

CONFLICT EFFICACY: ANTECEDENTS AND CONSEQUENCES

by

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B.S., Morningside College, 2005  
M.S., Kansas State University, 2006

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Department of Psychology  
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## **Abstract**

Interpersonal conflict has remained a pervasive and important issue in all organizations. Despite the prevalence of workplace conflict and high individual and organizational costs, hypotheses regarding the effects of operationalizing work conflict in different ways have been largely ignored and only indirectly investigated. Study 1 experimentally examined the extent to which the process of conflict resolution was affected by context (i.e., definitional differences). Results from 507 college student participants indicated that felt conflict was manipulated by subtly changing the definition of work conflict used in survey instructions. While the manipulation was somewhat effective, the effect size was weak. Ultimately, students' perceptions about what the conflict was about directly predicted conflict intensity, frequency, efficacy, and some resolution preferences. Results from Study 1 help refute recent criticisms that operationalizing work conflict in different ways has created a fragmented literature base, and allowed for Study 2 to move away from measurement and design issues to the more pragmatic concern of investigating the newly established and important concept of conflict efficacy, including its antecedents and consequences. Although self-efficacy is one of the most popular constructs in psychology, little research has examined conflict efficacy, or one's assessment of their ability to resolve interpersonal conflicts. Study 2, a cross-sectional study, tested a model in which conflict efficacy (CE) was the central research variable. Study 2 attempted to establish conflict resolution skills, mastery experiences, vicarious experiences, physiological arousal, and verbal persuasion as antecedents of CE, and negative interactions at work and positive social relationships at work as key outcomes of CE. Results from 137 college students indicated that

the hypothesized sources of conflict efficacy were actually better predictors of positive work relationships than either task or domain CE. Negative interactions at work and positive social relationships were predicted by task CE. In addition, frequency of negative work interactions was found to moderate the effect of conflict avoidance preference on work relationships such that avoiding was negatively related to positive work relationships when the individual experienced frequent negative interactions at work, but non-significantly related when relatively less negative interactions at work were experienced.

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## **Dedication**

This dissertation is dedicated to my loving wife, Emily Erin Steele. I give my deepest expression of love and appreciation for the inspiration that you have provided throughout this process. Thank you for helping make my dreams a reality.

## **CHAPTER 1 - Introduction**

The aim of the present research was twofold. Until now, suppositions regarding the effects of defining conflict on intentions and perceptions had been largely ignored and only indirectly investigated (Barki & Hartwick, 2001; 2004; Tjsovold, 2006). The present research (Study 1) contrasts with traditional analyses because it relied on controlled experimentation, rather than correlational design. The goal of Study 1 was to ascertain the effect of conflict definition on subsequent perceptions of conflict self-efficacy, frequency, intensity, and resolution preference. This design also allowed for a direct test of the effect of framing on perceptions and behavioral expectations. The second goal of this research was to test a model designed to provide a better understanding of the dynamics between conflict efficacy and positive work relationships. Study 2 contrasts with previous research that has not simultaneously examined the effects of causes and consequences of both domain and task conflict efficacy. In addition, previous research examining self-efficacy has often minimized the role of the source variables. The second study assessed the unique contribution of conflict skills, mastery experience, vicarious experience, aversive physiological arousal, social persuasion, and frequency of negative interactions at work on both forms of CE, and subsequent positive work relationships. The findings of both studies can be used to inform academic research and organizational application. This manuscript is divided into two broad sections with the first section focusing on the experimental definition study, and the second focused on the self-efficacy study.

Interpersonal intraorganizational conflict is an important issue for both organizational researchers and practitioners. In fact, Ma (2007) described conflict management as, “A major sub-field of organizational behavior” (p. 3). Conflict is an inevitable and pervasive element of

social life, including organizational life (De Dreu, 2007; Rubin, Pruitt, & Kim, 1994).

According to experimental research with small groups (e.g., Brehmer, 1976), conflict is so pervasive that it even occurs without differences in goals, interests, or motivations among group members. Although litigation and arbitration costs have been estimated to be in the neighborhood of \$5 billion (Michel, 1998), what is often missed is that conflicts begin taxing the organization long before the situation is formally recognized (Fullerton, 2005).

Employees engaging in conflict have an average of 50 % higher healthcare costs, and miss an average 6 % more work (Kittusamy & Buchholz, 2004; Raak & Raak, 2003). In fact, conflict accounts for most (i.e., 90 %) of involuntary departures and half of voluntary departures (Bobinski, 2006). In addition to costs and turnover, research has also associated conflict and its management with a variety of other important organizational variables. For instance, conflict and how it is managed significantly predicts a variety of important organizationally relevant outcomes such as worker well-being (Stokols, 1992), stress (Murphy, 1995), task performance (Olson-Buchanan, Drasgow, Moberg, Mead, Keenan, & Donovan, 1998), contextual performance (Greenberg & Barling, 1999), employee theft (Dana, 2001), leadership effectiveness (Barbuto & Xu, 2006), withdrawal behaviors (O'Brien & Drost, 1984), and goal attainment (Kochan & Verma, 1983). In addition, effective conflict management predicts general attitudes such as follower satisfaction (Gross & Guerrero, 2000), fairness perceptions, and job satisfaction (Shapiro & Brett, 1993).

Thus, interpersonal skills to negotiate and coordinate efforts are essential in the modern business context in which managers face complex pressures, diversity, international competition, and changing organizational structures (Stevens & Gist, 1997). Realizing the pervasiveness of conflict and the competitive advantage associated with successful resolution, managers have

shifted from attempting to eliminate or prevent conflict, toward improving how they handle conflict (Callanan, Benzing, Perri, 2006). In fact, managers and executives spend approximately 20 % to 40 % of their time addressing issues of work conflict (Baron, 1989; Bobinski, 2006; Brahm, 2004; Denny, 2005; Stanley & Algert, 2007; Thomas, 1992). In addition, according to Luthans, Rosenkrantz, and Hennessey (1985), successful managers actually spent more time on conflict management behaviors than less successful managers. Although conflict is pervasive, important, and has received an increased amount of attention, it is still not well understood.

In a special issue of the *Journal of Management* Wall and Callister (1995) reviewed the topic of work conflict and likened it to the common cold, in which it is well known, everyone has experience with it, yet it remains difficult to analyze, and despite a high base-rate, a cure remains undiscovered. One part of the difficulty in studying conflict is that conflicts may affect groups, individuals, and organizations simultaneously in similar or different ways (De Dreu, 2007). Part of the difficulty in analyzing and remedying work conflicts could be due to definitional and operational inconsistencies (Barki & Hartwick, 2004; Tjosvold, 2006). In dealing with this issue, most research has analyzed the causes, mechanisms, and consequences of conflicts at the individual level of analysis. The first experiment will address the former (i.e., definitional and operationalization effects), while the second study will address the latter (i.e., the causes, mechanisms, and consequences).

### ***Defining Conflict***

Forty years ago, Fink (1968) noted that variation in the use of the term ‘conflict’ was a reflection of the many different conceptual frameworks for studying conflicts. Fink wrote, “...scientific knowledge about social conflict has not yet moved to a level of analytical precision superior to that of common sense” (p. 430). Fink’s comments are aligned with philosopher



Thomas Kuhn and his description of theory. According to Kuhn (1996, p. 596), “As knowledge advances, definitions of phenomena become part of theory, and change when theories change. Without one or more strong theories definitions tend to lack widely shared meanings.” Based on Fink’s review forty years ago and Kuhn’s comments regarding the evolution of science, one might expect that contemporary conflict researchers have agreed on a consistent definition and operationalization of interpersonal conflict. Unfortunately, this is not the case (Tjosvold, 2006).

Despite inconsistencies, there are some commonalities in definitions of conflict. An early definition of conflict was provided by Dahrendorf (1959, p. 135; as cited in Easterbrook, Beck, Goodlet, Plowman, Sharples, Wood, 1993), “All relations between sets of individuals that involve an incompatible difference of objectives ... are relations of social conflict”. Dahrendorf’s definitional component of incompatibility remains a major aspect of common definitions used today. For example, Barbuto and Xu (2006) recently defined conflict as the result of incompatibility, disagreement, or dissonance, within or between social entities. Similarly, in their seminal review, Wall and Callister (1995) defined conflict as a “process in which one party perceives that its interests are being opposed or negatively affected by another party” (p. 517).

Work conflict has been defined narrowly in terms of content (e.g., objective or subjective Deutsch, 1973; and task or relational; Jehn, 1995), control (such as degree of interdependence and status; Elangovan, 1995), and situational characteristics (such as degree of time pressure or escalation of conflict; McCabe, 1988). Workplace conflict has also been considered more broadly, and defined as issues regarding scarce resources, politics, and even sense of humor (De Dreu, 2007). While conflict has been described and studied in a multitude of ways and contexts, a consistent typology has emerged. A review of the literature indicated three main

operationalizations of conflict: *disagreement* (Hocker & Wilmot, 1985; Jehn, 1995; Putnam & Wilson, 1982) *interference* (Alper, Tjosvold, & Law, 2000; Donohue & Kolt, 1992; Pruitt & Rubin, 1986; Putnam & Poole, 1987; Thomas, 1976; Wall & Callister, 1995), and *negative emotion* (Jehn, 1994; Jehn, Chadwick, & Thatcher, 1997). The idea that conflict is a second-order multi-dimensional construct consisting of disagreement, interference, and negative emotion has been supported with organizational data collected from information system managers and users (Barki & Hartwick, 2001).

Disagreement came about primarily from the work of Jehn (1995), who operationalized task conflict as “disagreements among group members about the content of the tasks being performed, including differences in viewpoints, ideas, and opinions” (p. 284). In other words, “Disagreement exists when parties think that a divergence of values, needs, interests, opinions, goals, or objectives exists” (Barki & Hartwick, 2001, p. 198). Interference is probably the most frequently used conceptualization of conflict. Putnam and Poole’s (1987) definition indicated a focus on interdependency and goal directed behaviors. “The interaction of interdependent people who perceive opposition of goals, aims, and values, and who see the other party as potentially interfering with the realization of these goals” (p. 522). Interference, described by Alper and colleagues (2000), involves incompatible activities between individuals where one person is perceived as interfering, obstructing, and reducing the other individual’s effectiveness. In other words, “Interference exists when one or more of the parties interferes with or opposes the other party’s attainment of its interests, objectives, or goals” (Barki & Hartwick, 2001, p. 198).

Negative emotion also came about from the work of Jehn (1995), who operationalized relationship conflict as, “Interpersonal incompatibilities among group members, which typically includes tension, animosity, and annoyance among members within a group” (p. 284). It is

important to point out that all the discussed definitions and elements of conflict consider the role of individual perceptions as more important than objective statuses. In other words, goal incompatibilities can be imagined, but still be very much a part of work conflict, even if in reality there is no actual incompatibility.

Recently, Tjosvold (2006) criticized the field of conflict resolution research, arguing that the research lacks a consistent conceptualization and operationalization of interpersonal conflict. Similarly, Barki and Hartwick (2004) argued different operationalizations of conflict have resulted in a fragmented knowledge base and hindered a clear understanding of what is meant by conflict. Easterbrook et al. (1993) noted that it is much easier to identify conflict situations such as a strike or a fight, but it is more difficult to define conflict. Easterbrook et al. pointed out that work conflict has been used in the literature to describe 1) antecedent conditions of conflictual behavior, 2) affective states of individuals who have or are experiencing conflict, 3) cognitive states of individuals who have or are experiencing conflict, and 4) various types of conflictual behaviors. Barki and Hartwick conceded that the literature assesses interpersonal conflict occurring between individuals and contains some combination of cognitive, affective, and behavioral elements. Tjosvold also noted that multi-component conceptualizations of interpersonal conflict are necessary, but rarely tested.

In defense of the field, defining and understanding conflict is difficult because conflict tends to be somewhat circular. For instance, the nature of a conflict will influence the way it is handled, and the way it is handled will influence the expression of current and future conflict and the handling of that future conflict (DeChurch & Marks, 2001). In other words, the way that conflict is manifested and handled is influenced by previous conflict situations. In addition to creating a fragmented literature base and making between study comparisons difficult, Barki and

Hartwick (2004) argued that the definitional issue is a serious problem because situations representing different interpersonal conflict types could be perceived as reflecting different intensities of interpersonal conflict. Tjosvold (2006) and Barki and Hartwick have offered little empirical support for their assertions. As a result, an experiment (Study 1) was designed to ascertain how definitional differences affect the study of conflict and its resolution. Specifically, based on the aforementioned literature review, three operationalizations of conflict consistent with Barki and Hartwick's (2001; 2004) review will be examined. The three operationalizations are: *disagreement* (Jehn, 1995), *interference* (Alper, et al., 2000), and *negative emotion* (Jehn, 1994; Jehn, Chadwick, & Thatcher, 1997). These three operationalizations will also be combined to form multiple frame conflicts (e.g., *disagreement AND interference*, *disagreement AND negative emotion*, *disagreement AND interference AND negative emotion*, *interference AND negative emotion*).

The difference between disagreement and interference is pivotal according to Tjosvold (2006), with disagreement assuming a more solvable position, in which cooperation and collaboration are expected. Consequently, defining conflict as opposition to one's goals or purpose (i.e., incompatibility) was argued to bring about more of a win-lose position, in which intensity and competition are expected to increase. In addition, Andrews and Tjosvold (1983) argued that the utility of conflict management preference varies according to perceived conflict intensity. Although they did not provide a specific direction, Barki and Hartwick proposed that, "Situations representing different interpersonal conflict types will be perceived as reflecting different intensities of interpersonal conflict" (p. 238).

Tjosvold (2006) hypothesized, but did not test that value, emotional, and relationship conflicts result in destructive consequences. Similarly, Barki and Hartwick (2004) hypothesized,

but didn't test that disagreement conflicts are more readily and satisfactorily resolved than situations of negative emotion. Empirical work (Medina, Dorado, Munduate, Martinez, & Cisneros, 2002) has confirmed that relationship conflict hampers satisfaction and well-being, while increasing tension. Although Medina et al. observed the same pattern of results for task conflict; the effect sizes were much lower. In addition, propensity to quit was significantly predicted by relationship conflict ( $r = .36$ ), but unrelated to task conflict ( $r = .10$ ). In sum, Medina et al.'s work showed that relationship conflict, but not task conflict, was associated with negative affective employee reactions.

Euwema, Van de Vliert, and Bakker (2003) posited that, "other conflict issues and courses of escalation in other contexts produce different behaviors, a different set of substantive and relational outcomes, and other behavior-effectiveness associations" (p. 134). Thus, the need to maintain control manifested as forcing/dominating preference should be associated with interference and negative emotion, whereas simple disagreement should be perceived as more readily resolvable. Disagreement conflict is also expected to encourage cooperative approaches such as by considering a fifty-fifty split compromise, or by seeking out common interests through collaboration. Extrapolating the work of DeChurch et al. (2007) Barki and Hartwick (2001, 2004), and Tjosvold (Andrews & Tjosvold, 1983; Tjosvold, 2006) it was expected that the definition used would affect perceptions of conflict intensity, frequency, efficacy, and preferences for resolving conflict.

Conflict frequency was selected because if there are definitional differences then it is important to recognize which types of conflict occur most frequently. Intensity was selected because Barki and Hartwick (2004) argued that different types of conflicts should vary in intensity based on how the conflict is conceptualized, although they cited no empirical results for

their argument. Conflict intensity has been argued to be an inverse predictor of conflict efficacy (Barki & Hartwick, 2001) and was therefore included. Additionally, conflict resolution style was included because DeChurch, Haas, and Hamilton's (2007) argument that conflict resolution style and subsequently, conflict efficacy is affected by the type of conflict (i.e., task vs. relationship conflicts). The limited empirical data available (Barki & Hartwick, 2001) does support the hypothesis that problem-solving and compromising are positively correlated with a frequency/intensity composite score and that dominating, avoiding, and accommodating are negatively correlated with the frequency/intensity composite score. Frame, or the perception of what the conflict is focused on was selected based on Jehn's work (1994, 1995, 1997), which argued that task, relationship, and process conflicts are interrelated but distinct types of conflict. Frame in this sense was considered a manipulation check. Although written as hypotheses, the literature in this area is under-developed resulting in only tentative expectations at this point. Thus, the following hypotheses should be viewed as guided research questions rather than specific hypotheses.

*Hypothesis 1: Mean levels of intensity, frequency, and efficacy, will significantly differ as a result of the conflict definition used.*

*Hypothesis 2: Mean levels of cooperative preferences for collaborating and compromising will be significantly higher when using the disagreement definition than when using the interference and negative emotion definition; mean levels of destructive preferences for avoiding, accommodating, and dominating will be significantly higher when using the negative emotion and interference definitions than when using the disagreement definition.*

The major thesis in Tjosvold's (2006) critique was that if conflict is defined as opposing interests it will cause competitive orientations, whereas conflicts that are defined as incompatible actions, maximize individual responsibility to manage conflict. Tjosvold (2006) argued that when conflict descriptions and definitions are ambiguous they are assumed to be based on opposing interests and then conflict is competitively perceived. Tjosvold's assumption is that in general, there is a negative perception regarding conflict and failure to clarify roles, interests, or conflict type would be perceived as interference. To some degree, Tjosvold's assumption has been realized empirically. Specifically, Olekalns, Robert, Probst, Smith, and Carnevale (2005) found that negotiators typically interpret ambiguous messages as competitive and behave accordingly.

*Hypothesis 3: When no specific definition is presented (i.e., the ambiguous condition) the results will be consistent with the interference condition in that the same pattern of mean level differences in intensity, frequency, preference, and frame that are observed when using the interference condition would be replicated in the ambiguous condition.*

To reiterate, the purpose of Study 1 was purely exploratory and was designed to help interpretation of the literature reviewed for the main thrust of this research. Study 1 questioned the extent to which the process of conflict resolution was affected by context (i.e., definitional differences). Study 1 directly evaluated the extent to which operationalization of conflict affects the generalizability of results, and if so, the best way to operationalize conflict for Study 2.



## CHAPTER 2 - Method Pilot Study

### *Pilot Study Participants*

Pilot data were collected at Kansas State University. Undergraduate students enrolled in general psychology (N = 400) agreed to participate in the experiment. Eighty percent of the student participants were originally from Kansas and averaged 19 years of age (*Mean* = 19.26, *SD* = 1.71). Most of the students identified their ethnicity as Caucasian (90 %). The sample was roughly equal on the basis of gender (51 % male and 49 % female). The majority of the sample was either freshmen (70 %) or sophomores (20 %).

### *Materials*

*Instructions.* A Review of the literature resulted in three main operationalizations of conflict, that were consistent with Barki and Hartwick's (2001; 2004) review:

Disagreement (Jehn, 1995)

Interference (Alper, et al., 2000)

Negative emotion (Jehn, 1994; Jehn, Chadwick, & Thatcher, 1997)

*Disagreement* was constructed primarily from Jehn's (1995) operationalization of task conflict (quoted in the preceding section). Specifically, in the *disagreement* condition the instructions read: "Think back to a recent conflict you had at work, which is defined as disagreement between you and at least one other person about the content of tasks being performed, including, differences in viewpoints, ideas, and opinions." *Interference* was constructed primarily from Alper and colleagues' (2000) definition (quoted in the preceding

section). Specifically, in the *interference* condition the instructions read: “Think back to a recent conflict you had at work, which is defined as incompatible activities between you and at least one other person about interfering, obstructing, and making what you do less effective.”

*Negative emotion* was constructed primarily from Jehn’s (1995) operationalization of relationship conflict (quoted in the preceding section). Specifically, in the *negative emotion* condition the instructions read: “Think back to a recent conflict you had at work, which is defined as incompatibility between you and at least one other person about personality differences, general annoyance, and feelings.”

Combinations of these three operationalizations were created, resulting in seven definitions of interpersonal conflict. The *disagreement AND interference* condition read: “Think back to a recent conflict you had at work, which is defined as disagreement and incompatible activities between you and at least one other person about interfering with what you do and differences in opinions.” The *disagreement AND negative emotion* condition read: “Think back to a recent conflict you had at work, which is defined as personality incompatibility and viewpoint disagreement between you and at least one other person about personality dissimilarities and differences in opinions.” The *disagreement AND interference AND negative emotion* condition read: “Think back to a recent conflict you had at work, which is defined as disagreement and incompatible activities and personality incompatibility between you and at least one other person about interfering with what you do, personality dissimilarities, and differences in opinions.” The *interference AND negative emotion* condition read: “Think back to a recent conflict you had at work, which is defined as incompatible activities and incompatibility between you and at least one other person about interfering with what you do and personality

dissimilarities.” Finally, an additional *ambiguous* condition was also created in which conflict is not defined: “Think back to a recent conflict you had at work.”

*Intensity.* *Intensity* was measured on a 5-point Likert scale (1 was not very intense and 5 was very intense) with a single item: “How intense was this type of conflict?”

*Frequency.* *Frequency* was measured on a 5-point Likert scale (1 was rarely 5 was very often) with a single item: “How frequently do these types of conflict occur?”

*Efficacy.* *Efficacy* was measured on a 5-point Likert scale (1 was not very well and 5 was very well) with a single item: “How well can you solve this type of conflict?”

*Frame.* *Frame* was measured by a single categorical item based on Jehn’s (1994, 1995, 1997) work: “What is this conflict about?” with the options of: a task, a process, a person, task and person, process and person, or all. The purpose of the frame was to serve as a manipulation check and see if experimental condition matched individual perceptions about the fundamental cause of the conflict.

*Preference.* The 20-item DUTCH Test for Conflict Handling (De Dreu, Evers, Beersma, Kluwer, & Nauta, 2001) contains 20 items, with four items measuring each of the five styles, or preferences of handling conflict. Confirmatory factor analyses revealed good to excellent psychometric qualities of the instrument (De Dreu et al., 2001). In the original validation sample of 2,400 Dutch workers, alphas of .65, .68, .66, .70, and .73 were reported for accommodating, collaborating, compromising, competing, and avoiding, respectively. In a recent United States sample (DeChurch et al., 2007) alpha reliability coefficients for accommodating, collaborating, compromising, competing, and avoiding were .86, .81, .91, .89, and .93, respectively.

### ***Procedure***

Participants (N = 400) were randomly assigned to an experimental condition (K = 8). In other words, there were 50 participants in each experimental condition. The conditions were identical with the exception of the definition of interpersonal conflict described in the instructions. All participants were asked to answer questions regarding the perceived conflict frequency, intensity, and frame of the conflict. Additionally, participants rated their efficacy in resolving this 'type' of conflict and described their conflict management style using the DUTCH (De Dreu et al., 2001).

## **CHAPTER 3 - Results Pilot Study**

*Reliability.* Differential reliability was examined by calculating coefficient alpha for each of the five conflict preferences in each of the eight experimental conditions. The results indicated that the ambiguous definition condition was associated with the most reliable responses followed by the negative emotion definition condition. Complete results are provided in Table 3.1.

**Table 3.1 Definition Condition Effects on Internal Consistencies ( $\alpha$ ) of Conflict Resolution Preferences**

Conditions	Accommodating	Avoiding	Collaborating	Compromising	Forcing
Disagreement	.67	.67	.74	.66	.76
Interference	.70	.65	.75	.65	.63
Negative Emotion	.75	.78	.74	.78	.55
Disagreement and Interference	.72	.73	.75	.58	.64
Disagreement and Emotion	.61	.70	.72	.62	.44
Interference and Emotion	.64	.63	.84	.75	.59
All 3	.79	.75	.63	.70	.56
Ambiguous	.85	.77	.81	.82	.71
Overall*	.73	.72	.75	.70	.62

\*Overall N = 400, n = 50 in each condition (K = 8).

*Treatment Effects.* Homogeneity of variance was confirmed through non-significant results for Levene's Test of Equality of Error Variances, except for frequency  $F(7, 392) = 2.56, p = .01$ . Box's M  $F(315, 176858.3) = 392.29, p = .03$ , indicated inequality among the covariance matrices of the dependent variables. Analysis continued because the  $F$ -test is robust to such minor violations (Tabachnick & Fidell, 2006). With the use of the Wilks' criterion, the combined outcome variables (perceived target, intensity, frequency, efficacy, and the five conflict handling preferences) were not significantly related to the experimental condition,  $F(63, 2168.82) = 1.20, p = .14$ . Analysis of the effect sizes indicated weak association for experimental condition on the outcomes, approximate  $\eta^2 = .03$ . Even more problematic was the finding that the manipulation check was not significantly affected by experimental condition assignment,  $F(7, 392) = .89, p = .35$ , approximate  $\eta^2 = .01$ .

