COLLABORATION AS INFORMATION SHARING: THE EFFECT OF DISPOSITIONAL TRUST AND SITUATIONAL PERCEPTIONS OF POWER ON COLLABORATIVE OUTCOMES

By

MARY D. SASS

Bachelor of Science
The University at Albany, 1999

A Dissertation Submitted to the School of Business
of the George Washington University in
Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy

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REPORT ON FINAL DOCTORAL DISSERTATION EXAMINATION

The undersigned Committee has examined Ms. Mary D. Sass, a candidate for the Doctor of Philosophy degree, on her dissertation entitled: "Collaboration as Information Sharing: The Effect of Dispositional Trust and Situational Perceptions of Power on Collaborative Outcomes." The Committee has found the candidate's work to be acceptable and recommends to the Board of Trustees that she be granted the Doctor of Philosophy degree on May 21, 2006.

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February 22, 2006

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ABSTRACT
By: Mary D. Sass

True collaborative negotiations are rarely studied in lab settings because outcomes are not realized until some time after the negotiation's completion. This dissertation establishes a foundation for studying collaborative negotiations in the short-term by first reviewing the unique aspects of collaboration. A theoretical distinction is made between integrative and collaborative negotiations and several hypotheses focusing on information sharing and collaborative outcomes are tested. A significant positive relationship is found between information sharing and immediate collaborative outcomes. This dissertation claims that recognizing the link between collaborative negotiation processes (i.e., information sharing) and outcomes allows researchers to better estimate the long-term consequences of the negotiation. Additional aspects of the collaborative process are studied in order to explore how processes and outcomes are related. First, initial situational perceptions of power are manipulated and measured using a newly developed Negotiation Questionnaire. This questionnaire determines overall initial situational perceptions of power as well as perceptions of power when compared to the other party. Outcomes of this questionnaire are used to test hypotheses associated with perceptions of power, information sharing, and collaborative outcomes. Trends in the results indicate that perceptions of unequal power lead to greater information sharing. Second, dispositional trust, a component of initial trust, is measured and its relationships between information sharing and collaborative outcomes are explored. Trends in the results indicate that individuals with a lower trust are more likely to share information. Implications and future research are discussed.

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TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION

Negotiation is a social decision making process where parties resolve conflicts (Pinkley, 1990). Interpersonal conflicts, whether personal or professional, are a reality to every person, and a wide range of approaches varying in the processes that lead to single-gain or joint-gain outcomes exist. Traditionally, conflicts have been managed by single-gain negotiation. This style of negotiating emphasizes competition and individual goal achievement at the expense of the opponent. Single-gain negotiation is an effective means of eliminating conflict, but relationships between parties do not survive because of the anger and frustration resulting from one negotiator 'winning' and the other 'losing'.

With greater globalization and decentralization, organizations find it necessary to manage conflicts differently. Diverse employees empowered to make decisions often work together, and conflicts arise because they believe that their goals are incompatible with their colleagues (Klar, Bar-Tal, & Kruglanski, 1983). They recognize that it is in everyone's best interest to resolve conflicts in an efficient manner (Sexton, 1996). However, because employees often continue working together once conflicts are resolved, it is important to emphasize relationships. Therefore, many organizations are incorporating joint-gain negotiation into their culture. Joint-gain negotiation emphasizes working relationships and mutual benefits. The goal is to work in a cooperative manner while resolving problems. By generating solutions together, everyone benefits, and they are willing to work together again.

Many joint-gain negotiation techniques exist. Some emphasize individual parties trading resources, whereas others highlight the pooling and creative utilization of resources (Lewicki, Barry, Saunders, & Minton, 2003). Employees are charged with understanding these various techniques in order to choose the one that best suits their needs and desired outcomes. This

understanding is difficult because the techniques are not well-distinguished in the negotiation literature. Therefore, the first purpose of this dissertation is to conceptually separate the different types of joint-gain negotiation. This dissertation will argue that joint-gain negotiation becomes easier to understand when divided into integrative and collaborative negotiations. Focusing on the conditions, processes, and outcomes of integration and collaboration helps potential users understand similarities and differences, making it easier to choose the joint-gain technique best for them.

Chapter Two compares the conditions, processes, and outcomes of integrative and collaborative negotiations. It argues that different types of joint-gain are combined in the literature because both require information sharing and trust for the development of mutual benefit. On close examination, the integral differences between integrative and collaborative negotiations become apparent. Generally speaking, integrative negotiation requires less time, energy, and resources than collaborative negotiation. Parties using integrative negotiation maintain their individuality, and spend less time pooling resources and learning to work together. In contrast, parties using collaborative negotiation unite by combining resources and working together to develop unique ways to manage the resources.

Once integrative and collaborative negotiations are defined, the remainder of this dissertation focuses on collaboration. Much of the joint-gain literature uses integrative negotiation techniques to explain how individual and situational differences affect outcomes. However, little research focuses purely on collaboration. This lack of research may be because of the intertwined nature of collaborative and integrative techniques, or because collaborative techniques are not as well defined as integrative techniques. Whatever the reason, once the distinction is clear between integrative and collaborative negotiation, it is possible to focus on

collaborative techniques and outcomes when investigating how individual and situational differences affect joint-gain outcomes. Consequently, the second purpose of this dissertation is to expand current thinking of joint-gain negotiation by empirically studying various aspects of the collaborative negotiation process and outcomes.

To do this, the dissertation studies both rational and contextual components of a negotiation situation while examining their effects on negotiator behavior, negotiation processes, and negotiated outcomes. Much of the traditional joint-gain negotiation literature focuses on one of three topics: a) rational-prescriptive negotiation, b) the impact that situations have on negotiator behavior, and c) the impact that individual differences and background have on negotiator behavior (Bazerman & Carroll, 1987). While these topics improve our understanding of 'rational' negotiations, they rarely emphasize how perceptions affect negotiations. In recent years, negotiation literature focusing on subjectivity has emerged arguing that people respond differently depending on environmental and individual factors (Neale & Bazerman, 1985). Individual differences, unique experiences, and limited information affect how parties perceive a situation. Therefore, it is impossible to assume that one can enter a negotiation as a rational participant. Instead, one enters with limited information manipulated by every exchange between parties.

Chapter Three examines how dispositional trust and situational perceptions of power affect information sharing and collaborative outcomes. Dispositional trust is an individual trait that determines the amount of general trust a person has for others. This dissertation will examine how dispositional trust, as a component of initial trust, affects the amount of information shared and the level of joint-gain outcomes. In addition to trust, this dissertation will focus on situational perceptions of power, which result from the filtering of actual power

through individual and environmental factors. Moreover, how situational perceptions of power affect the amount of information shared and the resulting level of collaborative outcomes will be examined.

The final purpose of this dissertation is to propose an additional way to measure collaborative negotiation effectiveness. Collaborative negotiation theories suggest that collaborative outcomes must be measured for long-term sustainability (Gray, 1985). This suggestion is because collaborative outcomes consist of maintained relationships and long-term mutual benefits. It is impossible to know immediately after the negotiation whether or not these two outcomes will develop. Therefore, in short-term studies the true effectiveness of a collaborative negotiation cannot be determined. To handle this problem, immediate joint-gain is determined (Pruitt, 1981), and researchers argue that using these outcomes allows one to forecast the effectiveness of the collaborative negotiation (Thompson, 1991).

This dissertation suggests that, in addition to measuring immediate outcomes, it is beneficial to use the amount of information shared as a measure of collaborative negotiation effectiveness. Theorists agree that information sharing is necessary for collaborative negotiations. This theory is displayed by the strong link that exists between information sharing and relationship maintenance. Many studies have found that more information sharing leads to greater trust and stronger working relationships (Thompson, 1991). By measuring the amount of information sharing, one can make predictions about the type of relationship built. Measures of information sharing and immediate outcomes allow researchers to have both process and outcome information when making predictions. To determine if information sharing can be used as an outcome measure in collaborative negotiation, Chapter Three introduces a hypothesis that questions the relationship between information sharing and collaborative outcomes.

In summary, this dissertation has three main purposes. The first is to conceptually separate integrative and collaborative negotiations. Chapter Two claims that integrative and collaborative negotiations are different, each with unique conditions, processes, and outcomes. The second purpose of this dissertation is to study collaborative negotiations by examining both contextual and rational components of the negotiation. Therefore, Chapter Three reviews the literature on power, perceptions of power, trust, and information sharing to question the relationships between these variables and collaborative outcomes. The final purpose of this dissertation is to propose an additional way to measure collaborative negotiation effectiveness. The amount of information shared may give additional insight into the relationships developed. The link between information sharing and collaborative outcomes is questioned in Chapter Three.

The remainder of the dissertation introduces a new measurement for situational perceptions of power and then tests a series of hypotheses that investigate the relationship between collaborative negotiation processes and outcomes. Therefore, Chapter Four reviews the variables tested in this dissertation. In addition, the chapter describes the methodology and statistical analysis used in this investigation. Chapter Five provides the results of the statistical analysis and an interpretation of those results. Finally, Chapter Six discusses the results and the implications of the findings. In addition, the limitations of this dissertation and future research are introduced.

CHAPTER TWO: INTEGRATION VERSUS COLLABORATION

Introduction

Today's complex organizations favor environments that foster teamwork and problem-solving (Levi, 2001). Management realizes that working together to solve problems can enhance organizational commitment and employee morale, as well as help create solutions that far exceed those developed by individuals. In addition, these solutions tend to benefit everyone, resulting in satisfied individuals who want to work together in the future.

This desire to work together can especially be seen in negotiations. Organizations are wrought with conflicts; therefore, employees must be well versed in negotiation strategies (Lewicki, Barry, Saunders, & Minton, 2003). Traditionally, organizations have used two styles of negotiating. The first is single-gain or distributive negotiation. This style is competitive in nature and ends with win-lose outcomes; one party gains at the other's expense. Single-gain negotiations result in damaged relationships that are difficult to repair. The second is joint-gain negotiation. This style emphasizes working together to develop solutions that benefit all. It results in satisfied parties who are willing to maintain future relationships. With the increased focus on teamwork, organizations prefer joint-gain negotiation to solve problems because it fosters relationship building and win-win outcomes enhance the maintenance of these relationships.

While all agree that joint-gain negotiations foster working relationships, there is some disagreement as to the strategies that one should use during the negotiation (Fisher, Ury, & Patton, 1991; Thompson, 1998). Various techniques exist that lead to different levels of win-win outcomes. It is up to the negotiators to determine what outcomes are desired, and what joint-gain negotiation technique is required to achieve those objectives. These choices leave many

frustrated because of the time and energy needed to first determine the technique and second to complete the negotiation. Therefore, the purpose of this chapter is to review the literature that defines and describes both single- and joint-gain negotiation. In addition, this chapter argues that joint-gain negotiation should be divided into two categories: integrative and collaborative. These types of joint-gain negotiation require different conditions, use different processes for generating solutions, and result in different outcomes. By separating integrative and collaborative negotiations, it will be easier to understand and utilize joint-gain negotiations. Ultimately, this chapter's aim is to eliminate many of the frustrations associated with determining what type of joint-gain negotiation to use enabling users to choose a negotiation strategy that best utilizes strengths, accounts for any restrictions, and helps achieve desired outcomes.

Definitions of Distributive, Integrative and Collaborative Negotiation

Distributive negotiation is used when a negotiator wants to maximize the value obtained by a single deal and when the relationship with the opposing party is unimportant (Thompson & Hrebec, 1996). Each party is concerned with his own interests and is willing to obtain value at the expense of the other party. Parties see this type of negotiation as a game where one 'wins' and the other 'loses'. Therefore, parties do not disclose important information for fear of becoming vulnerable to deceitful moves made by the opponent. This fear of vulnerability fuels an environment where little trust develops and parties are suspicious of each other's actions. Parties have competing desires: both hope to discover the other's resistance points, motives, feelings, confidence, etc. This information is used to influence the opponent into secession.

In contrast, integrative negotiation is concerned with giving all stakeholders more of what they want. It recognizes that goals are not mutually exclusive and that the discovery of joint solutions can result in the long-term stability of relationships and organizational effectiveness

(Pruitt & Carnevale, 1982). While collaborative negotiation is based on the same assumptions, it expands it's definition to include: "1) the pooling of appreciation and/or tangible resources, e.g., information, money, labor, ect.; 2) by two or more stakeholders; 3) to solve a set of problems which neither can solve individually" (Gray, 1985, p. 912). Based on definition alone, it is possible to see that integrative and collaborative negotiations differ. Integrative negotiation consist of parties who maintain their individuality and walk away with more than they came with; whereas, collaborative negotiation is concerned with unifying parties in an attempt to create new alternatives that leave participants fully satisfied. Although definitions differ, theorists and organizations alike lump these two forms of negotiation together because both result in win-win outcomes, maintain relationships, and require similar atmospheres in order to claim success. Combining these two forms of negotiation has led to confusion and frustration because managers, after reading popular negotiation literature, believe that collaboration is the optimal way to negotiate. If a thorough analysis of the environment and desired outcomes is not conducted, people can become frustrated after attempting collaboration. They may not understand the time and expense associated with the use of collaborative problem-solving. In addition, they may not realize that less expensive and more time conscious alternatives leading to joint-gain and relationship maintenance exist. Therefore, this chapter reviews the literature on integrative and collaborative negotiations, focusing on their similarities and differences, in order to aid users in identifying the joint-gain negotiation strategy that works best for them and their situation.

Table 1 outlines the similarities and differences of distributive, integrative and collaborative negotiations, by breaking them down into three categories: conditions necessary for negotiation, the processes of the negotiation, and the outcomes of the negotiation. The Xs depict when the issues represent integrative and collaborative negotiations.

		DISTRIBUTIVE	INTEGRATIVE	COLLABORATIVE
CONDITIONS	Share Information		**X**	**X**
	Trust		**X**	**X**
	Separate People from Problem		**X**	**X**
	Manage Positions		**X**	**X**
	Unite			**X**
PROCESS	Compete	**X**		
	Expand the Pie		**X**	
	Logroll		**X**	
	Compensate		**X**	
	Cutting Costs		**X**	
	Problem-Solve			**X**
OUTCOMES	Single-Gain	**X**		
	Mutual Settlement		**X**	
	Superior Settlement		**X**	
	Pareto Optimal			**X**

Table 1: Distributive, Integrative, and Collaborative Negotiation Characteristics

The remainder of this chapter focuses on integrative and collaborative negotiation. First, integrative negotiation conditions, processes, and outcomes are discussed. Then, a discussion of collaborative negotiation follows using the same format as integrative negotiation.

Integrative Negotiations

Organizational theorists have discussed integration since the 1920s. Mary Parker Follett was instrumental in defining and discussing the benefits of integration. She believed that compromise, which was used by most organizations of her time (and is still used by many companies today), resulted in lose-lose outcomes where both parties received only part of what they wanted (Follett, 1925). Since neither party was completely satisfied, Follett believed that future tension between the parties would arise. Her solution was the integrative resolution. Through open communication and recognition of the bigger problem, Follett argued that people could reach successful long-term solutions (Graham, 1996; Metcalf & Urwick, 1941). This thinking led many researchers in the later part of the 20th century toward integrative negotiation research. Theorists recognized that integrative negotiations, which focused on joint-gain and relationship maintenance, were an important way to achieve goals while building stronger working relationships. A well-defined research track has given great insight into defining the process and outcomes of integrative negotiation.

Integrative Negotiation Conditions

Integrative negotiations recognize that information sharing and trust are necessary in order to achieve mutual outcomes that lead to sustained relationships. Most believe that information sharing is at the core of integrative negotiations. The greater the amount of useful

information provided by each party, the more likely it is that perceptions converge and joint-gain solutions result.

Negotiation researchers agree that sharing information increases the likelihood and quality of negotiated outcomes (Morishima, 1991; Murnigham, Babcock, Thompson & Pillutla, 1999). Sharing preferences and priorities improves the quality of outcomes because parties are able to incorporate this information in making decisions. O'Connor demonstrated this in his 1997 study. She found that dyads who exchanged information had greater perceptual accuracy, and better represented true desires. The importance of information sharing in integrative negotiations was also shown in Thompson's (1991) study of mutual and asymmetric information exchange. She found that both providing and seeking information improved the accuracy of negotiator's judgments, thus leading to more integrative solutions. These studies show that gaining information about a person leads to more accurate perspectives. The negotiators become more aware of each other, making it easier to work together and develop solutions that support goals.

However, sharing information comes with a price. Each participant runs a risk when disclosing his or her desires and goals (Molm, Takahashi, & Peterson, 2000). If, for instance, one party believes that the negotiation is distributive, they will use any information disclosed by the other party to gain power. Therefore, if the parties do not take the time to discuss and agree upon the type of negotiation to use, it is likely that little information will be shared. The parties will fear vulnerability and not disclose important pieces of information. While information sharing is critical, it is nearly impossible to achieve if trust—the second characteristic of integrative negotiation—is missing.

Trust is essential when creating a negotiating environment where information is shared. Both initial trust and relational trust are studied in the negotiation literature (Beersma & De Dreu, 1999; Conlon & Hunt, 2002). Initial trust exists before any negotiating occurres. A history of success or failure, previous interactions with the same individuals, and negotiator personalities all add to a person's level of initial trust. This trust is necessary in order to initiate a climate where negotiators are comfortable in sharing information. For instance, Butler (1999) found that initial trust expectations led to greater amounts of information sharing. When manipulating initial trust, he found that dyads that experienced greater information exchange had higher levels of initial trust. He concluded that this was due to the comfortable climate that developed when the dyads trusted each other.

In addition to initial trust, several studies have focused on relational trust that develops through the interactions of negotiators. Individual differences, reputations, and communication all affect the trust that develops during a negotiation. For instance, Fells (1993) created a list of behaviors necessary to develop trust during a negotiation. He suggests that dyads realize the importance of trust in negotiation if they show a willingness to trust, seek feedback to determine if perspectives were accurately received, reinforce the other party's willingness to trust, or recognize the adverse consequences if trust is not developed. Fells also suggests that trust is necessary because the greater the trust developed during the negotiation, the more likely it is that integrative outcomes result. Butler (1995) showed this when he discovered that dyads who trusted more during the negotiation shared more information, thus increasing perception accuracy. With more accurate perspectives, the dyads understood each other better and were able to develop integrative outcomes.

Whether focusing on initial or relational trust, researchers agree that the higher trust levels lead to more information sharing and integrative solutions. Therefore, if trust is desired, it is imperative that each party be explicit about stating their intentions and perspectives.

While information sharing and trust are essential pieces of integrative negotiations, neither can exist unless each party takes the pre-negotiation steps needed to establish a sound relationship. With these conditions met, there is a greater chance of reaching joint-gain outcomes through integration. Consequently, before negotiating it is important to separate people from the problem, and manage any positions that exist.

First, separating people from the problem requires that negotiators recognize that a problem exists and agree to analyze the problem objectively without associating it with the other party (Saunders, 1985). To do this, negotiators must: 1) share their perspectives of the problem, 2) jointly frame the problem so that it is satisfactory for all involved (Carpenter, 1999), and 3) make sure that the issues outlined in the problem statement are reasonable and manageable (Carlson, 1999). In addition, participants must focus on the environment where the negotiation takes place. It is important that an open climate is created and maintained so negotiators reveal their true objectives and listen to each other without being critical (Frey, 2003; Lewicki, Barry, Saunders, & Minton, 2003). All parties must be willing to share their alternatives truthfully. Without honesty, tension may rise leading to the demise of the integrative negotiation. Finally, negotiators must attempt to understand the needs of others to ensure that criticism is minimized.

After separating the negotiators from the problem, positions are managed (Saunders, 1985). In order to do this, it is important that all parties focus on commonalties and minimize differences. Initially, this may be difficult. By using positive statements and active listening, the parties can look beyond their initial desires in order to determine their true positions. This

development is aided by recognizing that the refusal to shift from initial beliefs and feelings does not allow for effective communication. When an objective problem is defined, and negotiators are focused on their interests and commonalities, the parties must make the decision to participate. At this time, any concerns and hesitations are voiced in order to build and maintain trust. After this is done, participants can clearly explain why they are or are not willing to commit to the process. If all parties are committed, they can generate alternatives to overcome the problems.

Integrative Negotiation Processes

Four approaches exist for generating integrative alternatives (Pruitt, 1983; Pruitt & Carnevale, 1993; Pruitt & Lewis, 1975). While they differ in complexity, all are ways for parties to develop mutually beneficial outcomes. These approaches assume that parties maintain their independence by controlling their own resources, but work together to ensure that the resources are utilized fully. By discussing their interests and opinions in an open and objective manner, parties can determine where the resources should be used and who will benefit most. The four approaches are expanding the pie, logrolling, compensating, and cutting costs.

Expanding the Pie

The first integrative technique, expanding the pie, assumes that a lack of resources is the only reason for conflict. By obtaining more resources, parties satisfy their goals. This technique is only possible when additional resources are available, and parties must work together to collect those resources (Bazerman & Neale, 1992). While this approach is simple in theory, it is difficult to do because additional resources do not always exist. Also, this technique assumes that parties' interests are not mutually exclusive, and the driving force for obtaining more resources is the desire to be able to continue working together (Neale & Bazerman, 1991). If

this technique is possible, it is an efficient way to achieve joint-gain without destroying relationships. And yet, little relationship building occurs because only limited interaction is needed.

Logrolling

The second integrative technique, logrolling, assumes that more than one issue is driving the conflict. Parties first provide a list of their issues and desires. Comparison of these lists helps parties discover that they have opposed preferences and values (Northcraft, Brodt, & Neale, 1995). Traditional logrolling assumes that parties have linear preferences and make calculated concessions in order to obtain important issues while giving away lesser valued issues (Tajima & Fraser, 2001). The key here is that parties prioritize their issues differently and make appropriate concessions that result in a recognized willingness to concede on some issues in order to maintain a working relationship (Pruitt, 1981). This technique ensures that trade-offs make parties at least partially satisfied.

Compensating

The third approach to integrative negotiation, compensation, suggests that to achieve desired outcomes, one party pays off the other in return for acquiescence (Pruitt, 1981). Three types of payment exist. First, specific compensation consists of alternate ways to satisfy the needs of a party who is frustrated by the propositions of the other. An example of specific compensation exists when a mother who decides to go back to work hires a housekeeper to compensate her family for the losses they experience with her gone. Second, homologous compensation looks similar to the party's lost benefit, but fills a need other than the one that was frustrated. An example of homologous compensation exists when two people swap books of differing subjects. One person requests a certain book; in return, that person gives a book of

interest to the giving party. Third, substitute compensation is a benefit that is given to serve a different need altogether. An example of substitute compensation is to thank a person for giving directions. This pay-off is unrelated to the request, but satisfies the giving individual. Compensation assumes that parties can determine truly desired outcomes by the other party, whether it is part of the negotiation or not. If this is done, it is possible to satisfy both parties since one achieves his or her desired negotiation goals, and the other receives a benefit that allows for easy recovery.

Cutting Costs

The final approach, cutting costs, assumes that a party will accommodate the opposing party if costs associated with negotiating are limited or eliminated (Pruitt, 1981). It requires that each party know the other well enough to suggest cost-cutting strategies that are important to each. The party who desires to achieve their objectives must develop a plan that aids in the cutting of costs for the opposing party. This plan ensures that the opposing party is less affected by the time and energy used in negotiation.

