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THE INFLUENCE OF CULTURAL DIVERSITY ON INITIAL DECISIONS TO TRUST IN
NEWLY FORMING TEAMS: A POLICY CAPTURING APPROACH

by

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for the degree of Doctor of Philosophy
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2008

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ABSTRACT

This study investigated the impact of diversity on the decision to trust at team formation when no history or prior relationship exists. The study consisted of two phases: 1) a selection phase and 2) a policy capturing phase. The first phase consisted of demographics, propensity to trust, and prejudice scales that were used to select participants for phase 2. The second phase consisted of a full factorial design, policy capturing study which consisted of 64 scenarios which varied the level (i.e., high and low) of 6 variables: cultural diversity, attribution, perceptions of risk, trustworthiness, third party information, and role clarity. The policy capturing study was used to identify the weights given to these variables when deciding whether or not to trust a new team member. Propensity to trust scores and prejudice ratings were used as moderators of the relationships between these 6 variables and the decision to trust. Findings showed that there was a strong moderating affect of the diversity of the simulated team member on the participant's decision to trust. However, there was no direct relationship between diversity and the decision to trust. The weight given to each variable, as well as the interaction of variables, was different based on the diversity of the new team member. Findings suggest that when forming teams, the diversity of new team members will impact what factors individuals consider in deciding to trust that other person. In addition to future research needs, the impact of these results is discussed in terms of both training and selection in teams.

This work is dedicated to the three people who have influenced me the most in my life, both professionally and personally. To my father, Robert, who began his encouragement and support for my academic career before I could read and continues to support and inspire me every day. To my mother, Marilyn, who offers unwavering and unconditional support, even as I follow my own path. Finally, to my husband, Matt, who always believes I can do anything and makes me believe it too.

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I must first thank my advisor and committee chair, Dr. Eduardo Salas, who has pushed me to go farther than I ever thought possible and who developed in me a love of science and exploration that I will carry with me throughout my career. To Dr. Shawn Burke, this dissertation and my completion of this program with my sanity in tact would not have been possible without her mentorship and guidance. I am truly lucky to have been inspired by both of them. I would also like to sincerely thank the remaining members of my dissertation committee, Dr. Stephen Fiore and Dr. Clint Bowers, who have generously given their time and expertise to better my work and focus. I thank them for their contribution and their good-natured support. I would also like to thank Dr. Jay Goodwin for his encouragement and guidance towards my future. To my colleagues for sharing their enthusiasm for and comments on my work: Katherine Wilson, Michael Rosen, Kevin Stagl, Rebecca Lyons, Debbie Diaz Granados, and everyone else who has benefited from our work together with Dr. Salas and Dr. Burke.

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TABLE OF CONTENTS

LIST OF FIGURES	viii
LIST OF TABLES	ix
CHAPTER 1: INTRODUCTION.....	1
Statement of the Problem.....	1
Purpose of the Current Study.....	5
Theoretical Foundations.....	8
Pre-Process.....	8
Decisions to Trust in Collective Contexts	10
Conceptualizing Trust.....	10
Literature Review.....	12
Types of Trust.....	12
Trust from a Different Perspective	14
Swift Trust	17
Antecedents to Trust	19
A Culturally Diverse Framework of Trust.....	20
Internal Factors	23
Trustworthiness.....	23
Attributions	24
Diversity.....	25
Social Identity Theory.....	27
External/Environmental Factors	33
Perceptions of Risk	33
Third Party Information	34
Role Clarity.....	34
Individual Decisions: Routes to Trust.....	35
Moderators: Factors Internal to the Trustor	38
Prejudice	38
Propensity to Trust.....	40
Diversity: Through a Cultural, Social Lens	41
Hypotheses.....	46
Propensity to Trust.....	46
Hypothesis 1.....	48
Hypothesis 1a.....	48
Hypothesis 1b.....	48
Diversity, Risk, and Attribution.....	49
Hypothesis 2.....	49
Prejudice	50

