. The opposite prediction was true for communication avoidant strategies: Importance of cooperative goals negatively predicted whereas importance of competitive goals positively predicted likelihood of communication avoidant strategies. This model was just-identified.

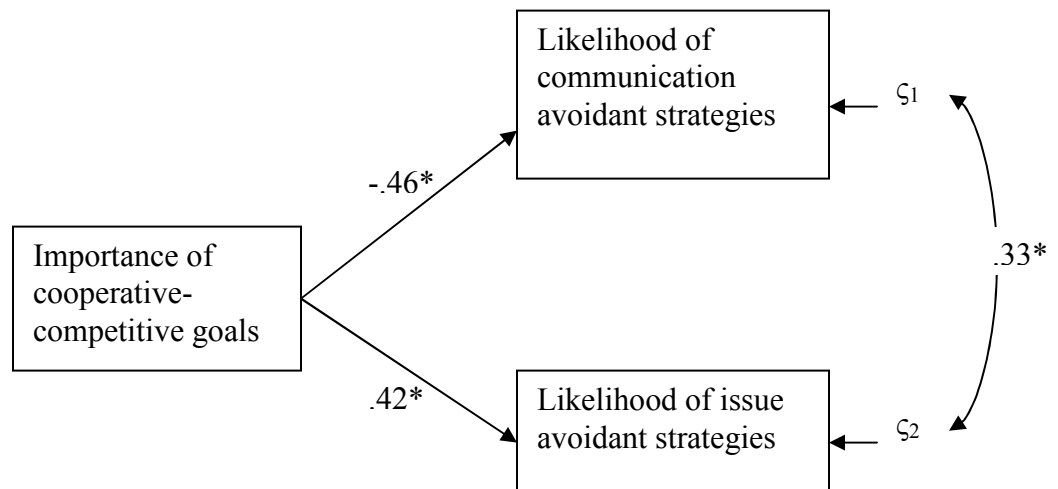


Figure 6. Structural relations between cooperation-competition and communication avoidant strategies and issue avoidant strategies. * $p < .01$.

Regressing Likelihoods of Other Conflict Strategies on Importance of Goals

This post-hoc analysis was done to test the linear relationships between the importance of the four goals and the likelihood of four other types of strategies proposed in the conflict literature: accommodation, domination, compromise, and integration. All the variables were represented by their first principal components based on the earlier principal component analyses.

The importance of the four goals together significantly predicted the likelihood of accommodation, $F(4, 333) = 32.57, p < .001, R^2 = .281$, adjusted $R^2 = .273$. Enmity goals ($b = -.13, t[333] = -2.04, p < .05$) and support goals ($b = .36, t[333] = 5.84, p < .001$) had significant unique contributions to accommodation, but instrumental competitive goals ($b = .07, t[333] = 1.29, p > .05$) and instrumental cooperative goals ($b = .09, t[333] = 1.54, p > .05$) did not make significant unique contributions to the prediction.

The importance of the four goals together significantly predicted the likelihood of domination, $F(4, 334) = 46.17, p < .001, R^2 = .356$, adjusted $R^2 = .348$. Enmity goals ($b = .28, t[334] = 4.42, p < .001$) and instrumental competitive goals ($b = .39, t[334] = 7.72, p < .001$) had significant unique contributions to domination, but support goals ($b = .01, t[334] < 1$) and instrumental cooperative goals ($b = -.04, t[334] < 1$) did not make significant unique contributions to the prediction.

The importance of the four goals together significantly predicted the likelihood of compromise, $F(4, 334) = 26.36, p < .001, R^2 = .240$, adjusted $R^2 = .231$. Enmity goals negatively ($b = -.31, t[334] = -4.57, p < .001$) yet instrumental cooperative goals positively ($b = .25, t[334] = 4.26, p < .001$) predicted compromise.

Support goals ($b = -.02$, $t[334] < 1$) and instrumental competitive goals ($b = -.05$, $t[334] < 1$) did not make significant unique contributions to the prediction.

The importance of the four goals together significantly predicted the likelihood of integration, $F(4, 335) = 45.77$, $p < .001$, $R^2 = .353$, adjusted $R^2 = .346$. Similar to the results of compromise, enmity goals negatively ($b = -.36$, $t[335] = -5.82$, $p < .001$) yet instrumental cooperative goals positively ($b = .30$, $t[335] = 5.69$, $p < .001$) predicted compromise. Support goals ($b = .05$, $t[335] < 1$) and instrumental competitive goals ($b = -.03$, $t[335] < 1$) did not make significant unique contributions to the prediction.

Principal Component Analysis on Avoidance and Other Conflict Strategies

To explore how the proposed avoidance strategies relate to the other conflict strategies mentioned in the literature (e.g., accommodation, domination, compromise, and integration), a principal component analysis with oblique rotation was performed among the six avoidance strategies and the four other conflict strategies.

The data yielded three components with eigenvalues over 1. The first component had an eigenvalue of 3.83 and explained 38.33% of the total variance in the set of conflict strategies. The second component had an eigenvalue of 1.93, explaining 19.29% of the total variance. The last component had an eigenvalue of 1.00, explaining 10.01% of the variance. The three components together explained 67.63% of the total variance.

Withdrawal, passive competition, and exit had positive loadings and compromise and integration had negative loadings on the first principal component. Similar to the structure found among the six avoidance strategies, the loadings on this

component all indicate the tendency to cease communication. Pretending, yielding, and accommodation had high loadings on the second component. These loadings indicate the tendency to maintain communication and avoid argument about an issue. As earlier analyses have shown, these three strategies were all caused by high importance of some cooperative goals (either instrumental cooperative or support goals). This component can be considered as composed of cooperative or accommodating strategies.

Outflanking and domination loaded highly on the third component, indicating that direct and indirect strategies to pursue an issue have much in common. Earlier findings have shown that both domination and outflanking are driven by some competitive goals. Although outflanking has avoidant features such as avoiding direct communication with the other to resolve conflict, the data suggest that outflanking is an active method to pursue a conflict, just as domination is.

The interrelations between the three principal components are found in Table 27. The scree plot and the loadings matrix of this principal component analysis are displayed in Figure 7 and Table 28, respectively. Table 29 reports the correlation coefficients between the likelihoods of conflict strategies. Again, the likelihood of each strategy was represented by its first principal component from earlier principal component analyses.

Table 27

Correlation Coefficients Between Three Principal Components Extracted from Conflict Strategies (Avoidance and Other)

Principal Component	1	2
1		
2	-.04	
3	.44*	-.10

* $p < .01$.

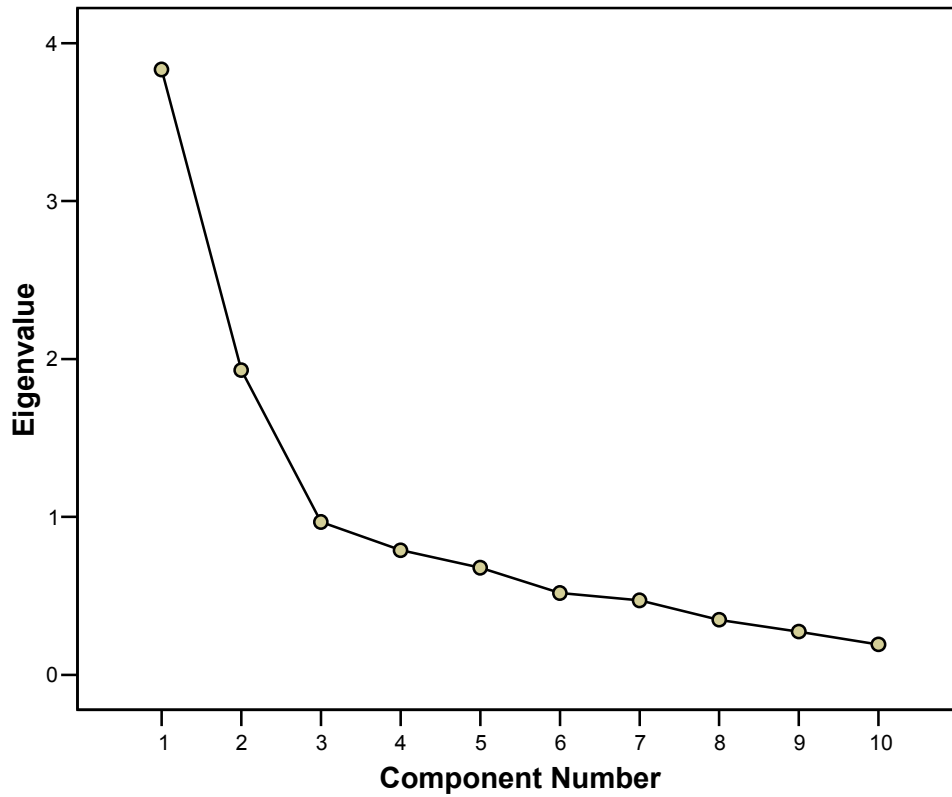


Figure 7. Scree plot for the principal components among the likelihood of the conflict strategies. Each variable was represented by its first component scores extracted from its indicators as shown in Table 10.

Table 28

Loadings of Likelihoods of Conflict Strategies (Avoidance and Other) on Three Principal Components

	Component		
	1	2	3
Withdrawal	.787	.414	-.023
Passive Competition	.776	.051	.175
Pretending	.317	.582	.240
Exit	.815	-.047	-.007
Outflanking	.122	.158	.792
Yielding	-.014	.708	-.033
Accommodation	-.147	.673	-.221
Domination	-.140	-.156	.898
Compromise	-.559	.544	-.074
Integration	-.741	.422	-.027
Eigenvalue	3.83	1.93	1.00
% Variance Explained	38.33%	19.29%	9.99%

Table 29

Correlation Coefficients Between Likelihoods of Conflict Strategies (Avoidance and Other)

	1	2	3	4	5	6	7	8	9	10
1. Withdrawal	1.00									
2. Passive Competition	.62**	1.00								
3. Pretending	.44**	.26**	1.00							
4. Exit	.54**	.65**	.24**	1.00						
5. Outflanking	.36**	.50**	.31**	.37**	1.00					
6. Yielding	.18**	-.02	.22**	-.18**	-.05	1.00				
7. Accommodation	.01	-.20**	.11*	-.21**	-.19**	.42**	1.00			
8. Domination	.12*	.35**	.07	.26**	.45**	-.14*	-.29**	1.00		
9. Compromise	-.17**	-.46**	-.01	-.36**	-.26**	.24**	.46**	-.35**	1.00	
10. Integration	-.34**	-.57**	-.10*	-.54**	-.33**	.21**	.42**	-.34**	.77**	1.00

** $p < .01$, * $p < .05$.

Note. Each variable was represented by its first component score extracted from its indicators as shown in Table 10.

CHAPTER V

Discussion

This chapter consists of four parts. The first part provides a summary of the study. The second part summarizes and interprets the results and discusses the study's implications. Limitations of the study and directions for future research compose the third part. The chapter ends with the significance of the study and a conclusion.

Summary of the Study

This study was designed to answer the following question: Under what circumstances do people use avoidance as a strategy to deal with interpersonal conflict? This study investigated the links between interpersonal goals and avoidance strategies. A typology of goals in interpersonal conflict situations and a typology of avoidance strategies were developed. A model that specified 12 situations in which a goal or a combination of goals predicted different avoidance strategies was then proposed to link interpersonal goals to avoidance strategies.

Twelve goal inductions corresponding to the 12 hypotheses were created. Each goal induction was placed in one of two hypothetical conflict scenarios, thereby creating 24 experimental conditions. In all these conditions, a gender neutral name, Casey, was used to refer to the hypothetical other person involved in the conflict scenarios.

Prior to the formal study, four pilot studies were conducted to (a) test and improve the items that measure the constructs and (b) test and improve the realism of manipulations that would be used in the formal study. The experimental manipulations and instruments that resulted from these pilot tests were then used in

the formal study.

The formal study involved 352 participants enrolled at a large eastern university. Each participant was randomly assigned to one of the 24 experimental conditions. The experiment employed questionnaires. The questionnaire started with a scenario that described a hypothetical conflict with Casey and reflected the goal manipulation, followed by the manipulation checks to see whether the targeted goals in the message had been considered important by the participants. The next part of the questionnaire asked the participants to report their likelihood of using different strategies (including avoidance and other conflict strategies) to respond to the conflict situation. Participants' demographic information was collected in the last part of the questionnaire.

Preliminary analyses indicated that type of scenario (classmate vs. colleague) did not have a main effect on the likelihoods of avoidance strategies, so the conditions differentiated by the two scenarios were merged in further analyses. Preliminary analyses also found that indicators in all but one measurement model captured the information of their intended constructs, and that the manipulations were successful. The hypotheses were evaluated using structural equation modeling. The experimental conditions were dummy coded and entered as independent variables. The importance levels of goals were mediators, and the likelihoods of avoidance strategies were outcome variables. Post-hoc analyses were done to further explore the relationships between goals and conflict strategies.

Summary and Interpretation of Results

Hypotheses 1a, 1b, and 1c: The Goals Predicting Withdrawal

Withdrawal refers to the avoidance strategy in which the actor avoids both the person and the issue in the immediate situation. Because withdrawal signals an actor's effort to avoid further argument, it may be a cooperative strategy. Hence, support goals (H1a), instrumental cooperative goals (H1b), and a combination of both (H1c) were expected to predict withdrawal.

However, none of these hypotheses were supported. Indeed, the signs of the statistics were negative although not significant, suggesting that withdrawal is not a product of cooperative goals. As shown in the later principal component analysis among the avoidance strategies, withdrawal is associated with passive competition, outflanking, and exit, all of which involve discontinuing communication with the other person (i.e., communication avoidant strategies). These four avoidance strategies are also caused by high competition and low cooperation. The principal component analysis among all the conflict strategies further confirmed the competitive element in withdrawal through its association with passive competition and exit, and its distance from two cooperative strategies, compromise and integration. Therefore, withdrawal implies more competition than cooperation.

Hypothesis 2: The Goals Predicting Passive Competition

Passive competition refers to the actor's avoidance of the person in the immediate situation but not of the issue. Because passive competition is a bold face-threatening act that undermines involvement in communication, passive competition suggests little concern for cooperation for either affection needs (support goals) or instrumental purposes (instrumental cooperative goals). Passive competition shows the actor's high need for actualizing his or her wishes (instrumental competitive

goals) and high need for putting his or her feelings above the other (enmity goals). Therefore, H2 states that the presence of both high importance of rivalry goals and low importance of cooperative goals predicts passive competition.

H2 was supported. Importance of instrumental competitive goals and enmity goals positively predicted while importance of instrumental cooperative goals and support goals negatively predicted likelihood of passive competition. Among the four goals, the importance of instrumental competitive goals contributed the most to a greater likelihood of passive competition, followed by the importance placed on instrumental cooperative goals. These findings suggest that passive competition is a strategy that results mainly from high concerns for instrumental gains.

Although domination was also predicted by instrumental competitive goals, the decision to use passive competition or domination seems to be determined by the actor's concern for future cooperation with the other person. Low importance of instrumental cooperative goals led to passive competition, but it did not lead to domination. These findings suggest that when people have high instrumental competitive needs, they may choose to argue with the other party until he or she submits (i.e., domination) or start doing what they want without further efforts of verbal engagement (i.e., passive competition). The latter is more likely to occur when the actor does not need to worry about future cooperation with the other party. As argued in the first chapter, passive competition, involving some conflict avoidance, may be a more aggressive strategy than domination.

Hypotheses 3a, 3b, and 3c: The Goals Predicting Pretending

Pretending is avoiding the issue but not the person in the immediate conflict

situation. Because pretending demonstrates the actor's effort to maintain communication, it may be a strategy preceded by high importance of cooperation together with low importance of competition; the cooperative purpose can originate from support goals (H3a), instrumental cooperative goals (H3b), or both (H3c).

These hypotheses were not supported. Nevertheless, two intriguing findings in the post-hoc analyses relate to this set of hypotheses. First, pretending was predicted positively by cooperative goals and negatively by competitive goals. In other words, the higher the importance placed on cooperative goals, the more likely the pretending. Because the post-hoc principal component analysis among the four goals indicates that enmity goals and support goals were at opposite ends of a single component, and pretending was negatively predicted by enmity goals, pretending should be positively predicted by support goals.

Second, an examination of β coefficients from the importance of goals to pretending leads to the finding that high importance of instrumental competitive goals causes pretending (see Table 23). Although pretending clustered with yielding and accommodation in the post-hoc principal component analysis, pretending has an important difference from the other two regarding their antecedents: High importance of instrumental competitive goals is a cause of pretending, but not a cause of yielding or accommodation. This finding suggests that avoiding the issue during the interaction (i.e., pretending) is quite different from avoiding the issue in the long run (i.e., yielding and accommodation). Communication maintenance in the immediate situation is not necessarily a sign that the actor gives up on the issue. Instead, competitive goals may motivate a person to use pretending. Pretending could be used

to prevent a relationship from deterioration through unpleasant verbal engagement. Then other ways may be sought to actualize competitive goals. In contrast, yielding and accommodation did not have competitive goals as antecedents. Yielding and accommodation may mean complete giving in because of the lengthened duration of avoiding the issue and continued interaction with the person. The short-term versus long-term use of issue avoidant strategies appears to result from different goals and may have different consequences.

Hypothesis 4: The Goals Predicting Exit

Hypotheses 4 through 6 make predictions about three long-term avoidance strategies. Exit refers to avoiding both the issue and the person in the long run. Exit, because of its complete abandonment of the relationship and the issue, was described as a strategy caused by the absence of competitive or cooperative goals: If the actor wants to gain something, he or she will not leave; if the actor wants to work with the other person in the future, he or she will also not leave; if there is anything that the actor wants, he or she will not leave. Therefore, H4 predicts that when all goals have low importance, the actor will choose to exit.

This hypothesis was not supported. Although low importance of support goals caused exit, high importance of enmity goals and instrumental competitive goals also caused exit. These results imply that exit may not result from passivity about the relationship and the issue, but a strategy to show competitive motivations. The post-hoc component analyses among all conflict strategies showed that exit clusters with withdrawal and passive competition, both of which involve discontinuation of communication. Cooperative strategies such as compromise and integration (see, e.g.,

Cai & Fink, 2002) loaded negatively on the same component with these communication avoidant strategies. Communication avoidant strategies were also predicted negatively by cooperative goals and positively by competitive goals. Therefore, even though exit appears to be an escape from conflict engagement, it is a negative strategy of communication.

