12-1-1999

# Perceiving Organizational Conflict: The Effect of Occupational Rank and Sex on Perceptions of Conflict in the Workplace

Eric Hatcher
*Western Kentucky University*

# PERCEIVING ORGANIZATIONAL CONFLICT: THE EFFECT OF OCCUPATIONAL RANK AND SEX ON PERCEPTIONS OF CONFLICT IN THE WORKPLACE

A Thesis

Presented to

The Faculty of the Department of Psychology

Western Kentucky University

Bowling Green, Kentucky

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Eric Bennett Hatcher

December 1999

PERCEIVING ORGANIZATIONAL CONFLICT: THE EFFECT OF OCCUPATIONAL RANK AND SEX ON PERCEPTIONS OF CONFLICT IN THE WORKPLACE

Date Recommended 4/27/99

Reagan Brown
Director of Thesis

James L. Gray

Sam Fe Fowler

Edward Gray 10/18/99
Dean, Graduate Studies and Research Date

Table of Contents

List of Tables and Figures

Acknowledgments

To complete this thesis and successfully cope with the stress that resulted from the project, I have numerous people and organizations to thank. I would first like to thank God for blessing me with the opportunity to participate in a program that, by all accounts, should never have accepted me. I would like to thank my mother, Deirdre Rohter, for keeping an open ear to my constant clamoring about the process. For assistance with the generation of the mixed motive scale and the analyses involved in this study, I have to thank Dr. Reagan Brown. I thank Dr. James Craig for his statistical assistance and musical prowess. I thank Dr. Sam McFarland, as well, for conceiving the idea of testing for the predisposition to cooperate, the idea that holds this study together.

I also have to give a grand thanks to El Segundo, Elvis, Frank Sinatra, Andrew Dice Clay, Howard Stern, Gillian Anderson and, the master of wisdom, Rush Limbaugh for keeping my spirits up and inspiration at an all time high.

PERCEIVING ORGANIZATIONAL CONFLICT: THE EFFECT OF OCCUPATIONAL RANK AND SEX ON PERCEPTIONS OF CONFLICT IN THE WORKPLACE

Eric Bennett Hatcher December 1999 52 Pages

Directed by: Reagan Brown, Sam McFarland, and James Craig

Department of Psychology Western Kentucky University

In this study, perceptions of conflict were examined with respect to sex and occupational rank. The model for this study was Tjosvold's cooperation theory. Yet, unlike much of Tjosvold's work, I examined cooperation as a dependent rather than an independent variable. A reward-level pre-test was used to account for the predisposition to cooperate, and a mixed motive scale (post-test) was used to measure any differences in cooperation between occupational ranks and the sexes. Two hypotheses in this study were tested. First, in a between-rank conflict, supervisors were expected to view the conflict as competitive, while subordinates were expected to view the conflict as cooperative. Second, it was hypothesized that in a same-sex conflict women would tend to view the conflict as more cooperative then would men. Contrary to hypothesis one, occupational rank did not affect the perception of conflict or cooperation. There was partial support for the second hypothesis. Specifically, at low levels of pre-test cooperativeness, women exhibited more workplace cooperation than did men. However, at high levels of pre-test cooperativeness, the sexes did not differ in workplace cooperation.

## Chapter One

### Introduction and Background

Conflict and its effects on organizations are ever-present. Managers frequently attempt to alter worker behaviors to achieve the highest quality production while employees, whose expectations and needs are often neglected, become displeased with constant demands and pressure from their superiors (Tjosvold & Chia, 1988). Much of the research within cooperation theory focused on the behavioral antecedents and outcomes of conflict. The current study was focused more on the perception of conflict and less on behavior. The purpose of this study was to examine whether men and women, and supervisors and subordinates, differ in their perceptions of conflict. In this study, I assessed the hypotheses by using a cooperation pre-test and a pencil and paper role-play exercise.

#### Conflict theory

Exchange theory provided one of the main rationales behind early conflict theories. This theory contributed the idea that, within working relationships, each party has some influence over another's outcomes. According to exchange theory, negotiations reflect either a positive/reciprocal relationship or a negative relationship. Tjosvold referred to these relationships as cooperative and competitive goal-orientations (Tjosvold & Chia, 1988), while others have referred to these orientations as integrative and distributive approaches (McKersie & Walton, 1992). The cooperative/integrative relationship is

characterized by parties working together and reciprocating positive deeds. The competitive/distributive relationship is characterized by participants acting in ways that facilitate the accomplishment of a given task before another person is able to do so. Typically, rewards in the competitive scenario are considered limited and attainable by only one of the parties. Tjosvold added goal independence as a third goal orientation (Tjosvold & Chia, 1988). This third goal orientation was a conflict that was neither cooperative nor competitive.

Through the 1950's and 1960's, researchers attempted to formulate specific ideas about conflict that would allow for the development and evaluation of conflict theories. Kochan (1992) noted that Walton and McKersie's book (1965) made a great impact on the study of conflict. The book allowed the study of conflict to move from a strictly institutional/historical nature to a topic of social science research. Walton and McKersie also shifted the focus of conflict from solely behavioral to more cognitive grounds and were the main contributors to newer models of conflict and negotiations.

Defining conflict

There have been many debates over the definition of "conflict." Traditionally, conflict has been defined as the opposing interests of two or more parties. Tjosvold, however, utilized a slightly different definition of conflict. His definition of conflict was conceived as incompatible activities: one participant's action obstructs or makes another's action less successful (Tjosvold & Chia, 1988).

Van de Vliert (1998) asserted three key differences between Tjosvold's (1988) conceptualization of conflict and the traditional one. First, traditionally, conflict contained at least some cognitive components; however, most research in the area is strictly limited

to behaviors. Second, Tjosvold's definition was more specific than the traditional model of conflict in that it was concerned only with conflict in which both parties desired the same end but could not agree on the means to get it. Third, Van de Vliert (1998) emphasized that there should be a distinction between "conflict" and "opposing interests." Deutsch's argument was that for conflict to be present, the parties involved must be engaged in behaviors that hinder the attainment of a given goal, where "opposing interests" may represent a feeling or thought that will not result in an actual dispute.

Van de Vliert (1998) also pointed to three reasons why Tjosvold's definition of conflict is difficult to maintain. First, there are behaviors and/or circumstances in the workplace that may hinder the attainment of a given goal yet do not produce conflict. Some examples of circumstances that hinder that attainment of a goal yet are not due to conflict, include injury, malfunctioning equipment, and poor quality materials. Second, Van de Vliert (1998) asserted that there may be conflicting activities that do not result in conflict. One suggestion was that a better distinction between "conflict" and "competition" should be made. Third, there is a paradox considering that Tjosvold's definition of conflict contains incompatible behaviors, yet it does not include incompatible goals. In summary, although there has been significant support for the definition of conflict, as supported by Tjosvold, there is opposition that insists his definition is over-simplified and should include cognitive components.

Cooperation theory

Cooperation theory (Tjosvold, 1984) defines cooperative goals as those that are mutually beneficial to the parties. When goals are cooperative, the attempt by one person to achieve the desired goal will facilitate the attainment of the same goal for another

person. Conflict rises only over the method of attainment of these mutual goals. Competitive goals, on the other hand, are those that if sought by one hinder attainment by another. Conflict is inherent in this situation. Only one of the parties may achieve the desired end; the means typically reflect the desire to defeat the other pursuer of the goal(s). Independent goals are those characterized by a perceived lack of connection; that is, the parties involved believe that the desired ends are completely independent of one another, thus neither cooperation nor competition would help or hinder either party.