As a result of the failed manipulation, the experimental effects of the pilot study were not further analyzed; instead, the analysis was repeated using the participant's perceived target as the predictor for the same outcome variables. Although this analysis does not allow for a formal causal statement, it does allow for the establishment of relationships that can indicate where subsequent research should focus. Table 3.2 provides descriptive statistics and zero-order correlations. With the use of the Wilks' criterion, the combined outcome variables were significantly related to perceived target,  $F(40, 1689.69) = 2.19, p < .001$ , although the overall effect size was still weak, approximate  $\eta^2 = .04$ . Multivariate analysis of variance (MANOVA) indicated significant main effects for frequency,  $F(5, 394) = 8.26, p < .01, \eta^2 = .04$ , intensity,  $F(5, 394) = 7.85, p < .001, \eta^2 = .09$ , collaborating preference,  $F(5, 394) = 2.41, p < .05, \eta^2 = .03$ , and compromising preference,  $F(5, 394) = 3.15, p < .01, \eta^2 = .04$ . There were non-significant main effects for efficacy,  $F(5, 394) = 1.81, p = .11$ , dominating preference,  $F(5, 394) = 1.53, p = .18$ ,

accommodating preference,  $F(5, 394) = 1.82, p = .11$ , and avoiding preference,  $F(5, 394) = .96, p = .44$ .

Scheffe post-hoc multiple comparisons were performed for each of the significant main effects. Results indicated that there were no significant differences among target perceptions, and collaborating and compromising preferences (Scheffe, *ns*), but there were differences for frequency and intensity. Specifically, conflicts that were perceived as being about task AND process AND person occurred significantly more often than conflicts that were just about tasks (Scheffe  $Mean_{diff} .39, p < .05$ ) as did conflicts that were about task AND person (Scheffe  $Mean_{diff} .43, p < .05$ ). Process AND person conflicts were perceived as the most intense, and were statistically equivalent to task AND person conflicts, and person conflicts, which were rated significantly more intense than task conflicts, process conflicts, and task AND process AND person conflicts (Scheffe,  $Mean_{diff} 1.03$  to  $.63, p = .001$  to  $.05$ ).



**Table 3.2 Means (*M*), Standard Deviations (*SD*), Internal Consistencies ( $\alpha$ ), and Zero-Order Correlations**

Variable	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6	7
1. Intensity	2.56	1.13	NA							
2. Frequency	2.23	.70	NA	.39						
3. Efficacy	4.01	.86	NA	-.37	-.23					
4. Accommodating	3.00	.61	.73	-.19	-.13	.08				
5. Avoiding	2.86	.72	.72	-.12	-.10	-.12	.34			
6. Collaborating	3.59	.61	.75	-.13	-.05	.30	.26	-.09		
7. Compromising	3.55	.59	.70	-.17	-.12	.22	.30	.05	.70	
8. Dominating	2.93	.55	.62	.20	-.11	-.13	-.17	-.07	-.10	-.15

N = 400. All correlations  $> |.10|$  are significant at the .05 level (two-tailed), correlations  $> |.13|$  are significant at the .01 level (two-tailed). All items were assessed on a 5-point scale. Internal consistency reliability for single-items cannot be calculated.

## **CHAPTER 4 - Discussion Pilot Study**

The purpose of this experiment was to examine the effect of how a conflict was defined or framed on participants' perceptions of how frequently such conflicts occur, how intense such conflicts were, their conflict self-efficacy, and their general preference toward handling such conflict. As a result of the failed manipulation in the pilot experiment, the general research questions remained unexamined. Generally, the results revealed that perceptions regarding the focal point of a conflict (task, process, or person) may be related to perceptions of frequency and intensity, and perhaps to the compromising and collaborating preferences. Post-hoc results indicated that the most frequently occurring conflicts were about task AND process AND person, and the least frequent conflicts were just about tasks. The most intense conflicts were those about process AND person, or task AND person, or just person. While this does not directly support any of the hypotheses it does relate to the expectation that person conflicts tend to be more emotionally laden than other types of conflicts. Reliability analysis indicated that the ambiguous definition condition produced the most internally consistent responses, followed by the negative emotion condition.

The ambiguous condition may have produced the most internally consistent results because "any discontinuities in behavior attract attention and result in closer scrutiny of the other party's underlying goals and motives" (Olekalns et al., 2005, p. 381). Carroll and Payne (1991) argued that ambiguity causes negotiators to default to their preferred scripts (either cooperative or competitive). This scrutiny is likely to trigger changes in initial impressions, behaviors and emotions. Olekalns et al. (2005) found negotiators interpret ambiguous messages as competitive.

This is important because cooperative approaches seek to maximize joint gains; whereas competitive approaches maximize individual gain and thus individuals use argumentation, threats, and demands as tools (Weingart, Hyder, & Prietula, 1996; Olekalns & Smith, 2003). Not only do these approaches affect initial negotiation strategies by one party, but also due to the strong norm of reciprocity in negotiation, other parties tend to reciprocate whatever strategies and tactics are used by the first part in negotiation (Nemeth, 1970).

The following experiment was redesigned to increase power and decrease scope because the pilot experiment failed to effectively manipulate definitional differences that would allow for hypothesis testing. Rather than separately discussing the implications and conclusions of the pilot and the main experiment, the changes between the two experiments are presented and the discussion regarding the findings of both studies is combined under the Study 1 discussion.

## CHAPTER 5 - Revised Design and Procedure

A second experiment was designed to overcome some limitations of the pilot experiment. Specifically, the questionnaire was reworded to specifically identify participant's work experience. In addition, Jehn's (1997) typology was still included, but limited to only task, process, and person conflicts instead of including all the combinations. While this simplified the task and to some degree the utility of the findings, it also narrowed the focus and thereby reduced the cognitive effort required for participants and increased the statistical power. Statistical power was boosted by increasing the sample size by about 20 %, and reducing the number of experimental conditions from 8 to 4, which resulted in a cases to condition ratio of about 120:1, as opposed to the 50:1 in the pilot study.

*Participants.* Participants were a total of 507 (178 male and 283 female and 46 gender unspecified) undergraduate students who were recruited from the general psychology participant pool at Kansas State University. The majority of the sample were either freshmen (66 %) or sophomores (16 %), and most were Caucasian (79 %). In total, the students were from 21 states and 4 countries. The effect of participant's work experience was evaluated before hypothesis testing.

Four hundred ninety-two participants reported working an average of 18.65 hours per week (*Minimum* = 0, *Maximum* = 80.00, *SD* = 13.40). In fact, the number of hours worked per week demonstrated little effect on the research variables. Only accommodating ( $r = -.13, p < .01$ ) and compromising ( $r = -.10, p < .05$ ) were significantly related to average hours worked. In addition, using a specific job, or not using a specific job as frame of reference (counting academic work as not having a specific job in mind) was unrelated to all research variables, with

the exception of intensity. Specifically, the 111 participants who did not have a specific job in mind ( $Mean = 3.11, SD = 1.06$ ) and the 397 participants who had an exact job in mind ( $Mean = 2.67, SD = 1.25$ ) demonstrated a significant difference in perceived intensity ( $t[505] = 3.342, p = .001$ ), as expected the effect size was weak (.15). As a result of the weak findings regarding hours worked, and whether the participant's frame of reference was based on actual work on all of the research variables, the analysis continued without considering such variables as covariates.

Recall that the internal manipulation check was simplified to only reflect the four definition conditions (i.e., disagreement, interference, negative emotion, and ambiguous). Jehn's (1997) typology was also provided with a brief description. For example, *task* contained the description "content of work decisions", *process* contained "how to/who should", and *person* contained "interpersonal incompatibility". The rationale for including descriptions came from short interviews with a few pilot study participants who reported that they really did not understand what the words process and task meant in this context without a short description.

To reduce measurement error and further increase power disagreement, interference, and negative emotion were also measured using several items that were adapted from Barki and Hartwick's (2001) management information system study. For example, "there were important opinion differences concerning the goals and objectives of work" was used as one of indicator items of disagreement, "the other party tried to block and prevent me from attaining my goals and objectives" was used as one of indicators of interference, and "the other party did things that made me feel frustrated" was one indicator of negative emotion. The full instrument is provided in Appendix A. As a result of instrument length restrictions, the conflict style assessments were converted to single-item assessments. Participants ( $N = 507$ ) were randomly assigned to an experimental condition ( $K = 4$ ). The conditions were identical with the exception of the

definition of interpersonal conflict described (i.e., disagreement, negative emotion, interference, or ambiguous) in the instructions.

## CHAPTER 6 - Revised Experiment Results

*Data Screening.* Prior to any analyses the data were tested to verify that the basic assumptions of the general linear model were met. Specifically, tests were conducted to assess skewness, multivariate outliers, multivariate linearity, normality, and homoscedasticity. Assessment of skewness was conducted by comparing the ratio of skewness to the standard error of skewness to determine significance. All measures were within acceptable ranges. Tests for multivariate outliers revealed five significant cases (Mahalanobis'  $D(11) > 31.26, p < .001$ ); however, these cases appeared to be part of the population that was sampled, and had relatively low levels of influence (Cook's  $D < .03$ ), and thus were retained.

The next step was to examine the factor structure of the conflict characteristics measure because it was newly defined for this study, and to examine the reliability of all the instruments. Testing the twelve items as observed variables for a three-factor solution (made up of disagreement, interference, and negative emotion) fit the data well,  $\chi^2(50, N = 507) = 136.5, p < .001$ , comparative fit index (CFI) = .96, standardized root-mean-square residual (SRMR) = .04. Review of modification indices indicated that fit could not be substantially improved. Between factor correlations were as follows: disagreement with interference .46, disagreement with negative emotion .37, and interference with negative emotion .57.

An additional confirmatory factor analysis was conducted on the twelve conflict characteristic items to establish whether the three-factor model fit the data significantly better than a more parsimonious single factor model. This single-factor model demonstrated a relatively worse fit ( $\chi^2_{diff}(3, N = 507) = 479.1, p < .0001$ ), CFI = .75, SRMR = .10. Results from these analyses provide evidence that the 12 items captured three distinct and interpretable

dimensions of conflict. Factor loadings and uniqueness of the 12 items are provided in Table 6.1. The three conflict characteristic measures were found to be acceptably reliable, with all measures yielding internal consistencies greater than .70 (see Table 6.2).

**Table 6.1 Factor Loadings and Uniqueness for Confirmatory Factor Model of Conflict Characteristics Variables**

Measure and Variable	Unstandardized factor loading	Standardized factor loading	SE	Uniqueness
<b>Disagreement</b>				
Disagreement 1	1.17	.64	.13	.59
Disagreement 2	1.22	.67	.13	.56
Disagreement 3	1.23	.69	.13	.53
Disagreement 4	1.00	.54	---	.71
<b>Interference</b>				
Interference 1	0.95	.68	.06	.54
Interference 2	1.10	.80	.06	.36
Interference 3	1.04	.80	.06	.36
Interference 4	1.00	.75	---	.44
<b>Negative Emotion</b>				
Negative Emotion 1	1.00	.81	---	.77
Negative Emotion 2	0.57	.37	.08	.31
Negative Emotion 3	1.26	.83	.09	.87
Negative Emotion 4	0.76	.48	.08	.35

Dashes indicate the standard error was not estimated.

*Descriptive Statistics.* Descriptive statistics for the study variables are presented in Table 6.2. As a whole, students reported similar mean ratings of disagreement conflict ( $M = 4.88$ ,  $SD = 1.04$ ), interference conflict ( $M = 4.10$ ,  $SD = 1.40$ ), and negative emotion conflict ( $M = 4.73$ ,  $SD = 1.23$ ). All scales indicated acceptable variance with all measures indicating standard deviations greater than 1. The data showed that as a whole, participants felt they had a moderate amount of efficacy, that conflicts within their frame of reference tended to be moderately intense and frequent, and individuals preferred to respond to conflict by avoiding.



**Table 6.2 Means (*M*), Standard Deviations (*SD*), Internal Consistencies ( $\alpha$ ), and Zero-Order Correlations**

Variable	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6	7	8	9	10
1. Disagreement	4.88	1.04	.72										
2. Interference	4.10	1.40	.84	.37									
3. Emotion	4.73	1.23	.77	.26	.44								
4. Intensity	2.77	1.22	NA	.26	.35	.42							
5. Frequency	2.39	1.10	NA	.18	.22	.26	.22						
6. Efficacy	3.80	1.07	NA	-.15	-.19	-.20	-.27	-.37					
7. Accommodating	3.74	1.46	NA	-.12	-.09	-.06	-.07	-.08	.02				
8. Avoiding	5.28	1.41	NA	-.07	.01	.10	.05	-.21	-.01	.21			
9. Collaborating	5.08	1.25	NA	.03	-.17	-.13	-.13	-.20	.27	.14	.17		
10. Compromising	4.29	1.31	NA	.03	-.03	-.10	-.06	-.13	.10	.15	.12	.33	
11. Dominating	3.79	1.55	NA	.10	.23	.18	.18	.19	-.10	-.21	-.13	-.24	-.12

N = 507. All correlations  $> |.09|$  are significant at the .05 level (two-tailed), correlations  $> |.11|$  are significant at the .01 level (two-tailed). Intensity, frequency, and efficacy were assessed on a 5-point scale, the rest of the measures were assessed on a 7-point scale. Internal consistency reliability for single-item measures cannot be calculated.

Unlike the pilot experiment, the full experiment contained two categorical manipulation checks and three continuous variables (i.e., conflict characteristics disagreement, interference, and negative emotion) that could also be used as manipulation checks. The two categorical manipulation checks were described differently, but should have been conceptually equivalent. That is, Barki and Hartwick's (2001) typology was described similarly to Jehn's (1997) typology. Barki and Hartwick's classification of disagreement, interference, and negative emotion was presented to the participants consistent with Jehn's classification of task, process, and person conflict, respectively. First, chi-squares were conducted to compare the frequency of category description using Barki and Hartwick's typology (i.e., disagreement, interference, or negative emotion) as it related to the randomly assigned experimental condition (see Table 6.3).

**Table 6.3 Chi-square Results of Experimental Condition X Barki and Hartwick Category**

	<u>Experimental Condition</u>				Total
	Disagreement	Interference	Negative Emotion	Ambiguous	
Disagreement	80 62.6	57 61.1	53 58.2	54 62.1	244 244
Interference	20 28.5	40 27.8	24 26.5	27 28.2	111 111
Negative Emotion	30 39	30 38.1	44 36.3	48 38.7	152 152
Totals	130	127	121	129	507

Expected counts are printed below observed counts,  $\chi^2(6, N = 507) = 22.49, p < .001$ .

The Pearson chi-square was significant,  $\chi^2(6, N = 507) = 22.49, p < .001$ . Chi-square analysis revealed that about 62 % (80/130) of participants in the disagreement condition correctly classified their assigned condition; however, the results were less promising in the other experimental conditions. Specifically, only about a third of the students (40/127) in the interference condition correctly classified their assigned condition, and students in the negative emotion condition did only slightly better at 44 % (53/121). Students who were in the ambiguous condition did not consistently classify their condition. Specifically, about 42 % classified the condition as disagreement (54/129), about 21 % classified it as interference (27/129), and 37 % (48/129) classified it as negative emotion. Thus, Hypothesis 3, which stated that the ambiguous condition would be perceived the same as the interference condition was not supported.

Second, chi-squares were conducted to compare the frequency of category definition selection using Jehns's (1997) typology (i.e., task, process, or person) as it related to the randomly assigned experimental condition (see Table 6.4).

**Table 6.4 Chi-square Results of Experimental Condition X Jehn Category**

	<u>Experimental Condition</u>				Total
	Disagreement	Interference	Negative Emotion	Ambiguous	
Task	40	44	23	33	140
	35.9	35.1	33.4	35.6	140
Process	55	43	35	31	164
	42.1	41.1	39.1	41.7	164
Person	35	40	63	65	203
	52.1	50.9	48.4	51.7	203
Totals	130	127	121	129	507

Expected counts are printed below observed counts,  $\chi^2(6, N = 507) = 29.18, p < .0001$ .

The Pearson chi-square was significant,  $\chi^2(6, N = 507) = 29.18, p < .0001$ . Despite the significant finding, only about 52 % (63/121) of participants in the person conflict condition correctly classified their assigned condition. The resulting conditions were even less accurately classified. Specifically, 31 % (40/130) of the students in the task conflict condition correctly classified their condition, and only 34 % of the students in the process conflict condition correctly classified their condition. Finally, about half of the students assigned to the ambiguous condition classified it as person conflict, with the other half of the participants classifying the ambiguous condition as either task or process conflict. Again, this classification is inconsistent with Hypothesis 3. Combining both manipulation checks showed that about 19 % (25/130) of the students in the first condition correctly classified it as both disagreement and task conflict, and only 9 % (12/127) correctly classified both interference and process conflict, and about 27 % (33/121) correctly classified both negative emotion and person conflict.

Third, in regard to the continuous variables measures, experimental condition did not produce significant mean group differences for interference,  $F(3, 506) = 0.11, p = .48$ , nor negative emotions,  $F(3, 506) = 0.46, p = .36$ . However, disagreement was affected by experimental condition,  $F(3, 506) = 2.06, p = .05$ . That is, the disagreement condition had a significantly higher mean on opinion differences than the ambiguous condition (Tukey  $Mean_{diff} = 1.24, p < .01$ ), and significantly higher than the interference condition (Tukey  $Mean_{diff} = .89, p < .05$ ).

An omnibus  $F$ -test with all conditions was calculated in addition to an omnibus  $F$ -test that dichotomized the conditions on the basis of whether it was in the disagreement experimental condition because of the tentative finding that the manipulation was mainly effective in the disagreement condition. Because both tests revealed a similar pattern of results, only the

standard omnibus  $F$ -test is described. Results indicated that experimental condition had no effect on perceptions of intensity,  $F(3, 506) = 0.87, p < .46$ , frequency,  $F(3, 506) = 1.35, p = .26$ , and efficacy,  $F(3, 506) = 0.83, p = .48$ . In addition, experimental condition had no effect on conflict handling preferences of avoiding,  $F(3, 506) = 0.13, p = .94$ , accommodating  $F(3, 506) = 0.27, p = .84$ , collaborating,  $F(3, 506) = 0.83, p = .48$ , compromising,  $F(3, 506) = 0.36, p = .78$ , and dominating,  $F(3, 506) = 1.10, p = .35$ . Based on this finding, all subsequent analyses were collapsed over experimental condition.

While Hypothesis 1 was not directly supported through experimental manipulation, it was reevaluated by examining the effect of individual classification (i.e., what the participants perceived the conflict was about) on intensity, frequency, and efficacy using multivariate analysis of variance (MANOVA). Specifically, MANOVA was conducted with Jehn's typology (1997) selection (i.e., task, process, and person) and Barki and Hartwick's (2001) typology selection (i.e., disagreement, interference, and negative emotion) as fixed factors, and intensity, frequency, and efficacy as outcomes. Homogeneity of variance was confirmed through non-significant results for Levene's Test of Equality of Error Variances, except for intensity  $F(8, 498) = 2.01, p < .05$ . Box's M  $F(48, 105811.5) = 58.20, p = .19$ , was non-significant and therefore indicated equality among the covariance matrices of the dependent variables. With the use of the Wilks' criterion, the combined outcome variables (perceived target, intensity, frequency, efficacy, and the five conflict handling preferences) were significantly related to Jehn's (1997) definition selection,  $F(6, 992) = 2.74, p = .01$ , but not Barki and Hartwick's (2001) definition selection,  $F(6, 992) = 1.84, p = .09$ . Analysis of the effect sizes indicated a weak association for Jehn's (1997) definition selection on the outcomes, approximate  $\eta^2 = .02$ , and weaker effects for Barki and Hartwick's (2001) definition selection, approximate  $\eta^2 = .01$ .

Using Jehn's (1997) definition selection, there were significant main effects for frequency,  $F(2, 507) = 3.42, p < .05, \eta^2 = .01$ , and intensity,  $F(2, 507) = 4.85, p < .01, \eta^2 = .02$ ; however, there was not a significant main effect for efficacy,  $F(2, 507) = 2.13, p = .12, \eta^2 = .01$ . Barki and Hartwick's (2001) typology indicated a reversed pattern of main effects in that only efficacy was significant  $F(2, 507) = 2.13, p < .05, \eta^2 = .02$ , while frequency was not significant,  $F(2, 507) = 1.38, p = .25, \eta^2 = .00$ , and intensity was not significant,  $F(2, 507) = 0.82, p = .44, \eta^2 = .00$ . Thus, there was no direct support provided for Hypothesis 1, and mixed indirect support those perceptions of what the conflict is about affect intensity, frequency, and efficacy.

Scheffe post-hoc multiple comparisons were performed for each of the significant main effects. Results indicated that there were significant differences for intensity and efficacy using Jehn's (1997) typology. Specifically, conflicts that were perceived as being about person were significantly more intense than conflicts about task (Scheffe  $Mean_{diff} .42, p < .01$ ), and conflicts about process (Scheffe  $Mean_{diff} .31, p < .05$ ). With regards to efficacy, the only difference was that task conflicts were perceived as significantly more resolvable than person conflicts (Scheffe  $Mean_{diff} .32, p < .05$ ). Results also indicated significant differences for efficacy using Barki and Hartwick's (2001) typology. In particular, conflicts that were perceived as being about disagreement (Scheffe  $Mean_{diff} .38, p < .01$ ) and conflicts about interference (Scheffe  $Mean_{diff} .34, p < .05$ ) were perceived as significantly more resolvable than conflicts about negative emotions.

To investigate further the secondary finding, the disagreement, interference, and negative emotion measures (i.e., conflict characteristics) were correlated with intensity, frequency, and efficacy. Results showed that the disagreement scale was significantly ( $p < .001$ ) related to intensity ( $r = .26$ ), frequency ( $r = .18$ ), and negatively related to efficacy ( $r = -.15$ ). In addition,



interference was also significantly ( $p < .001$ ) related to intensity ( $r = .35$ ), frequency ( $r = .22$ ), and efficacy ( $r = -.19$ ). Finally, the negative emotion measure was significantly ( $p < .001$ ) related to intensity ( $r = .42$ ), frequency ( $r = .26$ ), and negatively related to efficacy ( $r = -.20$ ). Thus, although there was no direct support for Hypothesis 1 because the mean levels of intensity, frequency, and efficacy were unaffected by the definition used, there was support that student perceptions regarding the nature of the conflict did affect mean levels of intensity, frequency, and efficacy, and that perceptions of conflict characteristics (i.e., level of disagreement, interference, and negative emotion) were significantly related to intensity, frequency, and efficacy. More specifically, negative emotions and person conflicts were rated as being the most intense, least resolvable, and the negative emotions measure correlated most strongly with frequency, intensity, and efficacy.

Hypothesis 2 was also not supported because conflict definition did not affect the mean level of conflict handling preferences of avoiding, accommodating, collaborating, compromising and dominating. Subsequent correlation analyses were conducted to see if there was a relationship between individual perceptions of conflict characteristics (i.e., disagreement, interference, and negative emotion) and preferences for handling conflicts (i.e., accommodating, avoiding, collaborating, compromising, and dominating). However, contrary to expectations, the disagreement measure was not related to the cooperative preferences of collaborating ( $r = .03$ ,  $p = .23$ ) nor compromising ( $r = .03$ ,  $p = .34$ ), but it was negatively related to accommodating ( $r = -.12$ ,  $p < .01$ ), and the destructive preference of dominating ( $r = .10$ ,  $p = .01$ ). Also unexpected, the interference scale was related to dominating ( $r = .23$ ,  $p < .001$ ), and negatively related to collaborating ( $r = -.17$ ,  $p < .001$ ), and accommodating ( $r = -.09$ ,  $p < .05$ ). The negative emotion measure showed positive effects on dominating ( $r = .18$ ,  $p < .001$ ), and avoiding ( $r = .10$ ,  $p =$

.01), and negative effects on collaborating ( $r = -.13, p < .01$ ), and compromising ( $r = -.10, p = .01$ ). In regard to Hypothesis 2, there was not a clear pattern for disagreement or interference; however, there was a clear pattern for negative emotion. Specifically, negative emotion was positively related to destructive conflict handling preferences and negatively related to cooperative conflict handling preferences, with the exception of no relationship with accommodating.