Hypothesis 5: The Goals Predicting Outflanking

Outflanking is a long-term strategy to avoid the person but not the issue. One example is to use a more powerful third party than either the actor or the opponent to enforce the actor's needs (Tjosvold & Sun, 2002). The actor who uses outflanking shows a clear intention to compete against the opponent because personal ideas on the issue are asserted. Such an indirect rather than a direct strategy hints at the actor's intention not to offend the other person by face-to-face engagement in conflict. Because going behind a person's back shows a lack of affection (e.g., Rusbult, 1987), it was predicted that an actor's intention to not be offensive would result from instrumental cooperative rather than support goals. H5 states that a combination of high importance of instrumental reliance goals (i.e., instrumental competitive and instrumental cooperative goals) and low importance of support goals leads to outflanking.

This hypothesis was not supported. The only significant goals that predicted outflanking were instrumental competitive goals. The principal component analysis among the avoidance strategies grouped outflanking together with withdrawal, passive competition, and exit. The principal component analysis among all conflict strategies grouped outflanking with domination. These findings indicate that

outflanking is an instrumental competitive strategy similar to domination. Some people feel comfortable using argumentative strategies to get what they want; others may feel that using a third party such as an authority figure or a mediator is preferable. Outflanking should not be considered to be a backstabbing strategy but rather as one way that some people choose to fulfill their goals in a conflict situation.

Hypotheses 6a, 6b, and 6c: The Goals Predicting Yielding

The last avoidance strategy, yielding, refers to avoiding the issue but not the person in the long run. It is tantamount to a long-term accommodation strategy (see, e.g., Rahim, 1983). Willingly or not, yielding denotes giving up on the issue and maintaining communication with the other party. Yielding is caused by a combination of low importance placed on the two competitive goals (enmity goals and instrumental competitive goals) and high importance placed on support goals (H6a), instrumental cooperative goals (H6b), or both (H6c).

Results supported H6a and H6c, but not H6b. These results suggest that the low importance placed on the two competitive goals is necessary to cause yielding. Also, high importance placed on support goals or high importance on both support and instrumental cooperative goals is necessary to cause yielding. Cooperation based on instrumental goals alone does not lead to yielding. The implication is that yielding may be a strategy that involves affection needs. Cooperation with the other person only for an instrumental purpose does not lead to the likelihood of yielding. Further analyses have provided additional evidence for this interpretation.

First, high importance of support goals was the most important predictor (largest β coefficient) of yielding among all goal importance variables (see Table 23).

Second, yielding was predicted positively by cooperation and negatively by competition. Finally, yielding was predicted negatively by enmity goals and positively by support goals. Taken together, the most important goals (with the largest β coefficient as shown in Table 23) that yielding serves are support goals, which involve high cooperative needs because of care and affection. In other words, the actor that chooses to yield may explain his or her action by saying, "I give in to you because I care about you."

Limitations of the Study

This study has three main limitations: the quality of measurement models, the hypothetical scenarios used, and a potential multicollinearity problem.

Quality of the Measurement Models

The current research proposed two typologies and a model to link the two typologies. Each construct proposed in the typologies was measured by four items. For the study to be manageable, a very small number of participants were used in the pilot studies. Informative evidence, rather than statistical results, was used to determine the final items for each construct.

Reliability coefficients and indices derived from measurement models indicated that the reliability and the dimensionality of the items were acceptable, and in some cases good. However, a more careful procedure could have been done to develop the instruments. Netemeyer, Bearden, and Sharma (2003) specified four steps in scale construction. First, the construct and its content domain should be defined. Second, measurement items should be generalized and evaluated; usually a large quantity of measurement items should be developed in this step. Third, multiple

studies (with multiple samples) should be conducted for initial development and validation; items should be submitted to exploratory factor analysis and reliability tests. Fourth, the items should be finalized and should be tested using confirmatory factor analyses with additional samples. Future research may focus specifically on the development and assessment of measurement models to better represent the constructs proposed in this study.

Hypothetical Scenarios Versus Interactions

The second limitation of this study was that this study used the method of hypothetical situations to test the model, in which importance of goals was first manipulated, and the likelihood of using avoidance strategies was measured. The time ordering and the structural equation modeling allowed specifications of the causal links between goals and avoidance strategies. Nonetheless, the applicability of the results from hypothetical situations to actual interactions may be questioned. A researcher has to rely on the participants' trustworthiness of self-report, awareness of their own intentions, and ability to identify the sources of their behaviors to generate results from hypothetical situations to actual interactions. However, people are often unable to recognize the influences on their behaviors (e.g., Jones & Nisbett, 1971; Nisbett & Bellows, 1977). People sometimes invent goals to make sense of their behaviors (Donohue, 1990). Therefore, the results from these hypothetical conflict scenarios may not necessarily apply to interactions.

Multicollinearity

Multicollinearity may have limited the results of the study. The current study aimed to specify conditions that may cause an avoidance strategy to occur, and

therefore used an experimental design with stringent propositions. The use of dummy variables as the independent variables in SEM may have created a multicollinearity problem. Multicollinearity can pose a problem in SEM because it may result in a singular matrix or a matrix with a determinant close to zero. A small determinant of the correlation (or covariance) matrix of the independent variables can easily lead to non-significant and unstable structural coefficients (Kline, 2005). In such cases, the unique contribution from each experimental condition may not be statistically significant. In fact, the determinant of the correlation matrix was .021.

Multicollinearity may partly explain why only one-fourth of the hypotheses were supported.

Future research may divide the larger model proposed in this study into sub-models, each of which focuses on testing the relationship between goals and one type of avoidance strategy. Such an approach may help avoid the problem of multicollinearity.

Directions for Future Research

The above section discusses the procedural limitations in conducting the study. The model proposed in this study can be improved in at least two ways. These improvements do not represent the limitations of the study. Rather, they have arisen from examination of the data and shed some light on future research directions. The two aspects are re-specifying the function of goals in predicting certain avoidance strategies and using other methods (especially interaction) to test and improve the model.

What is in the Black Box?

The cognitive model linking interpersonal conflict goals to avoidance strategies proposed in the study specified 12 situations in which a goal or a combination of goals leads to a certain avoidance strategy. As indicated earlier, 10 out of 12 situations depict a combination of goals. In these situations, the importance of some goals has to be high, the importance of other goals has to be low, and unmentioned goals have the implied importance level of zero. These situations may involve interactions reflecting some products of a 3 (enmity goals: negative, 0, positive) \times 3 (instrumental competitive goals: negative, 0, positive) \times 3 (support goals: negative, 0, positive) \times 3 (instrumental cooperative goals: negative, 0, positive) experimental design. But this design becomes very large and cumbersome. The number of cells makes it difficult to manage as an actual experiment. Therefore, the model in this research only focused on the cells with potential effects on the likelihoods of avoidance strategies.

Results indicated that out of the 12 specified hypotheses, only three were supported. Two reasonable follow-up questions are the following: Are the other specifications problematic? Are the avoidance strategies indeed predicted by interactions between goals? If the answer to the first question is positive, then future research should re-specify the situations that may predict the avoidance strategies. The second question is more complex. What if the effects of goals on avoidance strategies are not the result of interaction effects? What if the effects are additive? To answer these questions, a simple yet efficient way is to start from the scratch: Examine the effect of conflict goals on each avoidance strategy separately or use a simple experimental design to examine the relations between goals and avoidance.

Although the model proposed in this study has received partial support, the data provide directions for the future research. First, that the four types of goals loaded on one dimension indicates that cooperation and competition are indeed opposite goals. Therefore, instead of using four dimensions to produce a typology of goals, one dimension, the competitive-cooperative dimension, is good to start with. If emotional needs are of interest in a study, then two dimensions may be used (Table 30). The first dimension has competition versus cooperation as polar ends. The second dimension has instrumental versus emotional intentions as polar ends.

Table 30

A Recommended Typology of Goals

	Competitive	Cooperative
Emotional	Enmity Goals	Support Goals
Instrumental	Task Goals	Cooperative Goals

Second, the post-hoc principal component analysis among the avoidance strategies indicates the avoidance clusters into two groups: communication avoidant strategies and issue avoidant strategies. A way to look at these two clusters is that avoidance can be competitive or cooperative. Whereas withdrawal, passive competition, exit, and outflanking arise from competitive goals, pretending and yielding arise from cooperative goals. These findings provide direct support for the links from competitive goals to the first cluster and from cooperative goals to the second cluster. Future research can modify the model by specifying these parsimonious yet indirectly supported links. The black box question, however, remains and needs further consideration: Are the effects from goals to the likelihood of an avoidance strategy interactive or additive? To answer the question, an experiment using a 2 (enmity goals vs. support goals) \times 2 (task goals vs. cooperative goals) is a sensible start.

What are Other Ways to Test the Model?

As indicated in the limitations of the study, this study used hypothetical interactions instead of face-to-face interactions. Future research may use other methods to cross-validate the links between goals and avoidance strategies found in this study.

First, actual dialogues or behaviors that embody each type of avoidance strategy can be given to participants, who are asked to infer the actor's goals behind these behaviors. If the links from goals to avoidance strategies can be confirmed using this retrospective inference, then the model gains additional support. Second, participants can be asked to recall an episode in which they have used one of the

avoidance strategies (with an independent-groups design), and the motivations behind such a strategy. Cross-validation can then be done by analyzing what the participants have provided and what has been proposed in the model. This way the model may be modified to approach actual interaction situations. Third, a group of people who tend to use avoidance strategies can be identified; observations can be made and interactive dialogues analyzed to infer at what point the actors use avoidance, what type it is, and what motivations are behind it.

Significance of the Study and Conclusion

This study started by answering a simple yet long-neglected question: What goals do people have when they use avoidance as a strategy to resolve conflict? A cognitive model was proposed to link interpersonal conflict goals to avoidance strategies. This study successfully demonstrates that (a) different avoidance strategies exist, (b) different importance levels of goals predict these avoidance strategies, and (c) avoidance strategies and other conflict strategies may be motivated by similar or different goals.

Most of the existing research has focused on problem-solving strategies such as integration and compromise (see Kim & Leung, 2000, for a review). Until recently, a small number of researchers has focused on understanding why people avoid certain topics (e.g., Afifi & Guerrero, 2000; Leung, 1988; Roloff & Ifert, 2000) and how conflict is avoided (e.g., Tjosvold & Sun, 2002).

Understanding avoidance, however, may be more important in conflict communication than understanding problem-solving strategies. As Carrère and Gottman (1999) discussed, people should find clues of happy or problematic

marriages in what is unsaid rather than being fooled by verbal messages.

Stonewalling and contempt, for example, are two of the Four Horsemen that Gottman identified in an unhappy marriage (Gladwell, 2005). Stonewalling and contempt do not need verbal expression; they can be expressed through silence. Indeed, a person can express great hostility and defensiveness by avoidance. In contrast, avoidance can also be caused by awe, respect, or care for the other person, or by a fear of being abandoned (Roloff & Cloven, 1990).

These confounding characteristics of avoidance were the driving forces for this study. Six types of avoidance strategies were specified. The results suggest that positive or cooperative avoidance strategies differ from negative or competitive avoidance strategies. Further, the post-hoc principal component analysis showed that withdrawal, passive competition, and exit loaded positively, and compromise and integration loaded negatively, on one component. Pretending, yielding, and accommodation all loaded positively with compromise and integration on the second component. Outflanking and domination loaded on the third component.

Withdrawal is a competitive avoidance strategy, grouped with passive competition and exit. Withdrawal was negatively predicted by cooperation and positively by competition. Passive competition, similar to domination, is a competitive strategy caused by competitive goals. What differentiates passive competition from domination is that low importance of instrumental cooperative goals is a cause for passive competition, but not for domination. Therefore, passive competition is a less cooperative strategy than domination. Exit is not a strategy that is rooted in the absence of any goal; instead, exit is a strategy motivated by high

competitive and low cooperative needs. Withdrawal, passive competition, and exit are used to express competition at the socioemotional level or the task level, unlike the stereotype found in the traditional two-dimensional models of conflict behaviors (e.g., Pruitt & Rubin, 1987).

Yielding represents the other end of avoidance strategies; it is caused by the high importance placed on affection needs. One of the necessary conditions for yielding is the presence of support goals. Another necessary condition is low importance of competitive goals. These results help distinguish yielding from the competitive avoidance strategies such as those mentioned in the above paragraph.

Pretending is similar to yielding in that it is predicted by high importance of support goals. However, it differs from yielding in that pretending is also predicted by high importance of instrumental competitive goals. A person may switch the topic or give up on an issue on the spot; the person, however, may do so with strong competitive needs regarding the issue. In contrast, yielding means that the person gives up on the issue in the long run.

Outflanking, another avoidance strategy, has features similar to domination. In a culture that values direct communication, going behind a person's back tends to be considered conspiratorial, performed by a person who not only wants to beat the opponent materially, but also socioemotionally. Nonetheless, this study demonstrates that outflanking is only predicted by high importance of instrumental competitive goals. Thus it may just be another strategy used to compete against an opponent that only involves material gains, but does not necessarily involve backstabbing. This important finding may help people reconsider perceived enemies who resort to a third

party to resolve conflict (see, e.g., Tjosvold & Sun, 2002). Some people may lack verbal techniques to express their needs or find face-to-face arguments ineffective, and thus they may use outflanking to fulfill their needs.

This study contributes to the field of conflict management, and communication in general, in that it provides a theoretical framework for understanding avoidance. Although the study was focused on interpersonal conflict, the results can be extended cautiously to other contexts such as organizational communication. As indicated earlier, this study focuses on the link between goals and avoidance strategies in interpersonal conflict; the mechanism of this link should apply to various interpersonal conflict situations.

This study also contributes to the larger field of cognitive research. Three types of concepts are essential to cognitive research. These are “knowledge structures, cognitive processes, and limits on information processing” (Wilson, 2005, p. 247). Knowledge structures are organized schemata of knowledge about the world. Cognitive processes describe how information from outside world is accepted, tailored, stored, retrieved, and used to form plans of actions. Limits on information processing set the boundary regarding what people can be aware of (Wilson, 2005). The current study contributes to the understanding of these three types of concepts.

First, the success of goal manipulations indicate that competitive and cooperative goals about socioemotional or instrumental needs are stored in people’s knowledge structures. These goals can be activated by certain situational features. Second, although this study did not focus on the process that takes place after goal activation and before the output representation of strategies (see Greene, 1984, 1997;

Wilson, 1990, 1995), it attends to the beginning and the end of the process by addressing the following question: When one or a group of goals are considered important, what strategies will be the outcomes? The finding that cooperative goals lead to cooperative avoidance strategies (i.e., issue avoidant strategies) and competitive goals lead to competitive avoidance strategies (i.e., communication avoidant strategies) appear intuitive, but serves as empirical evidence regarding the association between goal types and avoidance strategy types.

Third, the dissertation also contributes to the understanding of the limits of information processing. Through a role-playing experiment, the success of goal manipulation and its effect on the likelihood of conflict strategies indicate that strategies are products of conscious choices. When the importance of certain types of goals is increased and brought to awareness, the likelihood of one or more conflict strategies being preferred also is increased. Although this study did not examine what determines the limits of people's capacity in conflict situations, it does provide information on the link between goals and strategies that are within people's capacity of awareness.

Different types of avoidance strategies relate to other conflict strategies. Each type of avoidance strategy has its own features. When used as a strategy in an interpersonal conflict, each avoidance strategy serves its unique goal antecedents. As the adage goes, "You cannot not communicate" (Watzlawick, Beavin, & Jackson, 1967, p. 24). This study demonstrates that avoidance has various facets and is not necessarily a passive or negative strategy. What is uncommunicated may imply more information than what is expressed. If the squeaky wheel gets oiled because of their

squeakiness, shouldn't more attention be given to the long-ignored, silent wheels?

Footnotes

¹ Whether communication is goal-oriented has been debated (e.g., Dillard & Schrader, 1998; Shepherd, 1998; Wilson, 2005). This dissertation only examines interpersonal conflict strategies that are goal-oriented. In the cognitive literature, a strategy is defined as a means to achieve goals (e.g., Greene, 1984, 1997; Dillard & Schrader, 1998; Schrader & Dillard, 1998; Wilson, 1990, 1995, 2005). The conceptualization of strategy involves goals; the link from a goal or a group of goals has also received empirical support (e.g., Booth-Butterfield, 1987; Cai & Wilson, 2000; Greene, 1984; Greene & Cappella, 1986; Greene & Lindsey, 1989; Samp, 2000; Schrader & Dillard, 1998). Therefore, the link between a goal and a strategy is assumed. Whether all communication behaviors are goal-oriented is beyond the discussion of this study.

² Hage and Marwell (1968) used these two elements because situational features such as *when* and *where* are important in comparing role relationships. People could take different roles in different situations. For example, a mother who is her child's teacher will have different role relationships at home (mother-child) and at school (teacher-student).

³ Some researchers may choose to distinguish between immediate, short-term, and long-term avoidance (e.g., avoiding the immediate situation, avoiding bringing up the situation until both parties cool down, and avoiding discussion forever). This dissertation uses a dichotomy to indicate representative types of avoidance strategies.

⁴ Some researchers may choose to include these two types in their studies because they represent the extreme types where none of the dimensional

characteristics are present (see Bailey, 1994). Such inclusion could facilitate comparisons between the ideal types that represent all qualities of the dimensions and those represent none of such qualities. They are omitted here, however, because the dissertation does not seek to differentiate between conflict confrontation and avoidance. Instead, emphasis is given to avoidance types only.

⁵ Although self-identity goals (defined as personal standards or intrinsic values, see Dillard et al., 1989) are not the focus of this study, they can be examined along the four dimensions proposed in this study. For example, if an individual competes with his or her intrinsic values with those of the other for material gains, the goal may be viewed as an instrumental competitive goal. If such competitive purpose originates from socioemotional needs (e.g., angered by violation of personal values), then the goal may be considered as an enmity goal.

⁶ Out of 90 possible main effects and interaction effects, only three (3.33%) were significant. Two significant main effects were participants' gender and Casey's gender on the likelihood of exit. A significant interaction effect was found between type of scenario, experimental condition, and participants' gender on the likelihood of withdrawal. Because of the small ratio of these three significant effects to the total number of possible effects and the increased amount of complexity by adding these variables in the later structural model, type of scenario, participants' gender, and Casey's gender were excluded.

⁷ Another way to conduct confirmatory factor analyses for the measurement models would be controlling for the group membership. Because manipulations should make participants respond differently to measurement items, measurement

models were submitted to confirmatory factor analyses, controlling for group membership. The results of the measurement model fits were close to the indices obtained without controlling for the group membership. These results are presented in Appendix P.