In his research, Tjosvold has suggested that the goal orientations, and the conditions that create them, impact each other in a cyclical manner (Tjosvold & Chia, 1988). For example, Tjosvold has asserted that the prior relationship of conflicted parties will help determine whether there will be cooperation or competition in the future. In addition, the interactions of the parties may help to strengthen or weaken their future relationship. Tjosvold and Chia's (1988) hypothesis was that good relationships will lead to cooperation and that cooperation will lead to good relationships. The results showed that cooperative goals were highly correlated with effective interactions between the parties. The prior relationship between the conflicted parties helped to determine how the conflict was resolved. Furthermore, most of the participants rated the cooperative goal-oriented methods as effective and competitive goal-oriented methods as ineffective. Tjosvold has found supporting evidence for his hypotheses in numerous studies (Tjosvold et al.,1984; Tjosvold, 1984; 1993; 1995; 1998). Tjosvold appears interested in cognition, but he does state that interlocked behavior is vital to an organization (Tjosvold, 1986). The importance placed on interlocked behavior is evidence of cooperation theory's behavioral emphasis.

Tjosvold has researched cooperation and competition for many years and has formulated an elaborate theory containing three main propositions. First, cooperation will create mutual support for successful performance: an open exchange of ideas and strong positive work relationships that positively affect future performances (Tjosvold, 1998). Second, competition will induce the expectation of working against the other party, facilitate closed-mindedness, and create relationships that undermine the goal of the parties. Third, independent goals will produce indifference to the behaviors of others and provide little support for joint ventures.

In general, Tjosvold has been concerned with two main questions. First, what are the behavioral antecedents of cooperation and competition? Second, what are the behavioral outcomes of cooperation and competition? Tjosvold has concluded that the antecedents of cooperation or competition include the prior relationship with the other party, sense of purpose, availability of rewards, commonality of tasks, and similarity of roles (Tjosvold, 1998). He has also concluded that cooperation or competition induce productivity shifts, change expectations of future interactions with the other party, affect trust between the parties, and change the degree of open, honest discussions. Tjosvold has found extensive empirical support for these ideas (Tjosvold et al., 1985; Tjosvold, 1986a; 1988a; 1988b; 1995).

It was noted that, if handled in an ineffective manner, conflicts negatively affect an organization's productivity (Tjosvold & Chia, 1988). Fortunately, managers and subordinates often see their goals as cooperative. Tjosvold viewed cooperative goals as helpful to conflict management; that is, Person A, who would be collaborative, would tend to feel that Person B should seek out his or her own interests and behave in an effective

way because that would help Person A be more effective as well. Evidence supports that, when cooperating, people will be more likely to offer constructive advice rather than attempt to control or direct the other person (Tjosvold et al., 1986; Tjosvold, 1988; 1990; 1997). Cooperation theory offered that this helping behavior will lead to increased achievements as well as raise morale, confidence and positive expectations of future projects. Some characteristics of the person conflicted with cooperative goals are openness to influence, honesty, and understanding differing points of view (Tjosvold, 1988). Unfortunately, not all conflicts are cooperative; many conflicts are competitive.

Many conflicts concern competitive goals and can not be resolved to mutual satisfaction. Because the nature of competitive goals is that only one person may attain the goal they can be very problematic for a company. It has been theorized that when goals collide, people may feel at risk when others attempt to attain the desired goal. This feeling of being in danger will most likely lead a person to make counter active movements or sabotage the other's attempts to achieve the goal (Tjosvold & Chia, 1988). A person engaged in competitive conflict is often characterized by suspiciousness, the assertion of unreasonable demands and the pursuit of interests despite the harm to others and failure to reach mutual agreements (Tjosvold, 1985a). It is clear that competitive conflict creates a high degree of tension in an organization and reduces morale, shared ideas, productivity and respect (Tjosvold & Chia, 1988).

Tjosvold & Chia (1988) found several reasons why people decide if a goal was cooperative or competitive. First, the most common reason given for deciding a goal was cooperative was that both parties could benefit from collaboration. This reason was followed by the importance of developing and maintaining a healthy work relationship.

The most common reason given for deciding that a goal was competitive was a lack of sufficient resources to provide positive outcomes for both parties. The second most common reason for viewing a goal as competitive was that the goals were directly opposed to one another. Fisher (1998) reminds us that this second reason (incompatible goals) for the perception of a goal as competitive is not included in Tjosvold's definition of conflict.

Criticisms of cooperation theory

As stated, one major criticism has been that the theory has a limited definition of conflict, including only those conflicts in which two parties desire the same end, yet disagree on the means to attain it (Fisher, 1998). Clearly, this situation does not encompass all conflicts. Others have criticized the assumption that "cooperative conflict" and "competitive conflict" are distinct. It has been stated that the term "competitive conflict" is redundant (Friedland, 1998). That is, it must be true that competition involves conflict. In addition, Friedland stated that the distinction between the two types of conflict is weak at best. There is also the argument that mixed-motive conflict, containing both cooperative and competitive goals, was not sufficiently explored (Van de Vliert, 1998). In addition, cooperation theory is too limited in that it assumes that competitive conflict is consistently characterized by the fact that the attainment of a goal by a person will hinder the attainment of that goal by another. Contrary to that assumption, it was asserted in this study that people involved in conflict have a choice concerning the outcome of the conflict.

The idea of how people reach a conclusion of whether a goal is cooperative or competitive is important because cooperation theory assumes that the perception of a goal

plays a major role in whether the parties decide to work with or against each other. The current study hypothesized that a person would rely on his/her position in an occupational hierarchy in deciding how to approach a particular conflict situation.

Conflict and occupational rank

Considering that how a conflict is perceived may affect superior and subordinate interactions, there are many independent variables that have been examined (Morrill, 1989). Some examples of these variables were urgency of the situation, task similarity, perspective taking, the degree to which the conflict is personal, and the direction in which grievances are aimed.

Morrill (1989) found that there was a substantial difference in how upward and downward grievances are resolved. He stated that downward grievances, those harbored by superiors towards subordinates, are often displayed as authoritative commands and a assortment of punishments. Morrill also stated that upward grievances, those held by subordinates toward superiors, are often not revealed; that is, subordinates are more likely to withhold complaints and avoid conflict with their superiors, while the supervisors may be more likely to assert their power. It has been stated that grievances between people of equal rank may tend to develop into full disputes and may require the assistance of a third party. Morrill (1991), hypothesized that as the degree of urgency in the need to solve the conflict rises so to would the degree of confrontation between incumbents. He found that this hypothesis was not supported. However, this finding was an interesting one and suggested that subordinates and superiors were consistent in how they approached grievances with respect to urgency. Considering Morrill's (1991) work, it was hypothesized in this study that superiors would perceive conflict with subordinates more

competitively. Inversely, it was expected in this study that subordinates would view conflict with a superior as more cooperative.