There are two types of cost-cutting strategies frequently used during integrative negotiations. The first alleviate concerns that the conceding party has about future reputation. In this situation, the conceding party believes it will be seen as an accommodator in future negotiations. To reduce the party's concerns, the requesting party can set precedents associated with the action. For example, the party can state that actions taken in the negotiation are unique to that negotiation, or that the current actions are due to special circumstances associated with the specific negotiation. This helps the conceding party accept the negotiation conditions because they can claim that it was the only option.

The second cost cutting strategy used in integrative negotiations protects the conceding party's image from harm (Pruitt, 1981). Negotiators try to make a certain impression in work and personal situations. By conceding, a party may be concerned about a loss of status, reputation, or freedom. To reduce the tension that results, the asking party can use one of the following six approaches:

a) Promise to support the conceding party's image at a future time

b) Begin a request by praising a characteristic of the conceding party

c) Choose words that reduce the demanding nature of the requests

d) Blame an outside force for the situation that exists

e) Explain that the concessions are in the best interest of the party

f) Encourage a belief that the conceding party aided in the decision-making

Using one of these suggestions eliminates the conceding party's concerns.

The aforementioned approaches assume that parties are separate entities that work toward mutual benefit. These methods are used if time is limited and relationship maintenance is desired. Before choosing an approach, it is important that both parties understand the problem objectively and are prepared to use an integrative approach.

Integrative Negotiation Outcomes

Once alternatives are generated, and the most acceptable solution is chosen, outcomes are examined. According to the integrative outcomes model developed by Thompson (1998), three levels of joint-gain agreements exist. The model is depicted in Figure 1.

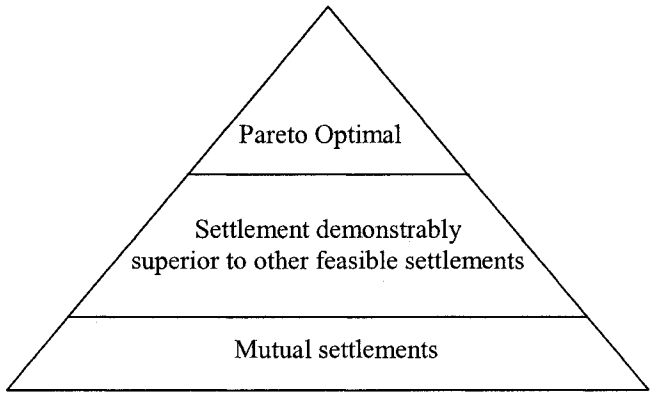

Figure 1: Thompson's Model of Integrative Agreements

The model begins at the base with the most simplistic agreement. Higher levels are progressively more complex, and therefore, more difficult to achieve.

Level 1: Mutual Settlement

Negotiators reaching this level of agreement are able to reach a settlement that exceeds both parties' reservation points (Thompson, 1998). Each stakeholder achieves a settlement that is better than his or her alternatives.

Level 2: Settlement Demonstrably Superior to Other Feasible Settlements

Level 2 is established when negotiators reach agreements that are better for all parties than other feasible settlements (Thompson, 1998). It expands the settlement by generating a new alternative that all stakeholders approve of. Level 2 indicates that a fixed-sum relationship does not exist. Certain alternatives create greater benefit for all parties.

Level 3: Pareto Optimal

A Pareto optimal outcome is defined in the negotiation literature as the alternative that best satisfies all involved parties (Tajima & Fraser, 2001). Level 3 outcomes claim that no other agreement would be as beneficial to both parties while stabilizing relationships (Thompson, 1998). These are the most complex outcomes to achieve and are an indication that parties worked as one unit.

Levels 1 or 2 demonstrate integrative negotiation outcomes. Both parties are partially satisfied because they gained more than their reservation point, but did not completely fulfill their desires or improve relationships. These outcomes benefit all, and do not destroy relationships. However, the techniques used to achieve these outcomes may not develop optimal outcomes because they only add or trade value.

Collaborative negotiations lead to Pareto optimal outcomes (Thompson, 1998). Before discussing collaborative negotiation outcomes though, the conditions and processes are examined to ensure the understanding of why collaborative negotiations result in outcomes that fully satisfy parties.

Collaborative Negotiations

In 1981, the introduction of *Getting to Yes: Negotiating Agreement Without Giving In* (Fisher & Ury, 1981) popularized joint-gain negotiation by introducing a collaborative problem-solving negotiation process that was geared toward mainstream management. With globalization, the restructuring of organizations, and new emphasis on empowerment, managers recognized the value of this collaborative approach to dispute resolution.

Although there are some aspects of collaborative negotiation that are identical to integrative negotiation, differences abound. Therefore, this section identifies and describes the conditions, processes, and outcomes of collaborative negotiations.

Collaborative Negotiation Conditions

Collaborative negotiations require the same conditions applied to integrative negotiation. Trust is needed so that information sharing occurs. Separating negotiators from the problem and managing positions are also necessary. However, collaborative negotiation conditions become more elaborate than integrative negotiation conditions because problem-solving processes are used to generate alternatives. Therefore, it is necessary to discuss these conditions before talking about collaborative negotiation processes.

The basic premise of collaborative negotiation is problem-solving. Theorists suggest that without problem solving, it is nearly impossible to create new alternatives that lead to the full satisfaction of all parties.

Before problem-solving can take place, it is important that steps are taken to ensure that a collaboration-friendly environment exists. Experts suggest that several factors encourage successful collaboration (Gray, 1989; Straus, 1993). These conditions make it possible for trust to develop, causing participants to feel more comfortable when sharing information. They also create unity between parties, allowing one problem-solving group to develop. While most theories overlap, there are subtle differences worth mentioning. Each theory will be individually presented below.

First, Gray (1989) suggests that five circumstances lead to effective collaboration: (1) interdependence of the stakeholders, (2) solutions that result from dealing openly and creatively with differences, (3) joint ownership of all decisions made, (4) assumed collective responsibility,

and (5) the recognition that collaboration is an emergent process. If stakeholders recognize and act on these five conditions, it is more likely that a common ground is discovered. Gray believes that any individual in any situation can find these five circumstances and use them to benefit himself.

Susskind and Cruikshank (1987) take a slightly different view of successful collaboration. They argue that only certain problems are amenable to collaborative solutions. Those problems are oriented toward how to do something rather than toward stakeholder rights. Susskind and Cruikshank believe that creative solutions can result only if individuals look beyond their positions and realize that focusing exclusively on outcomes inhibits communication.

Friend and Cook (1996) distinguish between successful and unsuccessful collaboration in four ways. In order to achieve collaborative solutions they argue that participants must first understand that collaboration is voluntary. There should be no coercion used when establishing a problem solving team. Second, Friend and Cook state that collaboration requires parity between participants. Every individual should have equal opportunities during interactions. Third, participants must recognize that collaboration is based on mutual goals. This recognition allows the stakeholders to focus on agreement rather than differences. Finally, Friend and Cook suggest that stakeholders must understand that collaboration depends on shared responsibility for participation and decision-making. Information sharing is imperative because it ensures that participants have similar perspectives.

Finally, Fine (1990) uses a different explanation of successful collaboration by identifying several factors that may inhibit problem solving. According to Fine, the parties involved in the collaboration should watch for: (a) an attitude that suggests that some individual

is unable to participate in a collaborative fashion, (b) a belief that all participants must view the problem the same way, (c) defensiveness because of a history of unsatisfactory interactions, (d) feelings of inadequacy and fear when trying something new, and (e) insufficient time. If any of these situations exist, it is important to take steps to alleviate the issue. Otherwise, trust will not exist, and a fluid information exchange will not develop.

While authors have different views on what the most important conditions are for collaboration, some similarities do exist. The aforementioned theorists believe that it is important for participants to discuss the problem in an equal manner, ensuring that trust and creative solutions arise. This communication ensures the development of a climate where parties unite. Ultimately, these theorists recognize that collaborative problem-solving is a process, not an end. With the conditions for collaborative negotiation discussed, the various models of collaborative problem-solving can now be introduced.

Collaborative Negotiation Processes

If parties want to ensure total satisfaction, collaborative negotiation should be used. Unlike the trade-off nature of integrative negotiation, collaborative negotiation encompasses a problem-solving philosophy. Borrowed from the decision-making and creativity literature, collaborative negotiation uses problem-solving to *create* mutually beneficial solutions that did not initially exist. The key to this type of negotiation is the melting of separate parties into one group through the elimination of positions and introduction of active listening. A review of collaborative problem-solving and collaborative negotiation provides several techniques beneficial to accomplishing collaborative negotiation.

Collaborative Problem-Solving

Collaboration combines resources to strengthen the outcomes of all stakeholders. It is an interactional process where the problem and the stakeholders influence each other in a circular fashion (Gray, 1985; Hood, Logsdon, & Thompson, 1993; Keys, Bemak, Carpenter, & King-Sears, 1998; Melaville, Blank & Asayesh 1993; Poitras & Bowen, 2002). Participants are encouraged to discuss issues directly without using a third party (Kelman, 1992). If an open climate exists and parties trust one another, then communication leads to the revelation that the underlying issues are similar. When this occurs, the desired consensus becomes a shared image of both the problem and the process by which stakeholders respond to each other (Hart, 1985). When the parties recognize this fact, they are better prepared to resolve the problem using creative solutions.

Specifically then, while there is much agreement on the overall process of collaboration, various models emphasize different points in the collaborative process. First, Gray (1985) proposed a process model of collaboration that includes three phases. The first stage, problem-setting, involves the identification of stakeholders and the mutual acknowledgment of the issues that join the individuals. If done successfully, this phase creates a climate where individuals understand each other and are able to effectively communicate. The second phase, direction-setting, focuses on the stakeholders articulation of their values and the identification and appreciation for different views and common purposes. This phase is only possible if trust is present. The final stage, structuring, involves the creation and maintenance of solutions that emphasize collective appreciation. This final stage allows for future relationships among stakeholders.

A second, similar model of problem solving created by Melaville, Blank, and Asayesh (1993) includes five stages. In the first stage, stakeholders come together around a specific issue. These participants understand that all are equal and willing to participate. Second, each individual defines his or her desires and goals. Outlining goals ensures that all are aware of the various issues and perspectives that exist. In the third stage, a strategic plan is developed. This plan includes the integrated goals and creative solutions that ensure collaborative success. It also contains the necessary steps that lead to a productive solution. Fourth, the participants act on the strategic plan. For the fifth and final stage, progress is monitored in order to flag any changes needed in the process. All participants are held accountable for their actions and are reassured of their progress. Melaville, Blank, and Asayesh's model emphasizes that equality is needed in order for collaboration to work; without equality, party differences may outweigh their similarities.

Hood, Logsdon, and Thompson (1993) present a slightly different model of collaboration. They argue that for effective collaborations to exist, one must focus on (a) the environment where the interactions will take place, (b) organizational factors, and (c) group interactions. If the participants are aware of the benefits and detriments of these three categories, there is a good chance for successful collaborative decisions. Therefore, it is warranted to briefly describe each aspect of Hood et al.'s model.

First, many of the critical problems that surface during problem-solving occur because of institutional characteristics that impede progress toward meaningful collaboration (Hood, Logsdon & Thompson, 1993). These institutional characteristics are broken into two general categories. The first includes the elements that relate to the perception of the problem. Examples of these characteristics include severity, complexity, and resource availability. The

second set of institutional characteristics includes the institutional context, such as the strength of the organization, the ability of that organization to change, and the conflicts that exist within that organization.

In addition to environmental factors, one must also understand the benefits and detriments of organizational factors. These factors are discussed in detail within the collaboration literature, and many agreed that three factors impact collaboration most (Gray, 1989; Waddok, 1989; Whetten, 1981). First of all, the perceived interdependence between participants impacts the level of collaboration. If the stakeholders perceive greater interdependence, they are more likely to discuss the various situations and develop creative solutions. Secondly, organizational interests play a role when determining the effectiveness of collaborations. For example, organizations may desire efficiency. If this is the case, then participants must decide if collaboration is even possible. Lastly, the organizational interest involves the level of commitment presented by the organization's top management. If top management is willing to invest the time, energy, and money for collaboration, success is more likely.

A final factor that influences collaborative problem solving according to Hood, Logsdon, and Thompson (1993) is group interaction factors. The number of individuals involved on each side of collaboration impact the ease of finding a solution. While large diverse groups have several perceptions, and therefore produce creative solutions, good solutions are only possible if enough time is allotted for the collaboration. If there is limited time, it may be more beneficial to include fewer people in the process. Hood and colleagues believe that by focusing on various factors involved in collaboration, one can become more aware of their situation and be able to

make better decisions. This theory is different from the aforementioned models of problem solving because of its emphasis on the environment.

Whatever model one chooses to use, most agree that collaborative problem-solving is warranted in several circumstances. The most dramatic appeal for collaboration is when time is abundant and consensus is critical because decisions are important to all. This situation is seen in several historical situations that are discussed at the end of this dissertation. Another situation where collaboration is a handy tool is when problems are too large for one organization to handle. By pooling resources, it is more likely that creative and definitive solutions develop. Finally, collaborative problem-solving is useful in the increasingly turbulent environment that exists for government and business. Many of these real life collaborative situations use some form of negotiation to discover a creative solution. Therefore, the next section of this paper explains the collaborative negotiation process.

Collaborative Negotiation

The collaborative negotiation process uses problem-solving to generate new and creative alternatives that fully satisfy all participants. It requires that parties not see themselves as separate entities, but rather come together to communicate in an open and honest way. This symbolic move from individualism to collectivism, makes it possible for parties to recognize their similarities, which ensures that they see past their positions and can work toward one common objective: to eliminate the conflict while ensuring that relationships flourish.

When interests are understood, alternatives are generated (Lewicki, Barry, Saunders, & Minton, 2003). If parties reframe the problem in order to create collective alternatives, they can generate win-win alternatives from win-lose situations. To do this, parties analyze the problem and create a list of alternatives. When the list is complete, parties choose the alternative that best

eliminates the problem. For example, participants can focus on increasing the resources available to them. By creatively looking at alternatives, stakeholders may find that they have more than originally thought.

When alternatives are established, the negotiators evaluate and select an alternative together (Lewicki, Barry, Saunders, & Minton, 2003). Again, it is important for participants to remain open when choosing the best alternative. Decisions should be based on the quality of the alternative as well as personal preference. It is important to thoroughly discuss the options to allow all underlying benefits and detriments to surface. This communication will ensure that future frustration and disappointment do not arise.

Collaborative Outcomes

Referring back to Thompson's (1998) model of integrative agreements (Figure 1), collaborative negotiation processes lead to Pareto optimal outcomes. These outcomes are the most beneficial to both parties and result in the highest levels of satisfaction. They result because parties recognize that they are one problem-solving group that desires the best possible solution for everyone. These outcomes are guaranteed to maintain relationships because parties recognize that by working together, they develop winning solutions.

Conclusion

Although most theories combine integrative and collaborative negotiations, this chapter claims that though the two have similarities, they are fundamentally different. The similarities rest in both requiring information sharing and trust. If these conditions do not exist, it is impossible for parties to work together. In addition, both integrative and collaborative negotiations result in mutual benefit, and relationship maintenance. However, integrative and

collaborative negotiations diverge at this point. In integrative negotiation, parties maintain their independence and use 'trade-off' techniques to achieve their desired goals. Integrative approaches result in partially satisfied parties who may not achieve all of what they desire.

In contrast, collaborative negotiations unite parties in a problem-solving approach where alternatives are created, and participants achieve more complete satisfaction. This approach is much more time and resource consuming, but can result in optimal outcomes.

It is important that those who want to use a joint-gain negotiation understand the differences between integrative and collaborative techniques so that they choose the best alternative to meet their needs. Negotiators must also understand those involved and the situation that exists. If negotiators clearly recognize their interests and the environment— and understand distributive, integrative, and collaborative negotiations—then they can choose the most efficient and effective way to negotiate. To conclude then, Table 2 summarizes the conditions that one should be concerned with when determining whether to use distributive, integrative or collaborative negotiation.

	DISTRIBUTIVE	INTEGRATIVE	COLLABORATIVE
AMOUNT OF TIME	Little	Moderate	Extended
EMPHASIS ON RELATIONSHIPS	Little	Moderate	High
PROBLEM IDENTIFICATION	Little	Moderate	High
CONSEQUENCE	-Single-gain -Damaged Relationships	-Mutual Settlement/Superior Settlement -Maintained Relationships	-Pareto Optimal -Future Relationships

Table 2: Important Conditions when Choosing a Type of Negotiation

CHAPTER THREE: LITERATURE REVIEW AND HYPOTHESES

Chapter Three redefined joint-gain negotiation as being either integrative or collaborative. The remainder of this dissertation focuses on collaborative negotiation, and investigates how individual differences affect the negotiation process. This chapter has three main functions. First, it introduces the research model studied in this dissertation. Second, this chapter reviews ways to measure collaborative outcomes and to discuss their shortcomings. It is argues that process measurements give greater insight into the sustainability of a collaborative venture. This chapter concludes by reviewing relevant literature and introducing a series of hypotheses. These hypotheses expand our understanding of the collaborative negotiation process by examining how individual and situational characteristics affect collaborative negotiation processes and outcomes.

The Research Model

Although collaborative negotiation is an important way to manage conflict, little research exists studying the people and climate of such negotiations. Therefore, this dissertation adds to the limited scholarship by examining various relationships between collaborative negotiation processes and outcomes. The first relationship investigated is that of information sharing and collaborative outcomes. Current research shows a strong link existing between information sharing and collaborative outcomes; this dissertation argues that this link leads to a better measure of collaborative effectiveness. Specifically, this chapter argues that current trends for measuring collaborative outcomes are enhanced by focusing on the amount of information shared.

Once the link between collaborative outcomes and information sharing is established, this chapter examines how dispositional trust and situational perceptions of power affect the amount

of information shared during a collaborative negotiation. It is argued that dispositional trust is an essential component of collaborative negotiation because parties are more willing to share information. The author also suggests that situational perceptions of power play a role in determining the path of a collaborative negotiation and should be examined more closely.

Figure 2 introduces the research model. This model develops a framework for understanding the link between: 1) situational factors (BATNA and situational perceptions of power), process measures (information sharing), and collaborative outcomes; as well as 2) individual differences (dispositional trust), process issues (information sharing) and collaborative outcomes. While the literature review and hypotheses are not discussed according to the flow of the model, it is important to briefly explain the logic for its development. This will ensure that a holistic understanding is established before individual components of the model are discussed.

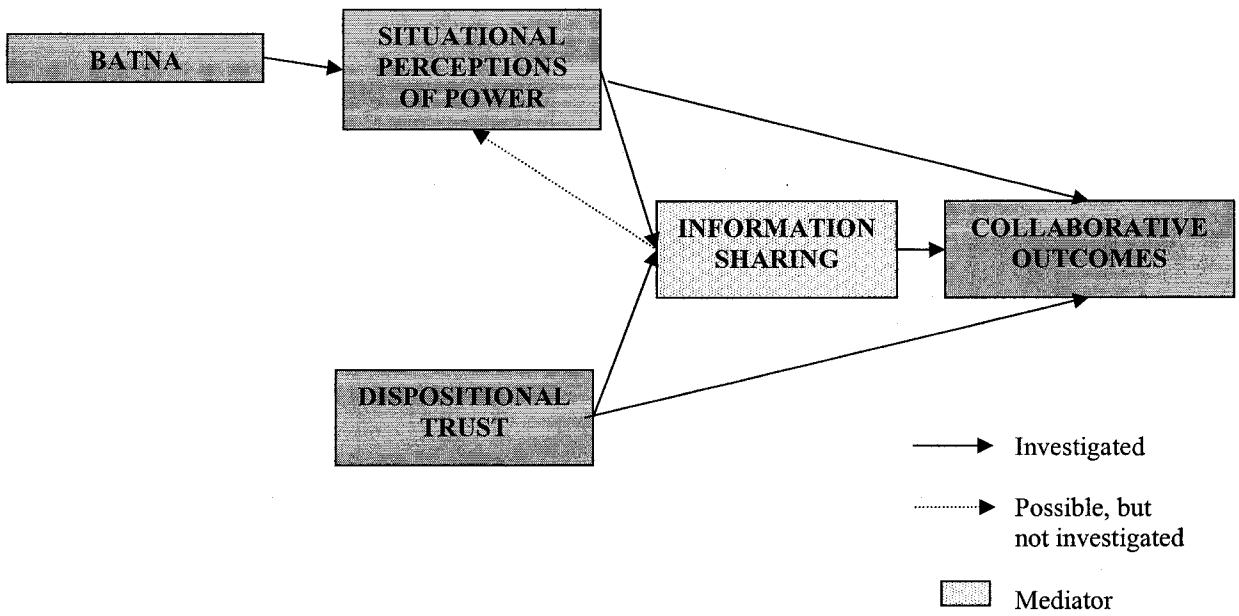

Figure 2: Research Model

This model begins by examining the relationship between the Best Alternative to the Negotiated Agreement (BATNA) and situational perceptions of power. The BATNA is manipulated in order to test its affect on a negotiator's situational perception of power.

Once the relationship between the BATNA and situational perceptions of power is established, the two relationships functioning as the primary purpose of this dissertation are examined. The first relationship between situational perceptions of power and information sharing suggests that situational perceptions of power alter the amount of information disclosure. The second relationship studied is between dispositional trust and information sharing. This connection suggests that dispositional trust affects the level of information shared.

This model also examines how perceptions of power and dispositional trust affect collaborative outcomes. To do this, it studies the direct relationships between perceptions of power and collaborative outcomes, as well as between dispositional trust and collaborative outcomes. It also examines these relationships as mediated by information sharing. Finally, this model suggests that a direct relationship exists between information sharing and collaborative outcomes.

Because of the important link between information sharing and collaborative outcomes, this chapter discusses the literature and introduces the hypotheses in a reversed order. First, the ways that collaborative outcomes are measured and the proposed importance of information sharing in measuring collaborative outcomes are discussed. This chapter then reviews each relationship represented in the model to build a case for the model as a whole.

Collaborative Negotiation as Information Sharing

Measuring Outcome Effectiveness in Collaborative Negotiation

Collaborative negotiations result in solutions that satisfy negotiators and improve relationships. Negotiators choose collaboration even though it consumes more time and resources, because of a desire to maintain future working relationships. They realize that people who work together to achieve goals are more likely to establish lasting ties. Therefore, when measuring the success of a collaborative negotiation, people must look at immediate and future results. There is some disagreement as to how to measure these outcomes. Traditionally, three methods are used (Pruitt, 1981). The first assumes that joint-gain results if the alternative is better for one party and equal or better for the other. This method is difficult to measure because of the subjective definitions of *equal* and *better*. Historically, researchers have had difficulty quantifying the value of alternatives.

The second method measures the effectiveness of the collaborative negotiation by summing negotiators' outcomes in order to produce a measure of joint profit (Thompson, 1990). While this is an efficient way to measure outcomes, it is difficult to determine if all parties achieved equal utility. One team may achieve more than the other, which can lead to tension between participants.

The third way to measure joint-gain is to use the outcomes achieved by the least benefited party (Pruitt, 1981). The alternative holding the greatest joint-gain is the one that benefits the lesser party most. Therefore, the party who gains more may not maximize their outcomes, but still increases the value of their outcomes. This measurement method does not work if the lesser party's options are of equal importance to them.