Hypothesis 3, unlike the other hypotheses was still directly testable; however, support for this hypothesis was somewhat meaningless given that the experimental manipulation in general had little effect on the research variables. Hypothesis 3 was supported by virtually no mean level differences from condition 2 (i.e., interference and process conflict) to condition 4 (ambiguous condition) in intensity, frequency, efficacy, and avoiding. The mean differences from condition 2 to condition 4 were as follows: intensity ( $Mean_{diff} = .16$ ), frequency ( $Mean_{diff} = -.12$ ), efficacy ( $Mean_{diff} = 0$ ), and preferences of dominating ( $Mean_{diff} = .30$ ), avoiding ( $Mean_{diff} = .10$ ), accommodating ( $Mean_{diff} = -.15$ ), collaborating ( $Mean_{diff} = -.14$ ), and compromising ( $Mean_{diff} = -.01$ ). At the same time, Hypothesis 3 received little support because only 21 % of participants in the ambiguous condition thought the conflict was about interference and only about 25 % thought the conflict was about process.

## CHAPTER 7 - Revised Experiment Discussion

The present study directly addressed the applicability of the present theoretical and research paradigm in organizational conflict. Jehn's (1992; 1994; 1995; 1997) work has dominated the conflict literature and caused many to differentiate between task and relationship conflict. Starting in 1992, Jehn found that members distinguish between task-focused and relationship-focused conflicts and that these two types of conflict differentially affect work group outcomes. Since then, research, teaching, and the practice of conflict resolution has argued that organizations should encourage task conflicts, but discourage process and relationship conflicts (Oetzel & Ting-Toomey, 2006). While Jehn has repeatedly found support for her three-factor model, little independent research has confirmed the link between how a conflict is categorized and other important conflict variables. In addition to experimentally testing this link, the present research can be seen as a direct response to Barki and Hartwick's (2001; 2004) and Tjosvold's (2006) criticisms.

Barki and Hartwick (2001) argued that while a vast conflict literature exists, this work has focused on conflict resolution to the "relative detriment of studying the meaning, measurement, and impact of interpersonal conflict" (p. 219). Barki and Hartwick (2004) subsequently suggested that conflict is difficult to define conceptually and operationally, but doing so would clarify the research in the field and accelerate knowledge accumulation. Certainly the way conflict is defined is an academic issue, but there are also potentially practical implications (Tjosvold, 2006). The present experiment examined the effect of how conflict was conceptualized on perceptions of conflict intensity, frequency, efficacy, and preferences for handling conflict. Research questions examined H1: if conflict intensity, frequency, efficacy,

and preferences for handling conflict were affected by conflict definition; H2: if cooperative preferences were associated with task or disagreement conflict and destructive approaches were associated with interference and negative emotion; and H3: the difference between conflict ambiguity and conflict interference. First, the specific research questions and then implications will be reviewed. Next, additional findings that can be used to guide Study 2 will be presented.

In regard to hypothesis testing, the data indicated that student participants were largely unaffected by manipulating the definition of conflict referred to in the instructions. The fact that the randomly assigned conditions did not affect perceptions of conflict intensity, frequency, efficacy, nor preferences for dealing with conflict is consistent with recent decision-making research (e.g., McElroy & Seta, 2007). Prospect theory (Kahneman & Tversky, 1979) predicts that message framing influences individual's perceptions; however, this theory has been exclusively applied to decision-making, and the framing of decision problems. The main component of prospect theory is the relation of potential outcomes to a point of reference. In the present experiment, the point of reference was manipulated, instead of manipulating the potential outcomes. McElroy and Seta showed that merely framing a decision differently on the basis of gain or loss had no effect on participant's choice; however, when frame was considered in the context of goals, it produced a powerful effect. In fact, the empirical summary across several applications of prospect theory indicates that the framing effect in risky-choice type problems is small (Kühberger, 1998). It is therefore not surprising that no effect was found in the present experiment, which relied on participants acknowledging more subtle differences than the risky-choice problems, and did not include goals or other moderators.

The finding that definitional differences did not affect mean levels of frequency, intensity, efficacy, or conflict handling preference should not be taken to mean that conflict

framing is unimportant. For example, Sanford (2003) found that married couples did not change communication behaviors on the basis of changes in topic. When couples were embroiled in conflict they tended to use negative forms of communication behavior regardless of the issue that was being discussed. In terms of researching conflict resolution, the consistency in the two studies that definitional differences did not affect important conflict characteristics is actually quite positive. The fact that the manipulation was somewhat effective, but still unrelated to important conflict research variables provides some evidence to initially refute Barki and Hartwick's (2001, 2004) and Tjosvold (2006) claim that the conflict resolution research is fragmented and cannot be connected. In other words, different conflict definitions may not produce artifacts that would hinder the synthesis of conflict research.

Research has consistently shown that individuals search for confirmatory information (Jonas, Schulz-Hardt, Frey, & Thelen, 2001). In addition, initial expectations affect information processing and subsequent perceptions of others (McKnight, Cummings & Chervany, 1998; Matheson, Holmes, & Kristiansen, 1991), and research has shown that context drives categorization judgments (Carnevale & Probst, 1998). Olekalns et al., (2005) extended the above cognitive research to negotiations and argued that negotiators often vary in the degree to which they clearly communicate or frame the strategic intent of the negotiation. The present study was the first experimental test and direct empirical support for Olekalns et al.'s argument that the way conflict is framed provides real cues, which in turn affect perceptions and behavioral expectations. That is, the present study supported that the definition of conflict used in instructions affected individual classification of conflict, or in other words, caused the participants to think about conflict in a certain way (disagreement, interference, or negative emotion). Individuals' perception of what the conflict was about significantly predicted

frequency, intensity, and efficacy. Consistent with Barki and Hartwick's (2004) suppositions, conflicts that were perceived to be about disagreement and interference were considered less intense, less frequently occurring, and overall, more resolvable than conflict that involved personality dissimilarities or negative emotion.

According to Brodtker and Jameson (2001, p. 263), "Conflict is emotional in terms of its onset, the social meaning it inheres from the conflict parties, and the strategic options each has for dealing with the conflict." Recognizing that conflict is an emotionally defined and driven process, "...fundamentally alters one's approach to conflict management" (p. 263). The present experiment provided empirical data that further supports Brodtker and Jameson's theoretical claims. According to Jones (2000) and Brodtker and Jameson (2001) identifying disputants' emotions helps conflict managers to understand how they have defined conflict. Similarly, they argued that intensity is indicative of the importance and meaning of conflict issues for each. Finally, if one knows the emotional intensity and salience of conflict issues, it allows inferences about a party's orientation to the conflict. Post-hoc stepwise modeling based on the three conflict characteristics of disagreement, interference, negative emotion and the perceptions of intensity, frequency, and efficacy accounted for over 10 % of the variance in collaborating preference, and over 7 % of the variance in the avoiding preference. Thus, the data supported Jones and Brodtker and Jameson's claims, but also showed that the majority of the variance remains unaccounted.

Consistent with other research that has shown that feelings of goal obstruction triggers feelings of reduced control, increased uncertainty, and subsequent stressful responses (Sutton & Kahn, 1987; Quick, Quick, Nelson & Hurrell, 1997), the present experiment demonstrated that obstruction-based conflict (i.e., interference) triggers reduced efficacy ( $r = -.19$ ), and competitive

responses to resolving conflict (collaborating  $r = -.17$ ). In fact, interference characteristics were most strongly related to dominating ( $r = .23$ ) than any other research variable. The present research findings are consistent with Tjsovold's (2006) concerns that how a conflict is phrased can affect how intensely a conflict is perceived and how difficult it would be to resolve. For example, perceptions of conflict intensity predicted dominating ( $r = .18$ ), and were negatively correlated with collaborating ( $r = -.13$ ). Similarly, perceptions of frequency were significantly related to all conflict handling preferences except accommodating. Finally, one's conflict self-efficacy was moderately related to collaborating preference, significantly positively related to compromising, and negatively related to dominating.

The link between conflict self-efficacy and conflict resolution styles is important because conflicts that appear intense and intractable are likely to be avoided, or worse yet, when the party does engage in conflict resolution they often proceed in competitive and destructive ways, which not only affect conflict resolution, but also affect performance (Alper et al., 2000; Desivilya & Eizen, 2005; Deutsch, 1973). It is also worth noting that the described causal model, in which how a conflict is described affects how it is perceived, which in turn fosters conflict efficacy, and subsequently cooperative (i.e., collaborating and compromising) or competitive approaches (dominating) forms a large part of the theoretical framework for Study 2. Others in this area, such as Shapiro and Rosen (2007) have confirmed that managers select different conflict response strategies depending on if the conflict type was task or relational. The present study showed that person or emotion conflict perceptions, regardless of experimental condition, significantly affected preferences for avoiding, collaborating, compromising, and dominating and that negative emotions were often viewed similarly to interference conflict. In addition to conflict research, such a finding has indirect implications for organizational research.

## ***Implications***

Scholars have begun to argue that organizational conflict research needs to address the issue of conflict culture (e.g., De Dreu, Van Dierendonck & Dijkstra, 2004; Gelfand, Leslie, & Keller, 2007). The general argument is that workers exist in contexts that shape norms, including the normative way to manage conflict. Although this argument has rarely translated to direct systematic investigation of the role of organizational culture in workplace conflict, there is a burgeoning research line with small groups that provides indirect support. For example, Kuhn and Poole (2000) found that small groups tended to create group-level conflict management preferences and norms. Not only did these preferences and norms affect how the groups managed conflicts, but they also affected group decision-making. Other small-group research (Chen, Liu, & Tjosvold, 2005; De Dreu & Van Vianen, 2001) has also found that groups develop conflict-handling preferences when dealing with conflict. Similar findings have occurred in negotiation research (Weingart & Olekalns, 2004; Olekalns, Putnam, Weingart, Metcalf, 2007).

While the present experimental investigation adds little direct information to the argument in the literature regarding the role of conflict culture, it does offer some fundamental insight into the role of definitions in conflict. More specifically, the fundamental reason for including organizational or subunit culture is the premise that culture affects the way conflict is defined, which affects the way conflict is subsequently handled (Gelfand et al., 2007). The present experiment directly challenges the link between the definition of conflict and its effects on perceptions of conflict intensity, resolvability, and general behavioral preference for dealing with conflict. Data indicated that perceptions of conflict affected hypothetical behavioral responses; however, this effect was not related to conflict definition. Thus, the present experiment supports perceptions as an important predictor of preferences for dealing with conflict, but not due to actually defining conflict. In fact, all three conflict-type characteristics



(disagreement, interference, and negative emotion) predicted most conflict handling responses, but negative emotion provided the most consistent and strongest effects. Thus, the present experiment suggests that future research should examine the context of the conflict including the culture and conflict handling norms, but not focus on shared definitions.

The findings of the present study are consistent with Pondy's (1967) five-stage model of conflict, which remains one of the most commonly referred to theoretical models, despite little empirical scrutiny (Oetzel & Ting-Toomey, 2006). According to the model, the source of conflict is one of three basic latent issues. Pondy argued that conflict is generally about competition for scarce resources, constraints against autonomy, and differing goals. This framework is similar to the idea that conflict is about task disagreements or interference and incompatible goals. According to Pondy, conflicts must be perceived and be felt to have organizational relevance. Pondy described felt conflict as the emotional aspect that encompasses emotions such as anger, hostility, and frustration. In other words, the present model is consistent with the elements of Pondy's model. Pondy argued that felt conflict should be the strongest predictor because it is more temporally related to manifest conflict than the latent sources. The present study offers some support for Pondy's model because the data indicated that of the three conflict characteristics negative emotion (or person conflict) was the strongest predictor of intensity, frequency, and efficacy.

*Practical implications.* In addition to some of the research implications already discussed, Pondy's (1967) model and the present research can also inform the practice of conflict resolution. Specifically, if conflict follows the path of cue, perception, latency, and finally feeling then there are specific empirically validated approaches to conflict diagnosis and resolution. For instance, if the root cause is cues, individuals could be trained to both detect the

cues of others and avoiding exhibiting the wrong cues before and during a conflict episode. Research shows that even subtle nonverbal cues affect joint problem-solving in marital relationships and in parent-child relationships (Forgatch, 1989; Prager, 1991) and the present study showed that written cues also affect perceptions about what a conflict is about. Research (Borbely, Graber, Nichols, Brooks-Gunn, & Botvin, 2005) has found that communication skill is an important predictor of effective conflict resolution regardless of the social context.

Thus, emotional management, including understanding how subtle communication such as non-verbal communication affects conflict perceptions can enable individuals to resolve conflict and negotiate more effectively (Adler, Rosen & Silverstein, 1998). The literature on frame of reference (FOR) training (Pulakos, 1984; Sulsky & Balzer, 1988) indicates that managers can be trained to block out and depend less on irrelevant sources of information and focus on the more important information. Based on a model specified by Olson-Buchanan and colleagues (1998; fully described in Study 2), training that increases one's ability to more accurately perceive the sources of a conflict, the level of emotionality in a conflict, and the short- and long-term effects of action and inaction should result in more optimal decision-making regarding how to resolve conflict.

According to Thomas and Pondy (1977), "Attribution of other party's intent is a central activity in conflict episodes, and ... these attributions play a crucial mediating role in shaping each party's reactions to the other's behavior, specifically mediating hostility and retaliation (p. 1089). Continuing in the model, the present research confirmed that perceptions regarding what the conflict boils down to (i.e., disagreement/task, interference/process, or negative emotion/person) will affect one's conflict self-efficacy and perceived intensity. This finding is consistent with other recent research (DeChurch, Haas, & Hamilton, 2007), which found that

perception of relationship conflict was affected by how the conflict partner first responded to conflict. Although the described model and the current research did not address moderators, it is likely that other factors such as trust and communication skills will affect the link between what conflict is about and one's perceptions of conflict intensity and individual efficacy (Desivilya & Eizen, 2005; Wall & Callister, 1995). Given that conflicts are more likely to induce strong physiological reactions, those who feel overwhelmed by their physical symptoms when approaching conflict, will also assume they are less able to resolve conflicts (Stone & Bailey, 2007). This link has not been previously tested in the context of conflict resolution nor has its unique contribution in the prediction of self-efficacy been validated. Thus, this will be an important consideration for Study 2. In addition, Kasouf et al. (2006) questioned how attribution processes are related to prior problem-solving episodes and associated with cooperation and relationships. The preliminary findings of Study 1 agree with Kasouf et al.'s call to address the role of self-efficacy in relationship satisfaction, which is a void that Study 2 will attempt to help fill.

Other research has suggested that arousal levels during conflict affect information processing (Giebels & Janssen, 2004; Wall & Callister, 1995), orientation toward resolution (i.e., cooperative v. competitive), and ultimately negotiation outcomes (Allred, Mallozzi, Matsui, & Raia, 1997). Similarly, Bantham, Celuch, and Kasouf (2003) supported a model in which a relational mindset (i.e., willingness to cooperate) affected specific communication behaviors that influenced problem-solving. Therefore, in addition to emotional management and communication training, interventions that facilitate conflict efficacy and control perceived intensity could help direct individuals to effectively resolve conflicts. Study 2 more fully describes and explores the antecedents and consequences of conflict efficacy.

In regard to controlling perceived intensity, there is still very little research, although both the pilot study and Study 1 suggest that efficacy, frequency and intensity covary. Emotional intensity may create the impetus for engaging in conflict resolution. Conflict that is highly salient would be more likely to be considered more intense, and be related to strong emotions. In addition, there is probably a trait component as well. Specifically, the pilot study, which contained a measure of conflict preferences, showed that all five conflict-handling preferences were significantly related to conflict intensity. In addition, in both the pilot and in Study 1, dominating was the strongest predictor of intensity perceptions. Thus, the present findings were indirectly supportive of Barki and Hartwick's (2001, 2004), DeChurch et al.'s (2007) and Tjosvold's (Andrews & Tjosvold, 1983; 2006) expectations that the definition used would affect perceptions of conflict intensity, frequency, efficacy, and preferences for resolving conflict.

This finding is consistent with the notion that "Conflict styles represent a core dimension of managing interpersonal relations at work" (Friedman, Tidd, Currall, & Tsai, 2000, p. 49). Kuhn and Poole (2000) provide the best description of conflict preferences or styles, "An individual's conflict style is a behavioral orientation and general expectation about one's approach to conflict" (p. 559). Personality can affect how one manages their resources, their demands, and perceptions of stress, and coping behaviors, and therefore it is expected that different levels of intensity and stress be related to personality differences in preferences of conflict management (Friedman et al., 2000). Again, this is important because how one responds to conflict can naturally escalate or dampen disputes, and create an environment that is either supporting or alienating. Although research findings (Renwick, 1975) suggest that individuals have dispositional preferences for conflict strategy, it should be noted that one's general disposition and tendencies towards conflict has been successfully modified with appropriate

training and support (Thorpe & Olson, 1990).

*Additional findings.* In addition to providing some insight into the primary research questions, the research has also provided useful information that can assist in the development of Study 2. Most important of this information was whether an undergraduate student population could evaluate work-based constructs, instruments, and contexts. The data indicated that about 80 % of Kansas State University undergraduate students work at least part-time. The correlation between average hours worked per week and all the research variables, was low in all the cases, with accommodating demonstrating the largest effect size ( $r = -.13$ ). In addition, while most of the students considered a work frame of reference, those that considered other frames of reference such as school work, relationships, sports, and clubs, did not produce significantly different ratings of most of the central research variables, with the exception of intensity, which indicated a weak, but statistically significant effect ( $r = .15$ ). Thus, it appears that the actual context (i.e., work versus relationships or school work) really had no meaningful effects, which supports the external validity of this study.

Additionally, the conflict characteristics instrument fit the data as well as the instrument from Barki and Hartwick's (2001) original study (CFI = .96 vs. CFI = .94, respectively). In addition, item analysis indicated that all items should be retained and did not need to be further adjusted. The good model fit and the significant, but non-redundant correlations between the three characteristics provide evidence of convergent and discriminant validity of the adapted measure to a student sample (Bagozzi & Phillips, 1982). In addition, the present study observed correlations that were similar in magnitude and identical in direction to Barki and Hartwick's original study. Specifically, the corrected correlations for the original study between a composite measure of the characteristics and subscale scores on a measure of conflict handling

preferences were -.12 accommodating, .31 avoiding, -.36 collaborating, -.20 compromising, and .25 dominating; whereas in the present study the uncorrected correlations between the composite score on characteristics and single-item measures of conflict handling preferences were -.12 accommodating, .02 avoiding, -.13 collaborating, -.05 compromising, and .23 dominating. While the magnitudes of some correlations were not statistically equivalent between the two samples, the results were similar, especially when taking into account that the original study corrected the correlations, had multiple items to assess each conflict preference, and was conducted with a sample of actual office workers. Taken in full, results indicated that Study 2 does not need to be focused on context, nor the work experience of the sample unduly affecting the results when studying interpersonal work conflict with a college student sample. This conclusion is consistent with other research that has found parallel behavioral sequences across conflict samples as diverse as police hostage negotiations and divorce mediations (Taylor & Donald, 2003).

### ***Conclusion***

It is important to consider the limitations and their effect on the conclusions drawn from the present data before concluding the discussion for Study 1. From a design perspective, there is the issue that the present research did not address a large variety of different definitions including content, control, and situational characteristics. The definitions could have been expanded to encounter broader issues that extend beyond the workplace including issues of politics or even sense of humor. While the present research is limited in the scope of definitions that were applied, the definition typology applied is the most dominant typology in the field. In addition, while other broader definitions are certainly of interest, many of which are subsumed under the applied typology, and the ones that are not tend to move away from issues about work

conflict to more broad personality concerns. Thus, differential effects may be observed with using other definitions of conflict; however, the major categories of conflict were tested with the present research allowing for more interpretable and generalizable findings.

One issue that gives pause is the reliance on single-item assessments. The pilot study relied on single-item measures of conflict type, intensity, frequency, and efficacy. Additionally, Study 1 also relied on single item assessments of conflict intensity, frequency, and efficacy. Although single-item assessments have the disadvantage of providing larger measurement error, and do not allow for internal consistency assessments, which limits the stability and generalizability of findings, the present research does contain advantages that overcome some of these problems. First, the correlation pattern can be compared between the two studies, which sampled over 900 college students. In addition, while the pilot study contained only a single assessment of conflict-type the second study contained multiple measures of conflict-type characteristics. Moreover, while Study 1 contained only single-item assessments of conflict preferences, the pilot study contained a 20-item validated assessment of conflict preferences. Additionally, while the magnitude of the effect sizes varied, the general pattern of effects was largely consistent between the pilot study and Study 1. For example, in both studies the single-item assessment of intensity correlated positively with frequency (.39 vs. .22), positively with dominating (.20 vs. .18), and negatively with efficacy (-.37 vs. -.27), accommodating (-.19 vs. -.07), collaborating (-.13 vs. -.13), and compromising (-.17 vs. -.06). Thus, it appears unlikely that the pattern of results reported were merely artifacts of the data caused solely by measurement error.

A larger concern would be external validity. Both samples provided consistent results, but were limited to the same university. While the present findings can be confidently applied to

the university population that was studied, there is no evidence that would help determine if the present findings would generalize to other college students, especially cross-culturally. In addition, the purpose of this research was to get a better understanding of workplace conflict, but the majority of the sample worked part-time and most worked summer jobs or jobs at lower level positions. Thus, the ecological validity and subsequently, the generalizability of these results to other organizations remains questionable; however, the consistent findings between Study 1 and Barki and Hartwick's (2001) study, and the fact that whether a job was the reference point and average hours worked was unrelated to the research variables, somewhat mitigates this concern.

The largest concern and limitation of the findings has to do with the experimental design. While the experimental design does allow for causal statements with regard to subtly changing the definition of work conflict in the instructions, it does not allow for causal statements regarding the relationship between frame of mind, conflict preference, and perceptions of conflict intensity, frequency, and efficacy. Despite these limitations, the proposed causal chain has received some empirical support. The fact that frame of mind was directly influenced by the randomly assigned experimental condition and the empirical realization that at least some component of conflict preferences are dispositional suggests that conflict follows the path of cue, perception, latency, and finally feeling.

The present findings indicated that experienced conflict were manipulated just by subtly changing the definition of work conflict in instructions. Although this manipulation proved somewhat effective, it was ultimately student perceptions about what the conflict was about that allowed for the prediction of intensity, frequency, and self-efficacy. This finding was first discovered in the pilot experiment, and was replicated and extended in Study 1. These findings are not necessarily novel. For example, Borbely et al. (2005) demonstrated that the type and



frequency of conflict resolution strategies varied by interpersonal context. While the finding that perceptions of the nature of conflict affect other conflict variables has already been explored, the present work was the first experimental examination of the extent to which work conflict perceptions were affected by varying the work conflict that was used. The results both agreed with and refuted arguments made by Barki and Hartwick (2001, 2004) and Tjsovold (2006). Specifically, the literature base surrounding conflict, its antecedents and consequences, is probably not as disjointed as Barki and Hartwick and Tjsovold feared; however, individual perceptions of what a conflict is about are related to perceptions of intensity, frequency, and efficacy, and behavioral expectations.

The findings of the pilot study and Study 1 can help inform and contextualize the findings of Study 2 in five primary ways. First, there was a consistent finding that internal consistency was highest when no specific definition was provided. Therefore, Study 2 should not provide participant an in-depth specific definition. Second, demographic variables, frame of reference, and average number of hours worked showed little potential to affect the core research variables. Third, successful adaptation of the conflict type assessment from a management organizational sample to the college student sample provides confidence that Study 2 can also effectively incorporate adapted instrumentation. Fourth, the literature review for Study 2 does not need to be limited to studies that have operationalized conflict in a certain way. Fifth, there was a consistent finding across both samples that conflict efficacy is correlated with conflict frequency, and to a lesser extent conflict resolution styles. In sum, the findings of the pilot study and Study 1 allow for Study 2 to move away from measurement and design issues to the more practical and interesting concern of the newly established, important concept of conflict efficacy, including its antecedents and consequences.

## CHAPTER 8 - Introduction Study 2

Interpersonal work conflict research has followed two distinct paths (Desivilya & Eizen, 2005). Study 1 contributed to the literature as part of the first direction, assessing outcomes associated with different conflict types (e.g., Jehn, 1995, 1997; De Dreu & Weingart, 2003). Study 2 contributed to the second direction, which is examining constructive conflict management processes (e.g., Tjsovold, 1997). The common research paradigm designed to address the second research direction has typically involved interest-based negotiation tasks (Desivilya & Eizen; Jehn, 1995). Interest-based negotiation tasks are designed so that if the participants focus on their shared interests, each can get what they want. Unfortunately, this provides an incomplete view of conflict because conflicts often have at least some irrational component (i.e., raw emotions), and are based on a variety of complex issues and positions, which may need to be surrendered or compromised for the individual to achieve their most important objective.