Appendix A

Instrument for Manipulation Checks

Enmity Goals

1. It is important to hurt Casey in some way. _____
2. It is important to let Casey feel hurt. _____
3. It is important not to let Casey feel inferior. (Reverse coded.) _____

Instrumental Competitive Goals

1. It is important to have the project done according to my idea. _____
2. It is important to defend my position on the project. _____
3. It is important to actualize my plan for this project. _____

Support Goals

1. It is important to have a truly caring relationship with Casey. _____
2. It is important to maintain mutual understanding with Casey. _____
3. It is important to have Casey feel my affection and care. _____

Instrumental Cooperative Goals

1. It is important to keep a functioning relationship with Casey
for possible future use. _____
2. It is important to be able to work with Casey on another project. _____
3. It is important to maintain a relationship with Casey just for the
possibility of future cooperation. _____

Appendix B

Instrument for the Avoidance Strategies

To Withdrawal

1. I will stop arguing and leave the scene.
2. I will avert the discussion temporarily.
3. I will not stop arguing. (Reverse coded.)
4. Withdrawal seems to be a good strategy to me.

To Passively Compete

1. I will stop arguing but begin to work on the project with my own ideas.
2. I won't argue any more but will do as I want.
3. Stop arguing and doing what I feel right is most important.
4. I will shut up and do what I think is right.

To Pretend

1. I will switch the topic.
2. I will pretend nothing was wrong.
3. I will suggest we do something else.
4. I will give up the issue tentatively by shifting the topic.

To Exit

1. I will ask to be removed from the team and will stop seeing Casey.
2. I will give up this project and never talk to Casey again.
3. I just want to be away from the project and Casey.
4. I will go on without this project or Casey in my life.

To Outflank

1. I will talk to our professor (boss) about my ideas.
2. I won't argue with Casey again but will think of something else to solve the problem.
3. I will go sideways (maybe talking to my professor [boss]) to solve the problem but won't argue with Casey.
4. I will solve the problem indirectly without having to discussing with Casey again.

Yielding

1. I won't talk about my different ideas and will remain Casey's friend.
2. I will give up arguing with Casey about the issue.
3. I will keep talking to Casey but not about the issue any more.
4. I will restrain myself from arguing about the issue with Casey in our future conversations.

Appendix C

Instrument for Other Conflict Strategies

Accommodation

1. I will try to satisfy this person's needs.
2. I will accommodate this person's needs.
3. I will not give in to this person's wishes. (Reverse coded.)
4. I will not bend over backwards to accommodate this person's wishes.
(Reverse coded.)
5. I will like to go along with this person's suggestions. (Reverse coded.)
6. I will try to satisfy this person's expectations.

Domination

1. I will use my power to get the highest profit.
2. I will exert pressure on this person to reach a solution most beneficial to my profits.
3. I will not use influence to get my ideas accepted. (Reverse coded.)
4. I will use my expertise to make the other accept my offer.

Integration

1. I will work closely with this person for a proper understanding of what both of us want.
2. I will bring all our concerns out in the open to reach an agreement in the best possible way.
3. I do not want to collaborate with this person to make decisions. (Reverse coded.)

4. I will work with this person to find prices that satisfy expectations of both of us.
5. I am willing to exchange information openly with this person to reach the best solution.

Compromise

1. I will try to work out a compromise that gives both of us some of what we want.
2. I will try to find a middle course or compromise to solve the problem.
3. I will bargain with this person to get middle profits.
4. If deadlock happens, I will take a moderate position to resolve the conflict.
5. I will try to give and take so that moderate profits can be obtained.

Appendix D

Pilot Study 1 Questionnaire Testing Indicators

Department of Communication

University of Maryland, College Park

Conflict, How Much Do You Know?

Instructions: In this study, you will be asked to match certain definitions with their representative statements. Further, you will be asked to rate how close these statements are to the definition. You will also have opportunity to provide comments for each statement. The study will take about 30 minutes. Thank you.

Part I.

In a conflict situation, people may have different goals to achieve. Here are four types of goals that may be salient in conflict:

Goal A: To make the other person feel inferior or to hurt the other person's feelings.

Goal B: To gain your own materialistic interest and ignore the other's materialistic interest.

Goal C: To show your affection or emotional support to fulfill the other party's needs.

Goal D: To be cooperative because you may need to use this person in the future.

Now that you know what these goals are, please evaluate how well the following statements reflect the definitions of the above goals. Use a number between 0 and 100 to indicate how well the statement matches the goal: **0** means not matching at all and **100** means perfect match.

Further, you may edit the statement if you think the editing could make the statement more appropriate.

For example, one individual's answers could look like this:

Statement	Goal A	Goal B	Goal C	Goal D
I don't mind hurting the other person's feelings.	100	0	0	0
I will argue with the other person until s/he submits.	20	100	0	0

Please provide your responses to the following statements; you can refer to the previous page if you forget the definitions of the four types of goals:

Statement	Goal A	Goal B	Goal C	Goal D
I will maintain mutual understanding with the other person.				
I will defend my position on the issue.				
I will actualize my plan on this issue.				
I do not care whether the other person feels hurt.				
I will maintain a relationship with the other person just for the purpose to cooperate in the future.				
I will have the issue solved according to my ideas.				
I will not hurt the other person because I truly value our friendship.				
I will show that I don't really care about how the other person feels.				
I will have the other person feel my affection and care.				
I want to let the other person feel inferior.				
I will keep the relationship for future use of the other person.				
I do not want to deteriorate our relationship because I need to work with the other person in another project.				

Part II.

When handling conflict, people sometimes use avoidance. An individual could avoid the issue, the person, or both. Also, such avoidance could be in the immediate situation or in the long term. The six types of avoidance strategies are:

Avoidance in the IMMEDIATE situation:

Avoidance Strategy A: To avoid the person and the issue.

Avoidance Strategy B: To avoid the person but not the issue.

Avoidance Strategy C: To avoid the issue but not the person (i.e., maintaining communication).

To help you understand, consider the following situation and Tom's responses that represent the above three avoidance strategies separately:

Tom is a married man. One day after dinner, Tom wanted to play a videogame but his wife asked him to help her wash dishes. They started to quarrel. Tom decided to stop quarreling.

Avoidance Strategy A (avoiding the person and the issue):

Tom stepped out of the room and drove off.

Avoidance Strategy B (avoiding the person but not the issue):

Tom stopped arguing but began to play the videogame.

Avoidance Strategy C (avoiding the issue but not the person):

Tom suggested, "Why don't we go out and see a movie?"

Avoidance in the LONG TERM:

Avoidance Strategy D: To avoid the person and the issue in the long run.

Avoidance Strategy E: To avoid the person but not the issue (e.g., use a 3rd party) in the long run.

Avoidance Strategy F: To avoid the issue but not the person in the long run.

To help you understand, consider the following example and Andrea's responses:

Andrea and Kelly were friends and colleagues at work. At a staff meeting, they disagreed on the plan for a project. After the meeting, Andrea decided to resolve the conflict.

Avoidance Strategy D (avoiding the person and the issue in the long run):

Andrea asked the boss that she be removed from the project and she stopped being Kelly's friend.

Avoidance Strategy E (avoiding the person but not the issue in the long run):

Andrea avoided talking to Kelly about the issue but sought their boss's support.

Avoidance Strategy D (avoiding the issue but not the person in the long run):

Andrea no longer insisted on her own arguments and remains Kelly's friend.

Now that you know what these different avoidance strategies are, please evaluate how

well the following statements reflect the definitions of the above avoidance strategies. Use a number between 0 and 100 to indicate how well the statement matches the goal: **0** means not matching at all and **100** means perfect match. Further, you may edit the statement if you think the editing could make the statement more appropriate. For example, one individual's answers could look like this:

For example, one individual's answers could look like this:

Statement	Avoidance Strategy A	Avoidance Strategy B	Avoidance Strategy C	Avoidance Strategy D	Avoidance Strategy E	Avoidance Strategy F
I will solve the problem indirectly.	20	0	10	0	100	0
I will do what I want.	0	100	0	0	0	0

Please provide your responses to the following statements; you may refer to the previous page if you forget the definitions of the avoidance strategies:

Statement	Avoidance Strategy A	Avoidance Strategy B	Avoidance Strategy C	Avoidance Strategy D	Avoidance Strategy E	Avoidance Strategy F
I will solve the problem indirectly without having to discuss with the other person ever again.						
I will stop arguing but begin to do what I want in the immediate situation.						
I will ask to be removed from the team and will stop seeing the other person.						
Withdrawal from immediate arguments seems to be a good strategy to me.						
Stop arguing and doing what I feel right is most important.						
I will give up the issue tentatively by shifting the topic.						
I will not stop arguing. (Reverse coded.)						
I will stop arguing and leave the scene.						
I will give up this project and never talk to the other person again.						

I will talk to our supervisor about my ideas.						
I will shut up and do what I think is right.						
I will pretend nothing was wrong.						
I won't argue with the other person again but will think of something else to solve the problem.						
I will suggest we do something else.						
I won't argue any more but will do as I want.						
I just want to be away from the project and the other person.						
I will go on without this project or the other person in my life.						
I will switch the topic.						
I will avert the discussion temporarily.						
I will go sideways (maybe talking to our supervisor) to solve the problem but won't argue with the other person.						

Now, tell us something about yourself:

Age: _____

Gender (Circle one): Female Male

Race/Ethnicity (Circle one):

Caucasian African American Hispanic Asian Other _____

Year in College (Circle one):

Freshman Sophomore Junior Senior Other _____

Appendix E

Pilot Study 2 Questionnaire Testing Indicators

Date _____ Time _____ Course # _____

Conflict, How Much Do You Know?

Instructions: In this study, you will rate how well certain behaviors match their representative concepts. You can choose any number between 0 and 100 to rate the match, where 0 means not matching at all and 100 means perfect match.

Part I

A conflict occurs when two or more interdependent parties have incompatible goals or interests. Everyone experiences some form of conflict almost daily. When you have a conflict with someone, depending on who the other person is and what your relationship is, you may handle conflict situations differently. In other words, you may use different strategies to carry out different goals. Here are four types of goals that may be salient in a conflict:

Goal A: To insist on your ideas and refuse to submit to the other person.

Goal B: To hurt the other person emotionally or to make him or her feel inferior or humiliated.

Goal C: To sacrifice your own needs to support the other emotionally and to show your affection.

Goal D: To be cooperative because you may need to use this person in the future.

The following table provides 16 behaviors or thoughts that reflect above goals. If you feel a behavior or thought reflects one specific goal *only* and *cleanly*, write **100** in the corresponding box and **0** in all the other boxes. If a behavior or thought seems to reflect several goals, you may choose any number between 0 and 100 to indicate how much the statement reflects each of those goals. Again, **0** means not matching at all and **100** means perfect match.

For example, one individual's answers could look like this:

Statement	Goal A	Goal B	Goal C	Goal D
I tried to maintain mutual understanding with the other person.	0	0	90	20
I argued with the other person until s/he submitted.	100	0	0	0

Imagine you just had a conflict with a person named *Casey*. Rate the following 16 behaviors or thought as to what goal(s) each of them reflect.

Ready? If so, go to next page.

[Note. The content in the Item Label column in the following tables did not appear in the actual questionnaire.]

For your convenience, here are the four types of goals and their definitions again:

Goal A: To insist on your ideas and refuse to submit to the other person.

Goal B: To hurt the other person emotionally or to make him or her feel inferior or humiliated.

Goal C: To sacrifice your own needs to support the other emotionally and to show your affection.

Goal D: To be cooperative because you may need to use this person in the future.

Please provide your responses to the following statements.

Statement		Goal A	Goal B	Goal C	Goal D
I didn't mind hurting Casey's feelings.	Enmity1				
I defended my position on the issue persistently.	Instrumental Competition1				
I focused on actualizing my plan on this issue.	Instrumental Competition2				
I cared about how Casey felt because of our friendship.	Support1				
I didn't want to deteriorate our relationship because I need to work with Casey in another project.	Instrumental Cooperation1				
I argued with Casey until s/he submitted.	Instrumental Competition3				
I had the issue solved according to my ideas.	Instrumental Competition4				
I was careful not to hurt Casey because I truly valued our friendship.	Support2				
I used words to humiliate Casey.	Enmity2				
I tried to have Casey feel my affection and care.	Support3				
I wanted to let Casey feel inferior.	Enmity3				
I kept the relationship with Casey because we had to work together.	Instrumental Cooperation2				
I did not care if Casey would feel upset because of my words.	Enmity4				
I tried to maintain a relationship with Casey just for the purpose to cooperate in the future.	Instrumental Cooperation3				
It was important for me to protect Casey's feelings.	Support4				
I had to be careful with what I said because I might be working with Casey in the future.	Instrumental Cooperation4				

Part II

When handling conflict, people sometimes use avoidance. Avoidance can be divided into three types: avoiding the issue, avoiding the person, or avoiding both. What's more, such avoidance could occur during the conflict episode on the spot or after the conflict episode in the long run. Hence, there are six types of avoidance strategies:

Avoidance ON THE SPOT:

Avoidance Strategy A: To avoid the person AND the issue.

Avoidance Strategy B: To avoid the person but NOT the issue.

Avoidance Strategy C: To avoid the issue but NOT the person (i.e., maintaining communication).

Here is an example to help you understand these three avoidance strategies:

Tom is a married man. One day after dinner, Tom wanted to play a videogame but his wife asked him to help her wash dishes. They started to quarrel. Tom decided to stop quarreling.

Avoidance Strategy A (avoiding the person and the issue on the spot):

Tom stepped out of the room and drove off.

Avoidance Strategy B (avoiding the person but not the issue on the spot):

Tom stopped arguing but began to play the videogame.

Avoidance Strategy C (avoiding the issue but not the person on the spot):

Tom dropped the argument and suggested, "Why don't we go out and see a movie?"

Avoidance IN THE LONG RUN:

Avoidance Strategy D: To avoid the person AND the issue in the long run.

Avoidance Strategy E: To avoid the person but NOT the issue (e.g., use a 3rd party to help you out but avoid talking to the person in conflict) in the long run.

Avoidance Strategy F: To avoid the issue but NOT the person in the long run.

Here is an example to help you understand these three avoidance strategies:

Andrea and Kelly were friends and colleagues at work. At a staff meeting, they disagreed on the plan for a project. After the meeting, Andrea decided to resolve the conflict.

Avoidance Strategy D (avoiding the person and the issue in the long run):

Andrea asked the boss that she be removed from the project and Andrea also stopped being Kelly's friend.

Avoidance Strategy E (avoiding the person but not the issue in the long run):

Andrea avoided talking to Kelly about the issue but sought their boss's support.

Avoidance Strategy D (avoiding the issue but not the person in the long run):

Andrea gave up on her ideas about the issue and remains Kelly's friend.

The table on next page provides 24 statements that reflect the six types of avoidance strategies. If you feel a statement reflects one specific type of avoidance *only* and *cleanly*, write **100** in the corresponding box and **0** in all the other boxes. If a statement seems to reflect several types of avoidance, you may choose any number between 0 and 100 to indicate how much the statement reflects each of those goals. Again, **0** means not matching at all and **100** means perfect match.

For example, one individual's answers could look like this:

Statement	Avoidance Strategy A	Avoidance Strategy B	Avoidance Strategy C	Avoidance Strategy D	Avoidance Strategy E	Avoidance Strategy F
I solved the problem indirectly.	0	0	10	0	100	0
I did what I wanted though I stopped arguing on the spot.	0	100	0	0	0	0

.....

Again, we gave the name "Casey" to "the other person" to make the conflict more imaginable to you!

Ready? If so, go to next page.

For your convenience, here are the six types of avoidance strategies again:

Avoidance ON THE SPOT:

Avoidance Strategy A: To avoid the person AND the issue.

Avoidance Strategy B: To avoid the person but NOT the issue.

Avoidance Strategy C: To avoid the issue but NOT the person (i.e., maintaining communication).

Avoidance IN THE LONG RUN:

Avoidance Strategy D: To avoid the person AND the issue in the long run.

Avoidance Strategy E: To avoid the person but NOT the issue (e.g., use a 3rd party) in the long run.

Avoidance Strategy F: To avoid the issue but NOT the person in the long run.

.....

Please provide your responses to the following statements.

Statement	Item Label	In the Conflict Situation			After the Conflict Situation		
		Avoidance Strategy A	Avoidance Strategy B	Avoidance Strategy C	Avoidance Strategy D	Avoidance Strategy E	Avoidance Strategy F
After the meeting, I solved the problem indirectly without having to discussing with Casey again.	Outflank1						
In the meeting, I stopped arguing but began to do what I wanted, pretending not hearing Casey's nagging.	Passive compet1						
After the meeting, I asked to be removed from the team and stopped being Casey's friend.	Exit1						
Casey was still a friend after our meeting but I was careful not to talk about the issue any more.	Yield1						
Stop arguing and doing what I wanted was the most important when we had the fight.	Passively Compete2						

For your convenience, here are the six types of avoidance strategies again:

Avoidance ON THE SPOT:

Avoidance Strategy A: To avoid the person AND the issue.

Avoidance Strategy B: To avoid the person but NOT the issue.

Avoidance Strategy C: To avoid the issue but NOT the person (i.e., maintaining communication).

Avoidance IN THE LONG RUN:

Avoidance Strategy D: To avoid the person AND the issue in the long run.

Avoidance Strategy E: To avoid the person but NOT the issue (e.g., use a 3rd party) in the long run.

Avoidance Strategy F: To avoid the issue but NOT the person in the long run.

.....

Please provide your responses to the following statements.

Statement	Item Label	In the Conflict Situation			After the Conflict Situation		
		Avoidance Strategy A	Avoidance Strategy B	Avoidance Strategy C	Avoidance Strategy D	Avoidance Strategy E	Avoidance Strategy F
I gave up the issue tentatively at that moment by shifting the topic.	Pretend1						
I stopped arguing and left the scene.	Withdraw1						
After the meeting, I restrained myself from arguing about the issue with Casey in our future conversations.	Yield2						
I talked to our supervisor about my ideas after the meeting without any more talking with Casey.	Outflank2						
I withdrew from the argument scene.	Withdraw2						
When the argument was too hot, I pretended nothing was wrong by talking about something else.	Pretend2						

For your convenience, here are the six types of avoidance strategies again:

Avoidance ON THE SPOT:

Avoidance Strategy A: To avoid the person AND the issue.

Avoidance Strategy B: To avoid the person but NOT the issue.

Avoidance Strategy C: To avoid the issue but NOT the person (i.e., maintaining communication).

Avoidance IN THE LONG RUN:

Avoidance Strategy D: To avoid the person AND the issue in the long run.

Avoidance Strategy E: To avoid the person but NOT the issue (e.g., use a 3rd party) in the long run.

Avoidance Strategy F: To avoid the issue but NOT the person in the long run.

.....

Please provide your responses to the following statements.