Hypothesis 3.....	51
Hypothesis 3a.....	51
Perceptions of Risk.....	52
Hypothesis 4a.....	53
Attribution.....	54
Hypothesis 4b.....	55
Trustworthiness.....	55
Hypothesis 4c.....	56
3rd Party Information.....	56
Hypothesis 4d.....	57
Role Clarity.....	57
Hypothesis 4e.....	58
Routes to Trust.....	58
Hypothesis 5.....	58
Hypothesis 5a.....	58
Hypothesis 5b.....	58
CHAPTER 2: MATERIALS AND METHODS.....	59
Experimental Design.....	59
Phase 1.....	61
Participants.....	61
Measures & Tools.....	61
Demographics Questionnaire.....	61
Propensity to trust.....	62
Prejudice Scale.....	62
Procedure.....	63
Phase 2.....	64
Participants.....	64
Measures & Tools.....	64
Scenario.....	64
Procedure.....	65
CHAPTER 3: RESULTS.....	67
Within Subjects Analyses: Assessment of Individual Policy Stability.....	67
Between Subjects Analyses: Overall Analyses.....	69
Data Analysis by Hypothesis.....	72
Hypothesis 1.....	72
Hypothesis 1a.....	72
Hypothesis 1b.....	72
Hypothesis 2.....	74
Hypothesis 3.....	75
Hypothesis 3a.....	77

Hypothesis 4.....	77
Hypothesis 4b.....	78
Hypothesis 4c.....	79
Hypothesis 4d.....	79
Hypothesis 4e.....	80
Hypothesis 5a.....	80
Hypothesis 5b.....	80
SECTION 4: DISCUSSION.....	83
CHAPTER 5: CONCLUSION.....	89
APPENDIX A: DEMOGRAPHICS QUESTIONNAIRE.....	91
APPENDIX B: PROPENSITY TO TRUST.....	94
APPENDIX C: PREJUDICE SURVEY.....	98
APPENDIX D: COHEN (1983) SAMPLE SIZE TABLE.....	102
APPENDIX E: POLICY CAPTURING VIGNETTE CUES.....	104
APPENDIX F: EXAMPLE SCENARIOS.....	106
APPENDIX G: UCF IRB HUMAN SUBJECTS PERMISSION LETTER.....	108
REFERENCES.....	110

LIST OF FIGURES

Figure 1. Framework of Antecedents and Decision to Trust at Team Formation	7
Figure 3: Hypothesis 1	48
Figure 4. Hypotheses 1a and 1b.....	49
Figure 5. Hypothesis 2	50
Figure 6: Hypothesis 3 and 3a	52
Figure 7: Hypothesis 4.....	52
Figure 8: Hypothesis 4a-e	54
Figure 9. Hypothesis 5, a-b	58

LIST OF TABLES

Table 1. Types of Trust (Nielsen, 2004)	15
Table 2. Soldier Quotes on Trust and Foreign Nationals.....	43
Table 3. Mean and SD for trust and confidence	69
Table 1. Beta weights for propensity to trust moderation.....	73
Table 2. Beta weights for antecedents for cultural groupings versus others	75
Table 3. Beta weights for antecedents and trust	76
Table 4. Beta weights for antecedents and confidence	76
Table 5. Beta weights for prejudice moderation.....	81
Table 6. Beta weights for diversity moderation for decision routes.....	78

CHAPTER 1: INTRODUCTION

Statement of the Problem

Organizations are increasingly attempting to react to and, ultimately, capitalize on the diversity of the modern world by “going global” and implementing teams that consist of culturally diverse individuals from far reaching corners of the world. Numerous sources predict that by the year 2010, minorities, women, and immigrants will account for 85 percent of the net growth of the American work force (Goldstein & Gilliam 1990; Johnston & Packer 1987; Judy & D'Amico 1998; U.S. Bureau of Labor Statistics, 1998; Wentling & Waight, 2001). Military operations have also become increasingly multicultural as peacekeeping and stability operations have become more necessary. These circumstances provide evidence that multicultural teams are a reality for a large percentage of the population.