While this paradigm has yielded some fruitful results and expanded knowledge of work conflict, it ignores personality-based conflicts and relationship issues (Desivilya & Eizen), and ultimately limits the application of research findings to actual conflicts in the workplace. Additionally, conflict resolution has rarely been assessed as a skill (see Stevens & Campion, 1994 and Olson-Buchanan, et al., 1998 for two notable exceptions). Instead it has been assessed as reactions toward, communication patterns with, or preferences for dealing with conflict. Study 2 addressed some of these concerns and contributed to the literature by specifically investigating the construct validity of conflict efficacy and its relationship with

conflict frequency, styles, skill, and positive work relationships. The theoretical rationale is provided before describing the research model.

### ***Social Cognitive Theory***

Bandura developed Social Cognitive Theory (SCT; Bandura, 1977, 1986, 1989) to understand, predict, and control individual and group behavior. SCT has been frequently applied to areas of personality development, motivation, and health promotion. SCT is premised on triadic reciprocal determinism. In other words, behavior, cognition, and environmental influences and other personal factors all operate as interacting determinants, which all influence each other. While SCT calls for reciprocal interaction, the magnitude of the influence among the sources is expected to vary based on the individual, the expected behavioral responses, and the situation.

According to SCT, expectations, beliefs, self-perceptions, goals, and intentions drive behavior. One unique aspect of SCT is that action is not all internally driven (such as with need theories), nor is it automatically controlled by the environment (such as with reinforcement theories); rather, most external influences are believed to affect behavior through cognitive processing. SCT does not assume rationality just because cognitive processing is the key mediating variable. According to SCT, rationality of action depends on reasoning skills, which vary considerably between individuals and within individuals over time (Bandura, 1986). The most important consideration in SCT is the role of cognition, which is responsible for encoding information, retrieving information, constructing one's reality, forming values, expectations, and determining subsequent actions (Jones, 1989). One of the most important and most often researched cognitive mechanisms in SCT is Bandura's (1986) notion of self-efficacy (Zeldin, 2000).

*Self-efficacy.* Self-efficacy “has been proven to be one of the most core concepts in contemporary psychology research” (Judge, Jackson, Shaw, Scott, & Rich, 2007) and has been examined in more than 10,000 studies in the last 25 years; with over 800 journal articles dealing with self-efficacy in industrial/organizational psychology (Judge et al., 2007, p. 107). It is an especially valued psychological construct because it was developed with strong theoretical underpinnings. The focus of this construct is on the mechanisms used when an individual evaluates their own potential success; however, self-efficacy should not be confused with confidence. Confidence is a general belief in one’s ability, but self-efficacy is an assessment of one’s motivation, resources, and action, related to the performance of a specific task (Muretta, 2004). Self-efficacy epitomizes SCT because it takes into account thinking, perceiving, and learning from others, and adjusting one’s behavior. Put differently, “Self-efficacy expectancies are convictions that one can successfully perform the behavior required to produce a given outcome” (Tipton & Worthington, 1984, p. 545). Self-efficacy has strong utility because it is a consistent predictor of behavior/performance (Judge et al., 2007).

Previous research has demonstrated that people need the requisite skills and self-efficacy to perform any task successfully (Bandura, 1977, 1986, 1997) and that self-efficacy positively correlates with performance (Cole & Hopkins, 1995; Judge, et al., 2007; Stajkovic & Luthans, 1998). In fact, Judge et al.’s literature review found over 800 articles linking self-efficacy with performance. Capability aspirations are the theoretical lynchpin for these effects, “Perceived self-efficacy concerns people’s beliefs in their capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in their lives” (Wood & Bandura, 1989, p. 364). According to SCT, self-efficacy explains why individuals with the same level of skill experience different performance outcomes (Gist & Mitchell, 1992; Wood &

Bandura, 1989). Efficacy is important for any task, including conflict resolution, because it influences choices to engage in behaviors, effort and persistence, and the resilience needed to overcome obstacles (Bandura, 1997; Rothbart & Hallmark, 1988).

### ***Conflict Efficacy***

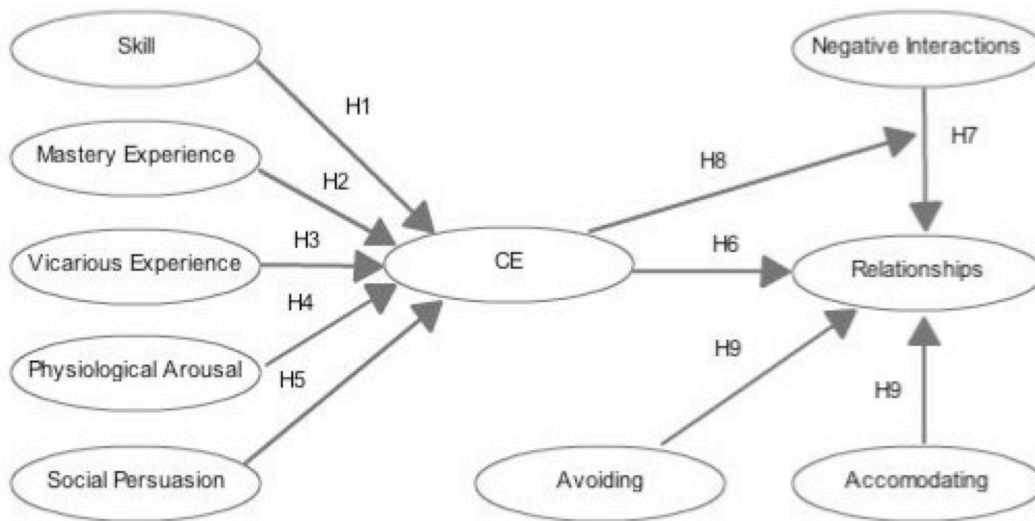
Individuals with high self-confidence in their ability strive for mastery and use their aspirational standards as a motivational benchmark (Bandura, 1986). Similarly, those who have low confidence give up easily because they do not foresee any benefit for sustaining effort. According to Bandura (1989), individual evaluations of capabilities not only influence whether thought patterns are self-handicapping or self-promoting, but they also influence stress expectations and reactions. Bandura (1977, 1986) postulated that efficacious individuals would be highly confident in future performance, and would therefore be more likely to engage in challenging tasks. More importantly, while working on a task (i.e., attempting to resolve a conflict) efficacious individuals should increase efforts and persist through difficulties. These hypotheses have been confirmed with a consistent link between self-efficacy and motivation, commitment, effort, persistence despite difficulties, and performance (Bandura, 1997; Eden & Kinnar, 1991; Stajkovic & Luthans, 1998).

Self-efficacy theory provides a strong theoretical framework for understanding conflict efficacy (CE). Recall that self-efficacy itself is the belief in one's abilities to arrange the resources needed to accomplish a specific task (Bandura, 1986). Therefore, CE refers to an individual's belief in his or her ability to resolve interpersonal conflict across a variety of situations (Alper et al., 2000). CE is a useful mechanism for understanding how different approaches to conflict resolution are associated with important team and organizational outcomes (Alper, et al.; Campion, Medsker, & Higgs, 1993; Stone & Bailey, 2007). Alper and

colleagues found that conflict efficacy was positively associated with cooperative approaches to conflict, negatively associated with competitive approaches to conflict, and predictive of managerial performance ratings. Stone and Bailey recently found that team CE directly affected career outcome expectations, team performance, and indirectly predicted behavioral intentions.

While CE is a newer and less understood construct, research has been done on several related constructs. For example, Kasouf, Celuch, and Bantham (2006) found that problem-solving efficacy, a construct that largely subsumes CE, was predictive of important behaviors for conflict resolution including cooperation, non-defensive listening, active listening, and disclosure. The purpose of the present work was to synthesize the literature on CE and related constructs, and test predictive hypotheses regarding the antecedents and consequences of CE (See Figure 8.1). Each path in the research model represents a specific hypothesis. The theoretical justification for these hypotheses is provided below in the order that they appear in the hypothesized research model.

**Figure 8.1 The hypothesized research model.**



### ***Antecedents of Conflict Efficacy***

*Conflict resolution skills.* Stevens and Gist (1997) described the importance of interpersonal skills to negotiate conflicts and coordinate efforts as must-have. Despite the strong linkage with organizational variables, and an obvious demand for competitive advantages, virtually no research has assessed conflict resolution as a skill. As already discussed, conflict can be dysfunctional, harming performance and breaking down cohesion (Jehn & Chatman, 2000; Sullivan & Feltz, 2001). Consequently, understanding conflict resolution and skillfully handling conflicts is an imperative skill set. Employers, teachers, and researchers agree that more should be done to develop teamwork skills (Buckenmyer, 2001; Chen, Donahue & Klimoski, 2004; Stone & Bailey, 2007).

Perhaps the most important teamwork skill is conflict resolution (Ilgen, 1999; Stone & Bailey, 2007; Tjosolvd, 1991). In fact, research has shown that interpersonal skills training, including conflict resolution provides greater organizational benefits than cognitive or technical skills training (Arthur, Bennett, Edens, & Bell, 2003). The limited research available suggests that conflict behaviors can be modified through training (Brockman & DeJonghe, 2005; Johnson, 1992). Steele (2008) recently found that performance in a conflict resolution course predicted interpersonal teamwork knowledge, skills, and abilities, including the skill to resolve conflict effectively.

Unfortunately, the conflict resolution skills line of research is difficult to maintain because there are no direct questionnaires that reliably assess conflict resolution as a skill. Stevens and Campion's (1994) Interpersonal Teamwork KSA Test contains four multiple-choice questions that cover conflict resolution scenarios, but these questions were neither developed nor validated as a measure of conflict resolution (M. J. Stevens, personal communication, April 20,

2007). The internal consistency of those four questions was reported as poor ( $\alpha = .26$ ; M. J. Stevens, personal communication, April 20, 2007). While questionnaire-based approaches have been virtually non-existent, there is a promising alternative assessment to conflict resolution as a skill.

Olson-Buchanan et al. (1998) developed an interactive video assessment of conflict resolution premised on a model that prescribes managerial action regarding different scenarios of interpersonal work conflict. The model states that there is an optimal decision regarding conflict handling dependent upon the short-term effects of the conflict, the long-term effects of the conflict, and the level of emotionality in the conflict. If a conflict is likely to yield only short-term effects, the main course of action suggested is arbitration, which is an approach recommended for issues requiring immediate responses, but little thorough analysis (Kolb & Glidden, 1986). If the conflict has both short-term and long-term effects, reactive problem-solving is prescribed. In this case, the manager would attempt to resolve the short-term issues, while working toward a solution to minimize further escalation and disruptions. This method is the most time-consuming and is therefore reserved for the most serious problems. Of course, if the issue were not likely to cause long-term nor short-term consequences, then the most efficient course of action would be inaction. Finally, policy-based actions are prescribed if there are long-term effects, and high emotionality. In this case, the manager uses existing policies in place to resolve the conflict. This technique is useful because existing policies are impersonal, and therefore, such an approach is less likely to escalate an already emotional conflict.

In a direct test of this prescriptive conflict resolution model, Olson-Buchanan et al. (1998) created a video-based situational judgment test (SJT) and administered it to a medium-sized sample of managers. Olson-Buchanan and colleagues observed significant correlations



between conflict SJT scores and uncontaminated managerial ratings of middle- and front-line managerial ability to resolve conflicts, and overall job performance. Not only were the SJT scores predictive of both criteria, but also the scores added incremental validity beyond quantitative and verbal scores (i.e., *g*), which has been established as the best generic predictor of performance (Ghiselli, 1973; Schmidt & Hunter, 1998; Viswesvaran, Schmidt & Ones, 2005).

The strength of the Olson-Buchanan et al. (1998) model is its empirical and theoretical foundation; however, assessing conflict resolution as a skill using this model is limited. Communication skills, personalities, timing, previous interactions, and other non-measured but still central issues, all affect successful conflict resolution, not just knowledge. Despite its limitations, the model is still relevant because communication and other behaviors need to be goal directed to be successful, and this underlying knowledge is the mechanism that drives human action.

Although the literature specifically examining CE is sparse, there is evidence that other related self-efficacy constructs (e.g., social self-efficacy) are important factors in constructively managing interpersonal conflict (Desivilya & Eizen, 2005). Brett, Pinkley, and Jackofsky (1996) found that participants with high negotiation efficacy achieved higher individual and joint profit in a negotiating task than individuals with low efficacy. Additionally, O'Connor and Arnold (2001) found that despite impasse or the perception of intractability, individuals with high negotiation-related self-efficacy persisted in searching for a solution and were highly resistant to concessions. It should be noted that O'Connor and Arnold found that negotiation self-efficacy did not predict impasse, but rather task persistence. Generalizing from this literature, and self-efficacy theory in general, it was expected that there CE and conflict skill development would be linked.

*Hypothesis 1: Conflict skills will positively predict conflict efficacy.*

Although skills have been described as an important antecedent to CE, Bandura (1997) described four specific experiential sources that shape one's sense of efficacy. The four sources of conflict efficacy are discussed in the order of effectiveness, starting with the most important source, mastery experience.

*Mastery experience.* According to Bandura (Bandura, 1977, 1986, 1997; Wood & Bandura, 1989) self-efficacy judgments, whether accurate or inaccurate, come from four principal sources including: mastery experience, vicarious experience (social comparisons), physiological arousal, (emotion manifestations), and social persuasion (social influences). These four sources drive individual perceptions of capability, strength, and vulnerability (Bandura, 1989). Although previously unexamined in the domain of conflict resolution, CE should also have these four sources. Mastery experience, also called enactive mastery, performance accomplishment, or performance attainment, is argued to be the single most important antecedent of self-efficacy (Bandura, 1977, 1986, 1997; Chowdhury, Endres, & Lanis, 2002; Dawes, Horan, & Hackett, 2000; Wise & Trunnell, 2001; Wood & Bandura, 1989). According to Bandura (1997), enactive mastery experiences are, "The most authentic evidence of whether the individual is capable of successfully completing the task" (p. 80). According to Smith (2002), enactive mastery is the most important because it comes from direct and personal experiences that are more likely to shape attributions and beliefs.

Research has shown that task success enhances self-efficacy, and subsequent task persistence, and performance (Bandura, 1986; Earley & Lituchy, 1991). Burke-Spero and Woolfolk (2003) explained the power of mastery experience in a qualitative study of preservice

teachers as being derived from trial and error. It is worth noting that Rothbart and Hallmark (1988) provided a caveat in that if success comes too easily, failure might produce more intense discouragement. Thus, enactive mastery would be most predictive of self-efficacy and performance if it had been developed by overcoming difficulties or sustaining efforts even after initial failures. Muretta (2004) found significant correlations between mastery experiences and higher self-efficacy regarding a maintenance task, as well as between adverse mastery experiences and lower self-efficacy.

Research (Bandura, Adams, Hard, & Howels, 1980) has suggested that self-efficacy gained from mastery experiences in one situation can generalize to similar situations. Extrapolating mastery experiences to CE could involve, for example, resolving other conflicts, or sorting out previous interpersonal disagreements, which should subsequently increase CE for future conflicts. Conversely, failures or major setbacks when resolving other conflicts, dealing with confrontations, or collaboratively problem-solving should lead to lower expectations (i.e., reduced CE) in resolving subsequent conflicts (Gist & Mitchell, 1992). Again, there is no research available that specifically addresses the relationship of mastery experience with conflict efficacy, but generalizing from the wealth of research available in other domains, it seems likely that mastery experience would be an important antecedent of conflict efficacy.

*Hypothesis 2: Mastery experience with previous conflicts will positively and uniquely contribute to the prediction of conflict efficacy.*

*Vicarious experience.* Those who do not experience initial success can still see efficacy and performance gains through other's confidence (e.g., manager confidence) and social

persuasion (Eden, 1988; Eden & Kinnar, 1991; Eden & Aviram, 1993). In fact, it has been argued that virtually anything that is learned from direct experience can also be learned vicariously (Bandura, 1986; Rosenthal & Zimmerman, 1978). Vicarious experience, also referred to as modeling, affects self-efficacy through a social comparison process where people judge their capabilities in relation to the capability of others (Bandura, 1977, 1986, 1997; Wood & Bandura, 1989). Vicarious experience is the second most important path in developing self-efficacy (Chowdhury et al., 2002; Wise & Trunnell, 2001). According to Wood and Bandura (1989, p.364), “Proficient models build self-beliefs of capability by conveying to observers effective strategies for managing different situations.”

In social modeling, the individual observes a response and consequences of someone else (i.e., the model). Just by watching, the observer can learn a great deal from the model. The greater the perceived homogeneity between the observer and the model (based on the observer’s perceptions), the greater the influence of social modeling (Bandura, 1977). In other words, observing another’s successes and failures allows individuals to evaluate their own capabilities. Specifically, the individual observes another actor successfully accomplish the task (e.g., observes a co-worker successfully resolve a conflict). The observer learns from this experience, but also gains confidence, which encourages her to engage in similar experiences as they arise (Bandura, 1977; Gist & Mitchell, 1992).

This highlights another important aspect of SCT; each person’s individual perception of the world and its potential outcomes creates a unique personality. Vicarious experience allows individuals to enhance information-processing skills and acquire judgmental standards (Bandura, 1986; Rosenthal & Zimmerman, 1978). Vicarious experience can be transmitted as simply as storytelling by colleagues (Rothbart & Hallmark, 1988). Numerous studies have validated the

link between vicarious experiences and self-efficacy. For example, Eden and Kinnar (1991) showed that vicarious experience and social persuasion enhanced Israeli soldiers' self-efficacy for assignment to Special Forces. Gorrel and Capron (1990) illustrated a similar effect using cognitive modeling, in which a model narrated their thought processes behind behaviors, and the observers experienced enhanced teaching self-efficacy. In addition, Bandura (1989) speculated that modeling influences are effective even if the observation is inadvertent. Finally, recent research (Stone & Bailey, 2007) found a significant positive link between vicarious team experiences and team CE, and team CE and behavioral intentions to use their skills to resolve conflicts. In other words, Stone and Bailey (2007) demonstrated team CE mediated the relationship between vicarious experiences and behavioral intentions to use conflict resolution skills.

*Hypothesis 3: Vicarious experience with previous conflicts will positively and uniquely contribute to the prediction of conflict efficacy.*

*Physiological arousal.* In addition to the vicarious experiences previously discussed, observing others can also result in powerful physiological arousal (Bandura, 1989). Physiological arousal, affective states, or affective arousal has been found to be the least important determinant of the four sources (Burke-Spero & Woolfolk, 2003; Chowdhury et al., 2002). Although, like the other sources, Bandura (1986) argued that physiological arousal is still a distinct self-efficacy source. In Bandura's (1997) description, individual interpretations of somatic states are viewed as indicators of vulnerabilities. In other words, physiological arousal in connection with self-efficacy refers to individuals attributing a physiological condition to

personal judgments. For example, tension is attributed to incapability (Wood & Bandura, 1989). Bandura (1989) hypothesized that arousal is most intense when the experience of another is personalized, or when one truly takes the perspective of another.

Muretta (2004) reported significant correlations between physiological arousal and higher task self-efficacy, as well as between aversive physiological arousal and lower self-efficacy. In a qualitative study of preservice teachers, Burke-Spero and Woolfolk (2003) described an inverse relationship between teacher physiological states and their ability to analyze a teaching task. Furthermore, Burke-Spero and Woolfolk explained that teachers could not focus on the teaching task until they felt comfortable and in control of their feelings. While the evidence presented above did not specifically analyze conflict, it does illustrate that aversive physiological arousal can affect perceptions of competence, analysis capabilities, and motivation, all of which are important elements of CE.

Physiological arousal is important because physiological reactions to task stimuli shape attributions about one's capabilities. Given that conflicts are more likely to induce strong physiological reactions, those who feel overwhelmed by their physical symptoms when approaching conflict will also assume they are less able to resolve conflicts (Stone & Bailey, 2007). This link has not been previously tested in the context of conflict resolution. Without a clear empirical answer, the hypothesis was made consistent with self-efficacy theory. Therefore, it is hypothesized that physiological arousal would make a unique contribution to CE, after controlling for the other three sources.

*Hypothesis 4: Aversive physiological arousal with previous conflicts will negatively and uniquely contribute to the prediction of conflict efficacy.*

*Social persuasion.* Verbal or social persuasion is another way to increase one's efficacy beliefs (Bandura, 1977, 1986, 1997; Wood & Bandura, 1989). Bandura (1997) described social persuasion as the weakest of the sources of efficacy because it is, "limited in its power to create enduring increases in perceived efficacy, but it can bolster self-change if the positive appraisal is within realistic bounds" (Bandura, 1997, p. 101). In Zeldin's (2000) exploration of mathematics self-efficacy, social persuasion was the only source that did not make a unique contribution to mathematics self-efficacy. The potency of persuasion depends on the credibility, trustworthiness, and expertise of the persuader (Bandura, 1986; Steele & Pinto, 2006). Regardless of its ability to make a unique contribution, social persuasion is important by itself at both a theoretical and empirical level. Theoretically, Wood and Bandura (1989) argued that, "If people receive realistic encouragement, they will be more likely to exert greater effort and to become successful than if they are troubled by self-doubts" (p. 365). Wood, Pool, Leck and Purvis (1996) showed that opposition by persuasive sources had an impact only when these sources were judged self-relevant. Empirically, in Eden and Kinnar's (1991) field experiment with Israeli soldiers, self-efficacy for assignment to Special Forces increased in the treated group through social persuasion.

Persuasion, and subsequently self-efficacy, are improved through merely receiving praise or being told that another has confidence in their abilities to perform the task successfully. Research (Eden, 1988) has shown that not just self-efficacy, but also one's performance can be significantly affected through praise (Pygmalion effect) or insults (Golem effect). According to Bandura (1977), the most common forms of persuasion are verbal encouragement, coaching, and feedback monitoring. Stone and Bailey (2007) recently found that team member support, in which team members worked through conflict cooperatively and verbally supported each other,

was a significant path to team CE. Although there is a dearth of empirical examination dealing specifically with conflict, the link between social persuasion as a valid source of efficacy has been well-demonstrated in other areas (e.g., Eden, 1988).

*Hypothesis 5: Social persuasion will positively and uniquely contribute to the prediction of conflict efficacy.*

*Uniqueness of the sources.* Hypotheses 2 – 5 stated that each source would uniquely contribute in the prediction of conflict efficacy; however, direct justification had not been provided. Even though the four sources have been argued to be important and uniquely contribute to the understanding and prediction of self-efficacy (Bandura, 1997), little research has evaluated the incremental validity of the four sources. For example, Smith (2002) found that each of the four sources significantly and moderately predicted computer self-efficacy and outcome expectations; however, the unique contribution of each source was not evaluated. In addition to the lack of research evaluating the unique contribution of the sources, the research that is available is often inconsistent. The research on mastery experience; however, has repeatedly shown that mastery experience is the most important source, and provides incremental validity in the prediction of a wide variety of self-efficacy domains.

For example, Usher and Pajares (2006) found that mastery experience not only made a unique prediction but was also the strongest predictor of academic and self-regulatory self-efficacy. Similarly, Britner and Pajares (2006) reported that of the four sources, only mastery experience predicted science self-efficacy beliefs of middle school students. Pajares, Johnson, and Usher (2007) recently reported mastery experience to be the most important predictor among the four sources of writing self-efficacy. Finally, Matusi, Matsui, and Ritsuko (1990) and Lent,



Lopez, Brown, and Gore (1996) found mastery experience explained a unique portion of variance in mathematics self-efficacy after controlling for the other three sources. While none of these studies evaluated conflict efficacy, both theory and empirical findings led to the hypothesis that mastery experience provides an important and unique contribution in predicting conflict efficacy.