Gray (1989) suggests that the aforementioned methods are too simple for measuring collaborative outcomes. Individuals using collaborative negotiations desire long-term joint-gain and relationship maintenance. Gray argues that because collaborative outcomes are long-term, one must track the parties to determine if the collaborative negotiation was truly effective. She suggests that four factors are needed in order to measure collaborative negotiation effectiveness. First, it is important to focus on the effectiveness of the outcome. Effectiveness exists if negotiators actually reached their desired goals. It is important to mention that initial goals may change during the negotiation process. Therefore, it is important to measure outcomes by examining both unchanged and developed goals (Hood, Logsdon, & Thompson, 1993). The second factor used to determine the value of collaborative outcomes is the sustainability of solutions. This factor follows outcomes over time, focusing on their stability when confronting changes within and between the parties. A third factor measured when determining the value of collaborative outcomes is agenda expansion. This factor focuses on the long-term relationship between parties, and how it changes as the parties and outcomes mature. The final factor used to determine the value of collaborative outcomes is the level of satisfaction that parties have with the outcomes and resulting relationship. If parties are happy with the negotiated results, they will want to work together again.

While the aforementioned factors determine both the short-term and long-term collaborative outcomes, they are difficult to measure. To gather the long-term information, researchers must follow-up with parties. Much of the collaborative negotiation research uses short-term research methods utilizing samples that disperse after the data gathering is completed. Although this type of research gives wonderful insight into the collaborative negotiation processes, it does not allow for the measurement of outcomes using Gray's (1989) suggestions.

Because short-term techniques are efficient and effective when conducting collaborative negotiation research, these techniques should not be eliminated. Instead, researchers can use multiple outcome variables to gain a more complete picture of collaborative negotiations. This dissertation suggests that in addition to measuring immediate joint-gain, one can also determine the amount of information shared. Information sharing leads to problem-solving and collaborative outcomes (Butler, 1999; Pruitt, 1981; Thompson, 1991). Measuring it gives researchers a second short-term outcome variable to use when predicting overall collaborative negotiation effectiveness.

The Importance of Information Sharing in Collaborative Negotiation

Information sharing is an essential element of collaborative negotiations. Problem-solving techniques require that an open climate be developed to ensure the free discussion of interests, positions, and ideas (Daniels, 1967; Van de Vliert, Nauta, Gievels, & Janssen, 1999). The free flow of information allows participants to clearly understand the other party, making it possible to mitigate their differences and focus on their similarities. This focus ensures that there is a merging of separate parties into one problem-solving group who can better utilize collaborative negotiation techniques.

Several authors have developed theories identifying the importance of information sharing in collaborative negotiation. They suggest that without communication, it is impossible to achieve the various steps needed to develop creative solutions (Akdere, 2003; Thompson, 1998). For instance, Poitras, Bowen, and Byrne (2003) used a case study method to develop a model of consensus building. A major emphasis of this model is the necessity of information. They suggest that parties who share information are more likely to develop trust and respect for

each other. The authors caution that information should be shared in small increments. Providing small amount of information allows for an information sharing-trust cycle to develop.

Hutchinson, English, and Mughal (2002) support the importance of an open climate where information sharing exists. By analyzing organizational response to problems, the authors developed a model of problem-solving. This model suggests that a problem-solving environment consists of people who seek trust through objective discussion of issues and concerns. This discussion allows negotiators to better understand each other before beginning the problem-solving process.

McCann (1983) developed guidelines for social problem-solving interventions. His model suggests that for problem-solving to occur, it is important to have a climate that encourages participants to discuss the problem in an objective manner, and to share values and beliefs to ensure that underlying issues surface and people are separated from the issues. McCann states that this environment cannot exist unless participants are willing to honestly share information.

Finally, Boone and Hollingsworth (1990) discuss methods for developing creative thinking in collaboration. They suggest that creativity is, "uncovering, selecting, reshuffling, and synthesizing one's inventory of facts, ideas and skills" (Boone & Hollingsworth, 1990, p. 3). According to the authors, without open communication, it is impossible to create alternatives because participants do not have enough information.

A constant flow of information increases the parties' knowledge and understanding of each other, making it possible to see beyond positions to the true interests of all participants. The parties can then use their new understanding of the situation to develop creative alternatives that satisfy the interests and goals of everyone.

In addition to theory, several researchers have found a strong link between information sharing and joint-gain (Kemp & Smith, 1994; Pruitt & Lewis, 1975; Thompson, 1991). For instance, Legler and Reischl (2003) found that communication was positively related to collaboration in school-to-work coalitions. They suggest that communication creates a climate where people are more comfortable sharing their needs, constraints, and concerns. Sharing this information leads to trust and a collaborative environment.

A second study conducted by Thompson and Hrebec (1996) found that incomplete information sharing leads to lose-lose agreements. People do not maximize their outcomes because they are not sharing enough information. Therefore, the authors suggest that negotiators should agree on an open climate before negotiating. By doing this, parties are able to begin trusting each other so that they feel less vulnerable sharing information.

Butler (1999) also focused on information sharing in collaborative negotiations. He found that the amount of information shared was positively associated with the effectiveness of the negotiation. Those dyads who shared information worked together more effectively and developed alternatives that created greater joint-gain.

O'Connor (1997) found similar results. She concluded that cooperative dyads achieved greater joint-gain when sharing information. This was due to more accurate perceptions developed by the parties. O'Connor stressed that information sharing was only effective in dyads that agreed on the use of collaborative negotiation. If the negotiators acted independently, their outcomes were reduced if they shared information. This may be because opponents used the information against the party.

Collaborative negotiation researchers agree that a positive relationship exists between information sharing and joint-gain. Because this strong link exists, the amount of information

shared represents another measure of collaborative negotiation effectiveness. This alternative method—when used alone or in conjunction with a measurement of joint-gain—is an objective way to understand the process of the negotiation. In order to determine if information sharing is a suitable means for measuring collaborative negotiation effectiveness, it is important for this dissertation to replicate the results found in other studies. Therefore Hypothesis 1 states:

H1: Collaborative outcomes positively relate to the amount of information shared.

While information exchange is essential in collaborative negotiations, it is difficult to share information if a trusting environment does not exist (Child, 2001; Lane & Buchmann, 1998; Vangen & Huxham, 2003). This difficulty arises because certain risks arise when sharing information in a negotiation. Parties believe that they are more vulnerable when sharing information and therefore, communicate less (Murnigham, 1992; Zand, 1972). If parties trust each other, this vulnerability is eliminated. In fact, some theorists suggest that trust is the single most important component to building a negotiation relationship (Butler, 1995; Bazerman & Neale, 1992; Fisher & Brown, 1988).

Building trust is extremely difficult because people desire control and power. Many believe that controlling a situation or person leads to goal achievement. This belief may be due to a strong emphasis on individualism, competition, and distributive negotiations in Western societies. People find it difficult to trust because they worry that the opposing party will use that trust to their advantage. This concern is clearly exemplified by the Dilemma of Trust (Lewicki, Barry, Saunders, & Minton, 2003). The Dilemma of Trust focuses on how much one believes what the other party says. If one believes too much, he may be taken advantage of. If one believes nothing that the opposing party says, then agreement is difficult to achieve.

The next section of this chapter discusses the importance of trust in collaborative negotiation. A review of the types of trust is presented before discussing the influence that trust has on information sharing and collaborative outcomes.

Trust and Collaborative Negotiation

Types of Trust

Several disciplines study the development and affects of trust on cultures and societies. This broad range of research has resulted in numerous definitions and models of trust, making it difficult to determine if trust has a particular influence on people and interactions (Nielsen, 2004). This difficulty is especially true in the negotiation literature. Although collaborative negotiation studies use different definitions and models of trust, almost all have concluded that trust plays an important role in developing a problem-solving environment (Butler, 1991). Without trust, parties perceive that there is too much risk associated with the relationship. Therefore, they are unwilling to work with the other party. This dissertation examines the types of trust found in collaborative negotiation, and questions the relationship between dispositional trust, information sharing, and collaborative outcomes. Interpersonal trust is defined as, "an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon" (Rotter, 1967, p. 651). Various trust theories are used in the collaborative negotiation literature. Each one recognizes the complexity of trust, and attempts to simplify it into various stages and types of trust. A brief review of the literature will aid in understanding the complexity of this concept.

Trust as a Dispositional Variable

The study of trust in collaborative negotiation has resulted in two major themes: trust as a personality trait and trust as a temporary state (Ross & Lacroix, 1996). The first perspective views trust as a stable trait that is developed and maintained by genetics and upbringing (Farris, Senner, & Butterfield, 1973). As children, we develop a *general trust* for people that is carried through into adulthood. This dispositional characteristic causes people to react in a similar manner (either trustfully or distrustfully) in most interactions with others. This perspective assumes that some people are more likely to trust than others, and is often called the Propensity of Trust (Mayer, Davis & Schoorman, 1995). Propensity of Trust is a stable trait that influences the amount one trusts another when little information is known about the opposing party and situation.

Early empirical work by Rotter (1967) determined that those who have high trusting scores are less likely to use deceptive tactics during interpersonal interactions. This may be because they see the other party as more trustworthy (Parks, Henager, & Scamahorn, 1996; Yamagishi, 1986). In addition, those who are more trusting are seen as more trustworthy by others. This initially trusting environment may lead to more cooperation because people feel comfortable with each other and the situation (Kuhlman, Camac & Cunha, 1986). These findings have major implications for collaborative negotiation, because initial impressions that parties are more trustworthy (when people have high trusting scores) may ease the tensions that exist. If the opposing party is confronted with someone who has a positive and trusting disposition, they are likely to respond in a less guarded fashion.

Trust as a Temporary State

In contrast to the first perspective, a second group of theories suggests that trust is a temporary state that is induced by a variety of stimuli. It develops through relationships and negotiation situations, and is constantly changing as the environment develops (Argyris, 1962). To help explain what this type of trust is, McAllister (1995) distinguishes between three general types of relationship oriented trust: 1) trust that is derived from cooperative behaviors, 2) trust that is derived from the predictable behaviors of others, and 3) trust that is based on the party holding a problem-solving perspective.

The first type of trust is developed as a result of cooperative behaviors exhibited between parties. This perspective assumes that trust is defined as the expectation that the other will cooperate (Pruitt & Kimmel, 1977). It recognizes that trust is created or destroyed by a series of cooperative or deceptive moves made by the other party (Kee & Knox, 1970). Therefore, trust is seen as a temporary state that is altered by the cooperative interactions that occur between parties. This perspective uses cooperation as an operationalization of trust (Ross & LaCroix, 1996).

The second trust state suggests that predictable behavior is necessary to establish trust (Butler, 1991). Theorists using this approach assume that parties will trust each other when they can make assumptions about each other's moves. This trust usually comes in the form of concessions or information sharing. A climate of trust is developed when information is traded-off, because both parties recognize the risk that is present when sharing information or making concessions. This second perspective of trust is manipulated through the interactions that occur during the negotiation. It suggests that trust is established and modified each time a transfer of information occurs.

The final type of trust that McAlister (1995) recognizes assumes that trust is a component of a problem-solving approach used in collaborative negotiations. It suggests that for trust to exist, parties must see others as: 1) recognizing and using a problem-solving approach, and 2) generally unselfish (Kimmel, Pruitt, Magenau, Konar-Goldband, & Carnevale, 1980.) If parties mutually understand that a problem-solving approach is best, then they have already set the stage for trust. Both are more willing to work together and recognize the necessity of trust. According to this approach, trust is also developed by the parties recognizing their similarities before and during the negotiation. When parties recognize that they are intertwined in mutual fate, or when they revisit their past problem-solving successes, the parties are more connected and willing to work together (Lewicki, Barry, Saunders, & Minton, 2003).

The problem-solving perspective is used most frequently when developing models of trust in collaborative negotiation. This model is used because of the complexity of the interactions that must occur during the problem-solving approach. This perspective recognizes that parties must eliminate their differences and focus on their similarities and mutual interests. Problem-solving recognizes that parties interact with each other, which causes constant changes in their perceptions, interests, and goals. These changes are central in determining the level of trust, information sharing, and relationship building that occurs during the collaborative negotiation. While the problem-solving approach is very helpful in developing fruitful theories about trust, information sharing, and relationship building, one piece that it missing with this line of research is the dispositional theory of trust. Little is said about the characteristics of the people in problem-solving models. Therefore, this dissertation focuses on dispositional trust and its affect on collaborative negotiation. The next section of this chapter reviews literature on dispositional trust and the information sharing.

The Effect of Trust on Collaborative Negotiation

The collaborative negotiation literature focusing on trust has found a positive relationship between trust and joint-gain (Huxham & Vangen, 2004). It suggests that trust is a central component in promoting cooperation and good will in collaborative negotiations (Naquin & Paulson, 2003). Many joint-gain negotiation articles use relational trust when studying the problem-solving process. These articles argue that a cyclical relationship between trust, information exchange, and relationship building exists (Vangen & Huxham, 2003), and that trust develops gradually over time (Rempel, Holmes & Zanna, 1985, Zand, 1972). Since trust is necessary during the collaborative process, it is important to determine how it originates. Unfortunately, few studies do this. Therefore, this dissertation examines initial trust, which exists before interactions occur.

Initial trust is based on a person's disposition to trust, experience, and knowledge of the opposing party. (Butler, 1999). Although most studies assume that initial trust is minimal (only exists enough to ensure that the trust-information sharing cycle can begin), theorists are beginning to question the importance of initial trust in joint-gain outcomes (McNight, Cummings & Chervany, 1998). They argue that stronger initial trust leads to greater ease in initial information sharing, which results in a more efficient trust-information sharing cycle if both parties agreed to a problem-solving approach. Because high initial trust is necessary for the development of a collaborative negotiation process, it is important to study how the components of initial trust affect information sharing and collaborative outcomes. Therefore, this dissertation investigates how dispositional trust affects the collaborative negotiation process and outcomes. Dispositional trust is not related to experience or firsthand knowledge of the opposing party, but rather, is based on the characteristics of the person entering the situation.

While no studies have focused directly on dispositional trust, some have examined initial trust and collaborative negotiations. For example, Jones and George (1998) suggest that in low initial trust situations, individuals may be hesitant to share critical information because of the possible risks involved. These individuals believe that the other party is not trustworthy and that they will use sensitive information to their advantage. This situation can cause failure in collaborative negotiation because little valuable information, crucial for the creation of new alternatives, is exchanged.

In support of Jones and George's (1998) suggestion, Droege, Anderson, and Bowler (2003) propose that trust increases the quantity and quality of information available to receivers. They argue that without the immediate development of initial trust, critical information needed for collaboration may go undiscovered.

In another study focusing on trust expectations and information sharing, Butler (1999) found that initial trust expectations were associated with the amount of information shared. This study also found a significant relationship between a climate of trust and information sharing, and fully supported the idea that initial trust leads to initial information sharing by using the integrative approach of logrolling. While logrolling leads to joint profit, it does not use the same processes as collaborative negotiation. However, since several overall similarities exist between the integrative approach of logrolling and the collaborative approach, this dissertation attempts to replicate this finding with collaborative negotiations by using dispositional trust to show how individual trust characteristics affect information sharing and collaborative outcomes. Therefore, Hypothesis 2 states:

H2a: The amount of information shared positively relates to dispositional trust.

Since there is such a strong link between information sharing and collaborative outcomes, it is important to examine the relationship that may exist between dispositional trust and levels of joint-gain as well. Therefore, two additional hypotheses are tested.

H2b: Collaborative outcomes positively relate to dispositional trust.

H2c: Information sharing mediates the relationship between collaborative outcomes and dispositional trust.

Although trust is necessary in collaborative negotiations, there are several other variables that may affect the amount of information shared and the collaborative outcomes that result. One such construct is a person's situational perception of power. Therefore, the final section of this chapter discusses perceptions of power and outlines hypotheses tested in this dissertation.

Perceptions of Power and Collaborative Negotiation

Power Versus Perceptions of Power

In general, power is known as the ability of one actor to influence another toward acting in a certain way (Shaw, 1976). According to Mary Parker Follett, there are two ways to think about power: power-over an individual and power-with a person (Metcalf & Urwick, 1941). Power-over refers to having control of the situation and being able to influence another individual. In contrast, power-with is defined as a jointly developed, non-coercive, co-active power that involves all parties. While both types of power are necessary in today's society, Follett argued that the more effective for maintaining relationships is power-with. Involving all parties ensures that each is empowered to make decisions, which may actively reduce conflicts. With this said though, much of the emphasis on power in Western society focuses on power-over another individual. Modern theories and taxonomies refer to different types of power as ways for individuals to obtain some advantage. Definitions assume that the one with greater power

has more influence over the other individual. The more powerful individual can use that influence to benefit himself.

Within the past 30 years, power in negotiation has become an important topic. Various taxonomies of power were developed in order to explain the different types of power that influence negotiation processes and outcomes. In addition, many researchers attempted to determine how power imbalances impact the negotiation. More recently, theorists focus on power as a social phenomenon that is altered by the perceptions of the involved parties. Unfortunately, perceptions of power theories have little support from research. Therefore, this dissertation adds to the limited research by focusing on perceptions of power in collaborative negotiations.

Understanding Power

Two major approaches for understanding power have emerged in the past 30 years. The first utilizes a Realist's approach. Under this philosophy, power is a definite concept that each person is capable of having and using to influence another individual. In addition, people make rational decisions based on their true understanding of power. This understanding has been very influential in developing current theories of power.

The second form of power research focuses on more of a contextual-based system where power is not seen as definite, but rather as a result of interactions between individuals and the environment. This approach has influenced the development of perceptions of power research because it accepts and recognizes differences in people.

The Realist's View of Power. Mary Parker Follett strongly believed that power was inside an individual and that it could not be delegated, transferred, shared, or given away (Drucker, Kanter, & Pauline, 1995). In short, only the individual could develop his power and

use it to influence another (Deutsch, 1973). This statement assumes that the person with more power wins and is not impacted by the party with less power (Dunne, 2002). These are Realist Assumptions. A focal point for this research is that an individual exhibits a certain level of power that alters the attitudes of others in a given situation (Lewicki, Barry, Saunders, & Minton, 2003). Using this philosophy, many types of power have been discovered.

In 1959, French and Raven introduced five major types of power: coercive power, expert power, reward power, legitimate power, and referent power. Their taxonomy gave meaning to the various types of influence. The first type of power, coercive power, is based on fear. Historical figures such as Hitler and Stalin used coercive power to establish their ruling. French and Raven state that one reacts to this power out of fear of negative consequences (Robbins, 2002), such as the infliction of pain, death, suspension, demotions, and so on. The second type of power, expert power, rests on the special skills and knowledge that an individual has. Expert power derives from the ability to organize data to support a desired outcome (Lewicki, Barry, Saunders, & Minton, 2003). The greater the number of unique skills, the greater the expert power. Third, reward power focuses on the ability to distribute valuable rewards. Individuals who are able to compensate often have greater reward power. Fourth, legitimate power is the power that one receives as a result of his or her position in a hierarchy. This power creates two types of leverage: formal authority and access and control over information flow (Thompson, 1998). It is likely that a manager will have power over his or her subordinate based only on his or her hierarchical position in the organization. Finally, referent power is present when a person wishes to be around another because of the other's desirable traits. It is seen when a person respects and admires another individual (Thompson, 1998). In this instance, the individual holding the unique traits has more power because the other wants to be associated with that

status. French and Raven's model of power has been instrumental in the development and understanding of the Realist's approach to power.

Since French and Raven (1959), many theorists defined additional types of power. One variation of French and Raven's model is resource power. People who control the resources are able to build a resource stockpile and have great amounts of resource power (Pfeffer & Salancik, 1974). Resources include items such as money, supplies, human capital, time, equipment, and interpersonal support (Lewicki, Barry, Saunders & Minton, 2003). To use resources as leverage, an individual must have control of a scarce item desired by many.

Resource power leads to what is known as situational power. Situational power concerns the control of resources (Greenhalgh, Neslin & Glikey, 1985). If parties view power as the determinant of dependence, the individual with a greater need to settle has less situational power (Bacharach & Lawler, 1981). The need to settle is determined by the number of resources that the individual holds. A party has more situational power if they are able to deny the other party of their outcomes or when the more powerful party has better alternatives and is willing to walk away from the negotiation.

A second form of power that is directly related to French and Raven's (1959)coercive power is punitive capability, otherwise known as "threat capacity" (DeDreu, Giebels, & Van de Vliert (1998). Those with punitive capability are able to coerce another individual through threats. Punitive capability, while very similar to French and Raven's coercive power, is a better way to depict this form of power because it appears to be less harsh.

A final power source, specifically associated to negotiation, is the attractiveness of alternatives (Darley, Messick & Tyler, 2001; Sondak & Bazerman, 1991; Pinkley, Neale, & Bennett, 1994). If a party has other choices when entering the negotiation, they are provided

with an added source of power because it is possible to walk away from the negotiation. They are not desperate to make a deal.

These sources of power were established under the Realist philosophy. They indicate that one person is capable of displaying various types of power, which will improve their odds of influence and control. According to Realists, these power types are definitive and absolute. They are held by an individual and are not necessarily influenced by the way another person sees them. In contrast to this thinking, a second view of power, known as the Contextualist view, defines power in interactions.

The Contextualist's View of Power. Although many power theories developed using the Realist's perspective, modern theorists are breaking from those assumptions, and recognizing that power, while partially determined internally, is largely developed through interactions with others and the environment. These theorists argue that Realism measures power in a vacuum without including the many factors that impact it (Dunne, 2002). For many, power is not a matter of possession any more, but rather an intricate weaving of possession and perception. They believe that power arises from an exchange relationship where one party is more dependent on the other (Emerson, 1972; Cook, 1977). The parties do not necessarily enforce the power that they hold, but rather recognize the influence they have through the interactions with the other party.

Contextualists argue that in negotiation, the party with less power may be able to communicate in a manner that increases their influence. This situation may make power levels equal, or even asymmetric in the opposite direction. In addition, this view states that power is not owned or measured in a static context, but is measured in the communication between two

parties (Dunne, 2002). Finally, contextualism recognizes the malleability of power and the importance of alternatives, context, and behavior.

The amount of power one has depends on the issue at hand. If a party has many alternatives, they gain power (Dunne, 2002). The more alternatives held by a party, the less likely it is that they are pressured into a decision. They do not have to accept the outcomes of the negotiation, and can choose another alternative. In addition to alternatives, a party is likely to gain power if they are strongly committed to their issues. With greater commitment, one is willing to expend more time and energy in order to achieve objectives. This creates greater focus, and thus establishes greater power. Finally, a party who has more control over their issues is likely to gain more power in a negotiation. If the party enters the negotiation confident in their ability to handle issues independently, outside of the negotiation, they are likely to gain power in the negotiation. With greater confidence, they are more prepared for discussion, which increases their level of influence.

According to Contextualists, the amount of power also depends on the context of the negotiation (Dunne, 2002). If negotiations occur in an atmosphere that warrants communication and collaboration, parties do not focus on power as much as working together. This situation makes the less powerful party equal to the more powerful. If, on the other hand, the environment encourages competition, it is likely that the more powerful party will be able to use this power to stifle the weaker.

Finally, Contextualists believe that the amount of power one has partially depends on the parties' behavior (Dunne, 2002). Knowledge, skills, and sheer will can strengthen a party's power. For instance, two important features of the party's behavior are reputation and perception. Most interactions that occur in negotiations are done in a perceived reality.