In addition to Morrill's (1991) findings, Kahn (as cited in Tandon, 1990) stated that superiors were more likely to use an avoidant style of conflict management with peers, yet use a more confrontational style with subordinates. This finding was opposed to Morrill's (1991) results in that Morrill found that supervisors were more confrontational with peers, where Kahn (as cited by Tandon, 1990) found that supervisors were non-confrontational with peers. Tjosvold, Johnson, and Johnson (1984) also found that higher power individuals were less likely than lower power individuals to consider the other party's perspective with respect to the conflict situation. This finding, again, suggests that supervisors perceive conflict as being more competitive, while subordinates may perceive the same situation as more cooperative. Tjosvold (1984) stated that disparate levels of power would be harmful to a working relationship. He asserted that low-power individuals were dependent on high-power individuals for goal attainment. This evidence suggested that subordinates tend to view conflict with superiors as cooperative, and superiors tend to view conflict with subordinates as competitive.

Another factor affecting whether a situation is seen as cooperative, competitive or goal independent is task similarity (Tjosvold, 1990). Specifically, incumbents that hold similar jobs view their goals as more cooperative. This result suggests that superiors and subordinates will differ in their perceptions of conflict due to dissimilar tasks. There is also evidence that level of power may have some bearing on the sharing of resources. It has been found that superiors who operated within a cooperative group were more willing to allow subordinates access to limited resources (Tjosvold, 1989). This finding was

reinforced by Tjosvold, Andrews, and Struther's (1990) study that reported cooperative superiors collaborated more often, influenced people effectively, and affected commitment in a positive direction. Collectively, these studies have shown that managers and subordinates may react differently to the same conflict situation depending on the variables involved in that situation.

There is substantial evidence that concerns the patterns of behaviors exhibited by subordinates and superiors when they are in either cooperative or competitive groups (Tjosvold, 1986a; 1988; 1990b; 1993; 1995). However, as noted, in the prior studies cooperation, competition and goal independence were independent variables; that is, these studies examined behavioral and attitudinal outcomes of working in a cooperative or competitive context. To date, cooperation, competition, and goal independence have not been used as dependent variables.

Conflict Related to Sex

It has been suggested that men are more competitive than women. However, this concept has not been demonstrated consistently. In particular, two studies are of interest to the present research. Part of Simmons, King, Tucker, and Wehner's (1986) study examined how men and women differed in their approaches to winning through competition and cooperation. The related hypothesis in Simmons' et al. (1986) study was that men and women would view cooperation and competition differently with respect to winning. However, those authors did not specify how the sexes would differ in these views. The hypothesis that men and women would view cooperation and competition differently was not supported. Rather, it was found that sex was not an important variable with respect to differing views on cooperation and competition (Simmons et al., 1986).

This finding suggests that there are no significant differences in the cooperativeness and/or competitiveness of men and women.

A study by Cashdan (1998) found results differing from the Simmons' et al. (1986) study. In Cashdan's (1998) study the related hypotheses were, first, men were expected to be more likely to compete with each other for access to women and, second, women were expected to be more likely to compete with each other for the resources that a male may be able to provide. Clearly, the Cashdan study diverged from the central points of the current research. However, the central focus of the Cashdan study was whether sex-based differences in same-sex conflict existed. Cashdan's hypotheses were partially supported. That study reported that men were more likely to compete for women, and women were more likely to compete for men. In addition, it was found that men competed against each other with greater frequency than women. The results of the Cashdan study suggests that men will be more competitive than women in same-sex conflict.

Mixed motive conflict

Tjosvold has argued that cooperation and competition are not the only possible scenarios regarding conflict. He stated that a combination of the two may exist: a mixed motive (Tjosvold, 1998). In a mixed motive conflict, the competitive interests drive the conflict while the cooperative interests drive the search for a mutually beneficial end. Regardless of how each type of orientation may motivate a person, Tjosvold acknowledged that the perceptions of goals would not be broad, general and singular. Nonetheless, a considerable number of Tjosvold's studies have examined goal orientations only in terms of cooperation, competition or goal independence with a lack of attention paid to the varying degree of the orientations therein. Fisher (1998) agreed with the idea

of the mixed motive conflict and stated that most situations were a combination of integrative (cooperative) and distributive (competitive) orientations.

The idea of the mixed motive is important. This suggests that the dependent measures should be placed on a continuum rather than in distinct categories, which should allow for the demonstration of differences between groups in terms of the perceived degree of cooperation and competition.

## Chapter Two

### Purpose, Measures and Hypotheses

The main purpose of the present research was to examine the different perceptions of a single conflict situation. The central question was: "do men and women, and supervisors and subordinates, differ in their perceptions of conflict? If so, how?". This researcher was not concerned with the impact of actual, antecedents on conflict, nor was I concerned with the behavioral/performance outcomes of a situation based on a particular goal orientation. Rather, the concern in this thesis was the fact that a given conflict situation may be perceived as cooperative, competitive or independent based on a person's sex and his/her placement in a hierarchy. In assessing these differences, this writer attempted to control for the predisposition to cooperate or compete with a pre-test derived from past research. A dependent measure that accounted for the perceived degree of cooperative, competitive and independent goal orientations was used.

#### Reward-Level Pre-Test

A reward-level pre-test that was essentially the same test displayed in Van Lange, Bruin, Otten and Joireman (1997) was employed. This measure can be seen in Appendix A. The test consisted of nine choices in which the participant was asked to pick one of three numerical ratios in each choice. The respondent was informed that with each choice they make, they and "the other person" received the allocated points in the ratio. Based on the choice of ratios, respondents are classified as cooperative, competitive or

independent. One ratio was equal, another ratio was somewhat favorable to the person (i.e., about a 250-point differential), and the third ratio was highly favorable to the person (i.e., a 400-point differential). The ratios were varied in the order of presentation to the participants. The equal ratio was termed "cooperative" and when chosen consistently represented a desire of equality/cooperation. The somewhat favorable ratio was referred to as "independent." This ratio had a moderate differential, but gave the largest amount of points to the respondent. When respondents consistently chose this ratio, they were assumed to be demonstrating the desire for the highest amount of points, regardless of the other person's amount of points. The highly favorable ratio in the scale was termed "competitive." This ratio gave the respondent less total points than the "independent" choice, but it offered the largest differential between the person and the other. When respondents consistently chose this ratio, they were interpreted as demonstrating the desire for a competitive differential, considering that the respondent could have selected a ratio that would have offered a higher amount of total points.

The Mixed Motive Scale

This scale was developed to assess differences in the cooperation with respect to the independent variables in this study. This measure can be seen in Appendix B. The first task in developing this scale was to attain a measure of agreement of the dimensionality of thirty three items. To this end, 12 graduate students from the participating university were asked to assign each of the items to dimensions, which they labeled. The results of this pilot demonstrated that the students identified three dimensions: "working together" (cooperative), "working against each other" (competitive), and "indifferent" (independent). There was considerable inter-rater

agreement for the items. In addition to inter-rater agreement, there was a moderate alpha reliability coefficient for each of the dimensions and the dependent variable. The inter-rater agreement percentages (i.e., IRA) from the pilot study and the post-completion alpha for each dimension can be seen in Appendix C.

The mixed motive scale consisted of a short vignette and 33 items. Ten questions were cooperatively oriented, 11 were independently/indifferently oriented, and 12 were competitively oriented. The participants were simply asked to read the vignette and, in light of that scenario, respond to the questions.