Statement	Item Label	In the Conflict Situation			After the Conflict Situation		
		Avoidance Strategy A	Avoidance Strategy B	Avoidance Strategy C	Avoidance Strategy D	Avoidance Strategy E	Avoidance Strategy F
After the meeting, I decided not to argue with Casey again but to think of something else to solve the problem.	Outflank3						
On the spot, I stopped arguing and suggested we say something else.	Pretend3						
On the spot, although I stopped arguing, I began carrying out my ideas.	Passively Competite3						
I just wanted to be away from the project and Casey once and for all.	Exit2						
On the spot, I just sat there and zipped my mouth.	Withdraw3						
I went on without this project or Casey in my life.	Exit3						
Although I was still Casey's friend, I never mentioned the issue again.	Yield3						
I averted the discussion at that moment.	Withdraw4						

For your convenience, here are the six types of avoidance strategies again:

Avoidance ON THE SPOT:

Avoidance Strategy A: To avoid the person AND the issue.

Avoidance Strategy B: To avoid the person but NOT the issue.

Avoidance Strategy C: To avoid the issue but NOT the person (i.e., maintaining communication).

Avoidance IN THE LONG RUN:

Avoidance Strategy D: To avoid the person AND the issue in the long run.

Avoidance Strategy E: To avoid the person but NOT the issue (e.g., use a 3rd party) in the long run.

Avoidance Strategy F: To avoid the issue but NOT the person in the long run.

Please provide your responses to the following statements.

Statement	Item Label	In the Conflict Situation			After the Conflict Situation		
		Avoidance Strategy A	Avoidance Strategy B	Avoidance Strategy C	Avoidance Strategy D	Avoidance Strategy E	Avoidance Strategy F
I went sideways (talked to our supervisor) after the meeting to actualize my ideas.	Outflank4						
After the meeting, I abandoned my ideas and remained Casey's friend.	Yield4						
I switched the topic on the spot.	Pretend4						
I shut up but started doing what I wanted at the fight.	Passively Competite4						
I gave up this project and never talked to Casey again.	Exit4						

Appendix F

Pilot Study 3 Questionnaire Testing Perceived Goal Realism

Department of Communication
University of Maryland

Part I

Read the following hypothetical scenario, and answer questions.

Casey is your classmate. You volunteer to do a project together. The project grade is important because it constitutes 20% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two have argued vehemently, but soon you realize that further argument may harm your relationship.

Each of the following concerns depends on the preceding, underlined condition. For each concern below, please rate how realistic it is for you to have these concerns and explain why. Use 0 to 100% to rate the realism of the goal, where 0% means the goal is not realistic at all and 100% means that the goal is completely realistic.

1. Casey is a friend you really care about.

You have a goal to maintain your friendship because you truly care about how Casey feels.

How realistic is this goal? _____

Please explain why or why not the goal is realistic:

2. You have to work on another project with Casey later on.

You have a goal to maintain a good relationship with Casey because you hope to work well with Casey on the other project.

How realistic is this goal? _____

Please explain why or why not the goal is realistic:

3. Casey is a friend you really care about and you are assigned to work with Casey on another group project.

You have a goal to maintain a good relationship with Casey both because you cherish your friendship and because you are assigned to another group project with Casey.

How realistic is this goal? _____

Please explain why or why not the goal is realistic:

4. You want to compete with Casey and you don't really care about how Casey feels, and you are not assigned to any other cooperative project with Casey.

You have a goal to compete with Casey about your ideas, even if such competition may hurt Casey. Further, you do not have a goal to maintain a good relationship or work with Casey in another project.

How realistic is the first goal? _____

Please explain why or why not the goal is realistic:

How realistic for you to lack the second goal? _____

Please explain why or why not the goal is realistic:

5. Casey is a friend you really care about, and for the sake of your relationship, you are willing to sacrifice your own needs.

You have a goal to maintain your friendship because you really care about how Casey feels. You also have a goal to give up your plan to Casey so that your friendship won't be harmed.

How realistic is the first goal? _____

Please explain why or why not the goal is realistic:

How realistic is the second goal? _____

Please explain why or why not the goal is realistic:

6. You have to work on another more important project with Casey later on, so you don't want to make Casey feel hurt, and you are willing to sacrifice your needs.

You have a goal to maintain a good relationship with Casey because you want to do well in the other project. You also have a goal to not make Casey to feel hurt. You have a third goal to give in to Casey in this argument if that's what it takes to maintain a good relationship with Casey.

How realistic is the first goal? _____

Please explain why or why not the goal is realistic:

How realistic is the second goal? _____

Please explain why or why not the goal is realistic:

How realistic is the third goal? _____

Please explain why or why not the goal is realistic:

7. Casey is a friend you really care; you two are assigned to another more important project. Therefore, you don't want to make Casey feel hurt, and you are willing to sacrifice your needs.

You have a goal to maintain a good relationship with Casey both because you care about Casey and because you want to do well in the later project. You also have a goal to make Casey not feel hurt. You have a third goal to give in to Casey in this argument if that's what it takes to maintain a good relationship with Casey.

How realistic is the first goal? _____

Please explain why or why not the goal is realistic:

How realistic is the second goal? _____
 Please explain why or why not the goal is realistic:

How realistic is the third goal? _____
 Please explain why or why not the goal is realistic:

8. Casey is not a friend of yours; you won't possibly work with Casey again; you no longer care about the outcome of this project; and you don't care how Casey feels.

You don't have any goal about Casey and the project.

How realistic is the lack of any goal? _____
 Please explain why or why not the goal is realistic:

9. Casey is not a friend of yours but you two are assigned to another more important group project. Meanwhile, you want your ideas realized in this project.

You have a goal to maintain your relationship with Casey because you want to do well in the later group project. You have a second goal to insist on your plan for the project.

How realistic is the first goal? _____
 Please explain why or why not the goal is realistic:

How realistic is the second goal? _____

Please explain why or why not the goal is realistic:

Are These Conflict Goals Real?

Part II

Read the following hypothetical scenario, and answer questions.

Casey is your colleague at work. You volunteer to do a project together. The outcome of the project is important because the boss will use it to evaluate your performance. Both of you really want to do well in this project. However, you disagree on the blueprint of the project. After a meeting in which you two argued vehemently, you realize that further argument will harm your relationship.

Each of the following concerns depends on the preceding, underlined condition. For each concern below, please rate how realistic it is for you to have these concerns and explain why. Use 0 to 100% to rate the realism of the goal, where 0% means the goal is not realistic at all and 100% means that the goal is completely realistic.

1. Casey is a friend you really care about.

You have a goal to maintain your friendship because you truly care about how Casey feels.

How realistic is this goal? _____

Please explain why or why not the goal is realistic:

2. You have to work on another project with Casey later on.

You have a goal to maintain a good relationship with Casey because you hope to work well with Casey on the other project.

How realistic is this goal? _____

Please explain why or why not the goal is realistic:

3. Casey is a friend you really care about and you are assigned to work with Casey on another group project.

You have a goal to maintain a good relationship with Casey both because you cherish your friendship and because you are assigned to another group project with Casey.

How realistic is this goal? _____
Please explain why or why not the goal is realistic:

4. You want to compete with Casey and you don't really care about how Casey feels, and you are not assigned to any other cooperative project with Casey.

You have a goal to compete with Casey about your ideas, even if such competition may hurt Casey. Further, you do not have a goal to maintain a good relationship or work with Casey in another project.

How realistic is the first goal? _____
Please explain why or why not the goal is realistic:

How realistic for you to lack the second goal? _____
Please explain why or why not the goal is realistic:

5. Casey is a friend you really care about, and for the sake of your relationship, you are willing to sacrifice your own needs.

You have a goal to maintain your friendship because you really care about how Casey feels. You also have a goal to give up your plan to Casey so that your friendship won't be harmed.

How realistic is the first goal? _____
Please explain why or why not the goal is realistic:

How realistic is the second goal? _____
Please explain why or why not the goal is realistic:

6. You have to work on another more important project with Casey later on, so you don't want to make Casey feel hurt, and you are willing to sacrifice your needs.

You have a goal to maintain a good relationship with Casey because you want to do well in the other project. You also have a goal to not make Casey to feel hurt. You have a third goal to give in to Casey in this argument if that's what it takes to maintain a good relationship with Casey.

How realistic is the first goal? _____
Please explain why or why not the goal is realistic:

How realistic is the second goal? _____
Please explain why or why not the goal is realistic:

How realistic is the third goal? _____
Please explain why or why not the goal is realistic:

7. Casey is a friend you really care; you two are assigned to another more important project. Therefore, you don't want to make Casey feel hurt, and you are willing to sacrifice your needs.

You have a goal to maintain a good relationship with Casey both because you care about Casey and because you want to do well in the later project. You also have a goal to make Casey not feel hurt. You have a third goal to give in to Casey in this argument if that's what it takes to maintain a good relationship with Casey.

How realistic is the first goal? _____
Please explain why or why not the goal is realistic:

How realistic is the second goal? _____
Please explain why or why not the goal is realistic:

How realistic is the third goal? _____
Please explain why or why not the goal is realistic:

8. Casey is not a friend of yours; you won't possibly work with Casey again; you no longer care about the outcome of this project; and you don't care how Casey feels.

You don't have any goal about Casey and the project.

How realistic is the lack of any goal? _____
Please explain why or why not the goal is realistic:

9. Casey is not a friend of yours but you two are assigned to another more important group project. Meanwhile, you want your ideas realized in this project.

You have a goal to maintain your relationship with Casey because you want to do well in the later group project. You have a second goal to insist on your plan for the project.

How realistic is the first goal? _____
Please explain why or why not the goal is realistic:

How realistic is the second goal? _____
Please explain why or why not the goal is realistic:

Now, tell us something about yourself:

Age: _____ Gender (Circle one): Female Male

Race/Ethnicity (Circle one): Caucasian African American Hispanic
Asian Other _____

Year in College (Circle one): Freshman Sophomore Junior Senior

Other _____

Appendix G

Pilot Study 4 Questionnaire Testing Perceived Goal Realism

Date _____ Time _____ Course # _____

Department of Communication
University of Maryland

Researchers at the University of Maryland are interested in how people can role play in a conflict situation and forget one's own identity. A conflict occurs when two or more interdependent parties have incompatible goals or interests. Everyone experiences some form of conflict almost daily. When you have conflict with someone, depending on who the other person is and what your relationship is, you may have different goals when handling the conflict.

What do you need to do in this study?

Simple but you need to try hard: You will read a hypothetical conflict scenario. DO NOT think what you will do in that scenario; instead, role play. There are 9 different role-relationships you would enact mentally in a hypothetical situation with someone named *Casey*. Do your best to ROLE PLAY! This study requires you to refresh your imaginary roles 9 times. Try not to use your own preference when answering questions.

In each role-relationship, the researchers list one or several major concerns or goals that may apply. Use the 0 to 100% scale to rate the realism of those concern(s) or goal(s), where 0 means the concern or goal is not realistic at all, and 100% means that the concern or goal is completely realistic. You can also add to the list based on your personal experience.

.....
What do you need to forget?

Imagine yourself being an actor in this study. FORGET how you would act with your personality or your ethical standards. Again, PLAY THE ROLE!

.....
Ready? If so, go to next page and it's role play time!

Scenario:

Casey is your classmate. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument. As you were arguing, you suddenly realized that further argument may harm your relationship.

Role-Relationship 1: Casey is a friend you really care about.

Corresponding Goal: This role-relationship makes you have a goal to maintain your friendship.

How realistic is this goal? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

.....
NOW, FORGET THIS ROLE AND GO TO YOUR NEXT ROLE.

Role-Relationship 2: You and Casey are not friends; but you have to work on another project with Casey later on.

Corresponding Goal: This role-relationship makes you have a goal to maintain a good relationship with Casey.

How realistic is this goal? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

.....
NOW, FORGET THIS ROLE AND GO TO YOUR NEXT ROLE.
.....

Role-Relationship 3: Casey is a friend you really care about. Moreover, you are assigned to work with Casey on another group project.

Corresponding Goal: This role-relationship makes you have a goal to maintain a good relationship with Casey.

How realistic is this goal? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

.....
NOW, FORGET THIS ROLE AND GO TO YOUR NEXT ROLE.
.....

Role-Relationship 4: Casey is a rival of yours. That is, you want to compete with Casey and use YOUR plan to do the project. You and Casey are not friends. How Casey feels is not something you consider; what's more, you already know that you are not going to do any other teamwork with Casey again.

Corresponding Goal # 1: In the argument, you have a goal to compete with Casey about your ideas, even if such competition may hurt Casey.

How realistic is this goal? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Corresponding Goal # 2 (*or lack of it*): You do NOT care to maintain a good relationship.

How realistic is this statement? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

.....
NOW, FORGET THIS ROLE AND GO TO YOUR NEXT ROLE.

Role-Relationship 5: Casey is a friend you really, really care about. Work is less important as compared with your relationship with Casey.

Corresponding Goal # 1: You have a goal to maintain your friendship.

How realistic is this goal? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Corresponding Goal # 2: You may also have a goal to give up your argument to Casey if further argument may damage your relationship.

How realistic is this statement? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

.....
NOW, FORGET THIS ROLE AND GO TO YOUR NEXT ROLE.

Role-Relationship 6: You and Casey are not friends, but you already know that you and Casey have been assigned to another MORE important teamwork. As compared with insisting on your ideas in this project, you know that being able to co-work on the next teamwork with Casey is more important.

Corresponding Goal # 1: You have a goal to maintain your friendship.

How realistic is this goal? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Corresponding Goal # 2: You have a goal to avoid hurtful words to upset Casey.

How realistic is this statement? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Corresponding Goal # 3: You may also have a goal to give up your argument to Casey if further argument may damage your relationship. How realistic is this statement?

_____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

.....
NOW, FORGET THIS ROLE AND GO TO YOUR NEXT ROLE.

We do not want to exhaust you—we know it's hard to be an actor and try to
forget yourself.
So, relax a little before you go on~~~ When you are ready, go to next page.
There are **three** role-relationships left for you to role play!
Ready? Go!

Role-Relationship 7: Casey is a friend you really care about AND you two are assigned to another more important project. As compared with insisting on your ideas in this project, your friendship with Casey and your being able to co-work on the next teamwork with Casey are more important.

Corresponding Goal # 1: You have a goal to maintain your friendship.

How realistic is this goal? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Corresponding Goal # 2: You have a goal to avoid hurtful words to upset Casey.

How realistic is this statement? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Corresponding Goal # 3: You may also have a goal to give up your argument to Casey if further argument may damage your relationship. How realistic is this statement?

_____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

.....
NOW, FORGET THIS ROLE AND GO TO YOUR NEXT ROLE.

Role-Relationship 8: Casey is not a friend of yours and you know you aren't involved in any other teamwork with Casey. The continuous argument and Casey's stubbornness made you so exhausted that you decide to give up on the project. What's more, you never want to talk with Casey again.

Corresponding Goal or Lack of Goals: You begin to lose motivation to do the project.

How realistic is this description? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Corresponding Goal or Lack of Goals: You begin to lose motivation to deal with Casey.

How realistic is this description? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

.....
NOW, FORGET THIS ROLE AND GO TO YOUR NEXT ROLE.

Role-Relationship 9: Casey is not a friend of yours but you two are assigned to do another more important group project. Meanwhile, you want to insist on your ideas on this project.

Corresponding Goal # 1: You have a goal to maintain your relationship.

How realistic is this goal? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Corresponding Goal # 2: You also have a goal to have the project done the way you want.

How realistic is this statement? _____%

If you don't think this goal is important, explain why:

If you believe there is/ are other goal(s) that are more important based on this role-relationship, list below:

Nice job acting up your role! Thanks!

Now, please tell us more about you.

1. My age is _____ years.

2. I am FEMALE MALE

3. My ethnicity is or most closely to

_____ African, American African, or Black

_____ Hispanic, Latino, Mexican American, Cuban American, or Puerto Rican

_____ Asian American, Pacific Islander, Chinese, Japanese, or Korean

_____ Central Asian, Indian, or Pakistani

_____ Arab, or Arab American

_____ Jewish

_____ White, Caucasian, European American

_____ Other (please specify): _____

4. I am a citizen of _____ (country).

5. My native language is ENGLISH Other (please specify)

_____.

6. I can also speak another language fluently YES NO

If "yes," the language is _____.

7. I am FRESHMAN SOPHOMORE JUNIOR SENIOR

 GRADUATE OTHER (please specify) _____.

8. One last question: While you were answering the questionnaire, were you imagining Casey as a male or female? Circle one.

Male

Female

Not clear

.....

That's all. Thank you for your time.

Appendix H

Messages in the 24 Experimental Conditions

Classmate Conditions

Condition 1 (H1a):

Casey is a friend you really care about. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship.

Remember that Casey is a friend you like very much. What would you do?

Condition 2 (H1b):

Casey is a classmate. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down.

Remember that Casey is a NOT a friend of yours. However, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. What would you do?

Condition 3 (H1c):

Casey is a friend you really care about. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one seems is to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship.

Remember that Casey is a friend you like very much. What's more, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. What would you do?

Condition 4 (H2):

Casey is a rival of yours. You were assigned to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down.

Remember that Casey is a rival of yours. That is, you want to compete with Casey and use YOUR plan to do the project. You and Casey are not friends. How Casey feels is not something you consider; what's more, you already know that you are not going to do any other teamwork with Casey again. What would you do?

Condition 5 (H3a):

Casey is a friend you really care about. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you

suddenly realize that further argument may make your communication break down and may even harm your friendship.

Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Your relationship with Casey is more important than whose idea is used and the grade you receive on the project. What would you do?

Condition 6 (H3b):

Casey is a classmate. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down.

Remember that you and Casey are NOT friends. However, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. You don't want to hurt Casey's feelings. Your relationship with Casey is more important than whose idea is used and the grade you receive on the project. What would you do?

Condition 7 (H3c):

Casey is a friend you really care about. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship.

Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Plus, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. As compared with your relationship with Casey and your being able to work well on the next project, the grade of this project is less important. What would you do?

Condition 8 (H4):

Casey is a classmate. You were assigned to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that Casey is NOT a friend of yours and you already know you two are not involved in any other teamwork for this class. The continuous argument and Casey's stubbornness made you so exhausted that you feel that you can stand any grade for this project, as long as you don't have to do this with Casey any more. You also made a note to yourself that you don't want Casey to be a friend in your life.

Condition 9 (H5):

Casey is a classmate. You were assigned to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that Casey is NOT a friend of yours. You don't really care about how Casey feels. You really want to do this project according to your ideas because you believe your plan can make a grade of 10 out of 10 on this project. However, you already know that you two are

assigned to another group project together, the grade of which constitutes 40% of your course grade. As compared with this project, the next group project is more important. What would you do?

Condition 10 (H6a):

Casey is a friend you really care about. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. As compared with your relationship with Casey, the grade of this project is less important. What would you do?