While research has clearly demonstrated the unique contribution of mastery experience in predicting self-efficacy, the research involving the unique contribution of vicarious experience is less clear. Lent, Lopez, and Bieschke (1991) and Lent et al. (1996) found that after controlling for mastery experience alone, vicarious experience did not significantly account for additional variance in mathematics self-efficacy, although individually vicarious experience did have a significant zero-order correlation with mathematics self-efficacy. Similarly, Pajares et al. (2007) recently reported that despite a significant zero-order correlation, vicarious experience when considered with the other three sources, added nothing unique in the prediction of writing self-efficacy. Moreover, Britner and Pajares (2006) found no effect for vicarious experience in the prediction of science self-efficacy beliefs of middle school students. Conversely, Zeldin (2000) argued that vicarious experience contributed to mathematics self-efficacy, and Usher and Pajares (2006) found that vicarious experience accounted added incremental validity in the prediction of academic and self-regulatory self-efficacy. Matsui et al. (1990) also reported that vicarious experiences made a unique contribution to mathematics self-efficacy. Finally, Anderson and Mavis (1996) reported that vicarious experience added incremental validity beyond mastery experience in the prediction of 'coming out' self-efficacy for lesbians. Because the available research is unclear and is not specifically related to conflict efficacy, the hypothesis regarding the unique contribution of vicarious experience was made consistent with self-efficacy theory.

Thus, it was expected that vicarious experience would be an important predictor, adding unique variance accounted for in the prediction of CE.

The available literature regarding the unique contribution of physiological arousal in the prediction of self-efficacy is also underdeveloped. Matusi et al. (1990) found that physiological arousal made unique contributions to mathematics self-efficacy. Similarly, Pajares et al. (2007) recently reported physiological arousal added a unique contribution in the prediction of writing self-efficacy; however, the effect size was small. Anderson and Mavis (1996) reported incremental validity for physiological arousal beyond the other three sources, with the addition of physiological arousal accounting for an additional 9 % in the prediction of ‘coming out’ self-efficacy for lesbians. However, Britner and Pajares (2006) reported that physiological arousal added nothing significant to the prediction of science self-efficacy beliefs of middle school students. Again, the unique contribution of physiological arousal was hypothesized consistent with self-efficacy theory.

Lastly, despite the theoretical importance of social persuasion, empirical studies evaluating its unique contribution to the prediction of self-efficacy are rare. The studies available provide inconsistent conclusions regarding the relative importance of this antecedent of self-efficacy. Usher and Pajares (2006) reported that social persuasion uniquely predicted academic and self-regulatory self-efficacy. In addition, Anderson and Mavis (1996) found that social persuasion uniquely accounted for 11 % of the total variance in ‘coming out’ self-efficacy after controlling for mastery experience and vicarious experience. Similarly, Pajares et al. (2007) also reported that social persuasion uniquely contributed to writing self-efficacy, after controlling for the other three sources; however, the effect size was small. Conversely, Matsui et al. (1990) reported that social persuasion was the only factor of three sources that did not make a

unique contribution to mathematics self-efficacy in a sample of college students. Additionally, Zeldin (2000) argued that all sources except social persuasion contributed to mathematics self-efficacy, and Britner and Pajares (2006) found no effect for social persuasion in the prediction of science self-efficacy beliefs of middle school students. Again, with no work being done in the domain of conflict, and without a consistent direction from the literature, the unique contribution of social persuasion in the prediction of CE was generalized from self-efficacy theory.

### ***Consequences of Conflict Efficacy***

*Positive work relationships.* The most frequently associated outcome of conflict is well-being (Wall & Callister, 1995). Conflicts have been empirically linked with anger, hostility, anxiety, stress, cynicism, threats, and violence (Thomas, 1992; Wall & Callister, 1995). Because conflict, at least in part, requires a negative perception about another or their actions and inactions, it is no surprise that during and after conflicts individuals harbor feelings of distrust. This distrust fuels further negative attitudes, resulting in even more negative attributions of the opponent than before and during the initial confrontation (Thomas, 1992). In addition to polarizing perceptions, individuals are likely to engage in withdrawal behaviors after conflicts including missing work altogether (Wall & Callister, 1995). Thus, motivation and job performance are affected by conflicts. Therefore, worker well-being is important from both an individual perspective and from a competitive advantage perspective.

Starting decades ago with Deutsch's work (e.g., Deutsch, 1973), a prevailing outcome of conflict management research has been the long-term effect (i.e., constructive or destructive relationships effects) to the relationship of the involved parties (Desivilya & Eizen, 2005). The link between CE and positive work relationships is important because research has indicated that

cooperative instead of competitive approaches to conflict fostered CE, and CE in turn, is related to effective job performance (Alper, et al., 2000).

In addition to performance benefits, maintenance and development of positive relationships at home, school, and work is important. Research has indicated that social support and a positive climate facilitate work-related engagement, defined as work absorption, work enjoyment, and intrinsic work motivation (Salanova, Bakker, & Llorens, 2006). Steele and Fullagar (2008) argued that a professor's support for student autonomy was a direct predictor of academic engagement and an indirect predictor of student psychological and physical well-being. Thus, emotional support and encouragement have been shown to be essential elements for well-being and health (Cohen & Willis, 1985). Perceiving the work environment as less supportive reduces job satisfaction, increases turnover intention, and undermines organizational commitment (De Dreu, Dierendonck, & Dijkstra 2004; Rhoades & Eisenberger, 2002). More specifically in regard to social relationships, Makoul and Rolof (1998) found self-efficacy to be significantly negatively correlated with withholding complaints, a key factor in relationship longevity. While the above body of literature paints a specific picture in which conflict, social support, and relationships are intertwined; there is still a dearth of research on CE and positive social work relationships. Generalizing the work of Alper et al. (2000), Makoul and Rolof (1998), and Thomas (1992) efficacious individuals should have stronger internal bonds, assuming that conflict is engaged constructively, in which the other party's needs are taken into account.

*Hypothesis 6: CE will have a significant and positive effect on social work relationships.*

*Negative interactions.* Research using the Interpersonal Conflict at Work Scale (ICAWS; Spector & Jex, 1998) in over a dozen samples containing over 3,000 employees has consistently demonstrated a moderate positive correlation between the presence of conflict at work and psychosomatic complaints. In another study, Spector, Chen, and O'Connell (2000) found positive and moderate correlations between conflict at work and anxiety and frustration. Other studies have also confirmed a positive moderate relationship between conflict at work and burnout (De Dreu, et al., 2004; Van Dierendonck, Schaufeli, & Sixma, 1994; Leiter, 1991). A worker's well-being is not just limited to their work life. Recent research (Story & Repetti, 2006) has suggested that considerable marital and personal strain can be due to negative social interactions at work. This effect is reciprocal in that conflicts in one's personal life also affect job satisfaction and stress (Story & Repetti, 2006). Generally speaking, interpersonal conflicts increase psychological distress, whereas perceptions of social support minimize psychological distress (Lepore, 1992). The cited research paints a clear picture that conflict frequency and well-being are related. If well-being is operationalized as positive social work relationships, then it is expected that frequent negative interactions at work would negatively affect work relationships.

*Hypothesis 7: Negative Interactions at work will negatively predict positive work relationships.*

*Conflict efficacy, frequency, and relationships.* Research (Rubin, Pruitt & Kim, 1994; De Dreu & Van Knippenberg 2005) has demonstrated that conflicts often escalate into competitive cycles in which arguments and positions harden, and exchanges become increasingly hostile. De Dreu and Van Knippenberg's (2005) thorough exploration of the mechanisms behind conflict escalation revealed that the core variable was a perception of threat to self-concept. De Dreu and Van Knippenberg's work is especially relevant because of the consistent finding that self-concept is correlated with task specific self-efficacy (e.g., Pajares & Graham, 1999; Pajares & Miller, 1994). In fact, recent research (e.g., Pajares & Barich, 2005) found stronger correlations between mathematics domain self-efficacy and self-concept ( $r = .51$ ) than mathematics task self-efficacy and domain self-efficacy ( $r = .36$ ). Other research (Choi, 2005) has demonstrated considerably more overlap in the two constructs ( $r = .81$ ). It has already been hypothesized that destructive conflicts can negatively affect social work relationships, but not that the effect of negative interactions on work relationships is affected by perceptions of one's capability to effectively manage and repair conflicts (i.e., CE).

De Dreu and Van Knippenberg's (2005) work showed that individuals who had a secure self-concept did not perceive minor disputes as threatening and consequently, did not react with hostile or competitive exchanges. However, those who had an insecure self-concept did perceive the disputes as threatening and responded in kind. Thus, one's self-concept, which is related to one's self-efficacy (and some e.g., Bong & Clark, 1999 would argue is equivalent to self-efficacy), plays a crucial role in the outcomes following a dispute. Whereas self-efficacy refers to one's judgment of their own abilities, self-concept refers to one's evaluative judgment of self-worth dependent upon socially constructed values (Pajares & Schunk, 2001). In other words,

self-concept is influenced by comparing oneself with others, whereas, self-efficacy is heavily influenced by comparing oneself with one's past performance (Choi, 2005).

Those with a low concern for self fail to represent their own interests, making them passive recipients of the actions of the other parties and eliminating any control (Friedman, Tidd, Currall, & Tsai, 2000). Other research has indicated a similar role for CE and its relationship with conflict frequency and relationship wellness. For example, Duffy, Shaw, and Stark (2000) found that self-esteem, a construct related to self-efficacy, affected the association between relationship conflict and peer evaluations, as well as the association between relationship conflict and absenteeism. O'Connor and Arnold (2001) account for these effects in their distributive spirals theory.

The distributive cycle is caused by impasses or a failure of the conflict parties to reach an agreement. The impasse is believed to trigger a set of negative emotions, perceptions, and future behavior intentions. This negative energy is then likely to cause future breakdowns in conflict resolution because of a decrease in information sharing and cooperative behaviors. Interestingly, O'Connor and Arnold (2001) observed that these distributive spirals occurred in individuals who reported low levels of negotiation efficacy, compared with those who reported high levels of negotiation efficacy being somewhat insulated from these negative spirals. They argued that this effect was due to those with higher self-efficacy making external attributions in regard to negotiation failure (i.e., luck or task deception) and those with lower self-efficacy attributing failures to their own lack of requisite skills.

Similarly, Bantham et al. (2003) supported a model in which a relational mindset (i.e., willingness to cooperate) affects specific communication behaviors that influence problem-solving. Problem-solving efficacy, a construct that subsumes CE, has been associated with

cooperation, non-defensive listening, active listening, and disclosure (Kasouf et al., 2006). Smoke (1977 as cited in Wall & Callister, 1995) pointed out that while engaged in conflict, parties lose sight of the original reasons for the conflict, and shift to goals of winning and reducing their own losses. Those who are less efficacious react in dysfunctional ways, including misinterpreting stimuli leading to overreaction, underreaction, or no reaction (Bandura, 1989).

CE should play a pivotal role in the relationship of conflict frequency at work and social relationships at work, such that the negative relationship is more pronounced at higher levels of CE. In other words, CE may work to explain the inverse relationship between negative interactions at work and positive work relationships by highlighting when negative interactions at work are generalized and when they are specific to an individual's confidence in their ability to resolve conflicts. Those who have low CE may engage in a variety of behaviors, or simply inaction that causes negative work interactions, which have nothing to do with their work relationships. Conversely, efficacious individuals may engage in a more concerted and skillful handling of negative interactions at work, thus teasing out general negative interactions from relationships.

Stevens and Gist (1997) speculated that low self-efficacy is associated with performance orientation in which poor performance reduces additional effort and planning leading to withdrawal and concerns of personal inadequacies. Stevens and Gist reported significant correlations between self-efficacy and negotiated salary in a negotiation task. They also reported an interaction effect in which low self-efficacy trainees in the condition designed to induce performance orientation were more likely to leave the study.

Tjosvold et al. (2001) argued that even if individuals value constructive conflict resolution, they do not necessarily engage in such behaviors. Tjosvold et al. posited that



individuals must feel confident that they can manage the demands of a conflict scenario before they are willing to directly engage in managing or resolving the conflict. Although Tjosvold et al. (2001) did not specifically measure self-efficacy, they did find that confidence about discussing a conflict issue, knowledge of the issue, and anticipation of agreement was indicative of an individual's willingness to engage in conflict resolution.

Those who feel efficacious about their abilities to resolve conflict should be more apt to make appropriate attributions about negative interactions at work, whereas, those with low self-efficacy would be more apt to generalize negative conflicts to their personal work relationships. In other words, it would be expected that the inverse relationship between negative interaction frequency and work relationships would be more profound for those who report higher CE. Negotiation research (O'Connor & Arnold, 2001) has demonstrated that negotiation self-efficacy moderated the relationship between outcomes, as well as negotiators' beliefs about who made the more positive contribution to the negotiation. As negotiation self-efficacy increased, attributions about the importance of self-contributions also increased. O'Connor and Arnold (2001) concluded that, "self-efficacy plays the strongest moderating role for negotiators' negative emotions and their perceptions of their counterpart's interest in reaching a deal" (p.160). Research has already indicated that external support moderates the relationship between interpersonal conflict experiences and general quality of life (Abbey, Abramis, & Caplan, 1985). Jex and Bliese (1999) also found that both self and collective efficacy moderated the stress-health relationship among Army workers such that those reporting high levels of self-efficacy responded more positively to stressors and strains compared to those reporting low efficacy.

*Hypothesis 8: CE will moderate the relationship between negative interactions and work relationships such that a stronger inverse relationship between negative interactions and positive work relationships will be observed in highly self-efficacious individuals than in lowly self-efficacious individuals.*

### ***Withdrawal Preferences***

The theoretical, empirical, and intuitive link between CE and positive work relationships can be extrapolated to analysis of withdrawal behaviors and social exclusion. According to Darling and Walker (2001) most managers feel uncomfortable with conflict and as a result, want to suppress it in every situation. Sacco (1999) offered a social-cognitive model of support, explaining that simply displaying negative emotions inhibits support from others. In addition, individuals who experience stress are more irritable and socially distant (De Dreu, et al., 2004). With such negative expectations, people may be reluctant to discuss opposing views directly and openly, preferring instead the relative safety of an agreeable discussion (Tjosvold, Nibler, Wan, 2001). This can create a negative cycle in which those who frequently experience conflict that they are ill equipped to handle, are likely to create invisible social barriers, which can reduce social support.

The lack of social support can cause individuals to become more stressed, avoidant, and poorer at resolving conflicts. Thus, a passive approach to conflict, such as avoiding, or a submissive approach to conflict such as accommodating (i.e., obliging, giving-in) results in negative well-being (De Dreu, et al., 2004). Additionally, neither passive nor submissive approaches led to identification of joint interests. As a result, lasting mutually beneficial opportunities are missed. Therefore, individuals who rely on these techniques are likely to have

reoccurring and potentially escalating conflicts, and hence stress, and lower levels of self-esteem and self-efficacy (De Dreu et al., 2001; De Dreu et al., 2004; Lawler & Katz, 1985).

While the focus of the current literature review has been on self-efficacy, as a related construct self-esteem is also applicable. Self-esteem refers to a general feeling of one's worth or value, whereas self-efficacy refers to one's belief in their capacity to perform a specific task. It is expected that while the constructs are unique, they would covary. Self-esteem has been found to moderate the relationship between positive evaluations of one's self and subsequent assertive behavior (Baumeister, Smart, & Boden, 1996). Self-esteem levels have also been found to affect problem-solving behaviors (Pierce, Gardner, Dunham, & Cummings, 1989) and avoidant behaviors in situations of negative feedback (Baumeister et al., 1996).

Research supports the hypothesis that reliance on avoidance and accommodating strategies are negatively related to effective problem-solving (Friedman et al., 2000) and individual health (De Dreu et al., 2004). Furthermore, occupational health psychology (OHP) research has explained that individual perceptions of resource control are positively related to individual well-being (Karasek & Theorell, 1990). Therefore, when one lacks the resources of mastery or self-efficacy, one is likely to have low perceptions of control, high stress, and reduced well-being (Jex & Bliese, 1999). This line of reasoning led De Dreu and colleagues (2004) to argue that, "avoiding and yielding amplify the negative effects of conflict on individual health, well-being, and job satisfaction" (p. 15).

*Hypothesis 9: Withdrawal preferences (avoiding/accommodating) will be negatively correlated with positive work relationships.*

Following the advice of DeChurch et al. (2007), initial dispositions toward handling conflict was included as covariates in the model to control for pre-interaction conflict preferences. By treating avoidance and accommodation as covariates, the research model specifically tested the CE-positive relationships link after removing the potentially distorting effects of avoidance and accommodation preferences.

### ***Summary of the Research Aims***

The purpose of this research can be thought of as both exploratory and theory extension. Self-efficacy theory has been thoroughly tested in a wide variety of settings. Yet, a key component in self-efficacy theory, the antecedents of self-efficacy, has been ignored. Hardly any research has actually tested the link between conflict resolution skill and conflict efficacy. Even when the original four antecedents have been examined, their incremental validity in the prediction of specific efficacy, and important outcomes, has usually not been examined. In addition, while self-efficacy in general is one of the most popular research constructs in all of psychology, it has rarely been applied to conflict situations.

In addition to validating one of the few measures of CE available and the only measure of conflict resolution skills, this research should provide greater characterization of mechanisms underlying self-efficacy, including its relation to conflict resolution skills, preferences, and work relationships. Not only does this research attempt to fill an important gap in the conflict literature, which is the absence of conflict skills, this research was also designed to provide specific suggestions for ways to encourage CE and improve work relationships. In short, this study should contribute to the research in terms of theory-testing, application, and potential ideas for further inquiry.

## CHAPTER 9 - Method Study 2

### *Participants*

Participants were a total of 137 (67 male and 68 female and 2 gender unspecified) undergraduate students who were recruited from the general psychology participant pool at Kansas State University. The majority of the sample was either freshmen (70 %) or sophomores (20 %), and most were Caucasian (88 %). In total, the students represented 30 majors and all undergraduate academic colleges. A summary of demographics is provided in Table 9.1.

**Table 9.1 Participant Response Frequencies on Demographic Variables**

Demographic Variable	Mean	Standard Deviation	n	%
Age	19.21	1.18		
Gender				
Male			67	49 %
Female			68	50 %
Unspecified			2	1 %
Ethnicity				
White/Caucasian			121	88 %
Asian			5	4 %
Hispanic			5	4 %
Black/African American			3	2 %
Native American			2	1 %
Other			1	1 %

### *Materials*

All materials that were used in this study were either established instruments or instruments that were based on substantive research and modified to fit the current purposes. All the surveys, except for the video-based interactive conflict situation judgment assessment had a 7-point Likert response scale either indicating agreement (i.e., 1 = “Strongly Disagree” to 7 = “Strongly Agree”, or confidence (e.g., “I am certain I don’t have the ability to successfully resolve this conflict” to “I am certain in my ability to successfully resolve this conflict”). Some

items were negatively worded to overcome response set bias that can occur when data is collected with only one method.

### ***Conflict Efficacy***

*Task CE.* Conflict efficacy was assessed with two different measures. At the task level CE was assessed in conjunction with the conflict video-based situation judgment test (SJT). More description regarding the SJT is provided in the conflict skills section. Specifically, participants were asked to take on the role of the manager. After each of the nine main conflict scenarios were presented the participant was asked their confidence of their ability to resolve the particular conflict situation, “Rate your belief in your ability to resolve this conflict”. The scenarios were created from 36 structured interviews with managers from several organizations. The anchors for the 7-point response scale were “I am certain I don’t have the ability to successfully resolve this conflict” and “I am certain in my ability to successfully resolve this type of conflict”. After assessing their efficacy, the participant was then prompted to choose a behavioral path (i.e., actually select how they would attempt to resolve the conflict). This measure contrasts with the domain measure because in this measure the situations were specific and were used as the focal point, and the participant assumed a position of power.

*Domain CE.* Alper et al. (2000) is the most frequent citation regarding CE. In addition, the Alper et al. instrument was the only scale that could be located that measured CE. The 6-item conflict efficacy scale (see Appendix B) was originally designed to measure team member perceptions of their team’s ability to manage different conflict situations. As a result, the instrument was slightly revised to fit the purposes of the present study (e.g., “I believe that our team will manage conflict among team members concerning personality differences in an effective manner” to “At work, I believe that I can manage conflicts concerning personality

differences in an effective manner”. The situations (i.e., personality differences, work habits, safety issues, work roles, and scheduling) were selected on the basis of a task analysis with factory workers who were asked about their most common and difficult conflict situations. Construct validation was offered by Alper et al. in the form of correlations with managerial performance ratings, and positive correlations with cooperative conflict approach and negative correlations with competitive conflict approach. Alper et al. reported good reliability for the instrument (coefficient alpha = .92). While the Alper et al. source article has been cited 38 times from publication to June 2008, none of the citing articles actually used the conflict efficacy scale. Steele (2008) observed significant correlations between college student self-ratings of domain CE, and grades in an introductory conflict resolution course.

### ***Antecedents of Conflict Efficacy***

*Conflict resolution skills.* In general, there are three primary methodologies that assess conflict resolution: self-report measures, observed interactions, and role plays (Borbely et al., 2005). Unfortunately, the hypothetical nature of the self-report format has caused some to question if responses are based on authentic reactions to conflicts (Borbely et al., 2005). Although infrequently used in the context of examining conflict, role-plays and situational vignettes have proven an effective means for assessing social interactions (Borbely et al., 2005). A conflict situation judgment test (SJT) is like other role plays, in that the participant is assigned a role and instructed to respond to a series of structured prompts during the depiction of interpersonal vignettes. This technique can be particularly effective because it, “Allows researchers to pinpoint pertinent behaviors such as persistence in problem-solving, assertiveness, positive conflict management, conflict exacerbation, affect, dyadic collaboration and friction, and emotions exhibited at various points during the interaction” (Borbely et al., 2005, p. 280).

Olson-Buchanan et al. (1998) developed the interactive video SJT of conflict resolution premised on a model that prescribes managerial action regarding different scenarios of interpersonal work conflict. The Olson-Buchanan assessment is similar to other SJTs, which present a variety of situations that individuals would likely encounter on the job. The scenarios were created from 36 structured interviews with managers from several organizations, which yielded nine pairs of conflict scenarios. Accompanying each of the nine conflict scenarios are multiple-choice options of how the individual would respond to the conflict if they were the manager in the hypothetical situation. Each of the nine scenarios had four branches in which the participant is asked how they would respond; then the individual's response is acted out by the manager in a subsequent video and the participant is again asked for their next course of action. After the second course of action is selected an entirely new situation is presented and the process is repeated. Conflict resolution skills are related to decision-making because competing interpretations and values have to be handled in such a way as to not eliminate diversity in analysis, or the other party's commitment (Sambamurthy & Poole, 1992). All scenes were presented from the manager's point of view, with only the manager's neck and side profile visible in a given scene. In five of the main scenes a white male portrays the manager, and in the remaining four scenes the manager is a white female. Across all the videos, there were 25 % minority actors, with minority status being defined according to ethnicity. The age of the actors ranged from 20 to 70 years old.

Social desirability analysis of the responses and adverse impact using the interactive video assessment to predict job performance both indicated no biases for women or minority workers. Additionally, all response options supported convergence with the theoretical key (i.e., did following the prescriptions of the underlying framework translate to high scores on the



assessment?). It is not possible to estimate coefficient alpha directly for the assessment because participants only viewed the main scene and one of the four branch scenes for each pair.

Additionally, in some situations there were several correct options. Olson-Buchanan and colleagues (1998) observed significant correlations between conflict assessment scores and uncontaminated managerial ratings of middle- and front-line managers' ability to resolve conflicts, and overall job performance. Not only were the assessment scores predictive of both criteria, but the scores also added incremental validity beyond quantitative and verbal scores. While the source article has been cited nine times from publication to June 2008, none of the articles actually used the assessment.

*The four sources of conflict efficacy.* A fundamental goal of the present research was to identify the antecedents of CE by confirming the theoretical link provided by self-efficacy theory. As a result, instrumentation was required that was consistent with self-efficacy theory, in which each of the four sources of self-efficacy (i.e., mastery experience, vicarious experience, physiological arousal, and social persuasion) could be distinctly assessed (see Appendix C). Unfortunately, existing established scales regarding CE and its antecedents are sparse. As a result, a questionnaire that was modeled largely after the work of Muretta (2004) and Stone and Bailey (2007) was created. Muretta created the most in-depth survey measuring all four sources distinctly; however, the items were designed to relate to a specific aircraft maintenance task. Purely adapting Muretta's items to the context of conflict resolution (e.g., "Repair a component when I've successfully repaired the component before with no difficulty" to mastery experience- "Resolve a conflict when I have successfully resolved a conflict over similar problems before with no difficulty" proved confusing to a small sample of organizational psychologists. Consequently, items were converted from fragments into full sentences with the individual as the

subject (e.g., mastery experience--“I am certain in my ability to successfully resolve a conflict when I have successfully resolved a conflict over similar problems before with some difficulty.”