The Vignette

To summarize the vignette, participants were asked to suppose that they were employed in a department store. The store became very busy and there was a customer prepared to make a purchase. However, this customer had been assigned to "the other person" (a supervisor or subordinate, depending on the assignment of the participant) in the vignette. Choices were presented to the participant that reflected the three main conflict orientations. Participants were found to be cooperative if they scored highly on items that conveyed that they should talk with the "other person," then solve the problem or split the offered bonus for ringing up the customer (i.e., cooperative). Participants that appeared independent scored highly on items that conveyed a general indifference to the situation. Those that appeared competitive agreed with items that expressed a desire to ring the customer in order to attain the bonus for him/her only (i.e., competitive).

Hypotheses

First, in accordance with Morrill (1989), who argued that downward grievances are typically handled in an authoritative manner and upward grievances are typically

endured, it was hypothesized that supervisors would be more likely to see the conflict as more competitive, while subordinates would be more likely to perceive it as more cooperative. Second, it was hypothesized that women would score higher on cooperative dimensions than men on the mixed motive scale after accounting for cooperativeness displayed on the pre-test.

## Chapter Three

### Method

Participants

There were 227 participants in this study. These participants were college-aged students from a mid-sized, southern university (58 males, 169 females). This sample was drawn from undergraduate psychology courses from the participating university. Using undergraduate participants is a common practice in research within cooperation theory (Tjosvold, 1985a; 1993; 1995). The participants were randomly assigned to an occupational rank of either "supervisor" or "sales assistant" (subordinate). The order of assignment was attained by a coin-flipping procedure. Participants were assigned to a rank according to the pattern of the coin-flip results. The distribution of participants was as follows, for males n = 29 supervisors, n = 29 subordinates; for females n = 86 supervisors, n = 83 subordinates.

It was noted that a sizable disparity between the totals of men and women was present in this study. However, the representation of the sexes in this study was very similar to the representation of the sexes in the university courses. This issue was addressed in a post-completion analysis.

Apparatus

To complete this study, 227 reward-level preference scales (see Appendix A) and 227 mixed motive scales (see vignette and response key in Appendix B) were distributed.

The participants were provided with pencils to complete the forms. SPSS data processing software was used to analyze the information obtained from the participants.

Procedure

Participants were recruited from undergraduate psychology courses. This recruitment consisted of announcing the dates and times of the testing sessions and delivering a short and benign explanation of the nature of the study. Participants then reported to any one of the testing sessions. Upon arrival, the participants signed in for proof of participation for extra credit in their course, read and signed a consent form, completed the reward level pre-test, read the role playing script, and completed the mixed motive scale. Upon completion of these tasks, the participants were free to leave. The average time to complete the tasks was about thirty minutes.

Scoring the reward-level pre-test

Van Lange, Bruin, Otten, and Joireman (1997) recommend that the reward-level test be scored categorically; that is, they stated that if a participant chooses a ratio six or more times (out of nine), that person should be appropriately classified as cooperative, competitive or independent. It should be noted that this procedure is flawed, however. Participants that do not choose six or more items from the same category elude the classification rule. An alternative scoring procedure that not only included all of the participants but also produced a statistically continuous score, rather than a categorical one, was employed to produce a percentage of cooperative choices that was derived from the reward level data. A considerable concern was that this percentage might have not represented the dispersion of the participants within the three orientation categories.

However, the correlation between the percentages of cooperative responses and the categories within which the respondents fell was sizeable and significant ($r = .680$).

In addition to the categorical and continuous variables being highly related, they are both significantly related to the composite mixed motive score as well. Specifically, the categorical variable correlated with the mixed motive composite at .206 ($p < .01$) and the continuous variable (cooperative percentage) correlated with the mixed motive composite at .230 ($p < .01$). These correlations can be seen in Table 1.

Table 1.

Correlations of the pre-test continuous and categorical variables with the dependent variable.

| | | pre-test cooperative % | pre-test category variable | mms DV |
|---|---|---|---|---|
| Pearson Correlation | pre-test cooperative % | 1.000 | .680** | .230** |
| | pre-test category variable | .680** | 1.000 | .206** |
| | mms DV | .230** | .206** | 1.000 |

**. Correlation is significant at the 0.01 level (2-tailed). N = 227

It should be noted that the latter correlation included the 31 participants that escaped the categorical classification rule. When the 31 "unclassifieds" were removed the correlation between the continuous variable and the dependent variable fell slightly ($r = .222$, $p < .01$). It appeared that including the 31 "unclassifieds" slightly improves the statistic. The continuous variable was used as the covariate considering that it included all participants and expressed a degree of cooperativeness.

When an attribute treatment interaction (i.e., ATI) procedure was executed, testing the reward-level pre-test's categorical and continuous variables for homogeneity of regression coefficients, it was found that there were no significant differences and, thus, the effects of the variables were similar. This ATI revealed that, after accounting for the covariate, the interaction produced a $R^2$ change of .001. At an alpha level of .05, $\underline{F}$ (3, 191) = .093, $p > .964$. Thus, there was no interaction between the categorical and continuous variables.

When comparing the cooperativeness percentage to the categorical variable, the majority of high percentage scorers fell into the "cooperative" category. Similarly, the majority of the low percentage scorers fell into the independent or competitive categories. This is evidence that the cooperativeness percentage effectively represents the categorical variable. See Table 2 for the listing of these data.

Table 2.

Participants counts with respect to the pre-test categorical variable by pre-test cooperativeness percentage.

| | | % cooperative responses on pre-test | | | |
|---|---|---|---|---|---|
| | | < 23% cooperative | 23 - 75% cooperative | > 75% cooperative | Total |
| pre-test category variable | unclassified | 7 | 24 | | 31 |
| | competitive | 37 | | | 37 |
| | independent | 49 | 3 | | 52 |
| | cooperative | | 6 | 101 | 107 |
| Total | | 93 | 33 | 101 | 227 |

As stated, 31 participants did not choose six or more consistent ratios. This occurrence makes rational sense when one considers the nature of the reward-level preference scale. The scale choices are of an equal ratio or two disparate ratios (with differences of about 250 points or 400 points, respectively), both of which favor the respondent. So, one might argue that the choice is to be cooperative (choose an equal ratio) or not to be (choose and unequal reward in favor of the participant). When we consider that the overriding theme in this thesis is the degree to which groups are cooperative, the cooperative percentage appears to be a robust statistic.

Scoring the mixed motive scale

The participants responded to 12 competitively-oriented items, 10 cooperative items and 11 independent items by use of a 7-point Likert-type scale (where 7 represented that greatest degree of agreement on all items). The main objective, considering the statistical analyses, was to develop one composite score from these items that represented that degree of cooperativeness of the sample.

An exploratory analysis revealed that, when the mixed motive scale items were combined according to dimension, logical relationships existed. Cooperativeness and competitiveness on the mixed motive scale correlated at -.436; independence correlated with cooperativeness at .142 and with competitiveness at .275. See Table 3 for these correlations. All of these relationships were significant ($p < .05$); however, magnitude was a key consideration in the following procedure and assumptions.

A single composite was created on the following bases. First, the independent composite correlated moderately to weakly with both the competitive and cooperative

Table 3.

Correlations between the MMS dimensions and the MMS cooperative composite.

| | | cooperative | competitive | independent | composite |
|---|---|---|---|---|---|
| Pearson Correlation | cooperative | 1.000 | -.436** | .142* | .795** |
| | competitive | -.436** | 1.000 | .275** | -.893** |
| | independent | .142* | .275** | 1.000 | -.114 |
| | composite | .795** | -.893** | -.114 | 1.000 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed). N = 227

composites. Second, the cooperative and competitive composites have a strong and significant relationship and, third, the cooperative and competitive items should represent the same construct (cooperativeness) at each end of its extremes.