Condition 11 (H6b):

Casey is a classmate. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that you and Casey are not friends. However, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. You don't want to hurt Casey's feelings. As compared with this project, the next group project is more important. What would you do?

Condition 12 (H6c):

Casey is a friend you really care about. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Plus, you two are assigned to another group project, the grade of which constitutes 40% of your course grade. As compared to/with? your relationship with Casey and your being able to work well together on the next project, the grade of this project is less important. What would you do?

Colleague Conditions

Condition 1 (H1a):

Casey is your friend and colleague at work. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship. Remember that Casey is a friend you like very much. What would you do?

Condition 2 (H1b):

Casey is your colleague at work. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down. Remember that Casey is NOT a friend of yours. However, you two are assigned to work on another, more important group proposal, the outcome of which will decide whether you could win a multimillion-dollar project from a client. What would you do?

Condition (H1c):

Casey is your friend and colleague at work. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship. Remember that Casey is a friend you like very much. What's more, you two are assigned to work on another, more important group proposal, the outcome of which will decide whether you could win a multimillion-dollar project from a client. What would you do?

Condition 4 (H2):

Casey is a rival of yours at work. You were assigned to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down. Remember that Casey is a rival of yours. That is, you want to compete with Casey and use YOUR plan to do the project. You and Casey are not friends. How Casey feels is not something you consider; what's more, you already know that you are not going to do any other teamwork with Casey again. What would you do?

Condition 5 (H3a):

Casey is your colleague at work and a friend you really care about. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize

that further argument may make your communication break down and may even harm your friendship.

Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Your relationship with Casey is more important than whose idea is used and the outcome you receive on the project. What would you do?

Condition 6 (H3b):

Casey is your colleague at work. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down.

Remember that you and Casey are NOT friends. However, you two are assigned to work on another, more important group proposal, the outcome of which will decide whether you could win a multimillion-dollar project from a client. You don't want to hurt Casey's feelings. Your relationship with Casey is more important than whose idea is used and the outcome you receive on the project. What would you do?

Condition 7 (H3c):

Casey is your colleague at work and a friend you really care about. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one seemed to be able to convince the other. As you were arguing, you suddenly realized that further argument may make your communication break down and may even harm your friendship.

Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Plus, you two are assigned to work on another, more important group proposal, the outcome of which will decide whether you could win a multimillion-dollar project from a client. As compared with your relationship with Casey and your being able to work well on the next proposal, whose idea to use and the outcome of this project are less important. What would you do?

Condition 8 (H4):

Casey is your colleague at work. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that Casey is NOT a friend of yours and you already know you two are not involved in any other teamwork. The continuous argument and Casey's stubbornness made you so exhausted that you feel that you can stand any outcome for this project, as long as you don't have to do this with Casey any more. You also made a note to yourself that you don't want Casey to be a friend in your life. What would you do?

Condition 9 (H5):

Casey is your colleague at work. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the

other. After the meeting, you decide to resolve this conflict and move on. Remember that Casey is NOT a friend of yours. You don't really care about how Casey feels. You really want to do this project according to your ideas because you believe your plan can score a 10 out of 10 on this project. However, you already know that you two are assigned to work on another, more important group proposal, the outcome of which will decide whether you could win a multimillion-dollar project from a client. As compared with this project, the next proposal is more important. What would you do?

Condition 10 (H6a):

Casey is your colleague at work and a friend you really care about. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. As compared with your relationship with Casey, whose idea to use and the outcome of this project are less important. What would you do?

Condition 11 (H6b):

Casey is your colleague at work. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that you and Casey are NOT friends. However, you two are assigned to work on another, more important group proposal, the outcome of which will decide whether you could win a multimillion-dollar project from a client. You don't want to hurt Casey's feelings. As compared with maintaining good communication with Casey for the sake of your next proposal, whose ideas to use and the outcome of this project are less important. What would you do?

Condition 12 (H6c):

Casey is your colleague at work and a friend you really care about. You volunteered to do a project together. The outcome of the project is important because the boss will use it to evaluate your job performance. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two had a heated argument, and no one was able to convince the other. After the meeting, you decide to resolve this conflict and move on.

Remember that Casey is a friend you like very much. You deeply care about Casey's feelings and don't want to hurt Casey's feelings. Plus, you two are assigned to work on another, more important group proposal, the outcome of which will decide whether you could win a multimillion-dollar project from a client. As compared with/to your relationship with Casey and your being able to work well on the next proposal, whose ideas to use and the outcome of this project are less important. What would you do?

Appendix I

Formal Study Instrument for Dependent Variables

Importance of Goals (Manipulation Checks)

Enmity Goals

1. I don't mind hurting Casey's feelings.
2. I don't need to worry whether my words would humiliate Casey; the more important thing is to get my way on this project.
3. I want to make Casey feel inferior.
4. I did not care if Casey would feel upset because of my words.

Instrumental Competitive Goals

1. I need to defend my position on the issue.
2. I need to think of ways to actualize my plan on this project.
3. I need to make Casey submit to my ideas.
4. I should plan on doing this project according to my ideas.

Support Goals

1. I care about how Casey feels because I want to maintain a good relationship with Casey.
2. I should be careful not to hurt Casey because I truly care how Casey feels.
3. It's important for me to let Casey feel my affection and care.
4. It is important for me to protect Casey's feelings.

Instrumental Cooperative Goals

1. I should avoid words or actions that might make our communication break down because I need to work with Casey again.

2. I need to keep good communication with Casey because we have to work together.
3. I should plan on keeping the communication going just for the sake of future teamwork with Casey.
4. I should be careful with word choice because I need to work with Casey again in the future.

Likelihood of Avoidance Strategies

To Withdraw

1. In the rest of the meeting, I will stop arguing and leave the scene.
2. In the rest of the meeting, I'll just shut up and stop responding.
3. I'll just sit there and zip my mouth in the rest of the meeting.
4. If the argument begins to turn into a breakdown, I will just step out.

To Passively Compete

1. In the rest of the meeting, I will stop arguing with Casey but start doing what I want, pretending not to hear Casey's nagging.
2. I'll focus on doing the project as I want and don't have to argue back.
3. In the rest of the meeting, I'll play deaf and do the project as I have planned.
4. On the spot, even though I will stop arguing, I will start doing the project as I want.

To Pretend

1. If the argument begins to turn into a breakdown, I will pretend nothing's wrong by talking about something else.
2. If the argument begins to turn into a breakdown, I'll switch the topic on the

spot.

3. On the spot, I will stop arguing and suggest we say or do something else.
4. In the rest of the meeting, I will try to keep the communication going by shifting the topic.

To Exit

1. After the meeting, I will ask the instructor (boss) to remove me from the team.
I will also make sure that I won't have Casey as a friend.
2. It is fine for me to move on without this project or Casey in my life.
3. I'll give up my ideas on this project and maybe never talk to Casey again.
4. After the meeting, I won't want to be discussing anything, or even talking with Casey any more.

To Outflank

1. After the meeting, I will try to solve the problem indirectly without having to discuss it with Casey again.
2. After the meeting, I will talk to our professor (boss) about my ideas without any more discussion with Casey.
3. After the meeting, I'll come up with some sideway strategy (talk to our professor [boss] or do something else) to actualize my ideas.
4. After the meeting, I'll try something else to actualize my plan for the project but not through another debate with Casey.

To Yield

1. After the meeting, I will restrain myself from arguing about the project with Casey in our future conversations.

2. After the meeting, I'll give up my ideas and remain Casey's friend.
3. I want to be, or remain, Casey's friend and will never mention our different ideas about the project again.
4. After the meeting, I'll be, or remain, Casey's friend but I'll be careful not to mention our argument on the project in our conversations.

Likelihood of Other Conflict Strategies

To Accommodate

1. I will try to satisfy Casey's needs during the meeting.
2. I will not give in to Casey's wishes.
3. I will try to satisfy Casey's expectations.
4. I will not bend over backwards to accommodate Casey's wishes.
5. I will like going along with Casey's suggestions.
6. I will accommodate Casey's needs.

To Dominate

1. I will exert pressure on Casey to reach a solution leaning towards my ideas.
2. I will use my power to get my way.
3. I will not use influence to get my ideas accepted.
4. I will use my expertise to make Casey accept my ideas.

To Compromise

1. I will try to find a middle course or compromise to solve the problem.
2. If deadlock happens, I will take a moderate position to resolve the conflict.
3. I will bargain with Casey to get a middle ground.
4. I will try to work out a compromise that gives both of us some of what we

want.

5. I will try to give and take so that moderate profits can be obtained.

To Integrate

1. I do not want to collaborate with Casey to make decisions.
2. I will work with Casey to find a solution that satisfies the expectations of both of us.
3. I will work closely with Casey for a proper understanding of what both of us want.
4. I am willing to exchange information openly with Casey to reach the best solution.
5. I will bring all our concerns out in the open to reach an agreement in the best possible way.

Appendix J

Formal Study Questionnaire Example (H1a)

Date _____ Time _____ Course # _____

Department of Communication
University of Maryland

Researchers at the University of Maryland are interested in knowing how people handle conflict situations.

What do you need to do in this study?

- 1. Read a hypothetical conflict situation.**
- 2. Rate the importance of your concerns in this conflict situation.**
- 3. Rate the likelihood you would use certain strategies to handle the conflict.**

Ready? Start!

Hypothetical Conflict Situation

Casey is a friend you really care about. You volunteered to do a project together. The project grade constitutes 10% of your course grade. Both of you really want to do well on this project. However, you disagree on the blueprint of the project. In a meeting, you two are having a heated argument, and no one is able to convince the other. As you are arguing, you suddenly realize that further argument may make your communication break down and may even harm your friendship.

Remember that Casey is a friend you like very much. What will you do?

[Note. The content in the Item Label in the following tables did not appear in the actual questionnaire.]

Part I

Rate the importance of the following thoughts or goals while you are thinking about how to deal with the conflict with Casey. If you **STRONGLY AGREE** with a thought or a goal stated below, rate it 100. If you **STRONGLY DISAGREE** with a thought or a goal, rate it 0. You may choose ANY number between 0 and 100 to indicate different degrees of agreement.

Note: Some statements seem to be repetitive. Never mind. Just respond to them.

Statement	Item Label	Your Rating	Scale
I don't mind hurting Casey's feelings.	Enmity1		100 = Strongly Agree 0 = Strongly Disagree
I need to defend my position on the issue.	Instrumental Competition1		100 = Strongly Agree 0 = Strongly Disagree
I should be careful with word choice because I need to work with Casey again in the future.	Instrumental Cooperation4		100 = Strongly Agree 0 = Strongly Disagree
I care about how Casey feels because I want to maintain a good relationship with Casey.	Support1		100 = Strongly Agree 0 = Strongly Disagree
I should avoid words or actions that might make our communication break down because I need to work with Casey again.	Instrumental Cooperation1		100 = Strongly Agree 0 = Strongly Disagree
I need to make Casey submit to my ideas.	Instrumental Competition3		100 = Strongly Agree 0 = Strongly Disagree
I should be careful not to hurt Casey because I truly care how Casey feels.	Support2		100 = Strongly Agree 0 = Strongly Disagree
I don't need to worry whether my words would humiliate Casey; the more important thing is to get my way on this project.	Enmity2		100 = Strongly Agree 0 = Strongly Disagree
I should plan on doing this project according to my ideas.	Instrumental Competition4		100 = Strongly Agree 0 = Strongly Disagree
It's important for me to let Casey feel my affection and care.	Support3		100 = Strongly Agree 0 = Strongly Disagree
I want to make Casey feel inferior.	Enmity3		100 = Strongly Agree 0 = Strongly Disagree
I need to keep good communication with Casey because we have to work together.	Instrumental Cooperation2		100 = Strongly Agree 0 = Strongly Disagree
I did not care if Casey would feel upset because of my words.	Enmity4		100 = Strongly Agree 0 = Strongly Disagree
I should plan on keeping the communication going just for the sake of future teamwork with Casey.	Instrumental cooperation3		100 = Strongly Agree 0 = Strongly Disagree
It is important for me to protect Casey's feelings.	Support4		100 = Strongly Agree 0 = Strongly Disagree
I need to think of ways to actualize my plan on this project.	Instrumental competition2		100 = Strongly Agree 0 = Strongly Disagree

List other goals or thoughts that are important to you (not listed above), each followed with a score of importance: _____.

Part II

Now, consider what you would do in order to resolve this conflict and move on. We have listed some strategies people often use to resolve conflicts. Some statements describe people's conflict strategies DURING the conflict; others describe people's strategies AFTER the conflict episode. Rate how likely you would use each strategy. People often use multiple strategies to handle conflict. So you can give high numbers to as many strategies as you may use. Also, you may give low ratings to any number of strategies that you are not likely to use.

Again, use the numbers between 0 and 100. If you feel you are almost certain to use a strategy, rate it 100. If you feel you are almost certain that you would not use a strategy, rate it 0. You may choose any number between 0 and 100 to indicate different likelihood to use a strategy.

Statement	Item Label	Your Rating	Scale
After the meeting, I will try to solve the problem indirectly without having to discuss it with Casey again.	Outflank1		100 = Definitely 0 = Not At All Likely
I will try to satisfy Casey's needs during the meeting.	Accommodate1		100 = Definitely 0 = Not At All Likely
If the argument begins to turn into a breakdown, I will pretend nothing's wrong by talking about something else.	Pretend1		100 = Definitely 0 = Not At All Likely
I will exert pressure on Casey to reach a solution leaning towards my ideas.	Dominat1		100 = Definitely 0 = Not At All Likely
I will not give in to Casey's wishes.	Accommodate2 (Reverse coded)		100 = Definitely 0 = Not At All Likely
I will try to find a middle course or compromise to solve the problem.	Compromise1		100 = Definitely 0 = Not At All Likely
After the meeting, I will talk to our professor (boss) about my ideas without any more discussion with Casey.	Outflank2		100 = Definitely 0 = Not At All Likely
I will use my power to get my way.	Dominate2		100 = Definitely 0 = Not At All Likely
If the argument begins to turn into a breakdown, I'll switch the topic on the spot.	Pretend2		100 = Definitely 0 = Not At All Likely
I will not use influence to get my ideas accepted.	Dominate3 (Reverse coded)		100 = Definitely 0 = Not At All Likely
If deadlock happens, I will take a moderate position to resolve the conflict.	Compromise2		100 = Definitely 0 = Not At All Likely
On the spot, I will stop arguing and suggest we say or do something else.	Pretend3		100 = Definitely 0 = Not At All Likely
After the meeting, I'll come up with some sideways strategy (talk to our professor [boss] or do something else) to actualize my ideas.	Outflank3		100 = Definitely 0 = Not At All Likely

Statement	Item Label	Your Rating	Scale
After the meeting, I will restrain myself from arguing about the project with Casey in our future conversations.	Yield1		100 = Definitely 0 = Not At All Likely
In the rest of the meeting, I will stop arguing with Casey but start doing what I want, pretending not to hear Casey's nagging.	Passively Compete1		100 = Definitely 0 = Not At All Likely
In the rest of the meeting, I will stop arguing and leave the scene.	Withdraw1		100 = Definitely 0 = Not At All Likely
After the meeting, I will ask the instructor (boss) to remove me from the team. I will also make sure that I won't have Casey as a friend.	Exit1		100 = Definitely 0 = Not At All Likely
I do not want to collaborate with Casey to make decisions.	Integrate1 (Reverse coded)		100 = Definitely 0 = Not At All Likely
In the rest of the meeting, I'll just shut up and stop responding.	Withdraw2		100 = Definitely 0 = Not At All Likely
I will work with Casey to find a solution that satisfies the expectations of both of us.	Integrate2		100 = Definitely 0 = Not At All Likely
After the meeting, I'll give up my ideas and remain Casey's friend.	Yield2		100 = Definitely 0 = Not At All Likely
I will bargain with Casey to get a middle ground.	Compromise3		100 = Definitely 0 = Not At All Likely
I'll just sit there and zip my mouth in the rest of the meeting.	Withdraw3		100 = Definitely 0 = Not At All Likely
I will use my expertise to make Casey accept my ideas.	Dominate4		100 = Definitely 0 = Not At All Likely
It is fine for me to move on without this project or Casey in my life.	Exit2		100 = Definitely 0 = Not At All Likely
I will try to satisfy Casey's expectations.	Accommodate3		100 = Definitely 0 = Not At All Likely
In the rest of the meeting, I will try to keep the communication going by shifting the topic.	Pretend4		100 = Definitely 0 = Not At All Likely
I will try to work out a compromise that gives both of us some of what we want.	Compromise4		100 = Definitely 0 = Not At All Likely
I will work closely with Casey for a proper understanding of what both of us want.	Integrate3		100 = Definitely 0 = Not At All Likely
I will not bend over backwards to accommodate Casey's wishes.	Accommodate4 (Reverse coded)		100 = Definitely 0 = Not At All Likely
I will try to give and take so that moderate profits can be obtained.	Compromise5		100 = Definitely 0 = Not At All Likely
If the argument begins to turn into a breakdown, I will just step out.	Withdraw4		100 = Definitely 0 = Not At All Likely
I am willing to exchange information openly with Casey to reach the best solution.	Integrate4		100 = Definitely 0 = Not At All Likely
I will like going along with Casey's suggestions.	Accommodate5		100 = Definitely 0 = Not At All Likely

Statement	Item Label	Your Rating	Scale
I want to be, or remain, Casey's friend and will never mention our different ideas about the project again.	Yield3		100 = Definitely 0 = Not At All Likely
I will bring all our concerns out in the open to reach an agreement in the best possible way.	Integrate5		100 = Definitely 0 = Not At All Likely
I'll focus on doing the project as I want and don't have to argue back.	Passively Compete2		100 = Definitely 0 = Not At All Likely
After the meeting, I'll try something else to actualize my plan for the project but not through another debate with Casey.	Outflank4		100 = Definitely 0 = Not At All Likely
In the rest of the meeting, I'll play deaf and do the project as I have planned.	Passively Compete3		100 = Definitely 0 = Not At All Likely
I'll give up my ideas on this project and maybe never talk to Casey again.	Exit3		100 = Definitely 0 = Not At All Likely
On the spot, even though I will stop arguing, I will start doing the project as I want.	Passively Compete4		100 = Definitely 0 = Not At All Likely
I will accommodate Casey's needs.	Accommodate6		100 = Definitely 0 = Not At All Likely
After the meeting, I'll be, or remain, Casey's friend but I'll be careful not to mention our argument on the project in our conversations.	Yield4		100 = Definitely 0 = Not At All Likely
After the meeting, I won't want to be discussing anything, or even talking with Casey any more.	Exit4		100 = Definitely 0 = Not At All Likely

List any other strategies that you will use that are not list above, each strategy followed with a score of importance:

Now, please tell us more about you:

1. My age is _____ years.

2. I am FEMALE MALE

3. My cultural background is or most closely to (If you are multiethnic, just choose the one whose culture influences you the most.)