In addition, Muretta’s (2004) design of three items reflecting strong, moderate, and adverse mastery experience, vicarious experience, physiological arousal, and social persuasion was redesigned with two items that were general in nature (e.g., social persuasion--“I have been told by others that I am good at resolving conflicts”, or vicarious experience--“I have observed people who are similar to me handle a variety of conflicts”) and one strong (social persuasion--“I am certain in my ability to successfully resolve a conflict when I've been told that I am capable even though it would be difficult, but have never attempted to resolve that type of conflict myself, or watched anyone attempt to resolve that kind of conflict” and one adverse (e.g., vicarious experience--“I am certain in my ability to successfully resolve a conflict when I've watched someone fail to resolve the same conflict, but have never attempted to resolve the conflict myself, or been told that I was capable of resolving that type of conflict” description for each of the four hypothesized sources.

The rationale for the gradations in the items was based on Bandura’s (2001, p. 3) advice that, “Perceived self-efficacy should be measured against levels of task demands that represent gradations of challenge or impediments to successful task performance.” The rationale for containing the more general items was based on Stone and Bailey’s (2007) description of vicarious team experiences and emotional states during team conflict. Stone and Bailey’s assessment was modified to be more reflective of conflict resolution experiences rather than just conflict experiences, and refocused from the team level to the individual (e.g., “My team had numerous disagreements or conflicts” compared to mastery experience --“I have succeeded in

handling a variety of conflicts before.” In addition, varying the level of specificity in the items should overcome some of the restriction of range that was posed by Stone and Bailey (2007).

Muretta (2004) did not report reliabilities. Stone and Bailey (2007) reported alphas of .92 for vicarious team experience and .82 for emotional state during a conflict. It should be noted that Muretta (2004) found a lack of support for vicarious experience and social persuasion, but strong support in terms of predicting maintenance self-efficacy, for mastery experiences and physiological arousal. This is not particularly problematic because Muretta used control variables for vicarious experience and social persuasion, but not for mastery experience or physiological arousal, thus probably masking their true effect. Stone and Bailey (2007) only tested vicarious team experience and emotional state during team conflict and found a significant positive path for vicarious team experience to self efficacy ( $\beta = .28$ ), but not for emotional state ( $\beta = .18$ ).

*Mastery experience.* Mastery experience is a subscale that is part of the larger sources of conflict efficacy scale. The mastery experience questions were designed to assess perceptions of instances in which the individual has overcome conflict situations. Example items include: “I have overcome and resolved difficult conflicts before” and “I am certain in my ability to successfully resolve a conflict when I have successfully resolved a conflict over similar problems before with some difficulty”. As with the other sources subscales, the response format was on a 7-point Likert scale that was anchored by the statements “I am certain I don’t have the ability to successfully resolve this conflict” to “I am certain in my ability to successfully resolve this conflict” or “Strongly disagree” to “Strongly agree”. The mastery experience subscale, like all the other subscales, was modeled after work by Muretta (2004) and is consistent with Bandura’s (2001) suggestions for scale construction.

*Vicarious experience.* Vicarious experience for conflict resolution was obtained by observing others resolve conflict situations. Again, vicarious experience was measured as a subscale that is part of the larger sources of conflict efficacy scale. Example items include: “Most of the conflicts I have observed, but have not been part of, end up successfully resolved” and “I have observed people who are similar to me handle a variety of conflicts before”.

*Aversive physiological arousal.* Physiological arousal questions were designed to assess the physiological manifestations of emotional reactions to conflict. Items include: “When I experience a conflict situation I notice physical reactions like changes in my breathing, or sweating, or my heartbeat” and the reverse coded item “I am certain in my ability to successfully resolve a conflict when I’m feeling fatigued and stressed.”

*Social persuasion.* Social persuasion for conflict resolution occurs when an individual receives verbal feedback of another’s confidence in her ability to resolve conflicts. Items include: “People close to me value and ask for my advice on how to resolve their conflicts” and “I have been told by others that I am good at resolving conflicts.”

### ***Consequences of Conflict Efficacy***

*Conflict frequency.* The Interpersonal Conflict at Work Scale (ICAWS; Spector & Jex, 1998; Appendix D) contains four items including “How often do you get into arguments with others at work?”, and “How often do other people do nasty things to you at work?” The ICAWS was designed to assess how well the individual gets along with others at work. The response scale was anchored by frequencies varying from “rarely” to “very often”. The average alpha across 13 samples was .74 (Spector & Jex). The ICAWS has been associated with physical symptoms and workload (Spector & Jex). In another study, Spector et al. (2000) found positive and moderate correlations between conflict at work and anxiety and frustration. In addition, Van

Dierendonck, et al. (1994) and Leiter (1991) reported moderate positive correlations between conflict at work and burnout.

*Work relationships.* The World Health Organization Quality of Life (WHOQoL) Bref instrument (Skevington, Lofty, & O’Connel, 2004) is an internationally recognized assessment of quality of life (QoL). This multidimensional scale examines four critical health domains. The domains include a measure of physical health, mental health, environment, and social relationships (e.g., personal relationships and social support). Although intercorrelated, these domains represent distinct constructs. Each domain of WHOQoL could be analyzed independently or added together as an overall measure of well-being. The present study focused on the social relationship domain because of theoretical relevance (see Appendix E). The instrument was altered slightly. Specifically, the item dealing with sexual activity “How satisfied are you with your sex life?” was replaced with “How satisfied are you with your close work friends?”. The social relationships domain had an internal consistency of .68 in a sample of Kansas State University architecture students (Fullagar, 2006), which increased to .75 with the removal of the sexual satisfaction question. The construct validity of the WHOQoL instrument has been well established (Skevington et al.).

### ***Covariates***

*Withdrawal Preferences.* The 20-item DUTCH Test for Conflict Handling (Dutch; De Dreu, et al., 2001) contains 20 items, with four items measuring each of the five styles of handling conflict. Confirmatory factor analyses revealed good to excellent psychometric qualities of the instrument (De Dreu et al., 2001). For the purposes of the present study the low-concern-for-self styles (i.e., withdrawal preferences of accommodating and avoiding) were used (see Appendix F). The original study (De Dreu et al., 2001) reported .71 and .69 for

accommodating (or yielding) and avoiding for self-reports, and .73 and .67 for peer ratings in a negotiation study in the Netherlands. Using an organizational sample, the reliabilities dropped slightly (accommodating  $\alpha = .65$ , and avoiding  $\alpha = .64$ ). In a recent United States sample (DeChurch, et al., 2007) alpha reliability coefficients for accommodating and avoiding scales were .86 and .93, respectively. In the pilot experiment described earlier in study 1, accommodating had an overall internal consistency of .73 and avoiding had an internal consistency of .72.

### ***Procedure***

Conflict efficacy is part of an individual's subjective experience, and therefore cannot be directly studied. As a result, an online questionnaire containing an informed consent, demographic information, the four sources of self-efficacy scale (i.e., mastery experiences, vicarious experiences, physiological arousal, social persuasion), the conflict efficacy scale, the social relationships subscale of the WHOQoL-Bref, the ICAWs, the accommodating and avoiding subscales of the DUTCH, and the conflict skills interactive video assessment was created. Undergraduate students were recruited from the general psychology participant pool at Kansas State University. As incentive, students were provided partial course credit that went to fulfilling a general psychology class requirement.

Students were provided a link to the online survey. Students were provided a statement of confidentiality and told that the survey was designed to collect information about their work conflict experiences before beginning. Instructions consistent with each scale's base instructions were provided and repeated on each survey page. After filling out the initial questionnaire, the interactive video assessment played automatically. The video assessment began with an instructional video, and then the nine pairs of conflict scenes. All online experimental sessions

concluded with a debriefing, which included the goals of the research and principal investigator contact information.

## CHAPTER 10 - Results Study 2

Data were collected and exported from a secure survey website. Missing data were not an issue because the survey required participants to complete all items on the main variables of interest (sources of CE, conflict resolution skill, CE, positive work relationships, withdrawal behaviors, and negative interactions at work). Unfortunately, because participation was requested through experimental sign-up sheets, a recruitment response rate could not be calculated. All measures were scored and coded according to the original instructions. The data were screened for errors by examining the maximum and minimum of all variables. The values for each variable were within appropriate ranges.

Prior to any analyses the data were tested to verify that the basic assumptions of the general linear model were met. Specifically, tests were conducted to assess skewness, multivariate outliers, multivariate linearity, normality, and homoscedasticity. Assessment of skewness was conducted by comparing the ratio of skewness to the standard error of skewness to determine significance; all measures were within acceptable ranges, except negative interactions at work (Skewness = 1.453, Standard Error of Skewness = .207). The moderate skewness of negative interactions at work (ICAWS) was rectified using Tabachnick & Fidell's (2006) recommendation of logarithm transformation (Skewness = .317). Tests for multivariate outliers revealed no significant cases (Mahalanobis'  $D(10) > 29.34, p < .001$ ). In addition, all cases had low influence (Cook's  $D < .05$ ). Examination of scatterplot matrices, residual scatterplots, and normal-probability plots confirmed no violations of multivariate linearity, normality, or homoscedasticity.

The next step was to examine the factor structure of the sources measure because it was



newly defined for this study, and to examine the reliability of all the instruments. Testing all 16 items as observed variables for a four-factor solution produced a non-positive definite covariance matrix, thus making the initial model untestable. Removing two observed variables (physiological arousal 3 and physiological arousal 4) produced a positive definite covariance matrix; however, the resulting model poorly fit the data and was easily rejectable,  $\chi^2(71, N = 137) = 273, p < .001$ , comparative fit index (CFI) = .733, standardized root-mean-square residual (SRMR) = .107. It should be noted that the two dropped physiological arousal items were the only negatively phrased items in the survey and would have been dropped on the basis of an item analysis. Review of modification indices indicated that fit could be substantially improved by correlating some of the error terms.

Within-factor measurement errors were correlated and the model was rerun. Although correlating all the error terms does not produce the best-fitting model and strictly following the modification indices does produce the best-fitting model, correlating all the errors does avoid capitalizing on chance improvements and is recommended over correlating just the error terms that significantly improve model fit (Gerbing & Anderson, 1984). In addition, correlating error terms has been accepted in conditions if the structural parameter estimates are largely unaffected when correlating measurement error (Fornell, 1983). All error terms could have been correlated because each assessment (i.e., source) of self-efficacy may have been affected by unmeasured latent constructs such as generalized self-efficacy, self-concept, or self-esteem (Brockner, 1988; Duffy et al., 2000; Farh & Dobbins, 1989). Thus, the decision to correlate the error terms post-hoc was made consistent with the recommendations provided by the literature, and was not made lightly. The resulting model fit the data well  $\chi^2(15, N = 137) = 41.2, p < .001$ , with a CFI value (.965) above .95 and a SRMR value (.052) less than .08 (Hu & Bentler, 1999). The four-factor

correlated error model was compared to the most parsimonious model, a single-factor model.

Although the single-factor model fit the data  $SRMR = .066$ ,  $CFI = .947$ , the fit was significantly worse  $\chi^2_{diff}(5, N = 137) = 19.8, p = .0013$  than the four-factor model.

While initial model testing showed that a four-factor solution did fit the data, it was unknown if the factor structure was incorrect due to response sets caused by item bundling, a common method (i.e., all variables were collected cross-sectional using a single-survey), or an additional unmeasured latent construct (e.g., self-esteem). Some of the survey items were bundled together (i.e., items 1 and 2 of each of the four sources; and items 3 and 4 of each of the four sources). To test if the factor structure was affected by item bundles (in which items bundled together were related because of response sets) the confirmatory model was rerun using only the first two indicators for each latent construct (i.e., the four sources). The reason why the first bundle was evaluated was because of the earlier elimination of items 3 and 4 in physiological arousal. This resulting model fit the data well,  $\chi^2(14, N = 137) = 13.9, p = .45$ ,  $CFI = 1.00$ ,  $SRMR = .036$ . Lastly, the four-factor bundle model was compared to the most parsimonious model, a single-factor model. The single-factor bundle model fit the data  $SRMR = .074$ ,  $CFI = .864$ , significantly worse  $\chi^2_{diff}(9, N = 137) = 50.2, p < .0001$  than the four-factor bundle model. Thus, the data indicated that the measure was capturing four unique sources.

Two additional confirmatory factor analyses were conducted on the 15 CE items to establish whether the items captured two distinct and interpretable dimensions. First, a two-factor model with the six items representing a domain CE factor and the nine items representing a task CE factor was tested. The two-factor model demonstrated marginal fit on several goodness of fit statistics,  $\chi^2(89, N = 137) = 260.6, p < .001$ , comparative fit index ( $CFI$ ) = .859, standardized root-mean-square residual ( $SRMR$ ) = .078. Second, a one-factor model in which all

15 items represented a single CE factor was tested. This model demonstrated a relatively worse fit ( $\chi^2_{\text{diff}}(1, N = 137) = -151.3, p < .001$ ),  $\chi^2(90, N = 137) = 411.9, p < .001$ , CFI = .735, SRMR = .106. Results from these analyses provide evidence that the 15 items captured two distinct and interpretable dimensions of CE, which I refer to as domain CE and task CE.

Most measures were found to be acceptably reliable, with only one measure producing reliability below .70 (physiological arousal  $\alpha = .40$ ). Findings were different than what was anticipated in that the general research model and most individual hypotheses received mixed support; however, a large portion of variance in both types of CE was accounted for by the sources, and many of the variables in the research model were significantly related to positive work relationships. First, information concerning descriptive and general relationships among the study variables is presented. Second, results of hypothesis testing and the research model are presented.

### ***Descriptive Statistics***

Descriptive statistics for the study variables are presented in Table 10.1. As a whole, students reported similar mean ratings of domain CE ( $M = 5.52, SD = .78$ ), task CE ( $M = 5.34, SD = .77$ ), and mastery experience ( $M = 5.34, SD = .77$ ). Not surprisingly the two negatively worded scales produced the lowest mean ratings. Negative interactions at work reflected the lowest mean rating ( $M = 1.95$ ) followed by aversive physiological arousal ( $M = 3.55$ ). All scales indicated acceptable variance with all measures indicating standard deviations greater than .75, save positive work relationships ( $SD = .56$ ). The data showed that as a whole, participants felt they had a moderate amount of relationship satisfaction, relatively high levels of CE and its sources, and tended to answer the withdrawal preferences neutrally. Not surprisingly, most of the research variables were significantly and positively intercorrelated. Consistent with other

research that has examined self-efficacy sources (e.g., Phan & Walker, 1999; Lopez & Lent, 1992; Matsui et al. 1990), the largest correlations were amongst the four sources. Positive work relationships was significantly predicted by all research variables except domain CE ( $r = .11, p = .22$ ), accommodating ( $r = -.03, p = .77$ ), and avoiding ( $r = .01, p = .99$ ).

**Table 10.1 Means (*M*), Standard Deviations (*SD*), Internal Consistencies ( $\alpha$ ), and Zero-Order Correlations**

Variable	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6	7	8	9	10
1. Relation	4.25	.56	.72										
2. Domain CE	5.53	.78	.88	.11									
3. Task CE	5.34	.77	.87	.23	.58								
4. Skills	.93	2.10	.NA	.18	.01	.02							
5. Mastery Experience	5.34	.77	.80	.27	.69	.56	.13						
6. Vicarious Experience	4.84	.86	.73	.27	.61	.53	.03	.70					
7. Social Persuasion	5.14	.82	.74	.24	.65	.62	.02	.71	.71				
8. Physiological Arousal	3.55	.84	.40	-.18	-.39	-.39	-.02	-.45	-.42	-.51			
9. Negative Interactions at Work	1.95	.77	.73	-.18	-.10	-.06	.05	.02	-.09	-.08	-.20		
10. Accommodating	3.70	.98	.77	-.03	-.18	-.15	.05	-.15	-.15	-.12	.16	-.08	
11. Avoiding	4.17	1.08	.79	.02	-.06	-.12	.02	-.08	-.06	-.06	.10	-.11	.63

N = 137. All correlations > |.16| are significant at the .05 level (two-tailed), correlations > |.21| are significant at the .01 level (two-tailed). All items except skills were assessed on a 7-point scale. Internal consistency reliability for skills cannot be directly calculated.

*Predicting CE.* Analysis of the correlation matrix indicated that all hypothesized antecedents, except skills were significant predictors of both domain and task CE. Thus, hypothesis 1, which stated that conflict resolution skills would be a significant positive predictor of CE was not supported. In addition, hypotheses 2, 3, 4, 5, and the general research model, which described the predictive link between the four sources and CE, received initial support. In addition, accommodating negatively predicted domain CE. A fundamental goal of the present study was to shed light onto the causes and consequences of the CE. The first important research question was: what is the relative effect of all four sources in predicting CE? To answer this question a multiple regression procedure was conducted. Entering all antecedents into the regression equation evaluated the unique contribution of each of the hypothesized antecedents. In other words, regression was used to evaluate the effect that the antecedents would have on CE after controlling for the other four antecedents. The analysis was repeated so that both domain and task CE were the dependent variables. Results are presented in Table 10.2 and Table 10.3.

**Table 10.2 Simultaneous Regression Analysis with Domain CE as the Dependent Variable**

Variable	B	SE B	$\beta$
Skills	-.02	.02	-.05
Mastery Experience	.43	.10	.42*
Vicarious Experience	.12	.08	.13
Social Persuasion	.23	.09	.25*
Physiological Arousal	.02	.07	-.02

Note.  $R^2 = .54$ . \*  $p < .01$ .

**Table 10.3 Simultaneous Regression Analysis with Task CE as the Dependent Variable**

Variable	B	SE B	$\beta$
Skills	-.01	.60	-.02
Mastery Experience	.20	.11	.20*
Vicarious Experience	.08	.09	.09
Social Persuasion	.35	.10	.37**
Physiological Arousal	.07	.07	.07

Note.  $R^2 = .42$ . \*  $p < .05$ , \*\*  $p < .01$ .

Results of the hierarchical regression analysis for predicting domain and task CE revealed a consistent pattern. All five predictors accounted for 54 % of the variance in domain CE, and 42 % of the variance in task CE. Both models indicated a large amount of redundancy among the variables, with only mastery experience, and social persuasion adding unique contributions. Differences in the regression analyses appeared only in the relative importance of mastery experience and social persuasion. The social persuasion source had a lower standardized beta ( $\beta = .25$ ) when predicting domain CE, as compared to mastery experience ( $\beta = .42$ ), but that pattern was reversed when predicting task CE (mastery experience  $\beta = .20$ , social persuasion  $\beta = .37$ ). Thus, hypotheses 3 and 4, which stated that the vicarious experience and physiological arousal sources respectively, would make unique contributions to the prediction of CE was not supported; however, Hypothesis 2, which stated mastery experience would be a unique predictor and Hypothesis 3, which stated social persuasion would be a unique predictor were supported.

Before further testing the research model, the pattern of correlations was reviewed to evaluate the potential for CE to act as a mediator between the antecedents and positive work relationships. The correlation matrix indicated that all four of Bandura's sources were strong predictors of both domain and task CE; however, skills had virtually no relationship with either CE variable. If CE mediated the relationship between the antecedents and positive work relationships then the CE measures should have indicated a stronger correlation with positive relationships than the correlation of the antecedents and positive work relationships. However, this was not the case for most of the hypothesized antecedents. In fact, only aversive physiological arousal (PA) indicated a possible mediated effect because PA was a significant predictor of both task CE and positive work relationships, and the positive work relationships-task CE association was stronger than the PA-relationship association. However, PA had poor

reliability ( $\alpha = .40$ ), thus its effect on positive work relationships was being underestimated. As a result, the correlations for task CE and relationships and PA and task relationships were corrected for attenuation because of unreliability. These corrected correlations reversed the correlation pattern indicating that task CE actually had a weaker effect ( $r = .29$ ) than PA ( $r = .33$ ) on positive relationships. Therefore, there was no reason to test statistically for a mediating effect of CE between any of the antecedents and positive work relationships. The general expected mediating role of CE was not supported. As a result, the research model was explored as each individual component rather than as an overall model.

### ***Predicting Positive Work Relationships***

*Moderating role of CE.* The final untested component of the original research model was the effect of negative interactions at work on positive work relationships. The correlation matrix already indicated a significant inverse association between negative interactions at work and positive work relationships, but the question of whether this effect was moderated by CE had not been tested. Moderation was tested using hierarchical regression (Aiken & West, 1991; Cohen, Cohen, West, & Aiken, 2003). In this approach the standardized predictor and standardized moderator are entered in a single step and their product term is entered in a subsequent step; the corresponding unstandardized betas are reported. Moderation is denoted by a significant change in the variance accounted for when comparing the step 1 model and the step 2 model and by a significant beta weight for the product term. Tables 10.4 and 10.5 summarize the moderation analysis using domain and task CE as the moderator, respectively.



**Table 10.4 Hierarchical Regression Testing Negative Interactions as a Moderator of Task CE on Positive Relationships**

Predictors	Positive Relationships	
	Step 1	Step 2
Negative Interactions at Work	-.18*	-.18*
Task CE	.09	.09
Negative Interactions at Work X Task CE		-.04
$\Delta R^2$	0.04	0.00
$\Delta F$	2.90	0.25
$F$	2.90	2.01

Note. \*  $p < .05$ .

**Table 10.5 Hierarchical Regression Testing Negative Interactions as a Moderator of Domain CE on Positive Relationships**

Predictors	Positive Relationships	
	Step 1	Step 2
Negative Interactions at Work	-.17*	-.18*
Domain CE	.22**	.22**
Negative Interactions at Work X Domain CE		-.04
$\Delta R^2$	0.08	0.00
$\Delta F$	5.91**	0.18
$F$	5.91**	3.98

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

The first regression model regressed negative interactions and work and domain CE at step 1 and the corresponding interaction term at step 2, on positive work relationships. The step 1 model was not significant,  $F(2, 133) = 2.896, p = .06$ , and accounted for only 4 % of the variance in positive work relationships. The step 2 model did not significantly improve the prediction of relationship  $F_{diff}(1, 132) = .254, p = .62$ . In other words, the introduction of the interaction term did not significantly change the model (i.e., increase the amount of variance accounted for in positive work relationships). The second regression model regressed negative interactions at work and task CE at step 1 and the corresponding interaction term at step 2, on positive work

relationships. The step 1 model was significant  $F(2, 133) = 5.91, p < .01$  and accounted for 8 % of the variance in positive work relationships. The step 2 model did not significantly improve the variance accounted for  $F_{\text{diff}}(1, 132) = .182, p = .67$ . In other words, the introduction of the interaction term did not significantly enhance prediction. In sum, there was no support for the hypothesis that CE moderated the effect of the negative interactions at work-positive work relationships effect.

*Moderating Role of Negative Interactions.* Feldt (1958 as cited in Keppel & Zdeck, 1989) demonstrated that general linear model techniques are less powerful when weak covariates are included (i.e., correlate with the dependent variable  $< .2$ ). The withdrawal preference variables were dropped as covariates because they failed to predict positive work relationships and also failed to correlate at .2 or higher with any other research variable. Thus, hypothesis 9, which stated that withdrawal preferences would inversely predict positive work relationships, was not supported and the research model needed to be respecified.

Although the withdrawal preferences were not suitable as covariates, their potential to have an effect on positive work relationships needed to be fully explored before totally eliminating them. Specifically, it was expected (based on the work of Andrews and Tjsovold, 1983) that the effects of the withdrawal preferences on positive work relationships were moderated by the amount of negative interactions at work. Research (Andrews & Tjsovold) had previously demonstrated that the effects of conflict management styles on relationship effectiveness were dependent on the amount of conflict in a relationship. Two, two-way interactions were tested using the previously described regression method (Aiken & West, 1991; Cohen, et al., 2003). First, the moderating role of negative interactions was tested for accommodating and then the moderating role of negative interactions was tested for avoiding.

**Table 10.6 Hierarchical Regression Testing Negative Interactions as a Moderator of Accommodating on Positive Relationships**

Predictors	Positive Relationships	
	Step 1	Step 2
Negative Interactions at Work	-.21*	-.22*
Accommodating	-.05	-.06
Negative Interactions at Work X Accommodating		-.17
$\Delta R^2$	0.04	0.01
$\Delta F$	2.44	2.44
$F$	2.44	2.46

Note. \*  $p < .05$ .

**Table 10.7 Hierarchical Regression Testing Negative Interactions as a Moderator of Avoiding CE on Positive Relationships**

Predictors	Positive Relationships	
	Step 1	Step 2
Negative Interactions at Work	-.21*	-.23*
Avoiding	-.02	-.06
Negative Interactions at Work X Avoiding		-.20*
$\Delta R^2$	0.03	0.03
$\Delta F$	2.34	3.85*
$F$	2.34	2.88*

Note. \*  $p < .05$ .