The cooperativeness composite was generated by attaining the mean of the reversed competitive raw scores and the cooperative raw scores. The independent raw scores were not included. This total composite correlated with dimensional composites fairly logically; that is, the composite correlated with cooperativeness at .795 ($p < .01$ two-tailed), and competitiveness at -.893 ( $p < .01$ two-tailed). The composite correlated with independence at -.114 (n/s).

It appears that this composite of cooperative and competitive scores with the absence of the independent items represents the dimensional composites rather well. The composite variable was used as the primary dependent variable. An independent analysis was run with respect to the mixed motive scale's independent dimensional composite and

the pre-test's cooperativeness percent. This procedure was done in order to ascertain whether the third hypothesis (no differences are expected considering the independent responses on the tests) in this study is correct.

Analyses

In this study, a 2 x 2 hierarchical ANCOVA was utilized to examine any second level interaction between the independent variables (sex and rank). If the analysis revealed no interaction among the independent variables, a separate ANCOVA would be performed for sex and rank, respectively. For each ANCOVA, the independent variables served as a predictor where the pre-test was the covariate and the mixed motive scale (post-test) was the criterion. Each ANCOVA first examined the slope differences within the independent variables using the moderated multiple regression procedure (Stone-Romero & Anderson, 1994). If no slope differences were evident, the next step was to examine any intercept differences within the independent variables using Lawshe's (1983) procedure. The specific procedures used in this study were attribute treatment interaction analyses (ATI). This analysis is a form of regression analysis that was used to assess possible interactions between the traits of participants and the treatments that they were exposed to this study (Pedhazur, 1997).

## Chapter Four

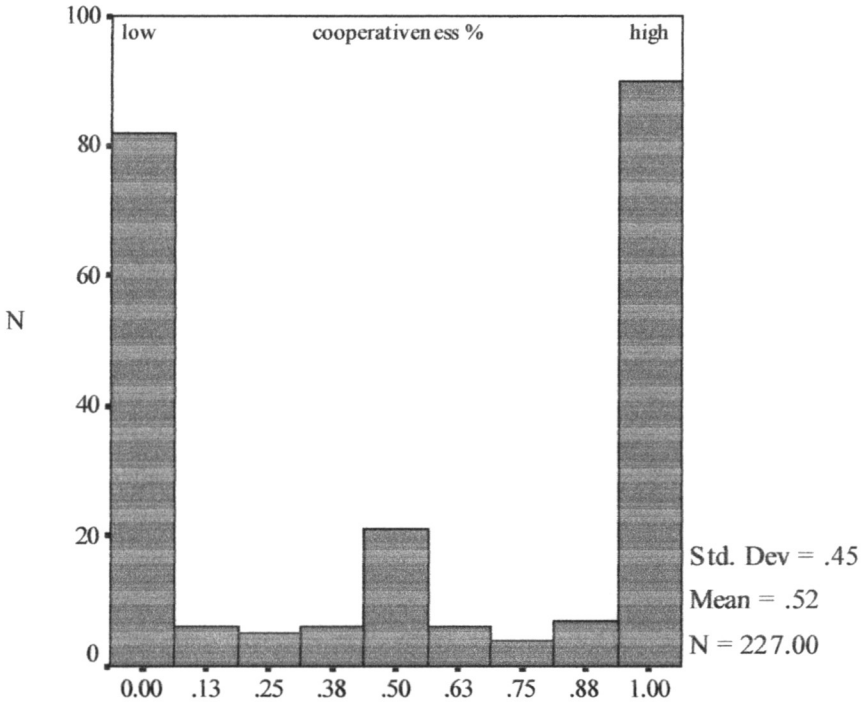
### Results

Considering the frequency distributions of the competitive and cooperative dimensions of the reward level pre-test, similar patterns were demonstrated. Specifically, the distribution of cooperative percentages derived from the reward-level pre-test was "U" shaped. The interpretation was that people responded to the measures either highly cooperatively or highly competitively. It should be noted that only 37 out of 227 participants could have been classified as competitive; thus the majority of the participants appeared to be, at the least, fairly cooperative. The importance of this pattern is that the majority of the participants in this study scored at the extremes of the reward-level pre-test. See Figure 1 for this distribution.

For the following analyses, the means for the pre-test and post-test are presented in Tables 4, 5, and 6. Table 4 shows the mean differences between men and women. Table 5 demonstrates the lack of difference between supervisors and subordinates. Table 6 shows the means of men and women at each level of rank.

With respect to the homogeneity of variances between the independent variables, Levene's test demonstrated that the variability between the groups in the study was homogeneous that is, the variability did not differ significantly. For the sexes $p < .102$, and for occupational rank $p < .151$.

Figure 1.




Distribution of pre-test cooperative percent.

Table 4.

Means of the MMS cooperative composite and the reward-level pre-test by sex.

| sex | | N | Minimum | Maximum | Mean | Std. Dev. |
|---|---|---|---|---|---|---|
| male | mms composite | 58 | 2.86 | 5.95 | 4.6433 | .7142 |
| | pre-test % | 58 | .00 | 1.00 | .4330 | .4544 |
| | Valid N (listwise) | 58 | | | | |
| female | mms composite | 169 | 2.57 | 6.48 | 5.0062 | .6334 |
| | pre-test % | 169 | .00 | 1.00 | .5457 | .4477 |
| | Valid N (listwise) | 169 | | | | |

Table 5.

Means of the MMS cooperative composite and reward-level pre-test by rank.

| Rank | | N | Minimum | Maximum | Mean | Std. Dev. |
|---|---|---|---|---|---|---|
| subordinate | mms composite | 112 | 2.57 | 6.30 | 4.8628 | .7209 |
| | pre-test % | 112 | .00 | 1.00 | .4911 | .4704 |
| | Valid N (listwise) | 112 | | | | |
| supervisor | mms composite | 115 | 2.57 | 6.48 | 4.9628 | .6206 |
| | pre-test % | 115 | .00 | 1.00 | .5420 | .4321 |
| | Valid N (listwise) | 115 | | | | |

Table 6.

Means of MMS cooperative composite and reward-level pre-test by sex/rank.

| Sex | Rank | | N | Minimum | Maximum | Mean | Std. Dev. |
|---|---|---|---|---|---|---|---|
| male | subordinate | mms composite | 29 | 2.86 | 5.81 | 4.5829 | .7894 |
| | | pre-test % | 29 | .00 | 1.00 | .3448 | .4458 |
| | | Valid N (listwise) | 29 | | | | |
| | supervisor | mms composite | 29 | 3.38 | 5.95 | 4.7037 | .6385 |
| | | pre-test % | 29 | .00 | 1.00 | .5211 | .4534 |
| | | Valid N (listwise) | 29 | | | | |
| female | subordinate | mms composite | 83 | 2.57 | 6.30 | 4.9606 | .6732 |
| | | pre-test % | 83 | .00 | 1.00 | .5422 | .4706 |
| | | Valid N (listwise) | 83 | | | | |
| | supervisor | mms composite | 86 | 2.57 | 6.48 | 5.0502 | .5930 |
| | | pre-test % | 86 | .00 | 1.00 | .5491 | .4272 |
| | | Valid N (listwise) | 86 | | | | |

Using the ANCOVA to examine any second level interaction, it was demonstrated that, with respect to the covariate, no interaction between sex and rank was found, $F$ (1, 222) = .011, $p > .918$.