As a consequence, both industry and the military are increasingly faced with multinational, multicultural teams formed as a matter of circumstance, location, or required expertise that, while serving the organizational needs, create a variety of challenges, especially upon formation. This is not to say that multicultural teams are only a matter of circumstance. Multicultural teams are often purposeful and beneficial. In fact, research has found that, in general, diverse teams often outperform teams whose members are similar, at least for certain tasks (e.g., idea generation; Gurin, Nagda, & Lopez, 2004). Despite the possible benefits, however, it is impossible to ignore that as diversity has continued to increase in modern organizations, the difficulties encountered when forming teams in a diverse population have continued to rise as well. Research, as well as anecdotal evidence, has shown that cultural differences frequently result in challenging and frustrating encounters, especially early in a

team's life span before deep levels of trust can be established through interpersonal interaction (Salas, Burke, Fowlkes, & Wilson, 2004; Watson, Kumar, & Michaelson, 1993).

While research has focused on diversity for some time at many different levels (e.g., organizational, national), there is little focus on situational influences, trust, and team member specific information with regards to cultural diversity, which is the scope of the current study. Furthermore, what has been done regarding multi- and cross-cultural teams is often conflicted and narrowly focused, with contradictory findings about teams or disjointed approaches that compare two homogeneous teams (e.g., American teams versus Asian teams). Historically, research has shown that culture affects behavioral processes, but often culture has been examined as dichotomous (e.g., an individual is either collectivistic or individualistic and does that make them good or bad team members). An example of this type of work is that conducted by Eby and Dobbins (1997), which showed that teams with a high percentage of collectivistic members, had higher cooperation leading to higher performance.

When research has examined diversity and teamwork in general, results have often been conflicting. DeSanctis and Poole (1997) found that the greater the diversity in teams within organizations, the more time was required for them to form bonds. Other work indicated that some teams may develop high trust and strong bonds in a short period of time, given certain (to date) undefined or, at the very least, unverified factors, while others do not (DeSanctis & Poole, 1994; Poole & DeSanctis, 1992; Jarvenpaa & Leidner, 1999). These differences and the difficulty in forming trust constitute the foundation of the current effort. Specifically, one of the problems identified after examining the culture literature as a whole is that there has yet to be a

sufficient investigation as to why some culturally diverse teams perform effectively and others do not, with more of the arguments focusing on what culturally similar teams do or prefer.

While the cultural literature has been insufficient in this regard, other research contends that one of the most important determinants of effective performance in interdependent systems is trust and that, without trust, transaction costs become too difficult and result in system and mission failure (e.g., team breakdowns, inability to complete mission objectives; Axelrod, 1984; Cummings & Bromily, 1996; Kramer, 1999; Salas, Sims, & Burke, 2005). Similarly, research has shown that trust is important to effective, collaborative performance at every level (i.e., individual, team, organizational), beyond just the impact it has on teamwork. For example, trust has been linked to positive attitudes such as job satisfaction, organizational commitment, job performance, and organizational citizenship behavior (Aryee, Budhwar, & Chen, 2002; Gill, Boies, Finegan, McNally, 2005; Watson & Papamarcos, 2002). Limerick and Cunningham (1993) may have said it best in their seminal work:

“The key value in networking, and the one that is most problematic..., is trust...High levels of trust help reduce transaction costs...Trust reduces uncertainty about the future and the necessity for continually making provisions for the possibility of opportunistic behavior among participants...Trust lubricates the smooth, harmonious functioning of the organization by eliminating friction and minimizing the need for bureaucratic structures that specify behavior of participants who do not trust each other. But trust does not come naturally. It has to be carefully structured and managed.” (pp. 95-96).