The first regression model regressed negative interactions and work and accommodating at step 1 and the corresponding interaction term at step 2, on positive work relationships. The step 1 model was not significant  $F(2, 133) = 2.44, p = .09$  and accounted for only 2 % of the variance in positive work relationships. The step 2 model did not significantly improve the prediction of relationship  $F_{diff}(1, 132) = 2.44, p = .12$ . In other words, the introduction of the

interaction term did not significantly change the model (i.e., increase the amount of variance accounted for in positive work relationships). The second regression model regressed negative interactions at work and avoiding at step 1 and the corresponding interaction term at step 2, on positive work relationships. The step 1 model was not significant  $F(2, 133) = 2.86, p = .10$  and accounted for 3 % of the variance in positive social relationships. The step 2 model significantly improved the variance accounted for from 3 % to 6 %,  $F_{diff}(1, 132) = 3.85, p = .05$ . In other words, the introduction of the interaction term significantly enhanced prediction. In sum, there was support for the negative interactions at work moderating the avoiding-positive relationships effect.

*Overall Prediction of Positive Work Relationships.* Although the initial research model was not supported, almost all the variables in the model were significant predictors of positive work relationships. The final analysis examined how well the variables as a set could predict positive work relationships. All research variables and the negative interaction X avoiding interaction term were simultaneously entered into a regression equation, save accommodating. The full model was significant  $F(10, 125) = 3.47, p < .01$  and accounted for about 21 % of the variance in positive work relationships. Although the model as a whole was significant, there was a large amount of redundancy among the predictors. This does not mean that the variables that were dropped in the creation of the final model were unimportant, rather it means that were redundant with the relatively stronger predictors of domain CE, conflict resolution skills, negative interactions at work, and mastery experiences.

As a result of the redundancy, a more parsimonious model was created by removing the non-significant predictors of domain CE ( $\beta = .19$ ), task CE ( $\beta = .12$ ), vicarious experience ( $\beta = .16$ ), social persuasion ( $\beta = .02$ ), and aversive physiological arousal ( $\beta = -.03$ ). The final model

was significant  $F(5, 130) = 5.00, p < .001$ , and accounted for about 16 % of the variance in positive work relationships. This model is presented in Table 10.8

**Table 10.8 Simultaneous Regression of Non-Redundant Research Variables on Positive Relationships**

Variable	B	SE B	$\beta$
Skills	.09	.17	.17*
Mastery Experience	.36	.12	.25**
Negative Interactions at Work	-.24	.09	-.22**
Avoiding	-.04	.10	-.04
Negative Interactions at Work X Avoiding	-.20	.10	-.17*

Note.  $R^2 = .16$ . \*\*  $p < .05$ , \*  $p < .01$ .

## CHAPTER 11 - Discussion Study 2

The present study employed a unique design that focused on hypothesized conflict situations both general with an unspecified role and power status, and task specific with a specified role and power status to understand better the antecedents and consequences of conflict efficacy. The present study offered some assistance to the literature gaps in understanding the process of how Bandura's (1997) hypothesized sources operate and the demand to improve worker well-being through enhanced supportive relationships. The current research was effective in expanding understanding of the nature of the relationship of CE, conflict resolution skills, conflict withdrawal preferences, and negative interactions at work on positive work relationships.

### *Hypothesized Findings*

Although pre-hypothesis data analysis showed support for a four-factor model of the sources of CE, the newly developed measure had moderate to high inter-source correlations (Range  $r = .42$  to  $.71$ ; dissattenuated Range  $r = .78$  to  $.97$ ). Although high intercorrelations were

expected to some extent, the fact that some of the correlations approached singularity questions the distinctiveness of the four sources. Others (e.g., Wolf 1997) have also found support for a four-factor model, but instead assessed self-efficacy as a single factor comprised of the four sources due to high intercorrelations among the source variables. It is likely that domain CE is an assessment of general conflict beliefs, whereas the task-based CE measure is an assessment of cognitive-behavioral skills under pressure in specific circumstances (Borbely, et al. 2005).

The four sources may actually be measuring a hybrid of domain and task CE. This hybrid reflects the general nature of domain CE (i.e., power status and specific situations are not considered) as an assessment of cognitive-behavioral skills that was formed on the basis of experiential learning, direct observation, experiential arousal, and social support. This is consistent with Wolf's (1997) work, which found that self-efficacy regarding issues that occurred in the work area was a better predictor of problem-solving confidence, group orientation toward problem-solving, and perceptions of expertise than self-efficacy regarding issues that occurred near the work area and self-efficacy regarding issues that occurred far from the work area.

Bandura's (1997) own conceptualization was formulated in relation to a performance criterion. In the present study the criterion was not specific task performance, but rather the ability to make and maintain effective interpersonal relationships at work. Therefore, the failure of task and domain CE to mediate the effect of the sources on work relationships may be more of a measurement issue than a theoretical issue. This reasoning is consistent with Britner and Pajares (2006) and Pajares et al. (2007). Britner and Pajares found that the individual sources were better predictors of engagement, self-concept, anxiety, and self-regulation than self-efficacy, but self-efficacy was a better predictor of grades. Similarly, Pajares et al. found that

writing competence was equally predicted by mastery experience and writing efficacy. As a result of the previously identified issues, each formal hypothesis will be reviewed along with the direct connection of positive work relationships.

*Conflict resolution skills.* The first hypothesis regarding conflict resolution skills as a positive predictor of conflict efficacy was not supported. It was found that student scores on the conflict resolution SJT had virtually no relationship with conflict efficacy. Self-efficacy theory and research suggests that those with a strong sense of self-efficacy self-regulate and use more effective strategies than others with low self-efficacy (Zimmerman, Bandura, & Martinez-Pons, 1992; Pintrich & De Groot, 1990). Assuming these constructs were validly measured, one possible explanation for the finding that there was no effect between skills and self-efficacy is that students did not realize their own skill set, or what the skill really entailed. As Stajkovic and Sommer (2000, p. 713) put it, “Self-efficacy expectations are, in fact, formed on the basis of subjective perceptions of personal and situational factors, rather than on the direct impact of objective reality.” Students may not have fully understood the self-efficacy items. Such an explanation seems dubious because students were asked about their belief in their ability to resolve a specific type of conflict immediately before they were asked to select the multiple-choice response. In addition, CE and its sources yielded six variables, and none of these six variables came close to significantly correlating with skills.

While the failure of conflict skills to correlate with either task or domain CE is a bit perplexing, other recent research (Pajares & Barich, 2005; Belanich & Mullin 2006) has also struggled to confirm the predictive utility of skill specific self-efficacy and an evaluation outcome of those skills. For example, Belanich and Mullin used a SJT to measure adaptive knowledge and found that declarative knowledge, self-regulatory behavior and strategic

performance during training was related to post-training SJT scores, but self-efficacy was not related to SJT scores. Swander (2001) contended that correctly interpreting and answering SJTs requires emotional accuracy. In other words, the participant has to understand the emotions of the characters in context. Wrongful interpretation of emotions can lead the participant to make inappropriate decisions about how to resolve the scenario. Similarly, Gist and Mitchell (1992) noted that complex tasks require an individual to estimate a number of skills and motivational parameters and that this may hamper their ability to make accurate assessments.

Additional research (e.g., Borbely et al., 2005) has shown a disconnect between self-report measures of conflict resolution skills and actual social and conflict behaviors on a relevant task. In contrast to Borbely et al. (2005), the present study used an objective assessment of conflict resolution skills. Negotiation research (Sullivan, O'Connor, & Burris, 2006) has also indicated similar results using more objective assessments. Although both types of negotiation efficacy were related to tactics used during negotiations, Sullivan et al. found no direct relationship between integrative negotiation efficacy and negotiation outcomes, nor between distributive negotiation efficacy and negotiation outcomes. Sullivan et al. explained that such a result was not surprising because other unmeasured variables including motives, situational constraints, and time pressure likely influenced the negotiation process and decision-making during negotiations. Sullivan et al.'s explanation and other research (e.g., Brett et al., 1996; O'Connor & Arnold, 2001) that has linked negotiation self-efficacy to negotiation behaviors is consistent with the finding in the present study that conflict skills were predictive of positive work relationships.

At this time, the simplest explanation is that the conflict SJT was not solely assessing the same conflict resolution skills that formed the basis of CE assessments. Perhaps the conflict SJT



was still measuring important skills related to conflict resolution and positive work relationships (such as conflict decision-making or emotional intelligence), but this measure was too narrow and not even considered when the participants formed their broader efficacy judgments. This would explain why participants relied on making their efficacy judgments on the basis of something else such as perceived intensity and emotionality of the conflict situation, rather than on the basis of past experiences with conflict. Although this explanation is falsifiable and lends itself well to simple study, the present study did not narrowly define conflict efficacy as decision-making under specific situations and did not measure emotional intelligence. Therefore, this hypothesis cannot be tested using the present data.

*Mastery experience.* The second hypothesis predicting that mastery experience would be a positive and unique predictor of CE was supported. It was found that mastery experience significantly predicted both domain and task CE, and accounted for a significant amount of unique variance (i.e., nonredundant with the other three sources) in both domain CE, and task CE. Although this finding is novel in the context of CE, the ability of mastery experience to account for a unique proportion of the variance above and beyond the other three sources in the prediction of self-efficacy has been documented in other domains such as general academics (Usher & Pajares, 2006), mathematics (Matusi et al., 1990), science (Britner & Pajares, 2006), and writing (Pajares et al., 2007). This finding is consistent with Bandura's theory that mastery experience is the most important source of self-efficacy beliefs (Bandura, 1977, 1986, 1997; Wood & Bandura, 1989). This is likely because of the fact that this source stems from actually achieving previous task success, which is related to both persistence and performance (Earley & Lituchy, 1991).

The basic finding that mastery experience was the single best predictor of positive work relationships is not surprising. Conflict shares an intuitive and empirical link with relationships both in personal and private life. In addition, mastery experience has consistently emerged as the most important component of self-efficacy. Thus, if conflict resolution is an important component in building and maintaining positive work relationships then it is expected that those who have previously successfully resolved prior conflicts would also have more positive relationships. The present study did not directly support previous experience with resolving conflict as a good predictor of work relationships. This study provided support that one's perception of how they previously handled conflicts could be a good predictor of work relationship satisfaction. This idea that perception is more important than reality was apparent in the data. The data indicated that mastery experience was totally unrelated to conflict resolution skills, and while both mastery and skills were important and unique predictors of positive work relationships, mastery experience was relatively more important.

*Vicarious experience.* The third hypothesis received mixed support. Vicarious experience was found to significantly and positively predict both domain and task CE; however, vicarious experience did not provide unique information beyond what was available from mastery experience, social persuasion, and physiological arousal in the prediction of CE. Although vicarious experience tied mastery experience for the largest zero-order correlation with relationships, vicarious experience added nothing beyond mastery experience in the prediction of positive work relationships. Thus, students who had more frequent observations of others resolving conflicts reported higher domain and task CE, as well as significantly better relationships. This outcome is firmly grounded in self-efficacy theory. In addition, this empirical

assessment extended Stone and Bailey's (2007) recent finding that team vicarious experiences were predictive of domain CE measured at the team level and behavioral intentions.

*Physiological arousal.* According to Brodtker and Jameson (2001, p. 263), "Conflict is emotional in terms of its onset, the social meaning it inheres from the conflict parties, and the strategic options each has for dealing with the conflict." Scholars have called for a focus on the effects of emotional experience and expression on organizational outcomes and experiences (Putnam & Mumby, 1993; Rafaeli & Sutton, 1989). Despite this request, few research studies have examined the physiological manifestations of emotion. The present study examined aversive physiological arousal consistent with Bandura's (1997) conceptualization and Brodtker and Jameson's (2001) description: "The physiological component of emotion is the way emotion makes us feel and thus is what makes emotional experience so compelling, so "real" (p. 261). While previous social science research (e.g., Jehn, 1995; Jehn, 1997; De Dreu & Van Vianen, 2001; Brodtker & Jameson, 2001) examined the impact of emotion and conflict by focusing on the effects of mood and affect, the present study examined the effects of emotion and conflict by asking students about their emotional manifestations during conflict.

The fourth hypothesis, which stated that aversive physiological arousal would be negatively related to CE also received mixed support. However, support for this hypothesis needs to be interpreted more cautiously than the other hypotheses due to the extremely low level of reliability in the measure of physiological arousal. Again, while aversive physiological arousal significantly negatively correlated with both domain and task CE, it offered no information beyond what was provided from the other three sources in the prediction of either type of CE. This is consistent with Stone and Bailey's (2007) recent finding that emotional states during team conflict added no new information beyond what was provided by vicarious

team experience and team member support in the prediction of team CE. Interestingly, aversive physiological arousal was the only one of the four sources that was not more strongly related to domain CE than task CE. Physiological arousal was also the weakest predictor among the sources of positive work relationships, although the relationship was still significant at the zero-order.

Previous research (e.g., Conger & Ge, 1999; Forgatch, 1989; Prager, 1991) has also indicated that physiological manifestations are important predictors of relationships. The link is believed to be related to subtle nonverbal displays that have been found to negatively impact joint problem-solving in marital relationships and in parent-child relationships (Forgatch, 1989; Prager, 1991). Other research has suggested that high arousal levels during conflict affect relationships because this arousal hinders effective information processing (Giebels & Janssen, 2004; Wall & Callister, 1995). Moreover, other work has also found that those who felt anger or low compassion for their negotiation partner had little desire to work collaboratively in the future. As a result, these individuals achieved fewer joint gains during negotiations (Allred et al., 1997). In addition to anger and compassion, research (Adler et al., 1998) has also linked fear and emotional management with negotiation outcomes.

It should be noted that in the present study, when combined with the other sources, physiological arousal was found to be redundant and accounted for a trivial portion of variance in positive work relationships. Such findings are consistent with others who argued that affective arousal is the least important source of among Bandura's four sources (Britner & Pajares, 2006; Burke-Spero & Woolfolk, 2003; Chowdhury et al., 2002). In sum, physiological arousal is important in both the foundations of self-efficacy beliefs and in positive work

relationships, but other sources such as mastery experience are relatively more important in the prediction of self-efficacy and relationships.

*Social persuasion.* Hypothesis 5, which stated that social persuasion would positively and uniquely contribute to the prediction of CE was supported. Social persuasion correlated the strongest of all the sources with task CE and correlated the second strongest of all the sources with domain CE. This pattern remained the same when entering all sources simultaneously, in that only mastery experience accounted for more of the variance in domain CE (although social persuasion still accounted for a non-trivial portion of unique variance) and that the majority of the prediction of task CE came from social persuasion. While social persuasion has been theorized to have the lowest relative priority of the sources (Bandura, 1997; Zeldin, 2000), the present study and other research suggest that it may be one of the most important sources (Anderson & Mavis, 1996; Britner & Pajares, 2006; Pajares et al., 2007). Wood and Bandura (1989) argued that realistic encouragement was an important facilitator of self-efficacy, effort, and persistence. Recently, Stone and Bailey (2007) found that team member support was a better predictor of team CE than team conflict experiences, team mentor influence, and emotional state during team conflict. The present study supports this recent finding and the theoretical argument that receiving praise is an important way to enhance self-efficacy, specifically CE.

Social persuasion was a significant individual predictor of relationships, accounting for nearly 6 % of the variance in positive work relationships. Like all the other sources, social persuasion did not provide incremental validity beyond mastery experiences in the prediction of work relationships. This means that although social persuasion may be effective in enhancing work relationships, its effect is totally accounted for by having strong beliefs stemming from

actual direct experience with conflicts. Part of the reason that social persuasion adds nothing beyond mastery experience is probably due to the fact that conflict is so pervasive. At a relatively young age everyone has experienced and had to handle a variety of conflict situations (Masten & Coatsworth, 1998). As a result, it is unlikely that someone's verbal encouragement would be able to overcome feelings of competence that have been developed from a variety of actual conflict situations over one's life. Statistically, it is difficult for a construct to account for a unique portion of variance in the criterion when it correlates highly with another predictor that is also related to the criterion.

*Conflict Efficacy.* The sixth hypothesis stated that CE would be a positive predictor of positive work relationships. This hypothesis also received mixed support. Self-efficacy can be developed at differing degrees of task specificity (Schwoerer, May, Hollensbe, & Mencl, 2005). In other words, while self-efficacy is inherently task specific, the specificity of self-efficacy with respect to a given task such as conflict resolution varies. Thus, relatively general or specific domains are possible within a given task, skill, or behavior. The present study is unique and contributes to the literature by conceptualizing conflict efficacy at the level of source, domain, and task. "Research does not often explicitly recognize both general self efficacy and specific self efficacy or generally investigate their relations or their relative contribution to understanding behaviors and outcomes. This compounds the challenge more about how self-efficacy is influenced and how it influences behaviors" (Schwoerer, et al. 2005, p. 114).

In the present study, task CE was a significant positive predictor of positive work relationships; however, domain CE failed to significantly correlate with relationships, and the effect size of domain CE on the other research variables was half that of task CE. In addition, while it was expected that domain and task CE would mediate the effect of the sources on

positive work relationships, the data actually indicated that all hypothesized antecedents (i.e., conflict resolution skills, mastery experience, vicarious experience, physiological arousal, and social persuasion) were more predictive of work relationships than domain CE. In addition, mastery experience, social persuasion, and vicarious experience (and physiological arousal when correcting for unreliability of the measure) were more strongly related to positive relationships than task CE. While this finding runs counter to original suppositions posited by Bandura, it is consistent with other recent research (e.g., Pajares, Johnson, & Usher, 2007; Britner & Pajares, 2006).

The present research continues a stream that has highlighted the need to assess self-efficacy more specifically. In fact, several researchers (e.g., Bandura, 1997; Pajares, 1996; Choi, 2005) have argued that the reason why some studies have failed to confirm the predictive utility of self-efficacy constructs is because of lack of specificity in the measurement of self-efficacy. Studies that have relied on general rather than specific measures of efficacy have shown weak predictive value (Lee & Bobko, 1994; Sullivan et al., 2006). The present findings support Bandura's (1997) conclusion that self-efficacy is best measured with respect to the specific task at hand. For over two decades, it has been argued that individual capability beliefs regarding task accomplishment and activity success play a critical role Bandura's (1986) social cognitive theory and in the prediction of future performance (Sullivan et al., 2006). The present study found that these beliefs regarding the successful resolution of a variety of conflict scenarios were relatively more important than an assessment of conflict resolution skills in the prediction of personal relationships. Despite the axiom rooted in social cognitive theory that individuals prefer to engage in tasks that individuals perceive themselves as more capable and avoid tasks when the

individual feels incapable, there was virtually no relationship between withdrawal preferences and conflict resolution skills or CE.

*Negative Interactions and Withdrawal Preferences.* While conflict skills, mastery experiences, vicarious experience, social persuasion, and physiological arousal all directly predicted positive work relationships, the role of negative interactions and avoiding preference was more complex. Hypothesis 7 stated that negative interactions at work would negatively predict positive work relationships. This hypothesis was supported by observing a significant negative correlation between the two constructs. In other words, one's perceptions of how often they have nasty interactions at work is inversely related to the meaningfulness of their work relationships. It could be argued that if one has several work friends, or even just one work friend who is powerful, then it follows that this person would be treated better. However, the present data paints a more complex picture. Although CE did not moderate the relationship between negative interactions and positive work relationships as was hypothesized (H8), the withdrawal avoiding preference did have an interaction effect.

More specifically, avoiding and accommodating did not predict any of the central research variables including positive work relationships, thus there was no support for Hypothesis 9. The failure to support this hypothesis is consistent with other research. For example, Euwema et al. (2003) found non-significant weak effects for avoiding and accommodating on both substantive and relational effectiveness. Additionally, Barki and Hartwick (2001) observed significant, but small effects for avoiding ( $r = -.23$ ) in the prediction of satisfactory conflict resolution, and virtually no effect for accommodating ( $r = -.01$ ). In this same study both avoiding ( $r = -.16$ ) and accommodating ( $r = .08$ ) were poor predictors of overall



success in satisfactory conflict resolution. The rationale for the failure to support this hypothesis will be described after examining the higher-order effects that were observed.

The present study indicated that the avoiding preference moderated the effect of negative interactions on positive work relationships. Thus, it appeared that avoiding was only a problematic strategy if there was a high amount of negative interactions. If there was a low amount of negative interactions at work, avoiding was useless as a predictor of positive work relationships, but when there was a high amount of negative interaction at work those who did not avoid reported significantly higher levels of positive work relationships. Others have argued that avoidance is an effective strategy when it is used to calm-down from emotionally intense conflicts, or to let trivial matters be sorted out on their own (Gross & Guerrero, 2000; Euwema et al., 2003). The present study suggests that avoidance is an ineffective response in terms of building relationships when others frequently argue with you, yell at you, or are rude to you at work. This interaction effect supports the contingency theory of managing interpersonal conflict that although widely argued (e.g., Andrews & Tjosvold, 1983; Blake & Mouton, 1964; Thomas, 1976; Thomas, Jamieson, & Moore, 1978), has received little empirical examination and support.

It is logical that if there is a low amount of conflict in general then it does not really matter how conflict is responded to, but when there is a high amount of conflict, one's style becomes relatively more important. In addition, it has long been theorized that conflict situations that end with a winner and loser set the stage for future conflicts and undermine cohesiveness, ultimately reducing group effectiveness (Folger Poole, & Stutman, 1997; Pondy, 1967). In part, the results from the present study may indicate that when individuals deal with conflicts, such as persistent negative interactions at work, the individual is not only dealing with the immediate interaction at hand, but they are also establishing behavioral patterns that may apply to future

conflicts as well as general interactions. This is certainly consistent with group research (e.g., Kuhn & Poole, 2000) that has shown groups develop norms regarding how they will manage conflicts and these norms carry over and affect other activities, such as decision-making, even when these activities do not involve open conflict.

It should be noted that the moderating role of avoiding on the negative interactions at work-positive work relationships effect was not formally hypothesized; however, there was previous empirical justification for examining this moderation effect (Andrews & Tjosvold, 1983). Specifically, Andrews and Tjosvold demonstrated that the effects of conflict management styles on relationship effectiveness were dependent on the amount of conflict in a relationship. Like the present study, Andrews and Tjosvold's research with student and sponsor teachers also indicated a significant main effect between overall conflict levels and overall effectiveness of the relationship ( $r = -.61$ ). The continued demonstration that frequent negative interactions at work is a moderator is important because it helps explain the usefulness of the avoidance strategy and its relationship with individual well-being. In fact, De Dreu and colleagues (2004) argued that, "avoiding and yielding amplify the negative effects of conflict on individual health, well-being, and job satisfaction" (p. 15).

It should be questioned why avoiding moderated the inverse relationship between negative interactions at work and positive work relationships when accommodating did not. It should also be questioned why the withdrawal preferences failed to correlate significantly with any other research variables. Although the use of the covariates failed in the present examination, research (e.g., Kuhn & Poole, 2000) has shown that at the group level conflict management style affects decision-making activities. It should be known that in their analysis of 11 teams Kuhn and Poole (2000) observed different conflict management styles for teams among

different conflict episodes. For example, 6 of the 11 teams used a different method from episode 1 to episode 2. Other research has also found difficulties in identifying how conflict management styles relate to conflict and performance. In addition to the fact that these styles are often used inconsistently, is the challenge of range restriction. The present study suggests that avoiding only has an effect on relationships when there is a high amount of negative interactions. The mean of the ICAWS scale was below 2 ( $Mean = 1.96, SD = .77$ ), on a 7-point scale. The majority of the participants reported low levels of negative interactions, and thus there was less opportunity for the withdrawal behaviors to have a direct effect on work relationships.

Other research (e.g., Rahim & Psenicka, 2004) has also failed to support that conflict styles affected the relationship between conflict and performance and found that only a problem-solving orientation was related to intragroup conflict and performance. One obvious explanation for the moderating effect for avoiding only is that the finding was merely an artifact of the small sample. However, empirical research has found that reliance on avoidance is negatively related to effective problem-solving (Friedman et al., 2000) and individual health (De Dreu et al., 2004). In addition, the present study was not the first occurrence of this type of relationship (Andrews & Tjosvold, 1983). Although researchers have argued that accommodating contributes to interpersonal relationships (Papa & Canary, 1995; Rahim, 1992), others have shown that the style is neither relational nor situationally appropriate, nor effective (Burke, 1970; Gross & Guerrero, 2000; Euwema et al., 2003).