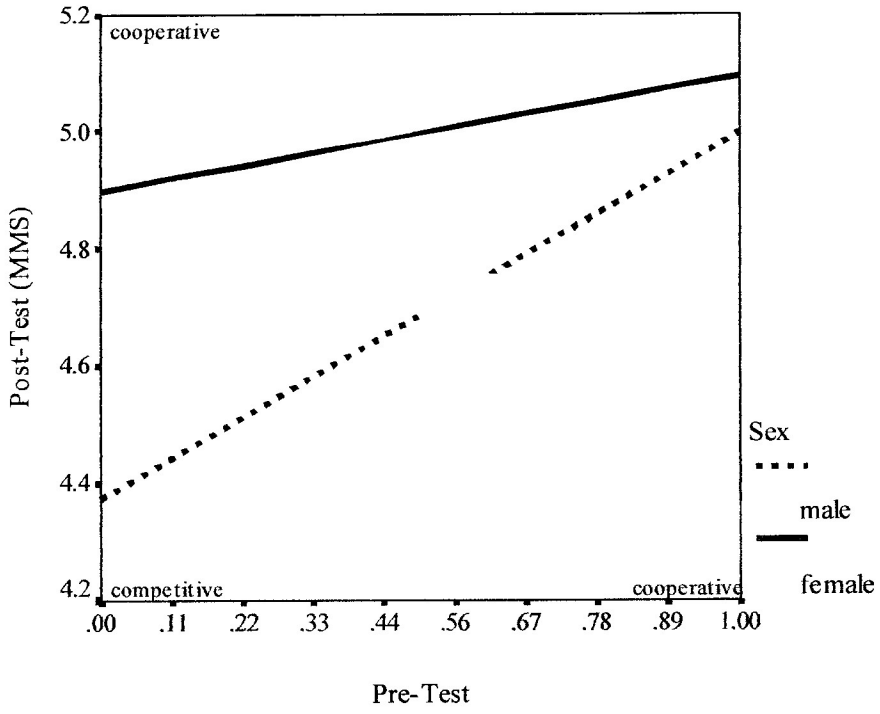
An ATI analysis was employed to examine the effects on both sex and rank individually. This procedure revealed that the interaction produced a significant $R^2$ change after pre-test cooperation was taken into account, $R^2 = .016$, $F = 4.00$, $p < .05$; there was a significant slope difference between men and women with respect to the pre-test

cooperative scores. The separate regression equations were for men y' = 4.373 + (.625 x pre-test score). For women the equation was y' = 4.898 + (.198 x pre-test score). The graphs of these equations can be seen in Figure 2. Following the Stone-Romero & Anderson (1994) model, an intercept analysis was not pursued given the significant slope difference.

An ATI analysis was also employed to examine the pre-test post-test relationship with regard to rank. The analysis revealed $\underline{R^2} = .030$, $\underline{F} = .7117$ ($\underline{p} > .05$). No significant slope difference was found between supervisors and subordinates was present. Given this result, a procedure (suggested by Lawshe, 1983) was employed to test the y-intercept differences of the subordinates and supervisors. This procedure revealed there was not a significant difference in the y-intercepts of the supervisors and subordinates, $\underline{t}$ (.166 ) = -.217, $p > .05$. The adjusted means for mixed motive post-test were, for supervisors: 4.954; for subordinates: 4.87. The separate regression equations for these groups were for supervisors: y' = 4.826 + (.253 x pre-test score). For subordinates, the regression equation was y' = 4.660 + (.412 x pre-test score). The graphs of these equations can be seen in Figure 3.

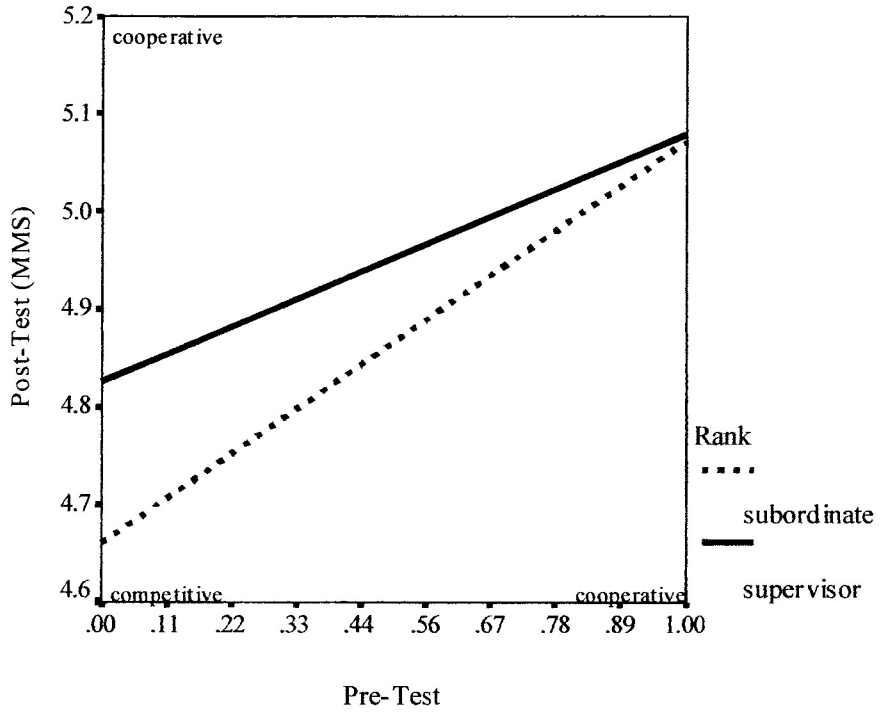
It was noted in this study that there was a sizable disparity between the number of men and women that participated. To address this issue, cases of women were randomly dropped from the study to create similar sample sizes based on sex. The same procedures as above were performed and the results did not differ from the original findings.

Figure 2.




Graph of the post-test (MMS line of best fit) with respect to the pre-test by sex.

Figure 3.




Graph of the post-test (MMS line of best fit) with respect to the pre-test by rank.

## Chapter Five

### Discussion

The results from this study demonstrated that supervisors and subordinates did not significantly differ on the post-test with respect to the pre-test. The patterns of cooperation demonstrated by supervisors and subordinates on the measures were highly similar. As the results stated, there was no significant slope or intercept difference between these groups. Thus, as the adjusted means demonstrate, there was no effect of rank on the mixed motive scale.

A concern in this study was that these participants were not supervisors and subordinates, rather they were college-aged students. If differences do exist in an actual workplace, this study did not accurately represent that population. However, it should be noted that the use of this type of sample was found to be sufficient in many of Tjosvold's previous studies (Tjosvold, Johnson, & Johnson, 1984a; Tjosvold, 1985a; 1985b; 1993; 1995). In much of Tjosvold's prior work, undergraduates played the roles of supervisors and subordinates and were exposed to a cooperative or a competitive environment. Based on past research and the fact that attaining data from employees would have been extremely difficult, this sampling procedure was seen as appropriate.