Therefore, one perceives the level of power that another has, which influences the tactics used in the negotiation. In addition, the reputation, which is a perception held by the opposing side, leads each to respond in a certain fashion. Again, reputation is a perception held by the opposing side.

Contextualism has established a new way of thinking about power. It is accepted by many who are now focusing on the perceptions of power, rather than the true power. There are two reasons for this. First, it is nearly impossible to gain a real sense of power. Because it is based both on possession and interaction, it is very difficult for researchers to measure. Second, because too many stimuli constantly bombard us, we are forced to choose only a small percentage of those stimuli (Thompson, 1998; Zajac & Bazerman, 1991). If we did not, we would be unable to comprehend our surroundings. Therefore, we use our prior experience and individual differences to reduce the stimuli to those that are most interesting. Because of this, we are unable to gain a true sense of an individual's power. We develop a picture of the other party by using our perceptions of the situation. Therefore, it is imperative that modern theorists turn to understanding our perceptions of power rather than measuring the *true* power that one has.

Perceptions of Power

In general, a perception is defined as our interpretation of reality (Lussier, 2000). It is a sense-making process where we attempt to interpret the environment so that we can respond appropriately (Lewicki, Barry, Saunders & Minton, 2003). The process of giving meaning to messages is greatly impacted by our state of mind, role, characteristics, and experience (Goldman & Rojot, 2003; Thompson, 1995). Perceptions distort reality, making it difficult to see something exactly as another views it. This distortion makes communication more difficult because it is impossible to fully understand the other party.

Perceptions of power are of the utmost importance when negotiating. All parties have a certain amount of power modified by environment and individual characteristics. Therefore, perceptions of power result from a combination of both Realist and Contextualist philosophies. Real power is altered by many environmental filters. For example, a receiver's traits, experience, and psychological state affect the way that he or she perceives power. In addition, the reputation and characteristics of the sending party—as well as the negotiation situation—influence the way that the receiver interprets power. These filters are important because they create perceptions of power.

First, individual characteristics alter a person's perception of reality (Staw, 1995; Taylor, 1995). Although a number of individual characteristics exist, two are studied extensively in the negotiation literature: a person's locus-of-control and self-esteem (Lewicki, Barry, Saunders, & Minton, 2003). These traits help shape the thinking and actions of the individual, and ultimately add to a person's perception of power.

Many negotiation specialists have studied how different personality traits impact the development of power in the interactions between parties (Greenhalgh, Neslin, & Gilkey, 1985). Although many traits effect perceptions in negotiation, locus of control continues to dominate the research. According to Rotter (1966), locus of control is a belief about a general causal relationship between actions and outcomes. If an internal locus of control is dominant, an individual believes that he or she controls outcomes. In contrast, if one has an external locus of control, he or she believes that there is little that can be done to manipulate destiny. Several studies indicate that locus of control has a direct impact on the level of success a party has with acquiring personal outcomes (Carpenter & Golden, 1997; Ford, 1983; Lord, Phillips, & Rush, 1980). These studies indicate that greater outcomes are established because those with an

internal locus of control ultimately gain more power in a negotiation. Theorists claim that this may be due to the party's belief that it controls its outcome. With an internal locus of control, one believes that he or she is in control and therefore may act as if he or she has more power.

In addition to locus of control, negotiation researchers study a person's self-esteem. Self-esteem refers to a person's affective evaluation of himself or herself (Gist, Stevens, & Bavetta, 1991). It is an overall perception, and, therefore, impacts many aspects of a person's life, including perception of power. If a person has a high level of self-esteem, he or she tends to be confident and sure of actions (Kramer, Newton, & Pommerenke, 1993). Therefore, he or she may act as if having a high level of power when negotiating.

Individual characteristics—such as locus of control and self-esteem—are very important in developing perceptions of power. While individual characteristics have a substantial influence on the framing of a person's negotiating perspectives, there are two other influences that impact a person perception of power even before the negotiation has begun: experience and the person's psychological state.

A second internal influence that effects perceptions of power is previous, substantial life experiences (Arino, Torre, & Ring, 2001). These experiences may include conversations about another party, research done on another other party, previous interactions with a party, or previous negotiations that were similar to the current situation. The individual draws on these personal experiences when preparing for the negotiation. He reflects on the incidents and their outcomes in an attempt to forecast the necessary actions needed in the current negotiation. By doing this, the individual may assume that the other party has certain powers. In addition, the individual may perceive himself as having a certain level of power due to the successes or failures that he has had in similar instances.

A final influence that an individual taps into when negotiating is his or her psychological state. The psychological state emphasizes a person's self-efficacy or confidence in a situation. Self-efficacy refers to, "a belief in one's capability to mobilize the cognitive resources, motivation and courses of action needed to meet task demands" (Wood & Bandura, 1989). Research in this area has determined that if an individual has had past success and believes that he or she is a good negotiator, it is likely that personal self-efficacy is strong (Gist, Stevens, & Bavetta, 1991; O'Connor & Arnold, 2001). It can be predicted, therefore, that this will improve his or her perception of power because of the belief that he has the necessary skills to be successful. In contrast, if the individual has failed in prior situations, his or her self-efficacy may be limited and result in a reduced perception of power.

Specific to negotiation, research has determined that greater levels of self-efficacy result in a higher attainment of individual negotiated outcomes (Brett, Pinkley, & Jackofsky, 1996). With greater self-efficacy, one is more likely to increase his or her confidence to perform and increase perceptions of power. In contrast, one with low self-efficacy will worry about his or her performance and believe that the other party is more capable (Stevens & Gist, 1997). This concern may result in a low perception of power.

While self-esteem and self-efficacy may effect one's perception of power, there is a mitigating factor that should be further discussed before moving forward. As mentioned above, both self-esteem and self-efficacy can improve one's confidence and optimism during the negotiation. This positive attitude may lead to overconfidence. Individuals may become biased because of overconfidence (Kramer, Newton, & Pommerenke, 1993; Lim, 1997; Neale & Bazerman, 1985). They may feel more powerful than they really are. Therefore, with overconfidence and an overstated perception of power, a party may diminish its negotiated

outcomes. This situation exemplifies the importance of understanding one's biases; the more accurate one's perceptions, the more likely he or she is to take realistic actions and make practical decisions.

In addition to internal influences, there are two external influences that impact a person's perceptions of power. First, recognizing the strengths, weaknesses, and actions of the opponent are critical when developing perceived power. Second, understanding the negotiation environment aids a person in determining how to use perceived power.

While internal influences play a critical role in developing ones perception of power, they also help frame the way that an individual views an opponent. For instance, self-esteem plays an important role in determining the importance of the other party. If one has a low self-esteem, he or she is likely to feel inferior and believe that the other party is stronger, more intelligent, or better prepared (Lussier, 2002). This individual is likely to take cues from his or her environment and create attitudes and beliefs based on his or her perceptions of the environment (Elangovan & Xie, 1999). These perceptions may lead to a belief that the other party is stronger or better prepared, ultimately increasing the likeliness of a disparity in power. In contrast, if one has high self-esteem, he or she recognizes his strengths and compares them to the other party.

A second internal influence that plays a role in perceptions of power is the past experiences that a negotiator has with the other party. If the individual has had positive experiences with the opponent, an optimistic view develops improving a person's mood and manner. Improvements of mood may enhance a person's interactions with the other party, possibly increasing the outcomes (Kramer, Newton, & Pommerenke, 1993). This positive environment also creates a climate where individuals perceive that their power is similar to the

other party's. This perception equalizes the parties making communication and interaction easier.

While internal influences may bias a person's perception of the opponent, external characteristics of that opponent may also impact a person's beliefs about power. If the opponent acts prepared, intelligent, and confident, it is likely that the individual will perceive him or her as having great power. In contrast, if the opponent acts timid and unprepared, the individual is likely to perceive the opponent's power as limited (Elangovan & Xie, 1999).

The environment also influences the individual's perception of power. If, for example, the context is conducive to openness and trust, the individual may perceive it as important to build a relationship with the opposite side (Fisher, Ury & Patton, 1991). Therefore, he or she may attempt to create a perception of equal power by tapping into his negotiating skills. If he or she is concerned that he has too much power, he may not reveal this power in an attempt to even the playing field. In contrast, if the environment encourages competition, and the individual perceives the other side as having more power, he or she may refer to low power tactics (i.e., friendliness, information exchange, etcetera) in an attempt to create equal or greater power (Rubin & Zartman, 1995).

The Effect of Perceptions of Power on Collaborative Negotiation

Perceptions of power are a very important piece of collaborative negotiation. Parties perceive themselves and others in a certain way depending on individual characteristics, the environment, and the interactions that occur during the negotiation. This study specifically focuses on situational power and its affect on information sharing and collaborative negotiation outcomes. Situational perceptions of power are a result of a person's situational power filtered

by the environment. The thought is that situational perceptions of power lead to success or failure, depending on the accuracy and use of the perceptions.

As was mentioned earlier, the environment can play a major role in developing a person's perception of the negotiation. One key aspect of the environment that changes a person's perception of themselves and the negotiation situation is the BATNA. A BATNA exists when a party has an option outside of the negotiation that allows them to walk away from the negotiation if they are unhappy with the outcomes. The BATNA is an alternative that is not as attractive as the potential outcome of the negotiation, but allows a party some sense of power because they are not desperate to make a deal (Dunne, 2002; Lewicki, Barry, Saunders, & Minton, 2003; Raiffa, 1982). The alternative allows the party to feel more powerful because it is unnecessary to rely on the other party for some outcome. In contrast, if no alternative is present, a party feels vulnerable because walking away from the negotiation results in nothing. Therefore, they feel that they have less power in the situation and must rely on the outcomes established.

Studies have shown that the presence and attractiveness of a BATNA affects a party's power. For instance, Pinkley, Neale, and Bennet (1994) found that the level or quality of the negotiator's alternative is of great importance in the development of reservation points and outcome expectations. The authors suggest that the higher reservation points and outcome expectations were due to an increased feeling of power.

Kim and Fragale (2005) also found that the BATNA was important for the development of power in negotiations. They concluded that the BATNA increases one's power because it provides a minimum value that parties will accept in the negotiation. This value helps clarify their interests, making parties more confident in their negotiating.

This dissertation attempts to replicate these findings using a collaborative negotiation.

Therefore, Hypothesis 3 states:

> *H3: When a BATNA is present, situational perceived power is higher than when a BATNA is not present.*

Studies focusing on perceptions of power and information sharing have mixed results (De Dreu, Giebels, & Van De Vliert, 1998). In studies conducted by McClintock, Messick, Kuhlman, and Campos (1973) as well as McAlister, Bazerman, and Fader (1986), equal power among negotiators (as conceptualized by the existence of various levels of BATNAs versus lack of a BATNA) led to greater joint profit when compared to unequal power dyads. This result may be due to the comfort level experienced when in equal power positions. Similar levels of power may connect parties because they are less concerned about the other party using power to manipulate the situation. This situation leads to greater trust because negotiators recognize that the opposing party is in a similar position: both needing each other to achieve mutual outcomes. With greater trust and equality, the parties feel that there is less risk associated with sharing information. Therefore, high levels of information sharing and joint-gains occur.

In contrast to these findings, Tedeschi, Bonoma, and Novinson (1970) found that unequal power among negotiators (as conceptualized by the existence or lack of a BATNA) led to more joint-gain when compared to those situations where negotiators had equal power. A possible explanation for this result is that both parties agreed on problem-solving as the best way to develop collaborative outcomes. Therefore, the more powerful party feels that it is their duty to share information. By sharing information, the collaborative environment is established and the weaker party feels that they too can share information. In contrast, the weaker person may share information initially since they feel that there is nothing to lose. This situation again opens lines of communication if problem-solving is the major objective.

To add to the inconsistencies, Pinkley, Neal, and Bennett (1994) found inconclusive results when determining whether unequal or equal power among negotiators affected the amount of information shared. These mixed results may be due to methodological differences, but it is difficult to make that conclusion because so few studies focusing on perceptions of power and information sharing exist. Therefore, this paper studies these topics by measuring the amount of information that is shared when a person has a BATNA versus when a person does not. Because the results are mixed, the following hypotheses are entirely exploratory. Therefore, Hypothesis 4a states:

> *H4a: When situational power is perceived to be equal, more information is shared than when situational power is perceived to be unequal.*

As with dispositional trust, it is important to examine the relationship that exists between perceptions of power and collaborative outcomes. This is due to the strong relationship that exists between information sharing and collaborative outcomes. Therefore, Hypotheses 4b and c state:

> *H4b: When situational power is perceived to be equal, more collaborative outcomes result than when situational power is perceived to be unequal.*
>
> *H4c: Information sharing mediates the relationship between collaborative outcomes and situational perceptions of power.*

Conclusion

Information sharing is critical to the development of joint-gain outcomes in collaborative negotiation. It mediates the relationship between the situation and outcomes. But, it is difficult to establish information sharing if other variables are kept unchecked. First, trust is essential in the development of information sharing. This paper defines trust as a dispositional factor that leads people to be trusting or untrusting in situations, and attempts to determine dispositional

trust's influence on information sharing and collaborative outcomes. It is hypothesized that dispositional trust, a component of initial trust, is positively related to the amount of information shared and, therefore, collaborative outcomes.

A second variable of particular interest in collaborative negotiation are situational perceptions of power that one has. Perceptions of power are difficult to assess, because they are altered by several variables. This paper manipulates the BATNA, which is a situational factor, in an attempt to determine: 1) if having an alternative leads to the perception that one is powerful, and 2) that situational perceptions of power affect the amount of information shared and collaborative outcomes that result. It is hypothesized that perceptions of unequal power lead to less information sharing and collaborative outcomes, whereas perceptions of equal power lead to more information sharing and collaborative outcomes.

With the hypotheses developed, it is now possible to examine how each will be tested. In order to do this, the next chapter develops the study by introducing the methodology and proposed statistical analysis used to explore these hypotheses.

CHAPTER FOUR: METHODOLOGY

Chapter Three developed a series of hypotheses questioning the relationships between: (a) information sharing and collaborative outcomes; (b) dispositional trust, information sharing and collaborative outcomes; (c) perceptions of power, information sharing and collaborative outcomes; and (d) the BATNA and perceptions of power. This chapter describes the methodology and statistical analysis used to test these hypotheses. Specifically, the first section of this chapter describes the sample, the independent, dependent, and mediating variables, and the research design for data collection. The second section of this chapter describes the data analysis.

Sample

This dissertation uses a sample consisting of 184 undergraduate business students enrolled in an introductory Organizational Behavior course at a private Mid-Atlantic university. Students attended both a lecture (taught by the professor) and a discussion section (led by a graduate teaching fellow (GTF)). Each discussion section consisted of approximately 30 students, and was led by one of four GTFs. All sections were conducted in the same fashion, using the same materials and exercises. To ensure consistency, the professor and GTFs met once a week to discuss the exact format of the discussion sections. Thirty-five percent of the sample is female and ages of participants range from 18 to 20 years old. Ninety-one percent of participants are United States citizens and six ethnic groups exist: Caucasian, Asian American, Hispanic, African American, Middle Eastern, and Indian. Table 5 provides descriptive statistics for gender, age, ethnicity, country born in, and citizenship.

CHARACTERISTIC	*CATEGORY*	*FREQUENCY*	*PERCENTAGE*
GENDER	Male	118	64.1
	Female	66	35.9
AGE	18	115	62.5
	19	65	35.3
	20	4	2.2
ETHNICITY	White	135	73.4
	Indian	5	2.7
	Middle Eastern	7	3.8
	Asian	16	8.7
	Hispanic	11	6.0
	African American	10	5.4
BORN	U.S.	152	83.6
	Other	32	17.4
U.S. CITIZEN	U.S.	153	90.8
	Other	31	9.2

Table 3: Demographic Information

This sample is ideal because of its size and accessibility. Although some argue that student samples are inferior to industry samples, more research published in reputable journals is using data from student samples (Loyd, Kern, & Thompson, 2005). Users of such data argue that many individual characteristics are stable for college students, and therefore the samples are more generalizable than previously thought. Classroom research is a convenient means for acquiring large amounts of data while using unique exercises and assessments to aid in learning.

Research Design

During the Spring 2005 semester, data were collected as part of an ongoing research project conducted by a business professor. Students were required to complete all exercises and assessments as part of the course and gave consent to use their answers for research. In order to guarantee anonymity, data were collected and entered by a an independent party.

Demographic information was collected from participants during the first week of the semester. It provided instructors with basic background information about the participants and

their experience. During week six, participants completed a negotiation role play in discussion section: Sally Swansong versus Lyric Opera House. This role play has the potential for collaborative outcomes. It provides participants with both shared information (identical for all roles), and unique information (known only to the person playing a specific role). Three Subject Matter Experts (SMEs) were utilized to determine if confidential pieces of role information were of equal weight and significance. SMEs consisted of two Organizational Behavior professors, one whose research focuses on negotiation processes and the other whose research focuses on team decision-making, and the author of this dissertation. Each SME rated the pieces of information independently and answers were compared. While all SMEs agreed that each piece of confidential information was important when making a collaborative decision, two discrepancies did emerge. In each instance, SMEs ranked the individual pieces of information for each role play differently. These differences were discussed by all SMEs, and agreement was reached regarding the importance of each piece of information. It was determined that ranking the pieces of information was not necessary because all the information was equally important to the negotiation. In addition, raters agreed that both roles had equal pieces of confidential information. See Appendix 1 for the roles of Sally Swansong and Lyric Opera House.

In addition to the role-play, participants completed the Negotiation Questionnaire and Information Sharing Questionnaire. The Negotiation Questionnaire asked participants about their initial situational perceptions of power. The Information Sharing Questionnaire asked about the extent to which participants disclosed pieces of unique information. To limit expert contamination, participants completed the role-play and coinciding questionnaires before attending the conflict and negotiation lecture. To minimize instructor contamination, an outside

researcher led each discussion section. This action ensured that each section was organized and led in the same manner.

In the beginning of class, participants were randomly assigned to a negotiation dyad and were directed to sit in designated seats facing their partner. Participants were assigned to dyads as follows. First, the class was divided in half. Next, participants were instructed to count off. That is, the first person was labeled as 'one', the second person as 'two', and so on until each participant had a number. Those with the same number paired up. They were instructed to remain silent until the negotiation began and were briefed on the events of class.

Each participant was randomly assigned to one of four role-play combinations as indicated in Figure 3.

Sally

Lyric		Alternative	No Alternative
	Alternative	Equal	Unequal
	No Alternative	Unequal	Equal

Figure 3: Role Play Assignment

As Figure 3 shows, one participant was assigned to the role of Sally Swansong's Agent, and his or her partner was assigned to the role of Lyric Opera House's business manager. In addition, roles containing BATNAs were randomly assigned. To do this, four color coded combinations of role plays, representative of Figure 3, were passed out. To limit information contamination, dyads were assigned different role combinations than those dyads surrounding them.

Participants had unlimited time to read their role information and prepare for the negotiation. When they were prepared, participants completed the Negotiation Questionnaire. Once each participant had completed and submitted his or her questionnaire, the negotiation

began. Participants had unlimited time to complete the negotiation, which resulted in a signed contract stipulating the agreed-upon conditions. Participants did not discuss any aspects of the negotiation until the main debriefing session. This ensured that all the dyads were able to negotiate in a quiet environment without overhearing key pieces of information from other dyads. When all groups finished negotiating, contracts were submitted, and participants completed the Information Sharing Questionnaire. After all of the Information Sharing Questionnaires were submitted debriefing occurred.

In week 14, students completed the Interpersonal Trust Scale (Rotter, 1967). This questionnaire measures dispositional trust. It was completed several weeks after the negotiation role-play and questionnaires were done to ensure that participants made no association between trust and negotiation.

Variables

Many of the factors in this study act as multiple variables. Therefore, this section examines each of the factors by: (a) briefly reviewing their definitions, (b) discussing the types of variables that each represents, and (c) introducing the measurement tools used to gather the data.

Control Variables

Gender, race, and national origin are control variables in this study. Same and different gender, race, and nationality dyads were compared to ensure that the variables did not affect the results. An explanation of the statistical analysis used to compare these groups is found in the Analysis section of this chapter.

Collaborative Negotiation Outcomes

Both the levels of joint-gain and relationship maintenance are outcomes of collaborative negotiation. While the literature suggests that outcomes be measured in the long-run to determine if the collaboration was successful, measuring immediate joint-gain results is useful for predicting the success of the negotiation. If both parties settle on a solution that benefits and satisfies all, it is likely that the parties worked together to develop the results.

Collaborative outcomes represent a dependent variable in this study. To measure this variable, immediate outcomes were identified using the dyads' negotiated contracts. Contracts were coded to determine the degree of joint-gain. Outcomes ranged from 1 (completely single-gain) to 5 (completely joint-gain). SMEs determined the level of collaborative outcomes resulting from negotiation contracts using the 5-point scale. SMEs consisted of two Organizational Behavior professors, one whose research focuses on negotiation processes and one whose research focuses on team decision-making, and the author of this dissertation. Each SME rated the contracts independently and ratings were compared. Five minor discrepancies were found. All questioned whether the contract represented 2 (somewhat single-gain) or 3 (both single-gain and joint-gain). These disagreements were discussed by all the SMEs and agreement about the type of each contract was reached. SMEs concluded that each of the questioned contracts were 2 (somewhat single-gain). See Appendix 2 for an example of the contract used in this study.

Information Sharing

Information sharing is a vital component of collaborative negotiation. Without it, joint-gain outcomes are unlikely. It is imperative that negotiators share their opinions, perspective, and concerns in order to create a trusting environment where parties work together to develop a mutually beneficial solution.

Information sharing is both a dependent and mediating variable in this dissertation. It is a dependent variable when examining how it is affected by dispositional trust and perceptions of power. Information sharing becomes a possible mediator in the relationship between (a) dispositional trust and collaborative outcomes, and (b) situational perceptions of power and collaborative outcomes.

To measure information sharing, a questionnaire asking two sets of questions was provided to participants. The first set asked to what extent they shared the key pieces of unique information identified in their role. The second set asked to what extent their partner shared key pieces of unique information found in their role. By asking about both self- and other-information disclosure, the partners' answers could be compared. Comparisons allowed the investigator to determine if information was heard by both parties. The amount of information shared was determined by summing the pieces of information that were shared by a negotiator. See Appendix 3 for examples of the Information Sharing Questionnaire.

Dispositional Trust

Dispositional trust is a stable trait that identifies the extent to which people trust one another. A high disposition to trust indicates that a person trusts others, even if no prior knowledge of the other exists. A low disposition to trust is represented by a person who does not

trust others. This trait explains why people view others as trustworthy or untrustworthy, independent of the situation.

Dispositional trust is an independent variable in this study because of its affect on both the amount of information shared and collaborative outcomes. To measure dispositional trust, the Interpersonal Trust Scale (ITS) (Rotter, 1967) was used. This survey, consisting of 25 questions, is recognized as being one of the most reliable and valid measurements of dispositional trust. The ITS has an internal reliability of .76 and a test-retest reliability of .68 across a three-month interval (Robinson, Shaver, & Wrightsman, 1991). Moreover, it is easily distributed, completed, and calculated, making it a feasible and effective means of measuring dispositional trust in the given sample. See Appendix 4 for the Interpersonal Trust Scale.

Situational Perceptions of Power

Situational perceptions of power represent the extent to which a person believes that he or she has some influence over another in the negotiation. Perceptions are investigated in this dissertation because interactions may influence a person's belief in his or her level of power. This belief is a perception, not necessarily a fact.