In other words, the condition of high concern for others and low concern for self (i.e., accommodating) appears to be a poor predictor of other conflict, organizational, and individual variables (Burke, 1970; Euwema et al., 2003; Gross & Guerrero, 2000; Munduate, Ganaza, Peiro, & Euwema, 1999). This is likely because it is a less extreme approach that should

ameliorate conflict in most situations. After all, accommodating means that the individual just gives-in regardless of whatever the other party wants. Darling and Walker (2001) reported that avoiding is common because most managers feel uncomfortable with conflict in general and most want to simply suppress it in every situation.

In reality, the way conflict is approached and handled is even more complex than what has been described: “The literature on interpersonal conflict in organizations predominately and implicitly suggested that, at least within a single conflict episode each party uses only one mode of conflict behavior that is more or less effective. However, more recent research suggests that the use of multiple modes of conflict behavior is actually much more common” (Euwema et al., 2003, p.120). For example, Elangovan (1995) described a model that factors in the relationship of the disputants, previous conflict experience, and level of trust. Similarly, Shapiro and Rosen (2007) argued that a manager’s approach depends on if the conflict is viewed as task- or relationship-driven. Others have painted an even more convoluted picture.

Conrad (1991) and Papa and Natalle (1989) showed that individual behavior often changes from one style to another during one conflict episode. Finally, Falbe and Yukl (1992) found that individuals not only change styles over the course of an entire conflict, but even within each attempt to resolve the conflict. Nevertheless, experimental data have shown that conflict management styles can impact the effectiveness of relationships (Pruitt & Lewis, 1977; Tjosvold & Deemer, 1980). Thus, while the present study does not address the true complexity of the conflict style preference construct, it does help support the contingent view and reinforce the importance of avoiding on the inverse relationship between negative interaction at work frequency and positive social relationships at work.

The present study also failed to support the moderating role of CE (H8). Research has shown that individual differences in knowledge moderates the relationship between events and corresponding behaviors (Taylor & Donald, 2003). In addition, Stajkovic and Sommer (2000) found that self-efficacy had a significant direct effect on causal attributions ( $r = -.34$ ). It is likely that CE does play an important role during conflict situations in regard to the causal attributions individuals make, and their subsequent actions; however, the present study assumed a specific attributional process and did not directly measure it. Part of the reason for the failure to support the moderating effect of CE could be attributed to the variables included in the study and the specificity of the hypothesis.

The literature specifically argued that self-concept affected the relationship between perceptions of disputes and competitive reactions (De Dreu & Van Knippenberg, 2005) and that self-esteem affected the relationship between absenteeism and relationship conflict (Duffy et al., 2000). Others found external support moderated the relationship between interpersonal conflict experiences and general quality of life (Abbey et al., 1985). Even the literature that was more closely linked with conflict examined mainly direct effects. For example, O'Connor and Arnold (2001) observed that distributive spirals occurred in individuals who reported low levels of negotiation efficacy compared with those who reported high levels of negotiation efficacy being somewhat insulated from these negative spirals. Similarly, Tjosvold et al. (2001) found that confidence about discussing a conflict issue, knowledge of the issue, and anticipation of agreement were indicative of an individual's willingness to engage in conflict resolution.

Thus, the moderating hypothesis may have over extrapolated the findings of available research. To understand if such moderating effects generalized to conflict situations it would have been better to use the same constructs (e.g., self-concept or self-esteem) and directly

measure attributions and reactions. However, the present approach, which measured a different construct (e.g., domain and task CE), negative interactions at work, and positive work relationships. In sum, the present study may have failed to confirm the moderating role of CE because it failed to reflect the nuance in design and the measurement of the more specific theoretically relevant variables.

While the results from the present study did not confirm all of the original hypotheses or the original research model, the results are still promising and contribute to the literature in several ways. The results of this study indicated that students experienced a moderate level of the CE sources, moderate levels of CE itself, and had moderately positive work relationships. Results also indicated that conflict efficacy was predicted by mastery experience, vicarious experience, physiological arousal, and social persuasion. All antecedents (i.e., conflict skills and the four sources) task conflict efficacy, and negative interactions at work predicted positive work relationships. In addition, results indicated that conflict resolution skills, mastery experience, negative interactions at work, and the interaction term of negative interactions at work X avoiding produced the most parsimonious set of predictors, which as a set accounted for 16 % of the variance in positive work relationships.

### ***Implications***

*Theoretical implications.* From a theoretical standpoint, little analysis has occurred with respect to Bandura's (1977, 1986, 1997) theory to confirm that four distinct sources of self-efficacy exist for a given task. This study explored that literature gap and found that the newly developed measures of CE were largely redundant with each other. Employing a unique design, the present study focused on hypothesized situations both general with an unspecified role and

power status, and task specific with a specified role and power status to highlight the role of measurement and context in the process of effective conflict resolution.

The present work indicated that task self-efficacy was a better predictor of positive relationships than domain self-efficacy. In addition, the best predictors were actually the conflict efficacy sources themselves. Not only has research relatively ignored the construct of conflict efficacy, but also the source variables had never been investigated in the context of CE. The present research suggests that these constructs are worth studying, especially in the context of work relationships. In addition to the distinctive aspect that CE was developed and measured in different ways, the present study is also unique in that it attempted to assess conflict resolution as a skill, rather than just a preference.

Interestingly, conflict resolution skills were predictive of positive work relationships, but not related to CE. The finding that perceptions of one's individual capabilities are better predictors than one's actual capabilities is an interesting finding that warrants more theoretical consideration. The present work showed that individual's subjective perceptions were relatively more important than their actual conflict resolution skills. This is consistent with Study 1, which demonstrated that felt conflict was a more useful predictor of a variety of outcomes than the actual conflict experimental condition assigned. While objective measures are still important, this work demonstrated that subjective reality is an important component in understanding the dynamics of interpersonal work conflict. In addition to the direct effects, the present research indicated a moderated effect, which supports a contingency view in the role of conflict preferences.

The present study helped establish individual CE as a valid and useful construct. Applying self-efficacy theory, a goal of the present study was to evaluate if CE was predicted by

specific behavioral experiences, and if CE in turn, could predict positive work relationships. In general, the present study supported the convergent validity of the CE construct as a specific type of self-efficacy. The results supported Bandura's (1997) hypothesized sources as important predictors of both measures of CE. In fact, when all sources were entered simultaneously, they accounted for 54 % of the variance in domain CE and 42 % of the variance in task CE.

The intricacies of self-efficacy development, as well as the importance of each source to conflict frequency, management, and skills, had remained largely unexplored. Therefore, I sought to understand the contribution made by the four sources of self-efficacy to the development of self-efficacy beliefs and to gauge the subsequent contribution made by these beliefs to the development of domain CE task CE and positive work relationships. To accomplish this end, existing measures were adapted and new measures were created. A natural implication was the creation of reliable measures of both domain CE and task CE and a third measure of the specific conflict sources. This source measure showed incremental validity beyond both domain CE and task CE, and thus should be redefined and further validated to be used in subsequent research dealing with individual conflict efficacy.

*Practical implications.* The present study suggested that because conflict efficacy, conflict skills, conflict handling preference, and amount of conflict were all non-redundant predictors of positive work relationships, there should be a number of specific approaches that could be used to potentially increase positive work relationships. This area of research is important because teachers, counselors, school administrators, and employers, could benefit from understanding how to facilitate the development of CE. Such approaches would include conflict skills training, verbal persuasion, and reducing the amount of negative interaction in the workforce, to name a few. Specifically, in the present study domain and task CE were related to



the four primary sources. In addition, CE, its sources, and the measure of conflict resolution skills all significantly predicted positive work relationships. Therefore, the present study suggests the specific mechanisms if one wanted to improve positive work relationships.

For example, conflict resolution training could be structured to improve conflict decision-making. In addition, recent research (Steele, 2008) has shown that participants' self-efficacy was enhanced after a short lecture on conflict resolution and the viewing of conflict resolution vignettes. Steele's recent work combined with the present study also implies that vicarious experiences and social modeling should be incorporated into conflict resolution training. In addition, allowing trainees to accomplish less complex and emotionally charged conflicts should facilitate a sense of mastery, which the present study showed is strongly linked with CE, and significantly related to positive work relationships. Finally, the present study would advocate training individuals to recognize and handle the stress that accompanies conflict, with the goal of enhancing trainees' CE and their work relationships.

Although the present study only focused on relational outcomes, research has consistently shown a positive correlation between substantive and relational outcomes. This is likely because the interdependent nature of work requires task and relationship consequences to converge (De Dreu & Weingart, 2003; Deutsch, 1973; Euwema et al., 2003; Jehn, 1997). Euwema et al. observed a strong correlation between the two constructs ( $r = .58$ ). Similarly, De Dreu and Weingart's (2003) meta-analysis indicated that task and relationship conflict was strongly correlated ( $r = .54$ ), as was relationship conflict and satisfaction ( $r = -.56$ ). There is now a burgeoning body of literature that supports relational outcomes being a requisite to achieve substantive results in interpersonal conflict (De Dreu & Van de Vliert, 1997; Euwema et al., 2003) and in negotiations (Fisher & Ury, 1981). Steele (2008) has already shown that merely

participating in a one-hour conflict resolution seminar can significantly increase CE. Thus, one would wonder if short focused training could not only increase CE, but also increase positive work relationships, and other associated outcomes such as commitment, job satisfaction, prosocial behaviors, and job performance.

### ***Limitations***

This study, as with others, is not without concerns in both design and procedure. A sampling bias could have been created by students' self-selecting participation. Although participation was voluntary, it was part of an option that met a general psychology requirement. In addition, although the sample was made up of only undergraduate students there was a large amount of variability in the student's choice of majors. As a result, it was unlikely that students who decided to participate had vastly difference experiences, attitudes, or traits than students who did not participate.

At the same time, only students were assessed using items that were originally designed for full-time employees. Study 1 indicated that most students worked part-time entry-level positions. This calls into question the ecological validity and generalizability of the findings. While the present findings could be applied to the university population after further study, there is no evidence that would help determine if the present findings would generalize to other college students, especially cross-culturally. Study 1 did show that whether or not a job was the reference point and average hours worked was unrelated to the conflict research variables with a different sample from the same population, which reduces this concern some. Research (Greenberg & Eskew, 1993) has also shown that having participants imagine themselves in a situation can elicit the same reactions as if they experienced the actual situation firsthand. Thus,

despite some shortcomings the scenario and methods used in the present study are still informative when the goal is to understand sensitive psychological processes.

In regard to the actual measures, the mean of the ICAWS scale was below 2 ( $Mean = 1.96, SD = .77$ ), on a 7-point scale. Thus, the majority of the participants reported low levels of negative interactions. As a result, there was a limited opportunity for the withdrawal behaviors to have a direct effect on work relationships, and to fully evaluate the potential effects of negative interactions at work on the other research variables. One may also be concerned that the instructions asked students to think about work conflicts. While it is possible that some students did not have recent workplace conflicts to draw on and may have substituted personal conflicts as a frame of reference, this is not necessarily concerning. Consider that behavioral sequences from police hostage negotiations and divorce mediations are virtually the same (Taylor & Donald, 2003). In a similar vein if there was some sort of priming bias one would expect a portion of the variables to indicate substantial skewness; however, this was not the case.

Mono-method bias was also explored. A mono-method bias is observed when effects are an artifact of using the same source (in this case a survey) to obtain data. This bias was considered both in design and tested statistically. From a design standpoint, the present study had varied response anchors for the different scales in the survey. In addition, conflict resolution skills were assessed objectively and physiological arousal items were negatively worded. Harman's single-factor test was run to statistically test for a mono-method bias. The Harman's single-factor test identifies if the factor structure of the research variables consists of a one factor solution that accounts for the majority of the variance. The present study yielded a multiple factor solution with several variables accounting for a large portion of the variance, and therefore did not reflect any indications of mono-method bias.

Previously, conflict efficacy had only been measured at the team level with the domain level of specificity. The adapted individual level scale was found to be reliable and produced a similar pattern of relationships to those found in team and negotiation research. In addition, a new efficacy scale was created in the context of specific scenarios in which the participant played the role of a manager who had decision-making authority. This scale was also reliable. Four sources of self-efficacy were also developed and tested. These scales were less reliable, but all except for physiological arousal had alphas greater than .70. Thus, there was the limitation that the reliability of the research variables used to assess the four sources and the two withdrawal preferences of avoiding and accommodating varied. The conclusions using these measures should be made with less conviction, but should not diminish the strong overall connection made between CE antecedents and positive work relationships. The dimensionality of these sources is questionable because of the high inter-source correlations. This concern is not unique to the present study. Others (e.g., Wolf, 1997) have also observed a lack of inter-source discrimination. Confirmatory analyses indicated that conceptualizing the four sources as unique latent constructs provided significantly better fit to the data than a single-factor model of the hypothesized sources.

The most obvious and important limitation of the present study is that causality cannot be established due to the study's correlational design. Although support was found for the moderating effect, the causal chain may be different from what has been hypothesized and tested in the present study. That being said, all hypotheses were strongly grounded in theory, based on previous empirical observations, and follow logic. For example, it is reasonable to expect that the effects are bidirectional meaning that positive relationships can affect the other variables;

however, it seems less plausible that relationship perceptions are affecting the objective measure of conflict skills.

Lastly, by design the present study was also limited by the selection of variables. As a result, potential influences of CE remained unexamined; however, this also allowed for a systematic examination of specific antecedents to CE and positive work relationships that could be studied with a moderately sized sample. The variables selected for the present study were theoretically driven, psychometrically acceptable, and allowed for very specific hypothesis testing. Moreover, the specific variables measured were relevant to both academic institutions and industry, and can be enhanced through specific interventions. Despite the significance of these results, this study was limited to a single university and the validity of these inferences for other universities or an industrial setting remain unknown. However, the results were promising and provide specific suggestions for future research.

### ***Future Directions***

Assessing physiological reactions would be an interesting and new method to objectively studying the emotional component in interpersonal conflict. The present study was unique in that emotion was considered as a physiological manifestation, rather than general affect. This work showed that despite difficulties with measurement, physiological arousal was a significant predictor of the other sources of CE, domain CE, positive work relationships, and negative interactions at work. Future research could extend these findings several ways. One issue is the degree to which survey assessments can capture such physiological manifestations. Therefore, the use of objective biometric instruments could help explain the degree to which surveys are an appropriate methodology. Similarly, given that emotional stability is one of the Big-5 personality dimensions it leads to the question: What is the role of trait emotionality in conflict

resolution? Finally, if physical manifestations are interpreted as cues of an individual's probability of success in conflict resolution, could training or other interventions be developed that can affect these physiological reactions? Such an intervention could be especially valuable in light of the present findings, which showed that aversive physiological arousal was negatively associated with positive work relationships and negatively associated with negative interactions at work.

Another future direction that has already been discussed is the potential role of moderators. The present study showed that avoiding was only a problematic strategy if there was a high amount of negative interactions. Future research should explore factors that affect the utility of the other conflict resolution preferences. Again, training could be built on this research foundation and might enable individuals to detect cues and moderators, develop a response, and subsequently effectively resolve a variety of conflict situations. Such training would be beneficial for both organizations and individuals.

In addition to replicating the current findings, validating the new measures, extending the findings to other samples, and experimentally and longitudinally verifying the present findings, new research could benefit from more in-depth analyses. The micro approach that the present study employed to investigate conflict resolution is valid, but future research could benefit more from multiple levels of analysis. In the present study, the main outcome studied was essentially relationship satisfaction. It would be interesting to dually assess the relationship taking into account both individuals' perceptions. It would be even more valuable to have such an assessment before, after, and during conflict situations, with data for both personal and work relationships that could be matched-up that captured the disputant's motives and behaviors. Lastly, conflict is a relative term. As a result, it is important to keep in mind that workers and

individuals in general, exist in social contexts that will shape norms, including the normative way to manage conflict. Thus, future research should also take into account individual culture and contextual norms.

### ***Conclusion***

Although self-efficacy is one of the most popular constructs in psychology (Judge et al., 2007), little research has examined conflict efficacy, or one's assessment of their ability to resolve interpersonal conflicts. The present research continues a stream that has highlighted the need to assess self-efficacy more specifically. The present cross-sectional study, tested a model in which conflict efficacy (CE) was the central research variable. The present study employed a unique design that focused on hypothesized conflict situations both general with an unspecified role and power status, and task specific with a specified role and power status to better understand the antecedents and consequences of conflict efficacy. Findings supported Bandura's (1997) conclusion that self-efficacy is best measured with respect to a specific task.

Consistent with self-efficacy theory, the present study provided evidence that the four sources of self-efficacy accounted for the majority of variance in both domain and task CE. Antecedents (i.e., conflict skills and the four sources), task conflict efficacy, and negative interactions at work predicted positive work relationships. In fact, results from 137 college students indicated that the hypothesized sources of conflict efficacy were actually better predictors of positive work relationships than either task or domain CE. Negative interactions at work and positive social relationships were predicted by task CE. In addition, conflict frequency was found to moderate the effect of conflict avoidance preference on work relationships such that avoiding was negatively related to positive work relationships when the individual experienced frequent negative interactions at work, but not significantly related for those with

relatively less negative interactions. Finally, conflict resolution skills, mastery experience, negative interactions at work, and the interaction term of negative interactions at work X avoiding produced the most parsimonious set of predictors, which as a set accounted for 16 % of the variance in positive work relationships. Taken in full, results from this study suggest that a) conflict efficacy is a valid predictor of work relationships, b) the measurement of conflict efficacy affects its relationship with other variables (i.e., task CE indicated stronger relationships with the other research variables than domain CE), and c) that avoiding is an ineffective response to conflict, when there is a high amount of negative interaction at work.



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## Appendix A - Study 1 Instrument

### Studies in Conflict

<u>Last 6</u> <u>Wildcat ID:</u>
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If you are interested in participating in more conflict research please  
your name and e-mail. Name:

E-mail:

write

How many hours a week do you regularly work (on average over the course of a year)?  
\_\_\_\_\_ hours per week.

What job were you referring to in the above question? \_\_\_\_\_

NOTE: If you have a job please use that as your reference point for answering all the questions, if not think of another situation such as relationship conflict, academic conflict, sports teams conflict and use that as your frame of reference.

What frame of reference are you using?    Job    Relationship    Academic    Sport    Club  
Other \_\_\_\_\_

**INSTRUCTIONS:** Read the following statement about work conflict and answer questions about your experiences with this type of conflict using the same frame of reference that you supplied above. There are no right or wrong answers, and your honest responses are important and will be kept confidential. Circle the word that best describes your opinion. Only circle 1 number or 1 word per question.

Think back to a recent and specific conflict you had at work, which is **defined as disagreement between you and at least one other person about the content of tasks being performed, including differences in viewpoints, ideas, and opinions.** PLEASE USE THIS DEFINITION AS A BASIS FOR EVERY OTHER ANSWER YOU PROVIDE.

What is this conflict about? *A Task (content of work decisions)* *A PROCESS (how to/who should)* *A Person (interpersonal incompatibility)*

I would describe this conflict as: *Disagreement*    *Interference*    *Negative Emotion*

All questions in this section refer to the bolded definition of conflict and begin with the phrase:  
During the conflict...

... there were important opinion differences concerning the goals and objectives of work.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... there were important opinion differences concerning how to complete a task.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... there were important opinion differences concerning when or how something should be implemented.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... there were important opinion differences concerning how something should be managed (e.g., who was involved, the division of tasks, meetings procedures, reporting, etc.).  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... the other party tried to block and prevent me from attaining my goals and objectives.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... the other party tried to block and prevent me from completing the task the way I wanted.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... the other party tried to block and prevent me from implementing something the way I wanted.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... the other party tried to block and prevent me from managing something the way I wanted.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... the other party did things that made me feel frustrated.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... the other party did things that made me feel angry.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... I noticed physical reactions in myself like changes in my breathing, or sweating, etc.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

... I felt physically fatigued and stressed.  
Strongly Disagree      Disagree      Somewhat Disagree      Neutral      Somewhat Agree  
   Agree      Strongly Agree

How **intense** is this type of conflict? 1 2 3 4 5 (*1 is not very intense and 5 is very intense*)

How **frequently** do these types of conflict occur? Very Rarely Rarely Sometimes Often Very Often

How well can you **resolve** this type of conflict? 1 2 3 4 5 (*1 is not well and 5 is very well*)

I generally try to win-at-all costs with this type of conflict.

Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree  
Agree Strongly Agree

I generally try to avoid this type of conflict.

Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree  
Agree Strongly Agree

I generally try to accommodate and give-in to the other party in this type of conflict.

Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree  
Agree Strongly Agree

I generally try to collaborate and work together with other party in this type of conflict.

Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree  
Agree Strongly Agree

I generally try to just do a fifty-fifty compromise with other party in this type of conflict.

Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree  
Agree Strongly Agree

## **Appendix B - Domain Conflict Efficacy**

Adapted from Alper et al. (2000)

1. At work, I believe that I can manage conflicts concerning personality differences in an effective manner.
2. At work, I believe that I can manage conflicts concerning work habits in an effective manner.
3. At work, I believe that I can manage conflicts concerning safety issues in an effective manner.
4. At work, I believe that I can manage conflicts concerning work roles in an effective manner.
5. At work, I believe that I can manage conflicts regarding schedules in an effective manner.
6. At work, I believe that I can manage conflicts among team members concerning the best way to get a project done.

## Appendix C - Sources of Conflict Efficacy

Adapted from Muretta (2004) and Stone and Bailey (2007)

### Mastery Experience

1. I have succeeded in handling a variety of conflicts before.
2. I have overcome and resolved difficult conflicts before.
3. I am certain in my ability to successfully resolve a conflict when I have successfully resolved a conflict over similar problems before with some difficulty.
4. I am certain in my ability to successfully resolve a conflict when I have failed to resolve a conflict over similar problems before.

### Vicarious Experience

1. I have observed people who are similar to me handle a variety of conflicts.
2. Most of the conflicts I have observed, but not been part of, end up successfully resolved.
3. I am certain in my ability to successfully resolve a conflict when I've watched someone resolve the same conflict with some difficulty, but have never attempted to resolve the conflict myself, or been told that I was capable of resolving that type of conflict.
4. I am certain in my ability to successfully resolve a conflict when I've watched someone fail to resolve the same conflict, but have never attempted to resolve the conflict myself, or been told that I was capable of resolving that type of conflict.

### Physiological Arousal

1. My mood often hurts my ability to successfully resolve conflicts.
2. When I experience a conflict situation I notice physical reactions like changes in my breathing, or sweating, or my heartbeat, etc.
3. \*I am certain in my ability to successfully resolve a conflict when I'm feeling physically and emotionally normal.
4. \*I am certain in my ability to successfully resolve a conflict when I'm feeling fatigued and stressed.

\*Reverse coded

### Social Persuasion

1. People close to me value and ask for my advice on how to resolve their conflicts.
2. I have been told by others that I am good at resolving conflicts.
3. I am certain in my ability to successfully resolve a conflict when I've been told that I am capable even though it would be difficult, but have never attempted to resolve that type of conflict myself, or watched anyone attempt to resolve that kind of conflict.
4. I am certain in my ability to successfully resolve a conflict when I've been told that I am not capable, but have never attempted to resolve that type of conflict myself, or watched anyone attempt to resolve that kind of conflict.

## **Appendix D - Interpersonal Conflict at Work Scale (ICAWS)**

Spector and Jex (1998)

1. How often do you get into arguments with others at work?
2. How often do other people yell at you at work?
3. How often are people rude to you at work?
4. How often do other people do nasty things to you at work?



## **Appendix E - Positive Work Relationships**

Adapted from Skevington et al. (2004)

1. How satisfied are you with your personal relationships?
2. How satisfied are you with the support you get from your friends?
3. How satisfied are you with your close work friends?

## **Appendix F - Withdrawal Preferences**

De Dreu et al. (2001)

### Accommodating

1. When in conflict, I generally prefer giving in to the wishes of the other party.
2. When in conflict, I generally prefer concurring with the other party.
3. When in conflict, I generally prefer trying to accommodate the other party.
4. When in conflict, I generally prefer adapting to the other party's goals and interests.

### Avoiding

1. When in conflict, I generally prefer to avoid a confrontation about our differences.
2. When in conflict, I generally prefer to avoid differences of opinion as much as possible.
3. When in conflict, I generally prefer to try to make differences appear less severe.
4. When in conflict, I generally prefer to try to avoid a confrontation with the other party.