_____ African, American African, or Black

_____ Hispanic, Latino, Mexican American, Cuban American, or Puerto Rican

_____ Asian American, Pacific Islander, Chinese, Japanese, or Korean

_____ Central Asian, Indian, or Pakistani

_____ Arab, or Arab American

_____ Jewish

_____ White, Caucasian, European American

_____ Other (please specify): _____

4. I am a citizen of _____ (country).

5. My native language is ENGLISH Other (please specify)

_____.

6. I can also speak another language fluently YES NO

If "yes," the language is _____.

7. I am FRESHMAN SOPHOMORE JUNIOR SENIOR

GRADUATE OTHER (please specify) _____.

8. One last question: While you were answering the questionnaire, were you imagining Casey as a male or female? Circle one.

Male Female Not clear

That's all. Thank you again for your participation. If you are interested in the purpose of the survey and the results of the study, feel free to contact Qi Wang at qiqiwang@umd.edu or call her at 301-405-6533. Note: The results will be available after August 1, 2006.

Appendix K

Descriptives of the Indicators Before Transformation

Indicators	Mean	SD	Skewness	Standard Error	Kurtosis	Standard Error
Enmity1	39.80	29.87	.233	.130	-1.073	.260
Enmity2	27.96	26.73	.750	.130	-.387	.260
Enmity3	12.80	20.51	1.865	.131	3.250	.260
Enmity4	26.38	26.69	.880	.130	-.190	.260
Instrumental Competition1	80.42	19.63	-1.279	.130	2.002	.259
Instrumental Competition2	74.34	22.15	-.850	.130	.387	.260
Instrumental Competition3	52.47	24.39	-.210	.130	-.072	.260
Instrumental Competition4	42.63	26.48	-.021	.130	-.776	.260
Support1	71.30	29.13	-.925	.130	-.136	.259
Support2	63.07	30.85	-.520	.130	-.880	.260
Support3	55.31	31.09	-.205	.130	-1.032	.260
Support4	52.90	30.75	-.141	.130	-1.032	.259
Instrumental Cooperation1	80.16	26.17	-1.836	.130	2.839	.259
Instrumental Cooperation2	87.52	17.91	-2.442	.130	7.791	.260
Instrumental Cooperation3	70.09	29.40	-1.037	.130	.089	.260
Instrumental Cooperation4	81.05	27.09	-1.900	.130	2.888	.260
Withdraw1	13.73	20.47	1.778	.130	2.912	.259
Withdraw2	9.34	16.94	2.235	.130	4.993	.259
Withdraw3	7.94	15.90	2.961	.130	10.271	.260
Withdraw4	23.84	26.19	.955	.130	.037	.259
Passively Compete1	16.76	23.92	1.505	.130	1.492	.259
Passively Compete2	27.58	27.98	.817	.130	-.318	.260
Passively Compete3	7.79	15.46	2.548	.130	6.634	.259
Passively Compete4	15.84	22.14	1.708	.130	2.579	.260
Pretend1	21.98	25.54	1.181	.130	.514	.260
Pretend2	24.03	25.79	.974	.130	.077	.260
Pretend3	45.90	32.10	.026	.130	-1.194	.260
Pretend4	37.83	30.26	.340	.130	-1.009	.259

Indicators	Mean	SD	Skewness	Standard Error	Kurtosis	Standard Error
Exit1	11.01	20.28	2.308	.130	5.102	.260
Exit2	18.69	28.60	1.517	.130	1.174	.260
Exit3	6.70	14.50	3.048	.130	11.029	.260
Exit4	21.62	30.02	1.298	.130	.388	.259
Outflank1	30.27	29.61	.729	.130	-.577	.260
Outflank2	32.05	30.49	.563	.130	-.941	.260
Outflank3	45.01	31.41	.093	.130	-1.188	.260
Outflank4	42.66	30.86	.243	.130	-1.018	.260
Yield1	76.48	25.22	-1.179	.130	.809	.260
Yield2	29.01	29.58	.709	.130	-.706	.259
Yield3	39.15	33.54	.333	.130	-1.202	.260
Yield4	54.36	33.51	-.250	.130	-1.211	.259
Accommodate1	57.90	24.43	-.418	.130	-.057	.260
Accommodate2	51.89	25.86	-.005	.130	-.420	.260
Accommodate3	51.05	26.37	-.181	.130	-.512	.260
Accommodate4	35.73	30.35	.579	.130	-.731	.260
Accommodate5	43.43	24.84	-.027	.130	-.342	.259
Accommodate6	48.51	26.67	-.019	.130	-.552	.259
Dominate1	49.60	27.92	-.156	.130	-.858	.260
Dominate2	32.42	28.63	.505	.131	-.842	.260
Dominate3	32.99	27.71	-.670	.130	-.326	.260
Dominate4	55.97	28.89	-.400	.130	-.812	.259
Compromise1	90.56	24.25	4.958	.130	76.902	.260
Compromise2	69.44	24.83	-.733	.130	-.045	.260
Compromise3	84.04	20.93	-1.570	.130	2.114	.259
Compromise4	87.31	20.07	-2.137	.130	4.681	.260
Compromise5	81.72	23.72	-1.664	.130	2.545	.259
Integrate1	23.56	28.86	-1.055	.130	-.077	.259
Integrate2	88.84	18.34	-2.158	.130	4.738	.259
Integrate3	86.36	20.13	-1.882	.130	3.458	.259
Integrate4	89.80	17.82	-2.556	.130	7.392	.259
Integrate5	87.74	19.31	-2.157	.130	4.644	.260

Appendix L

Data Transformation Formulas

Indicators for Enmity Goals

$$\text{New Enmity2} = \ln(\text{Enmity2} + 30) + 50$$

$$\text{New Enmity3} = \ln(\text{Enmity3} + 0.01) + 60$$

$$\text{New Enmity4} = \ln(\text{Enmity4} + 15) + 50$$

Indicators for Instrumental Competitive Goals

$$\begin{aligned} \text{New Instrumental Competition1} &= \text{Instrumental Competition1}^{2.911} - \\ &\quad \text{Instrumental Competition1}^{2.910999} + 50 \end{aligned}$$

$$\begin{aligned} \text{New Instrumental Competition2} &= \text{Instrumental Competition2}^{1.3} - \\ &\quad \text{Instrumental Competition}^{1.296} + 50 \end{aligned}$$

Indicators for Support Goals

$$\text{New Support1} = \text{Support1}^{1.3} - \text{Support1}^{1.296} + 50$$

$$\text{New Support2} = \text{Support2}^{1.2} - \text{Support2}^{1.196} + 50$$

Indicators for Instrumental Cooperative Goals

$$\begin{aligned} \text{New Instrumental Cooperation1} &= \text{Instrumental Cooperation1}^{2.911} - \\ &\quad \text{Instrumental Cooperation1}^{2.910999} + 50 \end{aligned}$$

$$\begin{aligned} \text{New Instrumental Cooperation2} &= \text{instrumental Cooperation2}^{3.51} - \\ &\quad \text{Instrumental Cooperation2}^{3.509999} + 20 \end{aligned}$$

$$\begin{aligned} \text{New Instrumental Cooperation3} &= \text{instrumental Cooperation3}^{1.60} - \\ &\quad \text{Instrumental Cooperation3}^{1.59} \end{aligned}$$

$$\begin{aligned} \text{New Instrumental Cooperation4} &= \text{instrumental Cooperation4}^{2.911} - \\ &\quad \text{Instrumental Cooperation4}^{2.910999} + 50 \end{aligned}$$

Indicators for Withdrawal

$$\text{New Withdraw1} = \ln(\text{Withdrawal1} + 0.0001) + 50$$

$$\text{New Withdraw2} = \ln(\text{Withdrawal2} + 0.0001) + 50$$

$$\text{New Withdraw3} = \ln(\text{Withdrawal3} + 0.0001) + 50$$

$$\text{New Withdraw4} = \ln(\text{Withdrawal4} + 30) + 50$$

Indicators for Passive Competition

$$\text{New Passively Compete1} = \ln(\text{passive Compete1} + 0.0001) + 50$$

$$\text{New Passively Compete2} = \ln(\text{Passively Compete2} + 30) + 50$$

$$\text{New Passively Compete3} = \ln(\text{Passively Compete3} + 0.0001) + 50$$

$$\text{New Passively Compete4} = \ln(\text{Passively Compete4} + 0.0001) + 50$$

Indicators for Pretending

$$\text{New Pretend1} = \ln(\text{Pretend1} + 20) + 50$$

$$\text{New Pretend2} = \ln(\text{Pretend2} + 20) + 50$$

Indicators for Exit

$$\text{New Exit1} = \ln(\text{Exit1} + 0.0001) + 50$$

$$\text{New Exit2} = \ln(\text{Exit2} + 0.0001) + 50$$

$$\text{New Exit3} = \ln(\text{Exit3} + 0.0001) + 50$$

$$\text{New Exit4} = \ln(\text{Exit4} + 0.0001) + 50$$

Indicators for Outflanking

$$\text{New Outflank1} = \ln(\text{Outflank1} + 60) + 50$$

$$\text{New Outflank2} = \ln(\text{Outflank2} + 60) + 50$$

Indicators for Yielding

$$\text{New Yield1} = \text{Yield1}^{1.6} - \text{Yield1}^{1.59}$$

$$\text{New Yield2} = \ln(\text{Yield2} + 60) + 50$$

$$\text{New Yield3} = \ln(\text{Yield3} + 100) + 50$$

Indicators for Accommodation

$$\text{New Accommodate1} = \text{Accommodate1}^{1.2} - \text{Accommodate1}^{1.196} + 50$$

$$\text{New Accommodate4} = \ln(\text{Accommodate4} + 60) + 50$$

Indicators for Domination

$$\text{New Dominate2} = \ln(\text{Dominate2} + 60) + 50$$

$$\text{New Dominate3} = \text{Dominate3}^{1.2} - \text{Dominate3}^{1.196} + 50$$

$$\text{New Dominate4} = \text{Dominate4}^{1.2} - \text{Dominate4}^{1.196} + 50$$

Indicators for Compromise

$$\text{New Compromise1} = \ln(\text{Compromise1} + 90) + 40$$

$$\text{New Compromise2} = \text{Compromise2}^{1.3} - \text{Compromise2}^{1.296} + 50$$

$$\text{New Compromise3} = \text{Compromise3}^{2.911} - \text{Compromise3}^{2.910999} + 50$$

$$\text{New Compromise4} = \text{Compromise4}^{2.911} - \text{Compromise4}^{2.910999} + 50$$

$$\text{New Compromise5} = \text{Compromise5}^{2.911} - \text{Compromise5}^{2.910999} + 50$$

Indicators for Integration

$$\text{New Integrate1} = \text{Integrate}^{2.019} - \text{Integrate}^{2.01899} + 50$$

$$\text{New Integrate2} = \text{Integrate2}^{3.51} - \text{Integrate2}^{3.509999} + 20$$

$$\text{New Integrate3} = \text{Integrate3}^{2.94} - \text{Integrate3}^{2.939999} + 50$$

$$\text{New Integrate4} = \text{Integrate4}^{4.59} - \text{Integrate4}^{4.5899999} + 50$$

$$\text{New Integrate5} = \text{Integrate5}^{3.61} - \text{Integrate5}^{3.6099999} + 40$$

Appendix M

Descriptives of the Indicators After Transformation

	Mean	SD	Skewness	Standard Error	Kurtosis	Standard Error
Enmity1	39.80	29.87	.233	.130	-1.073	.260
New Enmity2	53.95	.45	.173	.130	-1.221	.260
New Enmity3	58.74	3.84	.318	.131	-1.830	.260
New Enmity4	53.51	.65	.113	.130	-1.305	.260
New Instrumental Competition1	51.81	.98	-.086	.130	-1.273	.259
New Instrumental Competition2	54.79	1.94	-.419	.130	-.740	.260
Instrumental Competition3	52.47	24.39	-.210	.130	-.072	.260
Instrumental Competition4	42.63	26.48	-.021	.130	-.776	.260
New Support1	54.65	2.38	-.520	.130	-1.024	.259
New Support2	52.56	1.53	-.195	.130	-1.280	.260
Support3	55.31	31.09	-.205	.130	-1.032	.260
Support4	52.90	30.75	-.141	.130	-1.032	.259
New Instrumental Cooperation1	51.95	1.04	-.476	.130	-1.053	.259
New Instrumental Cooperation2	54.09	15.23	-.634	.130	-.913	.260
New Instrumental Cooperation3	42.43	23.55	-.415	.130	-1.046	.260
New Instrumental Cooperation4	52.03	1.05	-.605	.130	-.958	.260
New Withdraw1	46.85	6.14	.040	.130	-1.974	.259
New Withdraw2	45.39	5.89	.518	.130	-1.710	.259
New Withdraw3	45.17	5.78	.578	.130	-1.640	.260
New Withdraw4	53.87	.45	.419	.130	-1.186	.259
New Passive Compete1	47.14	6.21	-.026	.130	-1.971	.259
New Passive Compete2	53.94	.46	.265	.130	-1.253	.260
New Passive Compete3	44.96	5.73	.662	.130	-1.534	.259
New Passive Compete4	47.61	6.10	-.202	.130	-1.926	.260
New Pretend1	53.57	.55	.482	.130	-1.044	.260
New Pretend2	53.62	.56	.293	.130	-1.247	.260
Pretend3	45.90	32.10	.026	.130	-1.194	.260
Pretend4	37.83	30.26	.340	.130	-1.009	.259

	Mean	SD	Skewness	Standard Error	Kurtosis	Standard Error
New Exit1	45.76	5.97	.391	.130	-1.812	.260
New Exit2	44.50	5.54	.840	.130	-1.261	.260
New Exit3	47.59	6.26	-.142	.130	-1.940	.259
New Exit4	46.75	6.26	.125	.130	-1.945	.260
New Outflank1	54.45	.31	.363	.130	-1.154	.260
New Outflank2	54.46	.32	.249	.130	-1.343	.260
Outflank3	45.01	31.41	.093	.130	-1.188	.260
Outflank4	42.66	30.86	.243	.130	-1.018	.260
New Yield1	47.43	22.26	-.568	.130	-.904	.260
New Yield2	54.43	.31	.390	.130	-1.246	.259
New Yield3	54.90	.24	.101	.130	-1.376	.260
New Yield4	54.36	33.51	-.250	.130	-1.211	.259
New Accommodate1	52.22	1.19	.139	.130	-.552	.260
Accommodate2	51.89	25.86	.005	.130	-.420	.260
Accommodate3	51.05	26.37	-.181	.130	-.512	.260
New Accommodate4	54.51	.31	.177	.130	-1.143	.260
Accommodate5	43.43	24.84	.027	.130	-.342	.259
Accommodate6	48.51	26.67	-.019	.130	-.552	.259
Dominate1	49.60	27.92	-.156	.130	-.858	.260
New Dominate2	54.47	.30	.152	.131	-1.281	.260
New Dominate3	52.73	1.41	-.275	.130	-.999	.260
New Dominate4	52.17	1.37	.011	.130	-1.034	.259
New Compromise1	45.18	.12	-.870	.130	17.821	.260
New Compromise2	54.39	2.09	-.279	.130	-.921	.260
New Compromise3	52.08	1.03	-.619	.130	-1.029	.259
New Compromise4	52.28	.97	-.985	.130	-.347	.260
New Compromise5	52.00	1.06	-.453	.130	-1.218	.259
New Integrate1	50.32	.18	-.521	.130	-1.325	.259
New Integrate2	56.25	15.73	-.998	.130	-.399	.259
New Integrate3	52.53	1.14	-.830	.130	-.691	.259
New Integrate4	51.64	23.51	-.919	.130	-.587	.259
New Integrate5	45.55	2.52	-.869	.130	-.561	.260

Appendix N

Multivariate Analysis Results on Each Likelihood of Avoidance

Source	Likelihood of Avoidance Strategy	Degree of Freedom	<i>F</i>	<i>p</i>
Corrected Model	Withdraw	94	1.35	.03
	Passively Compete	94	1.20	.13
	Pretend	94	.95	.60
	Exit	94	2.34	.00
	Outflank	94	1.29	.05
	Yield	94	1.89	.00
Intercept	Withdraw	1	.24	.62
	Passively Compete	1	1.37	.24
	Pretend	1	1.64	.20
	Exit	1	4.31	.03
	Outflank	1	.02	.87
	Yield	1	.00	.98
Scenario	Withdraw	1	.40	.52
	Passively Compete	1	.24	.62
	Pretend	1	.69	.40
	Exit	1	.07	.78
	Outflank	1	.22	.63
	Yield	1	.37	.54
Condition	Withdraw	11	.97	.47
	Passively Compete	11	1.29	.23
	Pretend	11	1.33	.20
	Exit	11	4.77	.00
	Outflank	11	1.65	.08
	Yield	11	2.66	.00
Ps Gender	Withdraw	1	.41	.52
	Passively Compete	1	3.09	.08
	Pretend	1	.28	.59
	Exit	1	5.91	.01
	Outflank	1	.02	.87
	Yield	1	.02	.87
Cs Gender	Withdraw	2	2.20	.11
	Passively Compete	2	1.14	.31
	Pretend	2	1.14	.32
	Exit	2	4.87	.00

Source	Likelihood of Avoidance Strategy	Degree of Freedom	<i>F</i>	<i>p</i>
Scenario × Condition	Outflank	2	.21	.80
	Yield	2	.61	.54
	Withdraw	11	1.55	.11
	Passively Compete	11	1.19	.29
	Pretend	11	1.05	.39
	Exit	11	1.75	.06
Scenario × Ps Gender	Outflank	11	.74	.69
	Yield	11	1.27	.24
	Withdraw	1	.02	.87
	Passively Compete	1	.11	.73
	Pretend	1	.02	.87
	Exit	1	1.00	.31
Condition × Ps Gender	Outflank	1	.54	.46
	Yield	1	.91	.33
	Withdraw	11	.97	.46
	Passively Compete	11	1.28	.23
	Pretend	11	1.10	.36
	Exit	11	1.33	.20
Scenario × Condition × Ps Gender	Outflank	11	1.83	.06
	Yield	11	.45	.93
	Withdraw	10	2.84	.00
	Passively Compete	10	1.09	.36
	Pretend	10	1.19	.29
	Exit	10	.82	.60
Scenario × Cs Gender	Outflank	10	.65	.76
	Yield	10	1.12	.34
	Withdraw	2	.14	.86
	Passively Compete	2	.36	.69
	Pretend	2	.57	.56
	Exit	2	.01	.98
Condition × Cs Gender	Outflank	2	.19	.82
	Yield	2	.69	.49
	Withdraw	18	1.69	.05
	Passively Compete	18	1.24	.22
	Pretend	18	1.30	.18
	Exit	18	.76	.73

Source	Likelihood of Avoidance Strategy	Degree of Freedom	<i>F</i>	<i>p</i>	
Scenario × Condition × Cs Gender	Outflank	18	1.00	.45	
	Yield	18	.76	.74	
	Withdraw	9	1.24	.27	
	Passively Compete	9	.70	.70	
	Pretend	9	.66	.73	
	Exit	9	.78	.63	
	Outflank	9	.52	.85	
	Yield	9	.92	.50	
	Withdraw	2	1.52	.22	
Ps Gender × Cs Gender	Passively Compete	2	1.53	.21	
	Pretend	2	.41	.66	
	Exit	2	2.65	.07	
	Outflank	2	2.12	.12	
	Yield	2	.08	.91	
	Scenario × Ps Gender × Cs Gender	Withdraw	1	.46	.49
		Passively Compete	1	.12	.72
		Pretend	1	.00	.93
		Exit	1	.29	.58
Outflank		1	2.18	.14	
Yield		1	.00	.97	
Condition × Ps Gender × Cs Gender		Withdraw	9	1.08	.37
		Passively Compete	9	1.04	.40
		Pretend	9	.51	.86
	Exit	9	.59	.79	
	Outflank	9	1.02	.42	
	Yield	9	1.26	.25	
	Scenario × Condition × Ps Gender × Cs Gender	Withdraw	1	.55	.45
		Passively Compete	1	.41	.52
		Pretend	1	.03	.84
Exit		1	.01	.89	
Outflank		1	.00	.98	
Yield		1	.03	.85	

Source	Likelihood of Avoidance Strategy	Degree of Freedom	<i>F</i>	<i>p</i>
Error	Withdraw	243		
	Passively Compete	243		
	Pretend	243		
	Exit	243		
	Outflank	243		
	Yield	243		
	Total	Withdraw	338	
Passively Compete		338		
Pretend		338		
Exit		338		
Outflank		338		
Yield		338		
Corrected Total		Withdraw	337	
	Passively Compete	337		
	Pretend	337		
	Exit	337		
	Outflank	337		
	Yield	337		

Note 1. For independent variables, Condition = Experimental Condition, Scenario = Type of Scenario, Ps Gender = Participants' Gender, Cs Gender = Casey's Gender.