This portion of the dissertation is exploratory because a survey was developed to measure situational perceptions of power. Therefore, a component of this dissertation consists of running psychometric statistics, such as factor analyses, to explore the usefulness of this questionnaire.

One's situational perception of power represents both an independent and dependent variable in this study. It is an independent variable when examining its effect on both the amount of information shared and collaborative outcomes. The situational perception of power becomes a dependent variable when focusing on the relationship between the BATNA and the

situational perception of power. This relationship is examined to determine if having a BATNA affects the participant's situational perception of power.

To measure the situational perception of power, a questionnaire was developed with four sections. Each section attempts to measure how much power participants believe they have in comparison to their negotiating partner. Questions were constructed using theory and previous research, and each section used a different method for asking the same types of questions. This questionnaire attempts to measure situational perceptions of power rather than power. Therefore, it asks questions that relate to various types of power such as information power, relational power, and resource power. Because this questionnaire was used for the first time in this investigation, all questions were retained when calculating situational perception of power scores. See Appendix 5 for the Negotiation Questionnaire.

BATNA

The BATNA is an alternative that can be used if a negotiator is unwilling to settle with the terms of the negotiation. It is argued that having an alternative increases power because negotiators do not need to rely solely on the negotiation (Lewicki, Barry, Saunders, & Minton, 2003). They are less vulnerable and can walk away from the negotiation if they are unhappy with the results.

The BATNA is an independent variable in this study. It is manipulated to determine if the existence of a BATNA affects the situational perceptions of power that participants have. This study focuses on either having or not having a BATNA.

Analysis

The final section of this chapter discusses the statistical analyses used in the dissertation.

Analysis of Control Variables

To ensure that demographic composition did not affect the statistical analyses, gender, race, and national origin were examined at both the individual- and dyad-level. First, the demographic variables were compared at the individual level for each hypothesis using independent samples *t* tests. Gender was categorized as male/female, race as White/Other, and nationality as United States Citizen/Other. Races other than White were collapsed to one category because few non-Whites participated. In addition, all non-United States citizens were combined because few non-United States citizens participated.

Second, demographic variables were assessed at the dyad-level using independent samples *t* tests and ANOVA. Gender was categorized as all male/all female/mixed, race as same race/different race, and nationality as same nationality/different nationality. Races other than White were collapsed to one category because few non-Whites participated. In addition, non-United States citizens were combined into one category because few non-United States citizens participated. Non-significant differences between means ensured that gender, race, and nationality differences did not affect the results at the individual or dyad level. This analysis was conducted for all of the hypotheses studied.

Analysis of Information Sharing

Participants completed an information sharing questionnaire that asked about the confidential information that respondents shared as well as the confidential information that was disclosed by their negotiating partner. Asking the two sets of questions ensure that shared information was decoded by the receiver. Comparisons of self- and other-answers were done to

determine if information was sent and received. When disagreements arose, the receiver's responses to the information sharing questionnaire were used because his or her interpretation of information determined responses. These responses were instrumental in developing a circular flow of information disclosure that led to outcome development.

A five-point Likert Scale was used to measure the amount of confidential information sharing that occurred. The scale ranged from 1 (the piece of information was not disclosed) to 5 (the piece of information was completed disclosed). Intermediate values indicated if a piece of information was somewhat shared (hinted at). To determine the total amount of information that each participant shared, Likert values greater than 1 were added together. This number represented the total pieces of information that the receiver interpreted, whether the information was hinted at or completely disclosed. In the final analysis, this value was used (rather than using a weighted total of the extent that information was shared) because this dissertation is concerned about the amount of information rather than the degree to which information was shared. The maximum amount of information shared was 5 pieces when a BATNA did not exist and 6 when it did.

Factor and Psychometric Analysis of Situational Perceptions of Power

A questionnaire was developed to measure situational perceptions of power. This questionnaire contained four sections, each attempting to measure how much power one perceives to have when compared to another in a given negotiation. To determine the strength of this questionnaire, two steps were taken. First, Part 1 and Part 2 were analyzed to determine if they measured one's perception of their overall situational power. To do this, principal component analysis using varimax rotation was run to determine how the questions from Part 1 and Part 2 loaded. These sections were combined when running the analysis because their

separation was only due to Likert scale title differences. Principal component analysis was used because it is the standard data reduction method used in scale development. Results were used to determine which questions were included when calculating the perception of situational power.

To calculate the overall perception of situational power, data were normalized by using the factor loadings as weights and then dividing by the sum of the weights. The normalized values were then added together resulting in an overall situational power score.

Second, a correlation was run between answers of Part 3 and Part 4 to determine if the two sections were interpreted the same way. Both sections asked respondents to report on their personal situational power when compared to the other party: Part 3 used a continuum and Part 4 used percentages. A highly significant positive correlation was necessary to indicate that participants interpreted the questions similarly.

Analysis of Hypotheses

H1: Collaborative outcomes positively relate to the amount of information shared.

$$COut = f(InfShar)$$

Multinomial logistic regression analysis was run to determine if collaborative outcomes were a function of the information shared. Collaborative outcomes were measured at the dyadic level, so information sharing (which was measured at the individual level) was calculated for each dyad. To calculate dyad-level information sharing, the pieces of information shared by each negotiating partner were added together. This action controlled for confounding variables. The regression was then run using the dyad-level rather than individual-level data. In addition, participants were classified into three groups representing high, moderate, and low levels of collaborative outcomes. This categorization was done to make the distribution of participants in each category more equal. A significant positive relationship between information sharing and

collaborative outcomes, indicates that as information sharing increased, collaborative outcomes increased. This result was needed to support Hypothesis 1.

H2a: The amount of information shared positively relates to dispositional trust.

$$InfShar = f(DTrust)$$

Multinomial logistic regression analysis was run to determine if information sharing was a function of dispositional trust. Individual-level data were used to analyze this hypothesis. Total pieces of information sharing were collapsed to three categories (high, moderate, and low levels of information sharing) to make participant distribution in each category more even. A significant positive relationship between dispositional trust and information sharing, indicates that as dispositional trust increases, information sharing increases. This result was necessary to support Hypothesis 2.

H2b: Collaborative outcomes positively relate to dispositional trust.

$$COut = f(DTrust)$$

A one-way analysis of variance (ANOVA) was used to determine if a positive relationship existed between information sharing and dispositional trust. An ANOVA was used because both individual- and dyad-level data were analyzed. Categorizing controlled for confounding variables. Before running the ANOVA, dispositional trust was categorized as low or high. Dispositional trust scores ranging from 54 to 77 were labeled low and scores ranging from 78 to 107 were labeled high. Next, data were divided into four categories as seen in Figure 4.

CONDITION	*CATEGORY*
Sally's Agent & High Trust	3
Sally's Agent & Low Trust	4
Lyric's Business Manager and High Trust	5
Lyric's Business Manager and Low Trust	6

Figure 4: Description of ANOVA Categories for Dispositional Trust

The ANOVA was run to determine if mean collaborative outcomes were significantly different between groups. If the ANOVA shows a significant difference in means, then Tukey's post hoc test was used to determine which category had the highest mean collaborative outcome level. A significant difference between means with the larger collaborative outcomes associated with high levels of dispositional trust (both in Sally's Agent and Lyric's Business Manager) indicate that the higher the dispositional trust, the greater the collaborative outcomes. This result was needed to support Hypothesis 2b.

H2c: Information sharing mediates the relationship between collaborative outcomes and dispositional trust.

COut = f(DTrust, SPPower, InfShar, DTrust*SPPower, DTrust*InfShar, SPPower*InfShar)

To determine if information sharing mediates the relationship between collaborative outcomes and dispositional trust, four conditions were tested (Baron & Kenny, 1986; Holmbeck, 1997). First, the predictor (dispositional trust) must be significantly associated with the potential mediator (information sharing). Second, the predictor (dispositional trust) must be significantly associated with the dependent variable (collaborative outcomes). Third, the mediator (information sharing) must be significantly associated with the dependent variable (collaborative

outcomes), after controlling for the effects of the independent variable (dispositional trust) on the dependent variable (collaborative outcomes). Fourth, the impact of the independent variable (dispositional trust) on the dependent variable (collaborative outcomes) must be less after controlling for the mediator (information sharing). Therefore, to determine if information sharing mediates the relationship between dispositional trust and collaborative outcomes, a series of multinomial logistic regressions were conducted. All four conditions must be met to indicate that information sharing mediates the relationship between collaborative outcomes and dispositional trust, thus supporting Hypothesis 2c.

H3: When a BATNA is present, situational perceived power is higher than when a BATNA is not present.

$$H_2 = \mu_{\text{present}} > \mu_{\text{not present}}$$

A one-tailed independent samples *t* test was run to determine if having a BATNA (as compared to having no BATNA) results in higher levels of situational perceptions of power. A significant difference between means, with the higher mean value of situation perceptions of power associated with the BATNA present supports Hypothesis 3.

Situational perceived power was measured by the first portion of the Negotiation Questionnaire. Since this questionnaire was developed as part of this dissertation, situational perceived power was measured by different combinations of questions (representing different types of power associated with total situational perceptions of power). Therefore, *t* tests for the various factors found in the questionnaire (i.e., information, reputation, resource, having enough power), as well as the total questionnaire, were run to explore the significance of each type of power perception as well as overall situational perceptions of power.

H4a: When situational power is perceived to be equal, more information is shared than when situational power is perceived to be unequal.

$$H_1 = \mu_{equal} > \mu_{unequal}$$

A one-tailed independent samples *t* test was used to determine if greater amounts of information are shared when situational power is perceived to be equal. A significant difference in means, with the higher mean value of information shared when situational power is perceived as equal rather than unequal indicates that a party shared more information when their situational power is perceived to be the same as the other party. This result was necessary to support Hypothesis 4a.

H4b: When situational power is perceived to be equal, greater collaborative outcomes result than when situational power is perceived to be unequal.

$$H_1 = \mu_{equal} > \mu_{unequal}$$

An one-way ANOVA was used to determine if greater collaborative outcomes result from equal perceptions of situational power. An ANOVA was used because both individual- and dyad-level data were analyzed. Categorizing controlled for confounding variables. Before running the ANOVA, four categories, as indicated in Figure 5, were established. An ANOVA was run to determine if the mean situational perceptions of power were significantly different between groups. If the ANOVA shows a significant difference in means, then Tukey's post hoc test was used to determine which category had the highest level of collaborative outcomes. A significant difference between means, with the larger mean collaborative outcome values resulting with equal perceptions of situational power indicates that equal perceptions of situational power resulted in greater collaborative outcomes. This result was necessary to support Hypothesis 4b.

CONDITION	*CATEGORY*
Sally's Agent and High Power	1
Sally's Agent and Low Power	2
Lyric's Business Manager and High Power	3
Lyric's Business Manager and Low Power	4

Figure 5: Description of ANOVA Categories for Perceptions of Power

H4c: Information sharing mediates the relationship between collaborative outcomes and situational perceptions of power.

COut = f(DTrust, SPPower, InfShar, DTrust*SPPower, DTrust*InfShar, SPPower*InfShar)

To determine if information sharing mediates the relationship between collaborative outcomes and situational perceptions of power, four conditions were tested (Barron & Kenny, 1986; Holmbeck, 1997). First, the predictor (situational perceptions of power) must be significantly associated with the potential mediator (information sharing). Second, the predictor (situational perceptions of power) must be significantly associated with the dependent variable (collaborative outcomes). Third, the mediator (information sharing) must be significantly associated with the dependent variable (collaborative outcomes), after controlling for the effects of the independent variable (situational perceptions of power) on the dependent variable (collaborative outcomes). Fourth, the impact of the independent variable (situational perceptions of power) on the dependent variable (collaborative outcomes) must be less after controlling for the mediator (information sharing). Therefore, to determine if information sharing mediates the relationship between situational perceptions of power and collaborative outcomes, a series of multinomial logistic regressions were conducted. All four conditions must be met to indicate

that information sharing mediates the relationship between collaborative outcomes and situational perceptions of power, thus supporting Hypothesis 4c.

CHAPTER FIVE: RESULTS

This chapter provides the empirical results for the dissertation. Interpretations of the results are also included.

A correlation matrix including all variables was completed before running analyses to determine the relationships between variables. See Appendix 6 for the results of the correlation matrix.

Analysis of Control Variables

In all but one case, no statistically significant differences existed between genders, races, and nationalities at the individual- or dyad-level. Therefore, demographic characteristics did not affect the majority of results. See Appendix 6 for results of independent samples *t* tests and ANOVA.

An independent samples *t* test did find a significant difference between means when comparing ethnicities for Factor 2 of the Negotiation Questionnaire ($p < .05$). While Factor 2 may be affected by ethnicity, other factors and the total power perception score were not affected. Because there was no affect on the overall situational perception of power score, this difference in means was noted, but not controlled for when running other analyses. Therefore, this may be a limitation of the Negotiation Questionnaire.

Factor and Psychometric Analysis of Situational Perceptions of Power

Step 1: Factor Analysis of Part 1 and Part 2

Table 4 provides the factor loadings for questions from Part 1 and Part 2 of the Negotiation Questionnaire. Interpretations of factors followed the standard evaluation method frequently used by factor analysis: items with a factor loading of .3 or higher were considered significant (Kim & Mueller, 1978). This table shows that questions one through thirteen

(indicated by P1, P2, etc.) load on four factors: Questions five, eight, and twelve load on factor 1; questions three, six, nine, ten, and eleven load on factor 2; questions one and two load on factor 3; and questions four, seven and thirteen load on factor 4. Sixty-two percent of the variance is accounted for by these factors. Also included in Appendix 7 is the Scree Plot. This plot shows that four factors are present above an Eiganvalue of 1.

	Component			
	1: Resource Power	2: Reputation Power	3: Enough Power	4: Information Power
P5	.774	-.067	.283	.142
P12	.722	.113	.247	.016
P8	.708	.277	.031	.197
P10	.134	.749	.068	.074
P3	-.033	.596	.426	.159
P11	.319	.555	.167	-.461
P9	.535	.549	-.053	.119
P6	.068	.516	.106	.245
P2	.297	.038	.786	-.012
P1	.114	.301	.720	.035
P13	.153	.220	.100	.753
P7	.467	.238	-.105	.649
P4	.083	.029	.552	.588

Table 4: Rotated Component Matrix Showing Factor Loadings

When looking at the questions, four clear subsections of power emerge. Factor 1 represents situational perceptions of resource power. Factor 2 stands for situational perceptions of reputation power. Factor 3 includes the belief that one has enough situational power and resources to achieve their desired outcomes. Finally, factor 4 encompasses situational perceptions of information power. These results show that four types of power potentially influence one's overall situational perception of power.

In addition to the factor analysis, Chrombach's Alpha was run for the variables of Part 1 and Part 2 of the Negotiation Questionnaire. A reliability of .831 was determined for the variables of these two sections.

Because each type of power may influence one's overall situational perception of power, all questions were used to calculate a total score for situational perceptions of power. Each question was normalized using the factor loadings as weights.

Step 2: Correlation Between Part 3 and Part 4

The Pearson correlation coefficient between data from Part 3 and Part 4 of the Negotiation Questionnaire is .885. This correlation is statistically significant to the .000 level, indicating a highly statistically significant positive relationship exists between the sections. In general, participants interpreted the questions in the same manner, and thus answered the questions similarly. Therefore, the use of data from either part when analyzing related hypotheses is acceptable.

While the use of either section is supported, Part 4 data were used for the analysis of related hypotheses because it was less likely to be misinterpreted by the investigator. Unlike Part 3, which asks participants to mark on a continuum how much power they have, Part 4 asks participants to provide the percentage of power that they have in the scenario. When entering data, the investigator may have misinterpreted the value of the mark on the continuum, but was unlikely to misinterpret the numbers provided in Part 4.

Analysis of Hypotheses

Hypothesis 1

Hypothesis 1 predicted that collaborative outcomes are a function of the amount of information shared. Hypothesis 1 was supported. A positive, statistically significant relationship was found between information sharing and collaborative outcomes ($p < .000$): the greater the amount of information that was shared, the greater the collaborative outcomes that resulted. Table 5 shows the parameter estimates for the model. Further results are in Appendix 8.

							95% Confidence Interval for Exp (B)	
Outcomes	*B*	*Std. Error*	*Wald*	*df*	*Sig.*	*Exp (B)*	*Lower Bound*	*Upper Bound*
1.0 Intercept	2.441	.851	8.236	1	.004			
Shared Information	-1.551	.577	7.226	1	.007	.212	.068	.657
2.0 Intercept	-.403	.815	.244	1	.621			
Shared Information	.485	.449	1.164	1	.281	1.624	.673	3.917

Table 5: Parameter Estimates for Hypothesis 1

Hypothesis 2a

Hypothesis 2a predicted that the amount of information shared was a function of the amount of dispositional trust one had. Hypothesis 2a was not supported ($p > .05$). A significant relationship was not found between information sharing and dispositional trust. See Appendix 9 for results.

Hypothesis 2b

Hypothesis 2b predicted that the level of collaborative outcomes is a function of the amount of dispositional trust one had. Hypothesis 2b was not supported. The ANOVA indicated that a statistically significant difference between the mean collaborative outcomes did not exist ($p > .05$).

While not significant, the data analysis showed that those with lower levels of dispositional trust tended to share greater amounts of information (4 and 6 indicate low dispositional trust categories). This potentially contradicts previous research that focuses on the relationship between overall trust and information sharing (Lewicki, Barry, Saunders, & Minton, 2003). See Appendix 10 for results.

Hypothesis 2c

Hypothesis 2c predicted that information sharing mediates the relationship between the level of collaborative outcomes and dispositional trust. Hypothesis 2c was not supported. When testing the four requirements for mediation (Barron & Kenny, 1986), non-significant associations were found for requirements one (dispositional trust must be significantly associated with information sharing) and two (collaborative outcomes must be significantly associated with dispositional trust). The other requirements were not tested because the first two were not supported. Therefore, it is not concluded that information sharing mediates the relationship between collaborative outcomes and dispositional trust in this dissertation. See Appendices 9 and 10 for results.

Hypothesis 3

Hypothesis 3 predicted that the presence of a BATNA leads to higher levels of situational perceived power than when a BATNA was not present. Because situational perceived power is exploratory in this study, five one-tailed independent samples *t* tests were run using the four situational power factors as well as the total situational power determined by the Negotiation Questionnaire. Hypothesis 3 was not supported for any of these factors ($p > .1$). See Appendix 11 for results.

While not supporting Hypothesis 3, the *t* test for Factor 4 (situational perception of information power) was almost statistically significant at an exploratory level in the opposite direction ($p<.1$). Those who did not have a BATNA perceived that they had more situational information power when compared to those who had a BATNA. Perhaps the situational perception of information power is not related directly to the BATNA (since BATNA is a resource), and therefore is showing contradicting results.

Hypothesis 4a

Hypothesis 4a predicted that when situational power is perceived to be equal, more information is shared than when situational power is perceived to be unequal. Hypothesis 4a was not supported ($p>.05$). The independent samples *t* test showed no significant difference between means. See Appendix 12 for results.

Hypothesis 4b

Hypothesis 4b predicted that when situational power is perceived to be equal, greater collaborative outcomes result than when situational power is perceived to be unequal. Hypothesis 4b was not supported. The analysis of variance reported no significant difference between mean collaborative outcomes ($p>.05$). See Appendix 13 for results.

Hypothesis 4c

Hypothesis 4c predicted that information sharing mediates the relationship between collaborative outcomes and situational perceptions of power. In following the four requirements for mediation (Barron & Kenny, 1986), a non-significant association was determined in the first requirement (situation perceptions of power must be significantly associated with information sharing). The other requirements were not tested because the first was not supported. Therefore, it is not concluded that information sharing mediates the relationship between collaborative outcomes and situational perceptions of power in this dissertation. See Appendix 14 for the results of requirement one.

CHAPTER SIX: DISCUSSION

Introduction

This dissertation has theoretical, exploratory, and empirical implications. First, it proposes that three types of negotiations (distributive, integrative, and collaborative) exist. This claim contradicts traditional thinking, because previous negotiation literature combines integrative and collaborative negotiations. When comparing integrative and collaborative negotiation though, differences in the two arise in the negotiating conditions needed, processes used, and outcomes that result. Therefore, they should be separated into unique types of negotiation. Briefly, information exchange, trust, separating people from the issue, and management of positions are all necessary conditions for integrative negotiations. While these conditions are equally important for collaborative negotiations, collaboration also requires that the parties unite in order to form one problem-solving unit.

The processes used are also different between integrative and collaborative negotiation. With integrative negotiations, the parties remain independent but work to find a solution that partially satisfies each. This philosophy leads to several integrative negotiation processes that exchange resources in order to find a solution that pacifies each party. In contrast, collaborative negotiations use problem-solving to create a unique solution that best utilizes the collective resources. Parties pool their resources and develop solutions together.

Finally, integrative and collaborative negotiation outcomes differ. Integrative negotiations result in outcomes that are agreed upon, but may not completely satisfy either party. In contrast, collaborative negotiations result in creative outcomes that best utilize resources and therefore, fully satisfy parties. This dissertation claims that these differences should be

emphasized more in the literature so that parties are better informed about the important issues to assess when choosing the appropriate type of negotiation for their situation.

The second implication of this dissertation is exploratory. Situational perceptions of power, while recognized as an important component of the negotiation process (Lewicki, Barry, Saunders, & Minton, 2003), are rarely studied in the negotiation literature. This may be due to the difficulty of defining the perception of power construct. Because the construct is not well defined, it is difficult to develop a valid assessment to measure it. This dissertation consolidates perceptions of power research in an attempt to better define the construct and developed a questionnaire to measure situational perceptions of power. Because it was administered before the negotiation occurred, this questionnaire measures perceptions that exist before information is exchanged

The final implication of this dissertation is empirical. The investigator examined the impact that various individual differences have on the collaborative negotiation process and outcomes. Several hypotheses associated with information sharing, dispositional trust, initial situational perceptions of power and collaborative outcomes were tested in order to support the claim that negotiation processes and short-term outcomes are predictors of long-term collaborative effectiveness. Both direct and indirect results indicate that information sharing is predictive of long-term collaborative effectiveness. While few of the hypotheses were supported, this dissertation provides a foundation for future research that uses different samples and alternate questionnaires.

This chapter reviews the results of the empirical portion of the dissertation. In addition, it discusses the limitations of this study. The chapter concludes by introducing future research generated from this dissertation.

Collaborative Negotiation as Information Sharing

A main component of collaborative negotiation is information sharing. Because collaborative negotiation uses problem-solving as its main outcome generating process, it is imperative that parties disclose information. In order to create unique outcomes that satisfy involved parties, it is imperative that the parties understand each other's background, knowledge, and positions. Without this information, it is difficult to generate alternatives that utilize resources efficiently and effectively to satisfy parties. With effective communication, parties are much more likely to successfully develop optimal solutions. This dissertation suggests that information sharing can be used as a measurement of collaborative outcomes. Because collaborative outcomes are not realized until after the negotiation, it is necessary to find a way to predict the success of a collaborative negotiation. This dissertation claims that examining the amount of information sharing that occurs during the negotiation allows researchers to anticipate the success of the collaborative negotiation.