With regard to sex differences, the results demonstrate that an interaction was present. The interaction gave partial support of the second hypothesis. Specifically, at low levels of cooperativeness on the pre-test, there was a sizable difference between the

sexes on the post-test. However, at high levels of cooperativeness on the pre-test there is only a small difference between the sexes. The interpretation was that women were consistently cooperative on the post-test regardless of their scores on the pre-test, where men appeared to exhibit a consistent pattern of cooperativeness on both measures.

The findings suggest that highly cooperative men and women are equally cooperative in a work setting. However, highly competitive men are competitive in a work setting, whereas highly competitive women tend to be cooperative in a work setting. A possible explanation for the results may exist in the nature of the measures. Specifically, the pre-test required the participant to choose the numeric ratio that he/she preferred. This method was in contrast to the post-test, which asked the participant to role play a situation where interaction with another person might have been necessary. It is possible that women were represented at all levels of cooperativeness on the pre-test because the choice of a ratio did not require the desire for personal interaction. However, the scores from the post-test revealed that when women were asked if they would interact with another person, they scored cooperatively regardless of their scores on the pre-test. These results were consistent with Cashdan's (1986) study that found men are more likely to compete against each other than are women. Cashdan also found that men competed against each other more frequently than women.

Suggestions for future research

Several considerations could be addressed in future research. First, there is a possibility that a "consistency effect" may have been made evident on the reward-level pre-test; that is, perhaps people noted the disparities in the choices on the measure and simply choose the same disparity (or lack thereof) each time. If this were the

case, the pre-test would actually be measuring "desire for consistency" rather than the constructs it purports to measure.

It was noted that it was difficult to create the sense of difference between people by using a paper and pencil measure as in the current study. Considering this difficulty, the recommendation is that the mixed motive scale be revised to attain more precise measures of the construct "cooperativeness." The mixed motive scale could be improved by executing a number of exploratory factor analyses on data from a similar sample. It is also advised that the items be evaluated for reliability and their relationship with the constructs of interest. It is also possible that future researchers may obtain robust results by using workplace incumbents as participants, rather than request undergraduate students to role-play the positions.

Lastly, it should be noted that this study examined only same-sex conflict and produced results consistent with current literature. It may be of interest to study between-sex conflict in the future and examine differences, if any.

References

Cashdan, E. (1998). Are men more competitive than women? British Journal of Social Psychology, 37, 213-229.

Fisher, R. J. (1998). Questioning the scope and relevance of the cooperative and competitive goal approach to conflict. Applied Psychology: An International Review, 47 (3), 314-317.

Friedland, N. (1998). Much ado about "constructive controversy." Applied Psychology: An International Review, 47 (3), 317-321.

Kochan, T. (1992). Walton and McKersie's Behavioral Theory of Labor Negotiations: An Industrial Perspective. Journal of Organizational Behavior, 13, 289-295.

Lawshe, C. H. (1983). A simplified approach to the evaluation of fairness and employee selection procedures. Personnel Psychology, 36, 601-608.

McKersie, R., & Walton, R. (1992). A Retrospective on the Behavioral Theory of Labor Negotiations. Journal of Organizational Behavior, 13, 277-285.

Morrill, C. (1989). The management of managers: disputing in an executive hierarchy. Sociological Forum, 4, 387-403.

Morrill, C. (1991). The customs of conflict management among corporate executives. American Anthropologist, 93, 871-891.

Pedhazur, E. J. (1997). Multiple regression in behavioral research: Explanation and prediction (3rd ed.). Fort Worth, TX: Harcourt Brace & Company.

Simmons, C. H., King, C. S., Tucker, S. S., & Wehner, E. A. (1986). Success strategies: Winning through cooperation and competition. The Journal of Social Psychology, 126, 437-444.

Stone-Romero, E. F., & Anderson, L. E. (1994). Relative power of moderated multiple regression and the comparison of sub-group correlation coefficients for detecting moderating effects. Journal of Applied Psychology, 79, 354-359.

Tandon, K., Ansari, M. A., & Lakhtakia, U. (1990). Effects of job status and issue of conflict on the use of conflict handling strategies. Psychological Studies, 35, 11-16.

Tjosvold, D., Johnson, D. W., & Johnson, R. (1984). Influence strategy, perspective-taking, and relationships between high- and low-power individuals in cooperative and competitive contexts. Journal of Psychology, 116, 187-202.

Tjosvold, D. (1984). Cooperation theory and organizations. Human Relations, 37, 743-767.

Tjosvold, D. (1985a). Power and social context in superior-subordinate interaction. Organizational Behavior and Human Decision Processes, 35, 281-293.

Tjosvold, D. (1985b). The effects of attribution and social context on superiors' influence and interaction with low performing subordinates. Personnel Psychology, 38, 361-375.

Tjosvold, D. (1986a). Organizational test of goal linkage theory. Journal of Occupational Behaviour, 7, 77-88.

Tjosvold, D. (1986b). Dynamics and outcomes of goal interdependence in organizations. The Journal of Psychology, 120, 101-112.

Tjosvold, D. (1988). Cooperative and competitive dynamics within and between organizational units. Human Relations, 41, 425-436.

Tjosvold, D. (1989). Power in cooperative and competitive organizational contexts. The Journal of Social Psychology, 130, 249-258.

Tjosvold, D., Andrews, I. R., & Struthers, J. T. (1990). Leadership influence: goal interdependence an power. The Journal of Social Psychology, 132, 39-50.

Tjosvold, D. (1990a). Making a technological innovation work: Collaboration to solve problems. Human Relations, 43, 1117-1131.

Tjosvold, D. (1990b). The goal interdependence approach to communication in conflict: An organizational study. Theory and Research in Conflict Management, 4, 15-27.

Tjosvold, D. (1993). Experiencing a given base of power as a reward or punishment. Psychological Reports, 73, 178.

Tjosvold, D. (1995). Effects of power to reward and punish in cooperative and competitive contexts. The Journal of Social Psychology, 135, 723-736.

Tjosvold, D., & De Dreu, C. (1997). Managing conflict in Dutch organizations: A test of the relevance of Deutsch's cooperation theory. Journal of Applied Social Psychology, 27, 2213-2227.

Tjosvold, D. (1998). Cooperative and competitive goal approach to conflict: Accomplishments and challenges. Applied Psychology: An International Review, 47, 285-313.

Tjosvold, D., & Chia, L. C. (1988). Conflict between managers and workers: the role of cooperation and competition. The Journal of Social Psychology, 129, 235-247.

Van de Vliert, E. (1998). Cooperation-competition theory raises more questions than it answers. Applied Psychology: An International Review, 47, 323-327.

Van Lange, P. A. M., De Bruin, E. M. N., Otten, W., & Joireman, J. A. (1997). Development of prosocial, individualistic, and competitive orientations: Theory and preliminary evidence. Journal of Personality and Social Psychology, 73, 733-746.

Appendix: A

Competitiveness Pre-Test: derived from Van Lange, Otten, De Bruin & Joireman, 1997.

## Competitiveness Pre-Test: derived from Van Lange, Otten, De Bruin, & Joireman, 1997.

In this task we ask that you imagine that you have been randomly paired with another person, when we will refer to simply as the "Other". This other person is someone you so not know and that you will not knowingly meet in the future. Both you and the "Other" person will be making choices by circling either the letter A, B or C. Your choices will produce points for him/her and for you. Every point has value: The more points the "Other" receives, the better for him/her.