Appendix O

LISREL Syntax for Measured Variables in the Formal Study

Importance of Enmity Goals

CFA for Es transformed 51206
 DA NI=4 NO=346 MA=CM
 LA
 E1 E2 E3 E4
 CMATRIX
 892.377
 6.712 .205
 31.260 .796 14.802
 11.590 .171 1.152 .426
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Importance of Instrumental Competitive Goals

CFA for IPEs transformed 51206
 DA NI=4 NO=346 MA=CM
 LA
 IPE1 IPE2 IPE3 IPE4
 CMATRIX
 .976
 .701 3.794
 7.252 12.673 594.930
 6.405 13.385 253.977 701.374
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Importance of Support Goals

CFA for Ss transformed 51206
 DA NI=4 NO=346 MA=CM
 LA
 S1 S2 S3 S4
 CMATRIX

5.683
 2.791 2.353
 41.290 29.664 967.039
 41.756 32.562 587.602 945.966
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Importance of Instrumental Cooperative Goals

CFA for IOPS transformed 51206
 DA NI=4 NO=346 MA=CM
 LA
 IOP1 IOP2 IOP3 IOP4
 CMATRIX
 1.082
 9.423 232.159
 11.031 133.878 555.025
 .804 8.705 10.505 1.114
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Likelihood of Withdrawal

CFA for WS transformed 1206
 DA NI=4 NO=346 MA=CM
 LA
 W1 W2 W3 W4
 CMATRIX
 37.722
 16.667 34.808
 15.991 22.946 33.417
 1.194 .714 .957 .208
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Likelihood of Passive Competition

CFA for PCS transformed 1206
 DA NI=4 NO=346 MA=CM
 LA
 PC1 PC2 PC3 PC4
 CMATRIX
 38.666
 1.200 .221
 16.888 1.174 32.834
 17.351 1.287 19.718 37.328
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Likelihood of Pretending

CFA for PS transformed 1206
 DA NI=4 NO=346 MA=CM
 LA
 P1 P2 P3 P4
 CMATRIX
 .307
 .190 .316
 6.054 7.504 1030.682
 5.784 8.272 305.507 916.258
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Likelihood of Exit

CFA for EXS transformed 1206
 DA NI=4 NO=346 MA=CM
 LA
 EX1 EX2 EX3 EX4
 CMATRIX
 35.732
 18.520 39.223
 17.242 16.520 30.707
 18.799 19.621 14.257 39.301
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1

PD
OU AL SC AM AD=OFF

Likelihood of Outflanking

CFA for OS transformed 051206
DA NI=4 NO=346 MA=CM
LA
O1 O2 O3 O4
CMATRIX
.098
.035 .105
2.772 5.139 986.820
2.049 3.345 410.361 952.696
MO NY=4 NE=1 LY=FU,FI TE=DI,FR
FR LY 2 1 LY 3 1 LY 4 1
VA 1 LY 1 1
PD
OU AL SC AM AD=OFF

Likelihood of Yielding

CFA for GS transformed 051206
DA NI=4 NO=346 MA=CM
LA
G1 G2 G3 G4
CMATRIX
495.631
.133 .101
.905 .038 .058
156.562 4.516 4.776 1122.995
MO NY=4 NE=1 LY=FU,FI TE=DI,FR
FR LY 2 1 LY 3 1 LY 4 1
VA 1 LY 1 1
PD
OU AL SC AM AD=OFF

Likelihood of Accommodation

CFA for AS transformed 051206
DA NI=6 NO=346 MA=CM
LA
A1 A2 A3 A4 A5 A6
CMATRIX
1.434

8.102 669.127
 16.341 205.516 695.465
 .064 1.387 1.420 .097
 9.787 249.803 260.556 1.626 617.033
 14.637 258.989 419.284 2.028 320.823 711.504
 MO NY=6 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1 LY 5 1 LY 6 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Likelihood of Domination

CFA for DS transformed 051206
 DA NI=4 NO=346 MA=CM
 LA
 D1 D2 D3 D4
 CMATRIX
 779.999
 4.893 .094
 10.688 .142 1.990
 16.747 .201 .362 1.900
 MO NY=4 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Likelihood of Compromise

CFA for CS transformed 051206
 DA NI=5 NO=346 MA=CM
 LA
 C1 C2 C3 C4 C5
 CMATRIX
 .016
 .065 4.388
 .049 .896 1.070
 .058 .748 .552 .949
 .047 .824 .579 .591 1.142
 MO NY=5 NE=1 LY=FU,FI TE=DI,FR
 FR LY 2 1 LY 3 1 LY 4 1 LY 5 1
 VA 1 LY 1 1
 PD
 OU AL SC AM AD=OFF

Likelihood of Integration

CFA for IS transformed 051206
DA NI=5 NO=346 MA=CM
LA
I1 I2 I3 I4 I5
CMATRIX
.035
1.183 247.535
.075 11.844 1.317
1.685 202.369 16.857 553.069
.153 23.457 1.644 36.940 6.365
MO NY=5 NE=1 LY=FU,FI TE=DI,FR
FR LY 2 1 LY 3 1 LY 4 1 LY 5 1
VA 1 LY 1 1
PD
OU AL SC AM AD=OFF

Appendix P

Measurement Model Statistics Controlling for Groups

Importance of Goals, Indicator Loadings and Measurement Model Indices

Importance of Goals and Indicators	Unstandardized Loadings (standardized)
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Importance of Enmity Goals

I don't mind hurting Casey's feelings.	1.00 (.68)*
I don't need to worry whether my words would humiliate Casey; the more important thing is to get my way on this project.	0.02 (.71)*
I want to make Casey feel inferior.	0.10 (.53)*
I do not care if Casey would feel upset because of my words.	0.03 (.83)*

$\chi^2(34, N = 346) = 70.88, p < .01, RMSEA = .06, SRMR = .03, CFI = .96. H = .812.$

Importance of Instrumental Competitive Goals

I need to defend my position on the issue.	1.00 (.51)*
I need to think of ways to actualize my plan on this project.	1.88 (.49)*
I need to make Casey submit to my ideas.	29.00 (.60)*
I should plan on doing this project according to my ideas.	31.05 (.59)*

$\chi^2(34, N = 346) = 47.66, p = .06, RMSEA = .03, SRMR = .03, CFI = .98. H = .638.$

Importance of Support Goals

I care about how Casey feels because I want to maintain a good relationship with Casey.	1.00 (.84)*
I will be careful not to hurt Casey because I truly care how Casey feels.	0.70 (.91)*
It is important for me to let Casey feel my affection and care.	0.10 (.70)*
It is important for me to protect Casey's feelings.	0.11 (.73)*

$\chi^2(34, N = 346) = 125.93, p < .01, RMSEA = .09, SRMR = .03, CFI = .94. H = .903.$

Importance of Instrumental Cooperative Goals

I should avoid words or actions that might make our communication break down because I need to work with Casey again.	1.00 (.89)*
I need to keep good communication with Casey because we have to work together.	6.63 (.67)*

Importance of Goals, Indicator Loadings and Measurement Model Indices

Importance of Goals and Indicators	Unstandardized Loadings (standardized)
<i>Importance of Instrumental Cooperative Goals</i>	
I should plan on keeping the communication going just for the sake of future teamwork with Casey.	14.43 (.52)*
I should be careful with word choice because I need to work with Casey again in the future.	0.93 (.58)*
$\chi^2(34, N = 346) = 72.01, p < .001, RMSEA = .06, SRMR = .03, CFI = .96. H = .846.$	

* $p < .01$.

Note. Unstandardized coefficients resulted from the analyses of relevant covariance matrix, controlling for group membership (i.e., the 11 dummies in Table 10 were entered as independent variables which all lead to the dependent variable). Bold values represent unstandardized loadings of reference indicators.

*Likelihoods of Avoidance Strategies, Indicator Loadings and Measurement Model**Indices*

Likelihoods of Avoidance Strategies and Indicators	Unstandardized Loadings (standardized)
<i>Withdrawal</i>	
In the rest of the meeting, I will stop arguing and leave the scene.	1.00 (.58)*
In the rest of the meeting, I'll just shut up and stop responding.	1.30 (.79)*
I'll just sit there and zip my mouth in the rest of the meeting.	1.35 (.84)*
If the argument begins to turn into a breakdown, I will just step out.	0.05 (.43)*
$\chi^2(34, N = 346) = 72.29, p < .001, RMSEA = .06, SRMR = .03, CFI = .95. H = .827.$	
<i>Passive Competition</i>	
In the rest of the meeting, I will stop arguing with Casey but start doing what I want, pretending not to hear Casey's nagging.	1.00 (.63)*
I'll focus on doing the project as I want and don't have to argue back.	0.07 (.62)*
In the rest of the meeting, I'll play deaf and do the project as I have planned.	1.08 (.74)*
On the spot, even though I will stop arguing, I will start doing the project as I want.	1.15 (.74)*
$\chi^2(34, N = 346) = 36.25, p = .36, RMSEA = .01, SRMR = .02, CFI = 1.00. H = .787.$	
<i>Pretending</i>	
If the argument begins to turn into a breakdown, I will pretend nothing's wrong by talking about something else.	1.00 (.67)*
If the argument begins to turn into a breakdown, I'll switch the topic on the spot.	1.34 (.90)*
On the spot, I will stop arguing and suggest we say or do something else.	40.28 (.48)*
In the rest of the meeting, I will try to keep the communication going by shifting the topic.	44.18 (.54)*
$\chi^2(34, N = 346) = 57.90, p < .05, RMSEA = .04, SRMR = .04, CFI = .96. H = .853.$	
<i>Exit</i>	
After the meeting, I will ask the instructor (boss) to remove me from the team. I will also make sure that I won't have Casey as a friend.	1.00 (.73)*
It is fine for me to move on without this project or Casey in my life.	1.01 (.71)*

*Likelihoods of Avoidance Strategies, Indicator Loadings and Measurement Model**Indices*

Likelihoods of Avoidance Strategies and Indicators	Unstandardized Loadings (standardized)
--	--

Exit

I'll give up my ideas on this project and maybe never talk to Casey again.	0.79 (.63)*
After the meeting, I won't want to be discussing anything, or even talking with Casey any more.	1.03 (.72)*

$\chi^2(34, N = 346) = 69.51, p < .01, RMSEA = .05, SRMR = .03, CFI = .96. H = .796.$

Outflanking

After the meeting, I will try to solve the problem indirectly without having to discuss it with Casey again.	1.00 (.42)*
After the meeting, I will talk to our professor (boss) about my ideas without any more discussion with Casey.	1.75 (.71)*
After the meeting, I'll come up with some sideway strategy (talk to our professor [boss] or do something else) to actualize my ideas.	170.12 (.72)*
After the meeting, I'll try something else to actualize my plan for the project but not through another debate with Casey.	122.19 (.53)*

$\chi^2(34, N = 346) = 42.35, p = .15, RMSEA = .03, SRMR = .02, CFI = .99. H = .730.$

Yielding

After the meeting, I will restrain myself from arguing about the project with Casey in our future conversations.	1.00 (.18)*
After the meeting, I'll give up my ideas and remain Casey's friend.	0.05 (.60)*
I want to be, or remain, Casey's friend and will never mention our different ideas about the project again.	0.05 (.79)*
After the meeting, I'll be, or remain, Casey's friend but I'll be careful not to mention our argument on the project in our conversations.	6.57 (.77)*

$\chi^2(34, N = 346) = 48.43, p = .06, RMSEA = .03, SRMR = .02, CFI = .98. H = .788.$

* $p < .01.$

Note. Unstandardized coefficients resulted from the analyses of relevant covariance matrix, controlling for group membership (i.e., the 11 dummies in Table 10 were entered as independent variables which all lead to the dependent variable). Bold values represent unstandardized loadings of reference indicators.

*Likelihoods of Accommodation, Domination, Compromise, and Integration, Indicator**Loadings and Measurement Model Indices*

Conflict Strategies Measured by ROCI-II	Unstandardized Loadings (standardized)
<i>Accommodation</i>	
I will try to satisfy Casey's needs during the meeting.	1.00 (.62)*
I will not give in to Casey's wishes.	16.72 (.48)*
I will try to satisfy Casey's expectations.	26.31 (.75)*
I will not bend over backwards to accommodate Casey's wishes.	0.12 (.28)*
I will like going along with Casey's suggestions.	19.36 (.58)*
I will accommodate Casey's needs.	28.27 (.79)*
$\chi^2(63, N = 346) = 98.99, p < .01, RMSEA = .04, SRMR = .03, CFI = .97. H = .817.$	
<i>Domination</i>	
I will exert pressure on Casey to reach a solution leaning towards my ideas.	1.00 (.72)*
I will use my power to get my way.	0.01 (.80)*
I will not use influence to get my ideas accepted.	0.03 (.38)*
I will use my expertise to make Casey accept my ideas.	0.04 (.59)*
$\chi^2(34, N = 346) = 29.40, p = .69, RMSEA = .00, SRMR = .02, CFI = 1.00. H = .781.$	
<i>Compromise</i>	
I will try to find a middle course or compromise to solve the problem.	1.00 (.54)*
If deadlock happens, I will take a moderate position to resolve the conflict.	21.69 (.53)*
I will bargain with Casey to get a middle ground.	12.65 (.71)*
I will try to work out a compromise that gives both of us some of what we want.	12.48 (.80)*
I will try to give and take so that moderate profits can be obtained.	9.75 (.70)*
$\chi^2(48, N = 346) = 90.91, p < .05, RMSEA = .04, SRMR = .04, CFI = .94. H = .820.$	

*Likelihoods of Accommodation, Domination, Compromise, and Integration, Indicator**Loadings and Measurement Model Indices*

Conflict Strategies Measured by ROCI-II	Unstandardized Loadings (standardized)
<i>Integration</i>	
I do not want to collaborate with Casey to make decisions.	1.00 (.54)*
I will work with Casey to find a solution that satisfies the expectations of both of us.	29.28 (.82)*
I will work closely with Casey for a proper understanding of what both of us want.	3.49 (.78)*
I am willing to exchange information openly with Casey to reach the best solution.	60.96 (.80)*
I will bring all our concerns out in the open to reach an agreement in the best possible way.	5.48 (.70)*

$\chi^2(48, N = 346) = 183.31, p < .01, RMSEA = .10, SRMR = .04, CFI = .92, H = .871.$

* $p < .01.$

Note. Unstandardized coefficients resulted from the analyses of relevant covariance matrix, controlling for group membership (i.e., the 11 dummies in Table 10 were entered as independent variables which all lead to the dependent variable). Bold values represent unstandardized loadings of reference indicators.