Information sharing plays a key role in this dissertation. Direct and mediating relationships between information sharing and individual differences were examined to better understand information sharing's link to the creation of long-term collaborative outcomes. By examining these relationships, this dissertation explores various processes that occur during collaborative negotiations.

Hypothesis 1 tested whether collaborative outcomes were a function of information sharing. As with previous literature (Kemp & Smith, 1994; Pruitt & Lewis, 1975; Thompson, 1991), this hypothesis was supported. Sharing greater amounts of confidential information led to collaborative outcomes. Therefore, dyads who shared more information were more likely to reach collaborative outcomes. These dyads shared more of their confidential information with

each other making sure that each participant understood and correctly interpreted the information. This communication led to the discovery of true party desires ensuring that all concerns and interests were incorporated into the problem-solving and decision-making processes.

Hypothesis 1 tested the direct relationship between information sharing and collaborative outcomes in the short-run. Since this dissertation claims that information sharing is an essential component in predicting true collaborative outcomes, it also examined information sharing's influence on the collaborative negotiation process by first testing the direct relationship between (a) trust and information sharing, and (b) situational perceptions of power and information sharing. This dissertation also tested whether information sharing mediates the relationships between (a) dispositional trust and collaborative outcomes, and (b) situational perceptions of power and collaborative outcomes. Testing each of these relationships individually provided insight into how collaborative outcomes are derived and maintained.

The following two sections of this chapter review the findings associated with information sharing and the collaborative negotiation process. First, dispositional trust's influence on information sharing and collaborative negotiation outcomes are reviewed. Then, information sharing's influence on situational perceptions of power and collaborative negotiation outcomes are reviewed.

Trust and Collaborative Negotiation

Overall trust is both a dispositional factor and a temporary state. Dispositional trust determines a person's level of trust for others, independent of knowledge about and experience with people and situations. It is a stable trait that is one component of people's initial trust. Dispositional trust is used to calculate trust before entering a negotiation, but that trust may

change once the negotiation begins. This change occurs because people gather more information through interactions and change their perceptions about the people involved. These changes in perception will influence their temporary trust

Both initial and temporary trust are important to collaborative negotiations. Initial trust, which is significantly influenced by dispositional trust, molds interpretations of the initial situation. During collaborative negotiations, initial trust may aid in creating a climate that either fosters or inhibits information sharing and relationship building. As communication occurs, temporary trust is likely to develop and change based on interactions between parties. These changes in trust strongly influence the communication that occurs between negotiators.

There is a large amount of research that explains how temporary trust alters the amount of information shared (Vangen & Huxham, 2003). Many studies found a cyclical relationship between trust, information exchange, and relationship building: information exchange leads to greater trust and stronger relationships that, in turn, lead to greater trust and greater information sharing. Interestingly, few studies have focused on the origins of this cycle. This dissertation argues that dispositional trust, as a component of initial trust, affects the amount of information shared at the beginning of the negotiation.

Hypothesis 2a tested the relationship between dispositional trust and information sharing. It was hypothesized that a positive relationship exists between the two constructs. Hypothesis 2a was not supported. Therefore, it cannot be concluded that higher levels of dispositional trust lead to greater amounts of information shared.

Because dispositional trust is only one component of initial trust, it may be that another or multiple components of initial trust lead to initial information sharing. Prior studies found that higher levels of temporary trust led to greater amounts of information sharing (Rempel, Holems

& Zanna, 1985) and that temporary trust grows gradually throughout the negotiation. While this does not answer the question of how initial trust impacts information sharing, it does give some direction about how overall trust affects collaborative negotiation processes. Therefore, it is important to continue studying components of initial trust to determine how trust originates and changes during the collaborative negotiation process.

This dissertation also tested the relationship between dispositional trust and collaborative outcomes. Hypothesis 2b questioned whether collaborative outcomes were a function of dispositional trust. Hypothesis 2b was not supported. Therefore, it cannot be concluded that higher levels of dispositional trust lead to more collaborative outcomes. While not significant, results indicated that lower levels of dispositional trust led to greater collaborative outcomes. The theory behind Hypothesis 2b was based primarily on research using temporary trust because there is little research that focuses on dispositional or initial trust. Perhaps dispositional trust, alone, plays a different role in developing collaborative outcomes. Or maybe dispositional trust interacts with other components of initial trust that were not measured in this study.

Another reason for the unexpected result may be due to the educational and social pressures felt by the participants. As part of their course, participants learned about first impressions and perceptions. Perhaps participants did not want their initial impressions to influence their behavior. Therefore, they may have attempted to limit their initial instinct in order to better grasp the situation while gaining more information about their partner. Limiting their disposition to trust may have led them to share more information and attempt to build relationships even thought they did not initially trust their partner.

A final reason for this unexpected result may be that the negotiation role play occurred in a 'safe' classroom setting. Participants who had a low trust score may have disregarded their

disposition to be untrusting because they did not see any major consequence of doing otherwise. Therefore, they shared information.

Hypothesis 2c was the final hypothesis that focused on dispositional trust in this dissertation. This hypothesis suggested that information sharing acts as a mediator between dispositional trust and collaborative outcomes. This hypothesis was not supported. Because no significant relationship existed between trust and collaborative outcomes or between dispositional trust and information sharing, it is not possible to conclude that information sharing acts as a mediator. Barron and Kenny's (1987) four requirements were not fulfilled.

Situational Perceptions of Power and Collaborative Negotiation

One's situational perception of power was the final individual measure examined in this dissertation. Situational perceptions of power are those that differ for each situation. Each participant, when entering into a negotiation, has a perceived amount of power. This perceived power is dependent on several individual and environmental characteristics. Self-esteem, self-confidence, negotiating experience, and knowledge about the situation and the other party are some examples of what affects situational perceptions of power. Situational perceptions of power are rarely studied in the negotiation literature because an established questionnaire does not exist. The lack of a measurement may be due to the difficulty of assessing and defining all of the constructs influencing one's perception of power. This dissertation created a measure for assessing initial situational perceptions of power. The questionnaire consists of four components, each attempting to measure the power that a negotiator believes to have before entering into a negotiation. The first two sections measure overall situational perceptions of power, while the final two sections measure situational perceived power as compared to the other party. Factor analysis on the first two portions of the questionnaire found that four factors exist:

reputation power, resource power, information power, and enough power to negotiate. The data were normalized using the factor loadings and all questions were combined to form a total situational perception of power score. In addition to factor analysis, the final two sections were correlated to ensure that they were perceived to be asking the same question. A highly significant correlation coefficient (.885) exists, suggesting that participants interpreted and answered the two sections similarly. These two sections gave insight into how the participants compared their initial situational perceptions of power levels to the other party. At this time, because no other measure of situational perceptions of power exists, this questionnaire was not compared with others.

After calculating situational perception of power scores, several hypotheses were tested to determine initial situational perception of power's influence on the collaborative negotiation process. First, Hypothesis 3 tested whether having a BATNA led to a higher level of situational perception of power (when compared to not having a BATNA). Past negotiation research found that having a BATNA leads to greater power because negotiators are not desperate to settle (Dunne, 2002; Lewicki, Barry, Saunders, & Minton, 2003). This study didn't come to the same conclusion. The non-significant result may be due to the exploratory nature of the Negotiation Questionnaire. This questionnaire is still in its infant stages, and therefore must be studied further to determine if it is an accurate measure of one's situational perception of power.

Hypothesis 3 did have one interesting finding. Because this portion of the dissertation was exploratory, the four perceptions of power factors measured by the Negotiation Questionnaire, as well as the total situational perception of power score were analyzed. Factor 4 (situational perception of information power) was significant in the opposite direction. The result indicates that parties who did not have a BATNA had greater situational perceptions of

information power than those who had a BATNA. This trend may have resulted because participants who had a BATNA did not realize the value of their BATNA and the information power that it gave them. Before interacting, the person may have believed that the other party had an alternative as well, thus making them equally powerful. Because initial perceptions of power were measured in this dissertation, the perception of power that developed once the party realized that they had an important alternative is unknown. Previous studies that measured perceptions of power when associated with a BATNA did it at a later point in the negotiation (Pinkley, Neale, & Bennet, 1994). Information gathering may have impacted power in the studies. These studies also tested total perceptions of power, rather than situational perceptions of information power. Therefore, it is difficult to compare the findings of this dissertation to those of previous research.

A second possible reason for the result may be that parties do not see the value of the information related to having a BATNA because they were focused on working toward collaborative outcomes. Therefore, they believed that an alternative, while beneficial in distributive negotiations, was not useful in the collaborative scenario. Participants may not have used information about the BATNA when determining their initial situational perception of information power. This explanation supports Dunne's (2002) claim that people participating in collaborative situations are unconcerned about power because it is not emphasized is situations where people are working together.

The final set of hypotheses tested situational perception of power's association with information sharing and collaborative outcomes. Hypothesis 4a tested whether situational perceptions of power, when perceived to be equal, led to more information sharing than when situational perceptions of power were perceived to be unequal. Hypothesis 4a was not

supported. Therefore, it cannot be concluded that greater information sharing occurs when participants believe to have equal power. Interestingly, while not significant, when power was perceived to be unequal, more information was shared than when situational perceptions of power were perceived to be equal. This finding is reflective of the findings of Tedeshci, Bonoma, and Novinson (1970), who concluded that unequal perceptions of power led to greater information sharing. The affect that equal and unequal perceptions of power have on information sharing is still a debated topic. This dissertation studied the relationship in an attempt to support those who argue that equal perceptions of power lead to greater information sharing. Instead, this dissertation found a non-significant result that better supported the opposite claim.

Hypothesis 4b tested whether situational perceptions of power, when perceived to be equal, led to more collaborative outcomes than when situational perceptions of power were perceived to be unequal. Hypothesis 4b was not supported. Therefore, it cannot be concluded that greater collaborative outcomes resulted when participants believed to have equal power. This result may have occurred because participants determined that power was not important in the collaborative setting. Also, because initial situational perceptions of power were measured, it is unclear as to whether perceptions of power developed during the negotiation affected the collaborative outcomes. Perhaps interactional components had a greater influence on the final outcome of the negotiation.

Hypothesis 4c was the final hypothesis focusing on the initial situational perception of power. This hypothesis suggested that information sharing acts as a mediator between situational perceptions of power and collaborative outcomes. This hypothesis was not supported. Since no statistically significant relationship existed between perceptions of power and

collaborative outcomes or between perceptions of power and information sharing, it is not possible to conclude that information sharing acts as a mediator. Barron and Kenny's (1987) four requirements were not fulfilled.

Limitations

This dissertation adds to the theoretical, exploratory, and empirical literature focusing on collaborative negotiations. It emphasizes the importance of redefining negotiations to include distributive, integrative, and collaborative methods and processes. In addition, it introduces a questionnaire for evaluating situational perceptions of power in negotiations. Finally, it supports past research stating that information sharing is imperative in collaborative negotiations. While several of the hypotheses are not supported, a trend arises. This dissertation claims that information sharing is key to predicting collaborative outcomes. This was shown in the direct significant relationship between information sharing and collaborative outcomes. In addition, the insignificant relationships between information sharing and individual differences as well as relationships between individual differences and collaborative outcomes provide further evidence of information sharing's predictive nature. Both direct and indirect relationships associated with collaborative outcomes and information sharing support the claim the two constructs are associated. While this in an interesting finding of the dissertation, several limitations do exist. Therefore, this section outlines and discusses both data and methodological limitations that may have affected the results.

Several data limitations need to be addressed. First, this investigation relies mainly on self-report data (excluding the contract and information sharing questionnaire), which creates possibilities of social desirability and bias. Participant's knowledge of society may have caused

them to answer according to what they thought society wanted as opposed to what they believed. Therefore, data may be skewed toward societal norms.

In addition, the data collection assesses information only before and after the negotiation. For example, participants were asked about information sharing after the negotiation was complete. There is no way to determine exactly how the information was disclosed or what type of information was important in forming the interactions and outcomes. Therefore, only a snap shot of what actually occurred is examined by this dissertation.

Finally, the sample is skewed. Most of the data shows moderate information sharing and distributive outcomes. When glancing at the data, it seems that participants assumed a competitive role when negotiating, and therefore may have exchanged less information. Perhaps the data is skewed because an overwhelmingly competitive group participated in this study. Most of the participants were Caucasian United States citizens who grew up in the United States. These participants may have been socialized to be more competitive and therefore, used their upbringing and knowledge when approaching the negotiation role play. Their experience may have led them to negotiate in a distributive, or single-gain, manner. In addition, this study has limited generalizability due to the unique characteristics of this sample used. Skewed demographic characteristics, such as age, ethnicity, and nationality make it difficult to determine if the results found in this study can be generalized to industry populations or other cultures. Therefore, caution should be used when assuming that these findings apply to other groups. In addition, the skewed data may affect the analysis of the hypotheses. Results may be very different if run on a non-biased sample.

Several methodological limitations must also be addressed. First, because the six discussion sections met at different times throughout the week, contamination across sections

may have existed. If the participants discussed the negotiation exercise or assessments outside of class, participants who had not yet completed the role-play may have become aware of the key components of the exercise and questionnaires. Participants may have used this information when negotiating or answering questions, thus threatening internal validity and reliability.

Second, this study may not fully or accurately measure some of the constructs referred to in the hypotheses. For instance, the information sharing questionnaire only asked for responses to the confidential information shared. This information may have been only a small portion of the actual information shared. While the confidential information is extremely important to the negotiation, and is definitely a component of negotiation processes that existed, a large amount of information that was potentially important to the individual negotiations was not accounted for. Therefore, this dissertation may not represent a realistic picture of the information that impacted the negotiation. Also, situational perceptions of power remain an abstract phenomenon that defies easy observation. The questionnaire used for this study is still in its early stages and therefore, the internal validity and reliability are unknown. In addition, because no perceptions of power questionnaires have been developed, it is impossible to compare the questionnaire used in this study to existing surveys. Therefore, hypotheses using this questionnaire are exploratory and future studies should continue to develop it. Finally, although careful attention was paid to ensure that the role play was clear, concise, and easy to understand, some participants may have misunderstood aspects of their role, therefore changing the manner in which they communicated. SMEs may have overlooked certain details that intimidated or confused participants. If any of these were true, participants would not act to their potential.

Finally, collaborative outcomes were measured using a team of SMEs who read and rated each contract using a defined scale. That scale, while accepted by all the SMEs, may not be the

best measure of collaborative outcomes. Therefore, collaborative outcome data may be skewed or biased in some fashion.

Future Research

This dissertation has established a strong foundation for future research. Both its strengths and weaknesses guide the development of further research studies. First, this dissertation provides a basis for how dispositional trust and initial situational perceptions of power affect information sharing and collaborative outcomes. As with all research, it is impossible to measure and determine the impact of every potential variable impacting the study. Therefore, future research should replicate this study while including measures to evaluate (a) additional components of initial trust, and (b) temporary trust. Overall trust is a dynamic construct that changes with interactions and time. Measuring components of both initial and temporary trust will help to better determine the interactions between overall trust, information sharing, and collaborative outcomes. In addition, a future study can investigate other types of information exchanged during a collaborative negotiation. By expanding beyond confidential information, it is possible to determine if other information sharing impacts the negotiation outcomes. Also, future studies should include personality and conflict styles as factors affecting communication. Both of these constructs impact the way that one communicates, and may play a substantial role in collaborative negotiations.

Second, this dissertation should be replicated while videotaping each negotiation role play. This tool allows the researcher to examine participant interactions in order to develop a much richer understanding of the negotiation process. In addition, it allows the researcher to gauge whether the questionnaires used in the study accurately measure variables. By examining

the videotapes, researchers will better define the types of information shared and the relationships that develop.

Third, future research should use different samples when replicating the study. Industry samples will ensure that more mature, experienced groups are examined. These groups may lead to better generalizability across businesses. Additionally, upperclassmen or graduate students may lead to more generalizable results because of their maturity and experience. Another interesting sample to use for future research is one from a Collectivist society. This sample allows researchers to compare data from this dissertation to a sample from a different society. Insight into how rearing and society affect communication and problem-solving may arise when comparing data from opposing societies. In addition, collecting data from different samples may eliminate any bias that exists in this study. By collecting a larger more representative sample may prove to be less skewed. Analyses of these samples may show very different results than were found in this dissertation.

Fourth, future studies should replicate this study using a different collaborative negotiation role play. It would be interesting to see if gearing the role play to the audience changes the way that participants respond to the exercise. Perhaps participants are better able to act in role if they are familiar with the situation. This familiarity would ensure that fewer misinterpretations of the information were made.

Fifth, future research should continue to use the Negotiation Questionnaire in order to modify and strengthen it. In addition, using it in future studies allows researchers to determine the reliability and validity of the measure. Development of a questionnaire is an interesting and exciting opportunity, and future research is needed to improve what originated in this dissertation.

Finally, future research should focus on short-and long-term collaborative outcomes. This dissertation claimed that collaborative outcomes are not determined initially after the negotiation, but take time to develop. It would be interesting to conduct a long-term study that examines negotiation relationships during, immediately after, and in the future. To do this though, a lab setting is not ideal because of the short-term nature of participant's relationships. Therefore, the case study method may be best. This method provides a very realistic image of how the collaborative negotiation process is affected by the variables used in this dissertation.

Conclusion

In summary, this dissertation has three main purposes. The first is to introduce a new approach for understanding and defining negotiations. This dissertation argues that three types, rather than two types, of negotiation exist: distributive, integrative, and collaborative. The second purpose is to develop a link between collaborative negotiation processes, specifically information sharing, and long-term collaborative outcomes. A statistically significant relationship between information sharing and short-term collaborative outcomes and statistically insignificant relationships between various individual characteristics, information sharing, and short-term collaborative outcomes all emphasize that information sharing allows researchers to predict long-term collaborative outcomes. The third purpose is to test a series of hypotheses questioning the relationships between (a) dispositional trust, information sharing, and collaborative outcomes, and (b) situational perceptions of power, information sharing, and collaborative outcomes. This study introduces a Negotiation Questionnaire that measures one's initial situational perception of power, and used this questionnaire when testing hypotheses associated with perceptions of power.

This dissertation has several implications for practitioners. First, it demonstrates the importance of understanding integrative and collaborative negotiations. By understanding the differences, practitioners are better prepared to choose a negotiation strategy that fits abilities and circumstances. Second, this dissertation introduces a measure for understanding situational perceptions of power. By better understanding perceptions, practitioners can begin to understand why they frame a situation a certain way. Knowledge about individual perspectives is helpful when preparing for a negotiation because it allows the party to better anticipate any biases that may exist. Finally, this dissertation is important for those who want to gauge the success of a collaborative negotiation immediately after finishing. By focusing on the information sharing, practitioners can determine the success of the collaborative process and predict the success of future relationships.

This dissertation is an interesting look into the process of collaborative negotiation. First, it confronts some of the challenges associated with negotiation research and establishes a foundation on which future research can be conducted to answer many of the questions that remain a mystery.

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APPENDIX 1

SALLY SWANSONG & LYRIC OPERA

INSTRUCTIONS FOR LYRIC OPERA'S BUSINESS MANAGER

Information Known to Both Parties

- You are the Business Manager for Lyric Opera, an established institution in a major metropolitan area. As with most opera companies, Lyric is a non-profit entity that is financed by a combination of ticket sales, foundation and corporate grants, and income from a modest endowment. By and large, it usually breaks even over the course of the year, with fairly good attendance in its 2000-seat hall. Ticket prices range from $18 to $55, with $28 a reasonable average for rule of thumb accounting.

- As the Business Manager—the equivalent of the Chief Operations Officer—you are responsible for all operations, including finances, maintenance, budgeting, marketing, promotions, hiring and staffing. Your immediate supervisor is the Artistic Director—the equivalent of the Chief Executive Office—who approves the productions, musical scores, orchestra arrangements and the cast for each different opera. The Artistic Director reports to the Board of Trustees.

- The situation is that a production of *Manon Lescaut* is scheduled to open in three weeks. This production is scheduled to run for six weeks, with three performances per week. Unfortunately, your young lead soprano has developed a benign throat tumor, and although she will make a full recovery, she will not be able to sing the lead. This was announced in the high-circulation trade publication, *The Opera Times*. Cancellation of the opera would result in a loss of hundreds of thousands of dollars.

- Fortunately, Sally Swansong, a distinguished though aging soprano, has expressed interest in singing the lead. Sally has sung many times for the Lyric Opera over the years, including the title role in *Manon,* which means she will require less preparation time. A typical salary for a lead soprano would be $50,000.

- You are about to meet with Sally's agent, a partner in a talent-management agency who has a specialty in "fine arts," such as painters, poets, classical musicians and opera singers. As an agent, his responsibility is managing his client's career, from negotiating individual agreements to launching publicity campaigns to planning long-term prospects. As with all agents, he receives a 10% commission of all financial transactions, paid by the client, not the hiring institution.

Information Known Only to You

- The Artistic Director has informed you that Yvette Singsalot, the secondary soprano, is interested in the role. While she is very talented, and therefore is a good alternative to Sally, she is rather

young, and does not have name value yet. The Artistic Director is sure that she would do a fine job in the lead role, but prefers Sally because of her experience and name.

- Although the Artistic Director thinks that Sally is old for the role and her vocal quality has diminished over the years, he believes that given the situation, she is the best option. Besides, Sally has performed for Lyric many times, is a well-known performer, and knows the part of *Manon.*

- Given the existing circumstances, the Board of Trustees has increased your budget by $50,000 in order to secure the necessary talent. Thus, you have a total of $100,000 to use during the negotiation.

- You can use the money to your own discretion (i.e., you could potentially pay Sally a salary of $100,000, use the extra for stage production, or use the extra for publicity).

- Your primary concern, as always, is doing whatever it take to assure at least 85% attendance, as that equates to the "break-even" amount and will satisfy both the Artistic Director and the Board of Trustees.

- Anything less that 80% can be financially devastating. But, if you can increase attendance above 85%, you'll be everyone's hero. Although Sally has "name value," you're concerned that attendance could suffer if she is not in good voice.

SALLY SWANSONG VERSUS LYRIC OPERA

CONFIDENTIAL INSTRUCTIONS FOR SALLY'S AGENT

Information Known to Both Parties

- You are a partner in a talent-management agency, and your specialty is "fine arts," such as painters, poets, classical musicians and opera singers. As an agent, your responsibility is managing your client's career, from negotiating individual agreements to launching publicity campaigns to planning long-term prospects. As with all agents, you receive a 10% commission of all financial transactions, paid by the client, not the hiring institution.

- The situation is that a production of *Manon Lescaut* is scheduled to open in three weeks. This production is scheduled to run for six weeks, with three performances per week. The young lead soprano has developed a benign throat tumor, and although she will make a full recovery, will not be able to sing the lead. This was announced in the high-circulation trade publication, *The Opera Times*. Cancellation of the opera would result in a loss of hundreds of thousands of dollars.

- Fortunately, one of your clients, Sally Swansong, a distinguished though aging soprano, has expressed interest in singing the lead. Sally has sung many times for the Lyric Opera over the years, including the title role in *Manon,* which means she will require less preparation time. A typical salary for a lead soprano would be $50,000

- Lyric Opera is an established institution in a major metropolitan area. As with most opera companies, Lyric is a non-profit entity that is financed by a combination of ticket sales, foundation and corporate grants, and income from a modest endowment. By and large, it usually breaks even over the course of the year, with fairly good attendance in its 2000-seat hall. Ticket prices range from $18 to $55, with $28 a reasonable average for rule of thumb accounting.