Here's an example of how this task works:

| | A | B | C |
|---|---|---|---|
| You Get | 500 | 500 | 550 |
| Other Gets | 100 | 500 | 300 |

In this example, if you chose A you would receive 500 points and the other would receive 100 points; if you chose B, you would receive 500 and the other 500; and if you chose C, you would receive 550 points and the other 300. So, you see that your choice influences both the number of points you receive and the number of points the other receives.

Before you begin making choices, please keep in mind that there are no right or wrong answers-choose the option that you, for whatever reason, prefer the most. Also, remember that the points have value: The more of them you accumulate, the better for you. Likewise, from the "other's" point of view, the more points s/he accumulates, the better for him/her.

For each of the nine choice situations, circle A, B, or C, depending on which column you prefer most:

| | A | B | C |
|---|---|---|---|
| 1) You Get | 480 | 540 | 480 |
| Other gets | 80 | 280 | 480 |
| | A | B | C |
| 2) You get | 560 | 500 | 500 |
| Other gets | 300 | 500 | 100 |
| | A | B | C |
| 3) You get | 520 | 520 | 580 |
| Other gets | 520 | 120 | 320 |
| | A | B | C |
| 4) You get | 500 | 560 | 490 |
| Other gets | 100 | 300 | 490 |
| | A | B | C |
| 5) You get | 560 | 500 | 490 |
| Other gets | 300 | 500 | 90 |
| | A | B | C |
| 6) You get | 500 | 500 | 570 |
| Other gets | 500 | 100 | 300 |
| | A | B | C |
| 7) You get | 510 | 560 | 510 |
| Other gets | 510 | 300 | 110 |

| | A | B | C |
|---|---|---|---|
| 8) You get | 550 | 500 | 500 |
| Other gets | 300 | 100 | 500 |

| | A | B | C |
|---|---|---|---|
| 9) You get | 480 | 490 | 540 |
| Other gets | 100 | 490 | 300 |

Appendix: B

Cooperative / Competitive Goal Orientation Vignette and Mixed Motive Scale

## Cooperative / Competitive Goal Orientation Vignette and Mixed Motive Scale (alternate title: "Survey on Customer Compliance")

For this study, please read the following story carefully and answer the questions to the best of your ability. Please keep in mind that there are no right or wrong answers.

Suppose that you are a (manager/sales representative) of a department store. In this store, all sales representatives are given a bonus for each customer they "ring-up" for a purchase. In this store, the general practice is that when a customer arrives, they are quickly greeted an accommodated by a sales representative. Employees generally allow each other to "claim" a customer, and that representative receives the bonus when they ring the customer up. The store policy is that only the representative that "rings up" the customer is given the bonus, regardless of any help given by other employees.

Suppose that the store becomes very busy. There are long lines at the registers and many people milling through the store. You happen to notice a customer who appears to be ready to make a purchase, however, you remember that your (manager/another sales person), has claimed this customer.

First, please answer the open-ended question. Take as much space as needed for your answer. Then please answer the following questions by circling one number that indicates your level of agreement (from 1 "strongly disagree" to 7 "strongly agree"):

1. Open-Ended question: How would you resolve this situation?

2. Please circle the number that represents your opinion the best. The choices are 1 "strongly disagree", 2 "disagree", 3 "somewhat disagree", 4 "unsure", 5 "somewhat agree", 6 "agree" and 7 "strongly agree"

| | SD - | D | SWD | U | SWA | A - | SA |
|---|---|---|---|---|---|---|---|
| 1. I would rather not be in that situation | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. The "other person" doesn't deserve the money | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. There is no connection between my situation and the "other's" | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. Splitting the bonus is the best thing to do | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I do not care about the bonus money | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. In this case splitting the bonus is ridiculous | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. It doesn't matter who gets the money | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I should not get in the way of the "other person's" efforts | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. It is better to ignore the customer; they are not my responsibility | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. No one deserves the bonus money | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. I should help the customer and give the bonus to the "other person" | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. The bonus money doesn't matter in this case | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. Caring about the money is not good | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. It is better to let the "other person" work out the situation for himself | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. Taking my co-workers bonus would not help me in the long run | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. It is better to help a customer immediately and get a bonus | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. This situation has little to do with me | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. The "other" and I probably care about two different things | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. It is better to talk w/ the original server of the customer before acting | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. I should take care of myself and get the bonus | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. Each person needs to take their chance at getting the money | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. The "other" and I should share the work and the bonus | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. It is better to work with the "other person" | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. Employees who respect each other wouldn't take the bonus | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25. In this case (as co-workers), our needs are totally separate | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. Helping the customer is most important | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. I should stop the "other" from getting the bonus | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. I would rather earn more money than the "other person" | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. If the "other" gets the bonus, I lose | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. The "other person" doesn't need the money | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. Not getting the bonus money would be foolish | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. If I get the bonus, I win | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33. Helping the customer is of the least importance | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix: C

Item reliability by dimension

Item reliability by dimension: Coefficient Alpha and Inter-Rater Agreement percentages (n = 12).

Cooperative items: (alpha = .556)

4. Splitting the bonus is the best thing to do (IRA = .75)
8. I should help the customer and give the bonus to the "other person" (IRA = .680)
11. I should not get in the way of the "other person's" efforts (IRA = .833)
13. Caring about the money is not good (IRA = .833)
15. Taking my co-workers bonus would not help me in the long run (IRA = .680)
19. It is better to talk w/ the original server of the customer before acting (IRA = .680)
22. The "other" and I should share the work and the bonus (IRA = .680)
23. It is better to work with the "other person" (IRA = .680)
24. Employees who respect each other wouldn't take the bonus (IRA = .750)
26. Helping the customer is most important (IRA = .750)

Competitive Items: (alpha = .77)

2. The "other person" doesn't deserve the money (IRA = 1.0)
6. In this case splitting the bonus is ridiculous (IRA = .680)
14. It is better to let the "other person" work out the situation for himself (IRA = 1.0)
16. It is better to help a customer immediately and get a bonus (IRA = .680)
20. I should take care of myself and get the bonus (IRA = 1.0)
21. Each person needs to take their chance at getting the money (IRA = .750)
27. I should stop the "other" from getting the bonus (IRA = 1.0)
28. I would rather earn more money than the "other person" (IRA = .833)
29. If the "other" gets the bonus, I lose (IRA = 1.0)
30. The "other person" doesn't need the money (IRA = 1.0)
31. Not getting the bonus money would be foolish (IRA = .680)
32. If I get the bonus, I win (IRA = .680)

Independent Items: (alpha = .64)

1. I would rather not be in that situation (IRA = .680)
2. There is no connection between my situation and the "other's" (IRA = 1.0)
5. I do not care about the bonus money (IRA = .680)
7. It doesn't matter who gets the money (IRA = .833)
9. It is better to ignore the customer; they are not my responsibility (IRA = .833)
10. No one deserves the bonus money (IRA = .833)
12. The bonus money doesn't matter in this case (IRA = .833)
17. This situation has little to do with me (IRA = 1.0)
18. The "other" and I probably care about two different things (IRA = 1.0)
25. In this case (as co-workers), our needs are totally separate (IRA = 1.0)
34. Helping the customer is of the least importance (IRA = .680)

* Cooperative items and reversed competitive items (MMS composite), alpha = .77