Appendix Q

Covariance Matrix in LISREL for Models A and B

Covariance Matrix

Item	E1	E2	E3	E4	IPE1	IPE2
	-----	-----	-----	-----	-----	-----
E1	891.64					
E2	389.57	712.66				
E3	174.79	226.18	419.90			
E4	492.52	384.81	242.83	714.17		
IPE1	216.46	94.31	60.53	146.57	385.41	
IPE2	95.94	96.72	66.43	81.89	137.57	490.98
IPE3	214.99	200.63	148.84	201.80	135.38	145.77
IPE4	278.94	396.20	217.41	290.60	132.08	161.53
S1	-451.79	-297.76	-153.58	-378.34	-147.33	-101.21
S2	-540.75	-338.97	-130.09	-438.85	-176.21	-113.38
S3	-385.60	-183.99	-57.42	-301.15	-80.20	-20.10
S4	-526.33	-253.28	-75.32	-391.86	-179.98	-42.00
IOP1	-289.89	-234.08	-113.00	-264.72	-98.49	-54.64
IOP2	-126.39	-99.36	-73.34	-154.65	-24.69	-0.88
IOP3	-76.82	-116.54	-64.59	-97.49	-35.31	23.60
IOP4	-268.21	-254.20	-114.04	-253.24	-65.17	-47.59
W1	39.53	89.92	101.27	104.82	11.93	-6.03
W2	10.12	74.28	48.75	58.77	-18.71	-4.24
W3	-10.76	18.64	37.33	26.86	-37.66	-19.34
W4	-18.90	2.52	-10.02	-8.32	-24.59	-32.51
PC1	111.58	163.42	128.87	140.92	47.58	26.92
PC2	150.46	231.64	184.35	191.84	68.10	89.98
PC3	78.19	116.81	113.03	115.07	17.71	15.44
PC4	150.23	180.54	126.35	155.71	58.81	64.28
P1	-70.41	-6.00	46.23	-11.93	-57.47	15.84
P2	-26.30	34.91	27.32	-8.27	-24.86	39.56
P3	-116.49	-38.35	44.17	-38.89	-55.84	23.91
P4	-129.79	-52.05	-4.88	-49.06	-14.87	7.36
EX1	165.38	130.96	125.44	170.39	41.13	24.47
EX2	204.32	207.40	113.30	238.62	57.57	56.57
EX3	64.89	69.46	61.58	91.19	-0.16	4.74
EX4	377.21	269.00	152.68	315.31	155.88	107.50
O1	137.25	144.32	101.37	162.47	48.83	53.18
O2	200.03	245.66	169.19	235.27	59.37	119.08
O3	181.20	153.05	111.10	156.39	119.03	147.63
O4	133.30	120.57	118.78	114.84	129.20	161.57
G1	-63.22	-40.43	-63.87	-82.60	36.71	18.53
G2	-225.86	-101.15	-59.16	-124.28	-154.04	-79.82

Item	E1	E2	E3	E4	IPE1	IPE2
	-----	-----	-----	-----	-----	-----
G3	-271.06	-87.79	-41.44	-194.79	-99.99	-101.57
G4	-375.13	-193.44	-105.66	-279.28	-89.10	-31.85
DUMMY1	-1.65	-0.44	-0.27	-0.83	-0.50	-0.13
DUMMY2	0.90	0.56	0.23	0.38	0.42	0.00
DUMMY3	-1.20	-0.87	-0.38	-0.39	0.26	0.01
DUMMY4	2.40	2.09	1.68	1.69	0.65	1.01
DUMMY5	-1.02	-0.61	-0.23	-0.74	-0.23	-0.19
DUMMY6	0.09	0.18	-0.16	0.44	-0.08	0.22
DUMMY7	-1.23	-0.46	-0.57	-1.02	-0.31	-0.35
DUMMY9	0.14	0.25	-0.33	0.51	-0.18	-0.18
DUMMY10	0.06	-0.30	-0.27	-0.28	-0.18	-0.70
DUMMY11	0.68	-0.22	-0.37	-0.60	-0.01	-0.11
DUMMY12	-0.34	-0.56	0.01	-0.54	-0.51	-0.15

Covariance Matrix

	IPE3	IPE4	S1	S2	S3	S4
	-----	-----	-----	-----	-----	-----
IPE3	594.37					
IPE4	254.84	700.73				
S1	-143.62	-265.62	848.58			
S2	-116.90	-208.81	680.66	951.74		
S3	-54.39	-153.30	489.70	587.13	965.57	
S4	-118.21	-159.29	511.25	653.05	585.82	945.97
IOP1	-99.15	-201.43	468.04	404.29	278.35	338.15
IOP2	-67.19	-126.50	188.99	143.22	149.38	123.76
IOP3	-51.81	-123.78	232.00	98.44	131.64	171.22
IOP4	-85.03	-205.98	475.79	390.48	247.28	296.88
W1	45.95	99.06	-14.47	-0.47	48.43	2.75
W2	38.01	65.23	-65.46	-62.82	6.12	1.45
W3	8.25	7.01	-30.43	-18.03	26.22	27.84
W4	-29.43	10.99	-5.18	43.14	76.64	7.38
PC1	85.33	163.01	-115.55	-107.68	15.53	-103.34
PC2	142.98	284.15	-197.66	-211.74	-64.97	-115.22
PC3	52.61	130.12	-100.74	-93.71	1.14	-59.63
PC4	89.31	186.64	-148.30	-207.25	-76.99	-84.99
P1	14.14	-17.73	20.03	59.09	91.06	113.38
P2	-4.59	39.18	-60.16	-2.07	69.15	20.01
P3	4.37	-80.88	30.53	61.03	109.04	35.14
P4	-109.68	-80.38	47.45	88.44	84.74	102.36
EX1	62.69	160.46	-276.79	-250.59	-130.11	-160.38

	IPE3	IPE4	S1	S2	S3	S4
	-----	-----	-----	-----	-----	-----
EX2	78.69	175.96	-266.69	-343.44	-186.91	-186.22
EX3	22.58	71.82	-75.76	-79.58	-15.21	-21.90
EX4	148.37	274.31	-481.54	-504.69	-328.46	-344.58
O1	112.99	157.76	-150.01	-123.11	-93.72	-72.92
O2	169.89	247.80	-235.50	-238.24	-83.60	-162.12
O3	166.67	218.34	-171.42	-152.50	42.40	-96.83
O4	193.02	201.82	-128.10	-116.48	-1.75	-139.83
G1	-7.06	-8.19	24.82	24.95	54.45	23.42
G2	-74.62	-132.13	288.55	296.75	240.19	290.95
G3	-14.48	-101.92	391.08	396.53	380.84	287.84
G4	-52.29	-157.30	471.54	476.62	431.34	453.11
DUMMY1	-0.87	-0.42	1.02	1.61	0.81	1.28
DUMMY2	0.31	0.35	-1.44	-1.56	-1.46	-0.63
DUMMY3	0.08	-0.98	1.60	1.62	0.94	0.88
DUMMY4	1.51	1.76	-3.53	-2.97	-2.36	-2.39
DUMMY5	0.47	-0.50	1.43	1.75	1.44	1.44
DUMMY6	0.10	0.34	0.08	-1.16	-0.84	-0.77
DUMMY7	-0.89	-0.89	1.55	1.20	1.55	1.40
DUMMY9	-0.30	0.25	-0.66	-1.25	-1.63	-1.01
DUMMY10	-0.06	-0.38	1.60	1.84	2.16	1.19
DUMMY11	-0.20	0.04	-0.49	-0.99	-0.72	-0.60
DUMMY12	-0.46	-0.45	1.49	1.63	0.72	0.47

Covariance Matrix

	IOP1	IOP2	IOP3	IOP4	W1	W2
	-----	-----	-----	-----	-----	-----
IOP1	685.01					
IOP2	240.81	320.61				
IOP3	392.32	178.05	868.33			
IOP4	587.43	213.68	400.44	734.68		
W1	-24.99	-16.63	24.45	-38.10	419.25	
W2	-50.63	-12.14	26.83	-82.22	108.23	286.97
W3	-27.16	-15.39	31.85	-44.37	59.41	161.80
W4	17.56	-1.61	20.47	14.19	181.32	97.02
PC1	-113.34	-86.91	10.17	-109.00	212.73	102.50
PC2	-200.03	-137.09	-78.06	-166.69	142.17	98.53
PC3	-79.67	-34.68	-27.75	-102.94	102.64	91.18
PC4	-134.33	-66.91	-32.04	-165.34	113.03	124.16
P1	38.23	13.37	86.02	21.53	96.27	99.94
P2	18.76	5.95	83.00	-2.70	106.83	81.52
P3	89.85	66.35	140.25	59.95	105.39	121.89
P4	133.91	36.34	123.20	103.48	66.24	43.55

	IOP1	IOP2	IOP3	IOP4	W1	W2
	-----	-----	-----	-----	-----	-----
EX1	-168.14	-47.53	-39.60	-178.40	134.52	139.06
EX2	-176.28	-82.55	-53.28	-154.01	118.51	128.02
EX3	-36.46	-21.71	30.65	-55.71	65.03	96.17
EX4	-302.20	-121.88	-132.51	-352.17	74.92	135.21
O1	-113.40	-43.48	40.92	-95.58	169.44	134.45
O2	-142.75	-70.85	0.16	-142.85	113.25	127.23
O3	-76.02	-8.96	102.91	-31.62	143.19	88.97
O4	-85.43	-47.88	44.87	-38.33	118.45	61.48
G1	61.58	42.08	109.23	70.98	-8.62	-42.45
G2	128.58	61.79	59.97	126.17	76.62	42.91
G3	210.22	82.14	47.78	225.44	45.96	31.71
G4	295.84	126.97	129.37	313.84	28.58	-2.60
DUMMY1	0.39	-0.06	-0.52	0.40	0.00	0.23
DUMMY2	0.11	-0.16	0.70	0.37	0.16	-0.09
DUMMY3	0.40	0.34	-0.60	0.55	-0.15	-0.22
DUMMY4	-3.16	-0.72	-1.95	-3.50	-0.05	0.52
DUMMY5	0.76	0.45	0.28	0.92	0.06	-0.05
DUMMY6	0.48	-0.09	1.36	0.36	0.42	0.31
DUMMY7	0.94	0.58	0.43	0.59	0.15	-0.34
DUMMY9	0.50	0.12	1.16	0.90	-0.66	0.09
DUMMY10	0.47	0.13	-0.07	0.53	0.14	-0.02
DUMMY11	0.76	0.25	1.14	0.73	0.16	-0.02
DUMMY12	0.91	0.05	0.03	0.82	-0.47	-0.41

Covariance Matrix

	W3	W4	PC1	PC2	PC3	PC4
	-----	-----	-----	-----	-----	-----
W3	255.22					
W4	113.33	686.11				
PC1	43.58	122.92	572.19			
PC2	52.27	89.02	275.06	785.21		
PC3	52.15	62.25	145.64	189.25	239.26	
PC4	70.60	84.67	188.58	290.28	145.18	490.11
P1	115.47	164.73	139.07	63.69	73.78	39.52
P2	70.97	172.83	171.83	79.77	80.08	82.99
P3	111.03	158.26	119.80	-41.35	23.20	-34.51
P4	75.07	182.86	39.29	-27.23	34.16	24.01
EX1	68.15	93.70	124.93	120.48	101.42	146.17
EX2	66.76	83.69	125.35	252.09	111.51	211.62
EX3	63.13	74.37	81.42	104.71	89.39	119.69

	W3	W4	PC1	PC2	PC3	PC4
	-----	-----	-----	-----	-----	-----
EX4	62.01	72.79	161.63	212.63	148.61	231.10
O1	106.30	116.22	128.18	242.61	114.48	126.03
O2	58.07	88.98	245.36	306.99	102.21	161.73
O3	47.87	107.42	187.57	256.40	102.49	142.38
O4	32.50	139.79	179.66	375.95	97.01	170.67
G1	-20.27	32.91	5.23	-30.71	-54.76	19.37
G2	84.11	88.43	-21.80	-30.11	-13.89	-16.82
G3	45.68	79.64	91.30	-2.86	-1.10	-14.79
G4	27.18	55.19	-54.25	-119.93	-58.12	-40.95
DUMMY1	0.23	-0.27	0.09	-0.30	-0.13	-0.16
DUMMY2	0.02	-0.43	0.08	0.04	0.15	-0.06
DUMMY3	-0.32	-0.17	-0.05	-0.64	-0.18	-0.40
DUMMY4	0.33	-0.32	0.28	1.13	0.47	1.13
DUMMY5	0.01	0.27	-0.05	-0.59	-0.24	-0.46
DUMMY6	-0.17	-0.06	0.48	0.76	0.11	0.20
DUMMY7	-0.28	0.35	0.24	-0.07	-0.20	-0.09
DUMMY9	-0.05	-0.30	-0.63	-0.28	-0.07	-0.16
DUMMY10	0.40	0.25	0.13	-0.52	-0.35	-0.01
DUMMY11	0.00	0.05	-0.29	0.46	0.03	0.00
DUMMY12	-0.09	0.76	-0.52	-0.67	-0.20	-0.45

Covariance Matrix

	P1	P2	P3	P4	EX1	EX2
	-----	-----	-----	-----	-----	-----
P1	652.14					
P2	388.72	665.41				
P3	293.65	343.67	1030.32			
P4	286.89	385.27	307.00	916.26		
EX1	61.81	93.62	48.67	9.77	413.79	
EX2	78.42	73.72	6.69	141.76	241.39	818.07
EX3	99.49	58.28	48.03	30.09	135.61	149.17
EX4	14.35	77.46	-44.57	-26.04	331.08	338.28
O1	147.21	171.18	106.61	118.52	100.03	125.23
O2	138.65	176.45	121.05	47.60	187.78	230.96
O3	107.36	219.35	173.11	23.21	198.95	171.96
O4	54.66	139.69	95.80	51.43	99.80	147.80
G1	46.95	47.79	104.96	124.99	-17.21	17.05
G2	97.38	72.14	58.10	186.07	-57.29	-29.40
G3	149.89	87.28	170.76	164.23	-140.71	-79.68
G4	124.35	56.22	134.10	146.72	-219.79	-159.49

	P1	P2	P3	P4	EX1	EX2
	-----	-----	-----	-----	-----	-----
DUMMY1	-0.14	-0.06	-0.52	0.28	-0.61	-0.73
DUMMY2	-0.14	-0.21	-0.76	-0.09	0.46	0.79
DUMMY3	0.14	0.01	-0.20	-0.46	-0.55	-1.00
DUMMY4	-0.01	0.18	0.43	-0.66	1.06	0.99
DUMMY5	0.40	-0.24	0.59	-0.62	-0.70	-1.03
DUMMY6	0.10	0.71	0.19	0.34	0.62	0.74
DUMMY7	-0.43	-0.06	0.44	0.50	-0.70	-1.04
DUMMY9	-0.25	-0.47	-0.04	0.40	0.16	0.53
DUMMY10	-0.33	-0.17	0.06	-0.06	-0.67	-0.99
DUMMY11	0.05	-0.02	0.13	-0.11	0.71	1.31
DUMMY12	0.48	-0.26	-0.29	0.34	-0.78	-1.19

Covariance Matrix

	EX3	EX4	O1	O2	O3	O4
	-----	-----	-----	-----	-----	-----
EX3	210.43					
EX4	160.41	901.42				
O1	60.88	215.78	876.17			
O2	59.42	247.35	292.49	929.23		
O3	65.57	190.99	251.80	476.50	985.98	
O4	58.80	140.98	190.02	316.06	409.11	951.82
G1	-9.62	-69.59	5.88	-2.77	100.00	99.29
G2	34.45	-192.05	42.02	-110.27	-67.74	-71.01
G3	-9.74	-301.02	34.39	1.07	-74.26	10.47
G4	-52.30	-481.85	-27.98	-125.45	-68.12	29.21
DUMMY1	-0.34	-1.25	-0.89	-0.97	-0.33	-0.51
DUMMY2	0.26	0.72	0.28	-0.27	0.30	-0.63
DUMMY3	0.02	-1.28	-0.44	-0.58	-0.73	-0.38
DUMMY4	0.22	2.67	1.22	1.79	0.51	0.44
DUMMY5	-0.45	-1.04	-0.54	-0.57	-0.82	-0.38
DUMMY6	0.21	0.99	0.44	1.20	0.94	0.31
DUMMY7	-0.30	-1.00	0.15	-0.77	-0.95	-0.09
DUMMY9	0.22	-0.06	-0.38	-0.24	-0.18	0.33
DUMMY10	-0.36	-1.23	-0.59	-0.21	0.22	-0.35
DUMMY11	0.36	1.13	0.18	0.39	0.98	0.72
DUMMY12	-0.21	-1.23	0.15	-0.79	-0.60	-0.93

Covariance Matrix

	G1	G2	G3	G4	DUMMY1	DUMMY2
	-----	-----	-----	-----	-----	-----
G1	635.52					
G2	26.51	875.03				
G3	143.58	477.01	1126.33			
G4	167.67	404.17	670.10	1122.99		
DUMMY1	-0.15	0.75	1.03	1.12	0.08	
DUMMY2	0.46	-0.43	-0.82	-0.69	-0.01	0.08
DUMMY3	-0.70	0.77	0.33	0.63	-0.01	-0.01
DUMMY4	-0.05	-1.24	-1.97	-2.44	-0.01	-0.01
DUMMY5	-0.05	0.14	1.01	1.23	-0.01	-0.01
DUMMY6	0.18	-1.13	-1.37	-1.50	-0.01	-0.01
DUMMY7	-0.22	1.45	1.37	1.78	-0.01	-0.01
DUMMY9	-0.41	-0.35	-0.99	-0.67	-0.01	-0.01
DUMMY10	0.34	1.00	2.04	1.71	-0.01	-0.01
DUMMY11	0.33	-0.45	-0.48	-0.99	-0.01	-0.01
DUMMY12	-0.25	0.73	1.10	1.22	-0.01	-0.01

Covariance Matrix

	DUMMY3	DUMMY4	DUMMY5	DUMMY6	DUMMY7	DUMMY9
	-----	-----	-----	-----	-----	-----
DUMMY3	0.08					
DUMMY4	-0.01	0.08				
DUMMY5	-0.01	-0.01	0.08			
DUMMY6	-0.01	-0.01	-0.01	0.08		
DUMMY7	-0.01	-0.01	-0.01	-0.01	0.08	
DUMMY9	-0.01	-0.01	-0.01	-0.01	-0.01	0.08
DUMMY10	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
DUMMY11	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
DUMMY12	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Covariance Matrix

	DUMMY10	DUMMY11	DUMMY12
	-----	-----	-----
DUMMY10	0.08		
DUMMY11	-0.01	0.08	
DUMMY12	-0.01	-0.01	0.08

[See the table below for item label used in the study and indicator label used in LISREL program. Note that all the indicators are found in Appendix J. The transformation formulas are found in Appendix L. The descriptives of the indicators after transformation are found in Appendix M. The dummy variables are found in Table 10.]

Indicator Label used in LISREL	Item Label used in the Study
E1	Enmity1
E2	New Enmity2
E3	New Enmity3
E4	New Enmity4
IPE1	New Instrumental Competition1
IPE2	New Instrumental Competition2
IPE3	Instrumental Competition3
IPE4	Instrumental Competition4
S1	New Support1
S2	New Support2
S3	Support3
S4	Support4
IOP1	New Instrumental Cooperation1
IOP2	New Instrumental Cooperation2
IOP3	New Instrumental Cooperation3
IOP4	New Instrumental Cooperation4
W1	New Withdraw1
W2	New Withdraw2
W3	New Withdraw3
W4	New Withdraw4
PC1	New Passive Compete1
PC2	New Passive Compete2
PC3	New Passive Compete3
PC4	New Passive Compete4
P1	New Pretend1
P2	New Pretend2
P3	Pretend3
P4	Pretend4
EX1	New Exit1
EX2	New Exit2
EX3	New Exit3
EX4	New Exit4

Indicator Label used in LISREL	Item Label used in the Study
O1	New Outflank1
O2	New Outflank2
O3	Outflank3
O4	Outflank4
G1	New Yield1
G2	New Yield2
G3	New Yield3
G4	New Yield4
A1	New Accomodate1
DUMMY1	ξ_1
DUMMY2	ξ_2
DUMMY3	ξ_3
DUMMY4	ξ_4
DUMMY5	ξ_5
DUMMY6	ξ_6
DUMMY7	ξ_7
DUMMY9	ξ_8
DUMMY10	ξ_9
DUMMY11	ξ_{10}
DUMMY12	ξ_{11}

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