- You will be meeting with the Business Manager—the equivalent of the Chief Operations Officer—who is responsible for all operations, including finances, maintenance, budgeting, marketing, promotions, hiring and staffing. His immediate supervisor is the Artistic Director—the equivalent of the Chief Executive Office—who approves the productions, musical scores, orchestra arrangements and the cast for each different opera. The Artistic Director reports to the Board of Trustees.

Information Known Only to You

- You were recently informed that the Metropolitan Opera House is staging a performance of *Madama Butterfly*, and is currently looking for a lead soprano. While this role is a good alternative for Sally, Metropolitan does not have the same name recognition as Lyric. Therefore, you believe that the Lyric role would provide a better chance for Sally getting the PBS contract.

- Because Sally is aging and her career has been on a slight decline, she very much wants to sing the title role in *Manon*. So much so, that she has told you that she's willing to sing for free!

- The real motivation for getting Sally the role at Lyric is that you have been approached by a team of television producers from the Public Broadcasting Company. They have just received a multi-million dollar grant to produce a multi-episode special on the role of opera in civilization. This would be similar to the wildly popular "Civil War," "Jazz," and "Baseball" series. They expressed an interest in having Sally serve as one of the primary commentators, though they were concerned that her standing in the opera community had fallen in recent years.

- Although there's no guarantee that getting Sally the Lyric role would secure the PBS contract, it certainly would help. With the kind of publicity she'd receive from the PBS role, her status—and earning power—as an icon would be assured.

- If Sally were able to get at least 85% house, the opera would be deemed a success, increasing her chances that she would get the PBS spot and other lead roles in the future.

- Managing partners believe that it is important to keep Sally's viability as a talent because of her potential draw in aging demographics. In other words, they feel that Sally's maturity and reputation would be attractive to older audiences, who would come to the opera in order to see Sally perform.

SALLY SWANSONG & LYRIC OPERA

INSTRUCTIONS FOR LYRIC OPERA'S BUSINESS MANAGER

Information Known to Both Parties

- You are the Business Manager for Lyric Opera, an established institution in a major metropolitan area. As with most opera companies, Lyric is a non-profit entity that is financed by a combination of ticket sales, foundation and corporate grants, and income from a modest endowment. By and large, it usually breaks even over the course of the year, with fairly good attendance in its 2000-seat hall. Ticket prices range from $18 to $55, with $28 a reasonable average for rule of thumb accounting.

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- Fortunately, Sally Swansong, a distinguished though aging soprano, has expressed interest in singing the lead. Sally has sung many times for the Lyric Opera over the years, including the title role in *Manon,* which means she will require less preparation time. A typical salary for a lead soprano would be $50,000.

- You are about to meet with Sally's agent, a partner in a talent-management agency who has a specialty in "fine arts," such as painters, poets, classical musicians and opera singers. As an agent, his responsibility is managing his client's career, from negotiating individual agreements to launching publicity campaigns to planning long-term prospects. As with all agents, he receives a 10% commission of all financial transactions, paid by the client, not the hiring institution.

Information Known Only to You

- Although the Artistic Director thinks that Sally is old for the role and her vocal quality has diminished over the years, he believes that given the situation, she is the best option. Besides, Sally has performed for Lyric many times, is a well-known performer, and knows the part of *Manon.*

- Given the existing circumstances, the Board of Trustees has increased your budget by $50,000 in order to secure the necessary talent. Thus, you have a total of $100,000 to use during the negotiation.

- You can use the money to your own discretion (i.e., you could potentially pay Sally a salary of $100,000, use the extra for stage production, or use the extra for publicity).

- Your primary concern, as always, is doing whatever it take to assure at least 85% attendance, as that equates to the "break-even" amount and will satisfy both the Artistic Director and the Board of Trustees. Anything less than that attendance causes problems, and anything less that 80% can be financially devastating. But, if you can increase attendance above 85%, you'll be everyone's hero. Although Sally has "name value," you're concerned that attendance could suffer if she is not in good voice.

- Should you decide to sign Sally, the structure of the agreement is at your complete discretion. Whoever you sign, it is important to keep the salary amount confidential, so as to not set an undesirable precedent.

SALLY SWANSONG VERSUS LYRIC OPERA

CONFIDENTIAL INSTRUCTIONS FOR SALLY'S AGENT

Information Known to Both Parties

- You are a partner in a talent-management agency, and your specialty is "fine arts," such as painters, poets, classical musicians and opera singers. As an agent, your responsibility is managing your client's career, from negotiating individual agreements to launching publicity campaigns to planning long-term prospects. As with all agents, you receive a 10% commission of all financial transactions, paid by the client, not the hiring institution.

- The situation is that a production of *Manon Lescaut* is scheduled to open in three weeks. This production is scheduled to run for six weeks, with three performances per week. The young lead soprano has developed a benign throat tumor, and although she will make a full recovery, will not be able to sing the lead. This was announced in the high-circulation trade publication, *The Opera Times*. Cancellation of the opera would result in a loss of hundreds of thousands of dollars.

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- Lyric Opera is an established institution in a major metropolitan area. As with most opera companies, Lyric is a non-profit entity that is financed by a combination of ticket sales, foundation and corporate grants, and income from a modest endowment. By and large, it usually breaks even over the course of the year, with fairly good attendance in its 2000-seat hall. Ticket prices range from $18 to $55, with $28 a reasonable average for rule of thumb accounting.

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Information Known Only to You

- Because Sally is aging and her career has been on a slight decline, she very much wants to sing the title role in *Manon*. So much so, that she has told you that she's willing to sing for free!

- The real motivation for getting Sally the role at Lyric is that you have been approached by a team of television producers from the Public Broadcasting Company. They have just received a multi-

million dollar grant to produce a multi-episode special on the role of opera in civilization. This would be similar to the wildly popular "Civil War," "Jazz," and "Baseball" series. They expressed an interest in having Sally serve as one of the primary commentators, though they were concerned that her standing in the opera community had fallen in recent years.

- Although there's no guarantee that getting Sally the Lyric role would secure the PBS contract, it certainly would help. With the kind of publicity she'd receive from the PBS role, her status—and earning power—as an icon would be assured.

- If Sally were able to get at least 85% house, the opera would be deemed a success, increasing her chances that she would get the PBS spot and other lead roles in the future.

- Managing partners believe that it is important to keep Sally's viability as a talent because of her potential draw in aging demographics. In other words, they feel that Sally's maturity and reputation would be attractive to older audiences, who would come to the opera in order to see Sally perform.

APPENDIX 2

SALLY SWANSONG & LYRIC OPERA
CONTRACT: TERMS AND CONDITIONS

Signatures _____ _____

Sally Swansong's Agent Lyric Opera Business Manager

APPENDIX 3

Collaborative Negotiations as Information Sharing

Mary D. Sass, ABD
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Information Sharing
Lyric Opera House

Table of Contents

Name _____

Section # _____

Version _____

Information Sharing

Instructions: Questions 1-12 pertain to information you and the other party shared during the negotiation. Please read each statement carefully and answer each to the best of your ability.

To what degree did *you* share the following pieces of information during the negotiation?

	Not at All		Somewhat		Completely	
1. You have another singer, Yvette Singsalot, who can sing the role if an agreement is not reached between Sally's agent and you.	1	2	3	4	5	Not Applicable If Version N
2. The Artistic Director thinks that Sally is the best option for the role.	1	2	3	4	5	
3. Your budget is $100,000.	1	2	3	4	5	
4. You can use the $100,000 to your own discretion.	1	2	3	4	5	
5. Your primary concern is getting at least 85% of the seats filled.	1	2	3	4	5	
6. 80% of the seats filled would be financially devastating to Lyric.	1	2	3	4	5	

To what degree did *the other party* share the following pieces of information during the negotiation?

	Not at All		Somewhat		Completely
7. Sally is willing to sing in the opera for free.	1	2	3	4	5
8. Sally is truly motivated by the possibility of being offered a PBS television contract.	1	2	3	4	5
9. If Sally gets the lead role, she is more likely to be offered the PBS television contract.	1	2	3	4	5
10. Sally will see the opera as a success if she gets at least 85% of the seats filled.	1	2	3	4	5
11. Sally's reputation and maturity are seen as attractive qualities to older audiences.	1	2	3	4	5
12. Sally has another lead role that she can take if an agreement is not reached between her agent and you.	1	2	3	4	5

Collaborative Negotiations as Information Sharing

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Information Sharing
Sally Swansong

Table of Contents

Name _____
Section # _____
Version _____

Information Sharing

Instructions: Questions 1-12 pertain to information you and the other party shared during the negotiation. Please read each statement carefully and answer each to the best of your ability.

To what degree did *you* share the following pieces of information during the negotiation?

	Not at all		Somewhat		Completely	
1. Sally has another lead role that she can take if an agreement is not reached between Lyric and you.	1	2	3	4	5	Not Applicable if Version N
2. Sally is willing to sing in the opera for free.	1	2	3	4	5	
3. Sally is truly motivated by the possibility of being offered a PBS television contract.	1	2	3	4	5	
4. If Sally gets the lead role, she is more likely to be offered the PBS television contract.	1	2	3	4	5	
5. Sally will see the opera as a success if she gets at least 85% of the seats filled.	1	2	3	4	5	
6. Sally's reputation and maturity are seen as attractive qualities to older audiences.	1	2	3	4	5	

To what degree did *the other party* share the following pieces of information during the negotiation?

	Not at all		Somewhat		Completely
7. Lyric has another singer, Yvette Singsalot, who can sing the lead role if an agreement is not reached between Lyric and you.	1	2	3	4	5
8. The Artistic Director thinks that Sally is the best option for the role.	1	2	3	4	5
9. Lyric's budget is $100,000.	1	2	3	4	5
10. Lyric's Business Manager can use the $100,000 to his own discretion.	1	2	3	4	5
11. Lyric's primary concern is getting at least 85% of the seats filled.	1	2	3	4	5
12. 80% of the seats filled would be financially devastating to Lyric.	1	2	3	4	5

APPENDIX 4

Collaboration as Information Sharing

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Interpersonal Trust Scale (ITS)

Table of Contents

Accompanying Document

Answer Sheet and Scoring Key

Adapted from:

Rotter, J.B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality, 35*, 615-665.

Robinson, J. P., Shaver, P.R & Wrightsman, L. S. (1991). *Measures of Personality and Social Psychological Attitudes*. San Diego, CA: Academic Press, Inc.

Part 1: ITS Instructions

The following pages contain phrases illustrating people's beliefs. Read each item carefully and indicate how much you agree or disagree by using the scale provided. Write your answers in the blanks found on the accompanying Answer Sheet. Your answer sheet will be turned into the facilitator after completion of the assessment. Additional instructions for calculating your score are provided with the answer sheet itself. Please remember to include your name, student ID number and section number.

Answer as you honestly believe. Please understand that there are no right or wrong answers, and that such measures are only indicators of behavioral style or psychological orientation, and are not definitive. Your responses will remain confidential, and will not be associated with you as an individual.

Part 1: The Interpersonal Trust Scale

Scoring Key

1 = Strongly Agree
2 = Mildly Agree
3 = Agree or Disagree Equally
4 = Mildly Disagree
5 = Strongly Disagree

1. Hypocrisy (professing beliefs, feelings or virtues that one does not possess) is on the increase in our society.
2. In dealing with strangers one is better off to be cautious until they have provided evidence that they are trustworthy.
3. This country has a dark future unless we can attract better people into politics.
4. Fear and social disgrace or punishment rather than conscience prevents most people from breaking the law.
5. Using the honor system of not having a teacher present during exams would probably result in increased cheating.
6. Parents usually can be relied on to keep their promises.
7. The United Nations will never be an effective force in keeping world peace.
8. The judiciary is a place where we can all get unbiased treatment.
9. Most people would be horrified if they knew how much news that the public hears and sees is distorted.
10. It is safe to believe that in spite of what people say most people are primarily interested in their own welfare.
11. Even though we have reports in newspapers, radio and television, it is hard to get objective accounts of public events.
12. The future seems very promising.
13. If we really know what was going on in international politics, the public would have reason to be more frightened that they now seem to be.
14. Most elected officials are really sincere in their campaign promises.
15. Many major national sports contests are fixed in one way or another.
16. Most experts can be relied upon to tell the truth about the limits of their knowledge.
17. Most parents can be relied upon to carry out their threats of punishments.
18. Most people can be counted on to do what they say they will do.
19. In these competitive times one has to be alert or someone is likely to take advantage of you.
20. Most idealists are sincere and usually practice what they preach.

Scoring Key

1 = Strongly Agree
2 = Mildly Agree
3 = Agree or Disagree Equally
4 = Mildly Disagree
5 = Strongly Disagree

21. Most salespeople are honest in describing their products.
22. Most students in school would not cheat even if they were sure of getting away with it.
23. Most repair people will not overcharge even if they think you are ignorant of their specialty.
24. A large share of accident claims filed against insurance companies are phony.
25. Most people answer public opinion polls honestly.

This completes Part 1.

Part 2: Interpretation of ITS Scores

***Total Score*_____**

Introduction

The Interpersonal Trust Scale measures your expectation that the behavior, promises, and verbal/written statements of other individuals can be relied upon (Robinson, J.P., Shaver, P. R. & Wrightsman, L. S., 1991). Those who score high believe that all people are generally trustworthy and will live up to their word. Those who score low believe that others are inherently untrustworthy, and therefore have difficulty relying on others.

Your score for interpersonal trust is low if it falls between 25 and 50, moderate if it falls between 51 and 100 and high if it falls between 101 and 125.

APPENDIX 5

Name_____

Student ID #_____

Section #_____

Collaboration as Information Sharing

Mary D. Sass, ABD

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Negotiation Questionnaire

Table of Contents

Instructions

The following pages contain 15 questions regarding your feelings about the negotiations role you just read. Read the questions and answer according to the individual instructions provided. Hand the questionnaire into the facilitator before beginning the negotiation role-play.

Please understand that there are no right or wrong answers. In addition, your answers will remain confidential, and will not be associated with you as an individual.

Part 1

Instructions: Read each item carefully and indicate how accurately or inaccurately it describes your beliefs about your role in the negotiation scenario. Circle your answer directly on this sheet.

	Very Inaccurate	Moderately Inaccurate	Neither Accurate Nor Inaccurate	Moderately Accurate	Very Accurate
1. I have the power to get what I want in this negotiation.	1	2	3	4	5
2. I have the necessary resources (i.e., money, time, alternatives, etc.) to get what I want in this negotiation.	1	2	3	4	5
3. I have the necessary information to get what I want in this negotiation.	1	2	3	4	5
4. I have the necessary reputation (i.e., position in the industry) to get what I want in this negotiation.	1	2	3	4	5
5. I have more resources (i.e., money, time, alternatives, etc.) than the other party in this negotiation.	1	2	3	4	5
6. I have more information than the other party in this negotiation.	1	2	3	4	5
7. I have a better reputation (position in the industry) that the other party in this negotiation.	1	2	3	4	5
8. I have more power than the other party in this negotiation.	1	2	3	4	5

Part 2

Instructions: Read each statement carefully and indicate how much each statement either favors you or the other party in the negotiation scenario. Circle your answer directly on this sheet.

	Favor(s) The Other Party	Moderately Favor(s) the Other Party	Equally Favor(s) the Other Party and Me	Moderately Favor(s) Me	Favor(s) Me
9. The negotiation scenario	1	2	3	4	5
10. The information presented in the scenario	1	2	3	4	5
11. The alternatives presented in the scenario	1	2	3	4	5
12. The resources (i.e., time, money, etc.) presented in the scenario	1	2	3	4	5
13. My reputation (i.e., position in the industry) presented in the scenario	1	2	3	4	5

Part 3

Instructions: Consider power as a continuum that ranges from you having no power (the other party has all the power) to you having all the power (the other party has no power). On the following scale mark the level of power that you believe you have in the negotiation scenario.

0 Percent
(The other party has complete power)

100 Percent
(You have complete power)

Part 4

Instructions: Consider 100 percent of power as being divided between you and the other party. Indicate what percentage of power you feel that you and the other party have in the negotiation scenario. Your percentages must add up to 100 percent.

Your Power: _____%

The Other Party's Power: _____%

100%

APPENDIX 6
CORRELATION MATRIX AND ANALYSIS OF CONTROL VARIABLES

Correlation Matrix

		Trust	Factor 1	Factor 2	Factor 3	Factor 4	Total Power	Self Power	Info. Shared
Trust	Pearson	1	--	--	--	--	--	--	--
	N	157	--	--	--	--	--	--	--
Factor 1	Pearson	.036	1	--	--	--	--	--	--
	N	157	168	--	--	--	--	--	--
Factor 2	Pearson	.029	.466**	1	--	--	--	--	--
	N	157	168	168	--	--	--	--	---
Factor 3	Pearson	-.019	.423**	.400**	1	--	--	--	--
	N	157	168	168	168	--	--	--	--
Factor 4	Pearson	-.052	.447**	.351**	.298**	1	--	--	--
	N	157	168	168	168	168	--	--	--
Total Power	Pearson	.005	.817**	.779**	.662**	.691**	1	--	--
	N	157	168	168	168	168	168	--	--
Self Power	Pearson	-.637**	.053	.046	.007	.115	.076	1	--
	N	157	168	168	168	168	168	169	--
Info. Shared	Pearson	-.293**	-.044	.140	.012	.088	.067	.268**	1
	N	157	168	168	168	168	168	169	169

**Correlation is Significant to the .01 level.

Correlation Matrix for Individual Variables

Correlation Coefficient = .255**

**Correlation is Significant to the .01 level.

Correlation Coefficient for Dyad Variables (Information Sharing and Collaborative Outcomes)

Individual Level

			N	*M*	*SD*	*SEM*
Gender	Outcome	Male	106	2.08	1.070	.104
		Female	62	2.06	.973	.124
	Shared Info.	Male	106	2.26	1.488	.145
		Female	62	2.37	1.496	.190
Ethnicity	Outcome	White	124	2.06	1.015	.091
		Other	44	2.14	1.091	.164
	Shared Info.	White	124	2.4	1.513	.136
		Other	44	2.05	1.397	.211
Nationality	Outcome	White	151	2.03	1.029	.084
		Other	17	2.47	1.007	.244
	Shared Info.	White	151	2.31	1.493	.122
		Other	17	2.24	1.480	.359

Group Statistics for Control Variables in Hypothesis 1

			Levene's Test		*t test for Equality of Means*						
										95% Confidence Interval of the Difference	
			F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Gender	Outcome	Equal Variances Assumed	.664	.416	.123	166	.902	.020	.166	-.306	.347
		Equal Variances not Assumed			.126	137.8	.900	.020	.161	-.299	.340
	Shared Info.	Equal Variances Assumed	.005	.944	-.45	166	.655	-.107	.238	-.578	.364
		Equal Variances not Assumed			-.45	127.3	.655	-.107	.239	-.579	.366
Ethnicity	Outcome	Equal Variances Assumed	.935	.335	-.44	166	.660	-.080	.182	-.438	.279
		Equal Variances not Assumed			-.43	71.10	.672	-.080	.188	-.455	.295
	Shared Info.	Equal Variances Assumed	1.4	.245	1.34	166	.181	.350	.260	-.164	.864
		Equal Variances not Assumed			1.40	81.33	.167	.350	.251	-.149	.848
Nationality	Outcome	Equal Variances Assumed	.156	.694	-1.7	166	.098	-.437	.263	-.956	.081
		Equal Variances not Assumed			-1.7	19.95	.106	-.437	.258	-.976	.101
	Shared Info.	Equal Variances Assumed	.012	.912	.199	166	.842	.076	.382	-.678	.829
		Equal Variances not Assumed			.200	19.85	.843	.076	.379	-.715	.867

Independent Samples t tests for Control Variables in Hypothesis 1

			N	*M*	*SD*	*SEM*
Gender	Outcome	Male	97	1.89	.802	.081
		Female	58	1.93	.769	.101
	Shared Info.	Male	91	2.22	1.451	.152
		Female	57	2.32	1.478	.196
	Disp. Trust	Male	97	73.58	17.865	1.814
		Female	58	72.62	24.558	3.225
Ethnicity	Outcome	White	114	1.89	.784	.073
		Other	41	1.95	.805	.126
	Shared Info.	White	111	2.38	1.465	.139
		Other	37	1.89	1.390	.229
	Disp. Trust	White	114	72.87	20.893	1.957
		Other	41	74.20	19.790	3.091
Nationality	Outcome	U.S.	141	1.89	.803	.068
		Other	14	2.07	.616	.165
	Shared Info.	U.S.	135	2.25	1.465	.126
		Other	12	2.48	1.240	.358
	Disp. Trust	U.S.	141	73.23	20.356	1.714
		Other	14	73.14	23.264	6.218

Group Statistics for Control Variables in Hypothesis 2a-2c

			Levene's Test		*t test for Equality of Means*						
										95% Confidence Interval of the Difference	
			F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Gender	Outcome	Equal Variances Assumed	.829	.364	-.34	153	.735	-.044	.131	-.303	.215
		Equal Variances not Assumed			-.34	124.1	.733	-.044	.130	-.301	.121
	Shared Info.	Equal Variances Assumed	.029	.866	-.39	146	.698	-.096	.247	-.584	.392
		Equal Variances not Assumed			-.39	117.4	.699	-.096	.248	-.587	.395
	Disp. Trust	Equal Variances Assumed	3.22	.075	.280	153	.78	.957	3.422	-5.8	7.72
		Equal Variances not Assumed			.259	93.24	.797	.957	3.70	-6.39	8.3
Ethnicity	Outcome	Equal Variances Assumed	.002	.968	-.45	153	.651	-.065	.144	-.349	.219
		Equal Variances not Assumed			-.45	69.15	.655	-.065	.146	-.356	.225
	Shared Info.	Equal Variances Assumed	1.28	.259	1.77	146	.079	.486	.275	-.056	1.029
		Equal Variances not Assumed			1.82	64.69	.074	.486	.268	-.048	1.021
	Disp. Trust	Equal Variances Assumed	.155	.694	-.35	153	.724	-1.327	3.753	-8.742	6.088
		Equal Variances not Assumed			-.36	74.27	.718	-1.327	3.658	-8.615	5.962
Nationality	Outcome	Equal Variances Assumed	5.52	.020	-.84	153	.404	-.185	.221	-.621	.252
		Equal Variances not Assumed			-1.0	17.71	.313	-.185	.178	-.559	.189
	Shared Info.	Equal Variances Assumed	1.19	.277	.386	145	.700	.169	.436	-.649	1.031
		Equal Variances not Assumed			.444	13.88	.664	.169	.380	-.646	.983
	Disp. Trust	Equal Variances Assumed	.173	.678	.015	153	.988	.084	5.778	-11.33	11.49
		Equal Variances not Assumed			.013	15.04	.990	.084	6.450	-13.66	13.827

Independent Samples t tests for Control Variables in Hypotheses 2a-2c

			N	*M*	*SD*	*SEM*
Gender	Factor 1	Male	105	3.5178	.72274	.07053
		Female	61	3.5137	.85597	.10960
	Factor 2	Male	105	3.5023	.55750	.05441
		Female	61	3.5340	.58032	.07430
	Factor 3	Male	105	3.9557	.71355	.06964
		Female	61	4.1682	.69166	.08856
	Factor 4	Male	105	3.3749	.65314	.06374
		Female	61	3.4960	.63580	.08141
	Total Power	Male	105	3.55	.479	.047
		Female	61	3.63	.524	.067
Ethnicity	Factor 1	White	124	3.52	.742	.067
		Other	42	3.49	.863	.133
	Factor 2	White	124	3.44	.526	.047
		Other	42	3.73	.624	.096
	Factor 3	White	124	4.01	.732	.066
		Other	42	4.10	.647	.099
	Factor 4	White	124	3.42	.637	.057
		Other	42	3.42	.687	.106
	Total Power	White	124	3.56	.475	.043
		Other	42	3.66	.550	.085
Nationality	Factor 1	U.S.	152	3.52	.775	.063
		Other	14	3.44	.754	.202
	Factor 2	U.S.	152	3.51	.558	.045
		Other	14	3.601	.642	.172
	Factor 3	U.S.	152	4.04	.717	.058
		Other	14	4.00	.661	.177
	Factor 4	U.S.	152	3.42	.648	.053
		Other	14	3.44	.661	.177
	Total Power	U.S.	152	3.58	.490	.040
		Other	14	3.59	.574	.153

Group Statistics for Control Variables in Hypothesis 3

			Levene's Test		*t test for Equality of Means*						
										95% Confidence Interval of the Difference	
			F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Gender	Factor 1	Equal Variances Assumed	1.67	.198	.033	164	.974	.004	.125	-.242	.250
		Equal Variances not Assumed			.032	109.2	.975	.004	.130	-.254	.262
	Factor 2	Equal Variances Assumed	.06	.806	-.35	164	.729	-.032	.091	-.212	.148
		Equal Variances not Assumed			-.34	121.4	.732	-.032	.092	-.214	.151
	Factor 3	Equal Variances Assumed	.316	.575	-1.9	164	.063	-.213	.114	-.437	.012
		Equal Variances not Assumed			-1.9	128.7	.061	-.213	.113	-.435	.010
	Factor 4	Equal Variances Assumed	.009	.924	-1.2	164	.247	-.121	.104	-.327	.085
		Equal Variances not Assumed			-1.2	128.3	.244	-.121	.103	-.326	.083
	Total Power	Equal Variances Assumed	.4	.528	-.94	164	.350	-.075	.080	-.232	.083
		Equal Variances not Assumed			-.92	116.5	.362	-.075	.082	-.237	.088
Ethnicity	Factor 1	Equal Variances Assumed	.449	.504	.173	164	.863	.024	.138	-.249	.297
		Equal Variances not Assumed			.160	62.79	.873	.024	.149	-.274	.321
	Factor 2	Equal Variances Assumed	2.29	.132	-2.9	164	.004	-.285	.099	-.479	-.090
		Equal Variances not Assumed			-2.7	61.90	.010	-.285	.107	-.499	-.070
	Factor 3	Equal Variances Assumed	.039	.844	-.65	164	.519	-.082	.127	-.333	.169
		Equal Variances not Assumed			-.69	79.33	.494	-.082	.120	-.320	.156
	Factor 4	Equal Variances Assumed	.056	.814	.024	164	.981	.003	.116	-.226	.232
		Equal Variances not Assumed			.024	66.43	.981	.003	.120	-.238	.243

			Levene's Test		*t test for Equality of Means*						
										95% Confidence Interval of the Difference	
			F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
	Total Power	Equal Variances Assumed	.554	.458	-1.2	164	.235	-.105	.088	-.280	.069
		Equal Variances not Assumed			-1.1	63.03	.272	-.105	.095	-.295	.084
Nationality	Factor 1	Equal Variances Assumed	.205	.651	.370	164	.712	.080	.216	-.347	.507
		Equal Variances not Assumed			.378	15.64	.710	.080	.211	-.369	.528
	Factor 2	Equal Variances Assumed	.042	.838	-.61	164	.546	-.096	.158	-.408	.216
		Equal Variances not Assumed			-.54	14.87	.598	-.096	.177	-.474	.283
	Factor 3	Equal Variances Assumed	.026	.872	.202	164	.840	.040	.199	-.353	.434
		Equal Variances not Assumed			.217	15.96	.831	.040	.186	-.354	.435
	Factor 4	Equal Variances Assumed	.007	.935	-.14	164	.887	-.026	.181	-.384	.332
		Equal Variances not Assumed			-.14	15.40	.890	-.026	.184	-.418	.366
	Factor 5	Equal Variances Assumed	.049	.826	-.08	164	.934	-.012	.139	-.286	.263
		Equal Variances not Assumed			-.07	14.8	.943	-.012	.158	-.350	.326

Independent Samples t tests for Control Variables in Hypothesis 3

			N	*M*	*SD*	*SEM*
Gender	Equal/Unequal	Male	106	1.58	.495	.048
		Female	61	1.44	.501	.064
	Shared Info.	Male	106	2.29	1.493	.145
		Female	61	2.34	1.493	.191
Ethnicity	Equal/Unequal	White	124	1.53	.501	.045
		Other	43	1.53	.505	.077
	Shared Info.	White	124	2.40	1.513	.136
		Other	43	2.07	1.404	.214
Nationality	Equal/Unequal	U.S.	153	1.52	.501	.041
		Other	14	1.64	.497	.133
	Shared Info.	U.S.	153	2.34	1.488	.120
		Other	14	2.00	1.519	.406

Group Statistics for Control Variables in Hypothesis 4a

			Levene's Test		*t test for Equality of Means*						
										95% Confidence Interval of the Difference	
			F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Gender	Equal/Unequal	Equal Variances Assumed	.417	.519	1.78	165	.077	.142	.080	.-015	.300
		Equal Variances not Assumed			1.78	124.0	.078	.142	.080	-.016	.301
	Shared Info.	Equal Variances Assumed	.048	.828	-.22	165	.829	-.052	.240	-.525	.422
		Equal Variances not Assumed			-.22	125.2	.829	-.052	.240	-.527	.423
Ethnicity	Equal/Unequal	Equal Variances Assumed	.004	.952	-.03	165	.976	-.003	.089	-.178	.173
		Equal Variances not Assumed			-.03	72.71	.977	-.003	.089	-.180	.175
	Shared Info.	Equal Variances Assumed	1.21	.27	1,24	165	.218	.325	.263	-.194	.845
		Equal Variances not Assumed			1.28	78.31	.203	.325	.254	-.179	.830
Nationality	Equal/Unequal	Equal Variances Assumed	9.78	.002	-.86	165	.392	-.120	.140	-.396	.156
		Equal Variances not Assumed			-.86	15.52	.401	-.120	.139	-.415	.175
	Shared Info.	Equal Variances Assumed	.089	.766	.817	165	.415	.340	.416	-.482	1.161
		Equal Variances not Assumed			.803	15.37	.434	.340	.423	-.561	1.241

Independent Samples t test for Control Variables in Hypothesis 4a

			N	*M*	*SD*	*SEM*
Gender	Outcomes	Male	106	1.92	.770	.075
		Female	61	1.95	.784	.100
	Equal/Unequal	Male	106	.636	.147	.014
		Female	61	.606	.149	.019
Ethnicity	Outcomes	White	123	1.91	.768	.069
		Other	44	1.98	.792	.119
	Equal/Unequal	White	123	.637	.134	.012
		Other	44	.618	.183	.028
Nationality	Outcomes	U.S.	153	1.92	.786	.064
		Other	14	2.07	.616	.165
	Equal/Unequal	U.S.	153	.624	.143	.012
		Other	14	.629	.203	.054

Group Statistics for Control Variables in Hypotheses 4b-c

			Levene's Test		*t test for Equality of Means*						
										95% Confidence Interval of the Difference	
			F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Gender	Equal/Unequal	Equal Variances Assumed	.005	.942	1.25	165	.214	.03	.025	-.02	.077
		Equal Variances not Assumed			1.24	124	.216	.03	.024	.02	.077
	Outcome	Equal Variances Assumed	.001	.979	-.29	165	.775	-.036	.125	-.282	.210
		Equal Variances not Assumed			-.29	123.4	.776	-.036	.125	-.283	.212
Ethnicity	Equal/Unequal	Equal Variances Assumed	1.51	.221	-.10	165	.920	-.004	.042	***	.078
		Equal Variances not Assumed			-.08	14.21	.941	-.004	.055	***	.114
	Outcome	Equal Variances Assumed	3.97	.048	-.72	165	.470	-.156	.216	-.583	.270
		Equal Variances not Assumed			-.89	17.13	.388	-.156	.176	-.528	.216
Nationality	Equal/Unequal	Equal Variances Assumed	1.51	.221	-.10	165	.92	-.004	.042	***	.078
		Equal Variances not Assumed			-.08	14.21	.941	-.004	.055	***	.114
	Outcome	Equal Variances Assumed	3.97	.048	-.72	165	.47	-.156	.216	-.583	.270
		Equal Variances not Assumed			-.89	17.13	.388	-.156	.176	-.528	.216

Independent Samples t test for Control Variables in Hypotheses 4b-c

Dyad Level

			N	*M*	*SD*	*SEM*
Ethnicity	Outcomes	White	53	1.981	.772	.106
		Other	30	1.833	.791	.145
	Info. Sharing	White	53	1.566	.665	.091
		Other	30	1.533	.571	.104
Nationality	Outcomes	U. S.	65	1.862	.788	.098
		Other	18	2.167	.707	.167
	Info. Sharing	U. S.	65	1.554	.662	.082
		Other	18	1.556	.511	.121

Group Statistics for Ethnicity and Nationality

			Levene's Test		*t test for Equality of Means*						
										95% Confidence Interval of the Difference	
			F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Ethnicity	Outcome	Equal Variances Assumed	.497	.483	.830	81	.409	.148	.178	-.206	.502
		Equal Variances not Assumed			.825	59.08	.413	.148	.179	-.211	.506
	Info. Sharing	Equal Variances Assumed	1.30	.257	.226	81	.822	.033	.145	-.255	.321
		Equal Variances not Assumed			.236	68.20	.814	.033	.139	-.244	.309
Nationality	Outcome	Equal Variances Assumed	.927	.339	-1.5	81	.142	-.305	.206	-.714	.104
		Equal Variances not Assumed			-1.6	29.77	.125	-.305	.193	-.700	.090
	Info. Sharing	Equal Variances Assumed	2.41	.125	-.01	81	.992	-.002	.169	-.337	.334
		Equal Variances not Assumed			-.01	34.48	.991	-.002	.146	-.298	.295

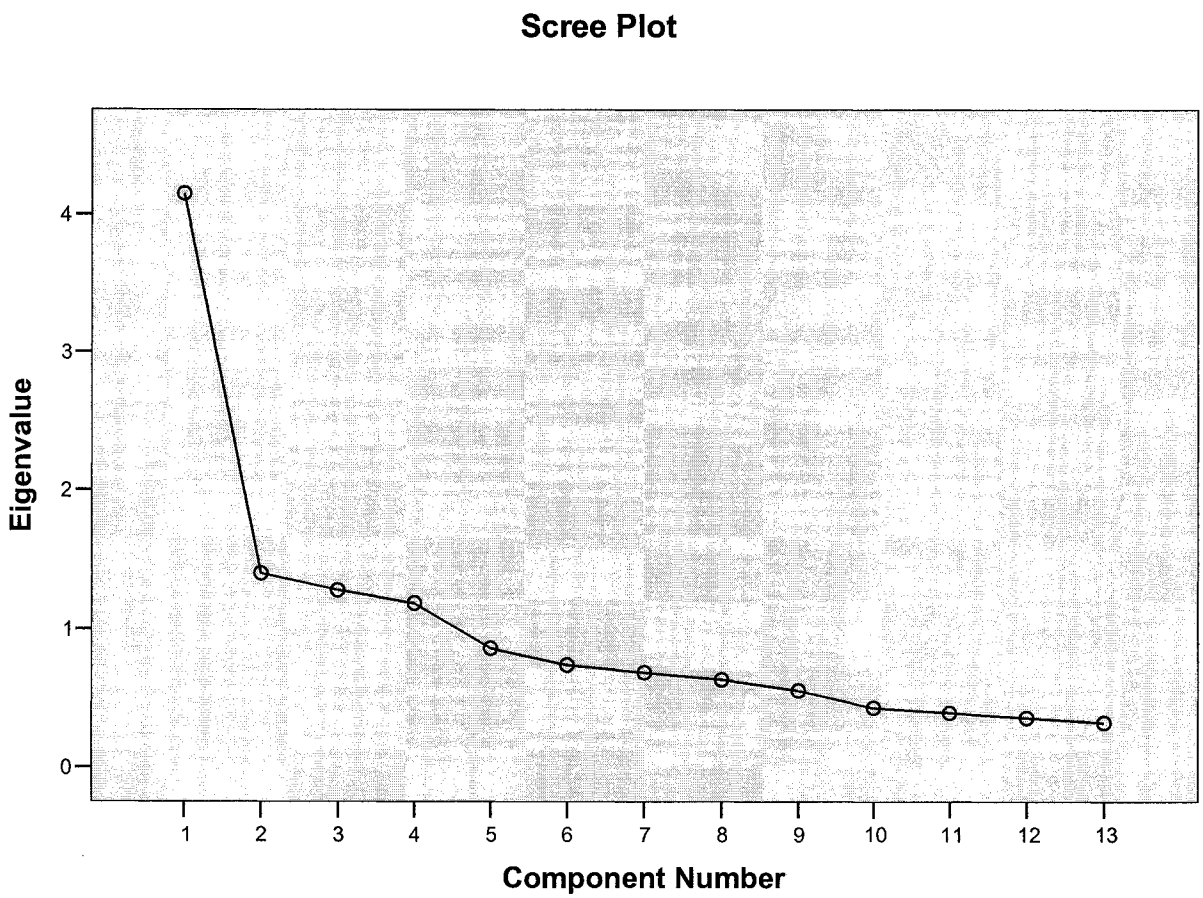
Independent Samples t test for Ethnicity and Nationality

		Ss	*df*	*MS*	*F*	*Sig.*
Info. Sharing	Between Groups	.143	2	.071	.177	.828
	Within Groups	32.363	80	.405		
	Total	32.506	82			
Outcomes	Between Groups	.081	2	.040	.065	.937
	Within Groups	49.485	80	.619		
	Total	49.566	82			

*Three groups were compared: male dyad, female dyad, mixed dyad

Analysis of Variance for Gender

APPENDIX 7



APPENDIX 8
ANALYSIS OF HYPOTHESIS 1

		N	*Marginal Percentage*
Modified Outcomes	1.00	29	34.1%
Paired	2.00	34	40.0%
	3.00	22	25.9%
	Valid	85	100.0%
	Missing	0	
	Total	85	
	Subpopulation	3	

Case Processing Summary

	Model Fitting Criteria	*Likelihood Ratio Tests*		
Model	*-2 Log Likelihood*	*Chi-Square*	*df*	*Sig.*
Intercept Only	35.806			
Final	17.719	18.087	2	.000

Model Fitting Information

Cox and Snell	.192
Nagerlkerke	.216
McFadden	.098

Pseudo R-Squared

Effect	*Model Fitting Criteria*	*Likelihood Ratio Tests*		
	-2 Log Likelihood of Reduced Model	*Chi-Square*	*df*	*Sig.*
Intercept	32.891	15.172	2	.001
Info. Sharing	35.806	18.087	2	.000

Likelihood Ratio Tests

APPENDIX 9
ANALYSIS OF HYPOTHSIS 2A

		N	*Marginal Percentage*
Information Sharing	1.00	51	34.5%
	2.00	68	45.9%
	3.00	29	19.6%
	Valid	148	100.0%
	Missing	0	
	Total	148	
	Subpopulation	39	

Case Processing Summary

	Model Fitting Criteria	*Likelihood Ratio Tests*		
Model	*-2 Log Likelihood*	*Chi-Square*	*df*	*Sig.*
Intercept Only	158.790			
Final	153.948	4.842	2	.089

Model Fitting Information

Cox and Snell	.032
Nagelkerke	.037
McFadden	.016

Pseudo R-Squared

Effect	*Model Fitting Criteria*	*Likelihood Ratio Tests*		
	-2 Log Likelihood of Reduced Model	*Chi-Square*	*df*	*Sig.*
Intercept	156.971	3.023	2	.221
ITS Total	158.790	4.842	2	.089

Likelihood Ratio Tests

Info. Sharing		*B*	*SE*	*Wald*	*df*	*Sig.*	*Exp (B)*	*95% Confidence Interval for Exp (B)*	
								Lower Bound	*Upper Bound*
1.00	Intercept	-1.100	1.944	.320	1	.571			
	ITS Total	.022	.025	.739	1	.390	1.022	.972	1.074
2.0	Intercept	-2.954	1.887	2.452	1	.117			
	ITS Total	.049	.025	4.031	1	.045	1.050	1.001	1.102

Parameter Estimates

APPENDIX 10
ANALYSIS OF HYPOTHESIS 2B

	SS	*df*	*MS*	*F*	*Sig.*
Between Groups	.192	3	.064	.099	.960
Within Groups	92.856	144	.645		
Total	93.047	147			

ANOVA of Collaborative Outcomes

	ANOVA Coding (I)	*ANOVA Coding (J)*	*Mean Difference*	*Std. Error*	*Sig.*	*95% Confidence Interval*	
						Low Bound	*Upper Bound*
Tukey HSD	3	4	-.011	.184	1.0	-.49	.47
		5	.056	.182	.990	-.42	.53
		6	-.044	.199	.996	-.56	.47
	4	3	.011	.184	1.0	-.47	.49
		5	.067	.177	.982	-.39	.53
		6	-.033	.194	.998	-.54	.47
	5	3	-.056	.182	.990	-.53	.42
		4	-.067	.177	.982	-.53	.39
		6	-.100	.192	.954	-.60	.40
	6	3	.044	.199	.996	-.47	.56
		4	.033	.194	.998	-.47	.54
		5	.100	.192	.954	-.40	.60

*Dependent Variable: Modified Outcome

Post Hoc Test for Mean Differences

	ANOVA Coding	*N*	*Subset for alpha =.05*
			1
Tukey HSD	5	42	1.83
	3	36	1.89
	4	40	1.90
	6	30	1.93
	Sig.		.951

Tukey's Modified Outcome

APPENDIX 11
ANALYSIS OF HYPOTHESIS 3

Version		*N*	*M*	*SD*	*SEM*
Total Power	Yes	87	3.581	.487	.052
	No	81	3.594	.505	.056
Factor 1	Yes	87	3.542	.747	.080
	No	81	3.511	.805	.089
Factor 2	Yes	87	3.550	.523	.056
	No	81	3.480	.601	.067
Factor 3	Yes	87	4.007	.739	.079
	No	81	4.057	.676	.075
Factor 4	Yes	87	3.349	.629	.067
	No	81	3.506	.670	.074

Group Statistics for Power Factors

		Levene's Test		*t test for Equality of Means*						
									95% Confidence Interval of the Difference	
		F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Total Power	Equal Variances Assumed	0.66	.797	-.17	166	.862	-.0133	.0766	-.1645	.1379
	Equal Variances not Assumed			-.17	164	.862	-.0133	.0767	-.1648	.1381
Factor 1	Equal Variances Assumed	.543	.462	.255	166	.799	.0306	.1197	-.2058	.2669
	Equal Variances not Assumed			.255	162.5	.799	.0306	.1200	-.2065	.2676
Factor 2	Equal Variances Assumed	1.72	.191	.806	166	.421	.0699	.0868	-.1014	.2413
	Equal Variances not Assumed			.802	159.1	.424	.0699	.0872	-.1022	.2422
Factor 3	Equal Variances Assumed	.402	.527	-.46	166	.646	-.0504	.1095	-.2666	.1658
	Equal Variances not Assumed			-.46	165.9	.645	-.0504	.1092	-.2659	.1651
Factor 4	Equal Variances Assumed	1.35	.25	-1.6	166	.119	-.1570	.1002	-.3549	.0408
	Equal Variances not Assumed			-1.5	163	.120	-.1570	.1004	-.3553	.0413

Independent Samples t tests for Power factors

APPENDIX 12
ANALYSIS OF HYPOTHESIS 4A

Equal/Unequal		*N*	*M*	*SD*	*SEM*
Info. Shared	1	78	2.29	1.637	.185
	2	91	2.36	1.370	.144

Group Statistics for Information Shared and Power

		Levene's Test		*t test for Equality of Means*						
									95% Confidence Interval of the Difference	
		F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
Info. Shared	Equal Variances Assumed	3.27	0.72	-.29	167	.77	-.068	.231	-.524	.389
	Equal Variances not Assumed			-.29	150.8	.773	-.068	.234	-.531	.395

Independent Samples t test for Information Shared and Power

APPENDIX 13
ANALYSIS OF HYPOTHESIS 4B

	SS	*df*	*MS*	*F*	*Sig.*
Between Groups	.935	3	.312	.519	.670
Within Groups	99.065	165	.600		
Total	100.000	168			

Analysis of Variance for Collaborative Outcomes

	ANOVA Coding (I)	*ANOVA Coding (J)*	*Mean Difference*	*Std. Error*	*Sig.*	*95% Confidence Interval*	
						Low Bound	*Upper Bound*
Tukey HSD	1	2	.164	.175	.784	-.29	.62
		3	.243	.226	.705	-.34	.83
		4	.078	.169	.967	-.36	.52
	2	1	-.164	.175	.784	-.62	.29
		3	.078	.207	.981	-.46	.62
		4	-.087	.143	.930	-.46	.28
	3	1	-.243	.226	.705	-.83	.34
		2	-.078	.207	.981	-.62	.46
		4	-.165	.202	.846	-.69	.36
	4	1	-.078	.169	.967	-.52	.36
		2	.087	.143	.930	-.28	.46
		3	.165	.202	.846	-.36	.69

Post Hoc Test for Mean Differences

	ANOVA Coding	*N*	*Subset for alpha =.05*
			1
Tukey HSD	3	19	1.79
	2	53	1.87
	4	66	1.95
	1	31	2.03
	Sig.		.574

Tukey's Modified Collaborative Outcomes

APPENDIX 14
ANALYSIS OF HYPOTHESIS 4C

		N	*Marginal Percentage*
Power	1.00	4	2.4%
	2.00	78	46.2%
	3.00	87	51.5%
	Valid	169	100.0%
	Missing	17	
	Total	186	
	Subpopulation	7	

Case Processing Summary

Model	*Model Fitting Criteria* *-2 Log Likelihood*	*Likelihood Ratio Tests* *Chi-Square*	*df*	*Sig.*
Intercept Only	41.600			
Final	41.259	.341	2	.843

Model Fitting Information

Cox and Snell	.002
Nagelkerke	.003
McFadden	.001

Pseudo R-Square

Effect	*Model Fitting Criteria* *-2 Log Likelihood of Reduced Model*	*Likelihood Ratio Tests* *Chi-Square*	*df*	*Sig.*
Intercept	57.552	16.293	2	.000
Total Information Shared	41.600	.341	2	.843

Likelihood Ratio Tests

Info. Sharing		*B*	*SE*	*Wald*	*df*	*Sig.*	*Exp (B)*	*95% Confidence Interval for Exp (B)* *Lower Bound*	*Upper Bound*
1.00	Intercept	-21.689	.891	9.105	1	.003			
	Info. Shared	-.179	.362	.244.	1	.621.	.836	.411	1.700
3.0	Intercept	-.020	.290	.005	1	.944			
	Info. Shared	-.038	.105	.132	1	.717	.963	.784	1.182

Parameter Estimates