Despite literature that points to the importance of trust in the healthy and effective performance of teams and the reference to ‘forming bonds’ in the culture literature, there has yet to be a deep examination of the formation of trust in multicultural teams. However, it is likely that trust is one of the factors that enable some culturally diverse teams to function at a higher

level, while a lack of trust can cause a lack of cooperation and coordination in other teams, leading to mission failure (e.g., uncooperative team members leads to problems in coordination and a lack of communication that results in the failure to complete team objectives). This is undoubtedly even more true at team formation when trust is fragile and undeveloped. Ultimately, the literature has not sufficiently addressed the question of trust in multicultural teams and the decision to trust others without shared experience or backgrounds when there are very few additional cues (e.g., Rink & Ellemers, 2007; Serva, Fuller, & Mayer, 2005).

In order to investigate this issue, the 'pre-process' period of trust formation, and how that individual process may be different when cultural diversity exists, was examined. Team formation and the individual decision to trust as new team members are introduced has been selected as the unit of study. It is believed to be the most influential moment to examine the development of trust in multicultural teams since these types of teams typically have problems forming bonds and developing cohesion, which will likely be even more consequential when individual team members do not have a history (Katz, Goldston, & Benjamin, 1958; Man & Lam, 2003). Furthermore, the individual's contribution to team level trust and the biases and prejudices they bring with them will significantly influence the development of trust at the team level and is, therefore, the first step in the examination of this problem. As a result, the focus of the current study is an individual's decision to trust someone from another culture at team formation.

Purpose of the Current Study

The overarching goal of this research is to investigate the impact of cultural diversity on an individual's decision to trust another at team formation based on the antecedents used internally to determine whether they can be trusted. Specifically, the purpose of the current effort is threefold. First, the literature lacks a comprehensive integration of the research on early trust formation and how that may relate to diversity. In an effort to address this, an overview of the diversity and trust literatures is provided and the antecedents to trust which may be most relevant to homogeneous and heterogeneous interactions are identified. In doing this, a framework (see Figure 1) is provided to structure the literature and resulting hypotheses. This framework, which will be used to organize the literature review, guided the development of the hypotheses and methodology of the current study and serves as a guide for discussions. Specifically, the discussion will begin by defining the overarching construct, the pre-process stage of the decision to trust, followed by a discussion of the left side of the framework, the inputs that shape the decision to trust, and lastly, the impact of cultural diversity, prejudice, and propensity to trust on the relationship between the inputs and the decision to trust. The relationship between antecedents to trust and the outcome of the decision to trust has yet to be adequately examined experimentally with regards to the effect of diversity. While this is a complex issue requiring extensive examination, as a first step, a set of hypotheses derived from the literature and centering on diversity and trust are presented.

Second, there is no one method that has been identified as the 'best way' to capture how people make the decision to trust. A majority of research to date has used self report questionnaires that ask someone if they trust and why. Therefore, a nontraditional methodology

that targets decision making, policy capturing, was used to enable the investigation of how diversity may affect the antecedents used by individuals in the decision to trust at team formation. Specifically, policy capturing is a methodology that allows insight into decision making and was used to identify the weight given to antecedents in the decision to trust using scenarios that describe team formation, when two levels of diversity are introduced. The current study was designed to present individuals with scenarios that vary a number of variables (i.e., trust antecedents and cultural diversity) to determine the antecedents used to make the decision to trust during team formation (i.e., team has no history). See Figure 1 for a theoretical representation of the relationships between the variables used in the scenarios.

Third, the findings will be discussed, including the implications for their future application. The findings of this investigation are expected to have impact in actual organizational environments; specifically with regards to how individuals are trained to interact with culturally diverse populations and with how work teams should be formed to leverage variables that promote positive decisions to trust in culturally diverse teams. The discussion begins with an overview of the trust literature and the theoretical foundations of this study.

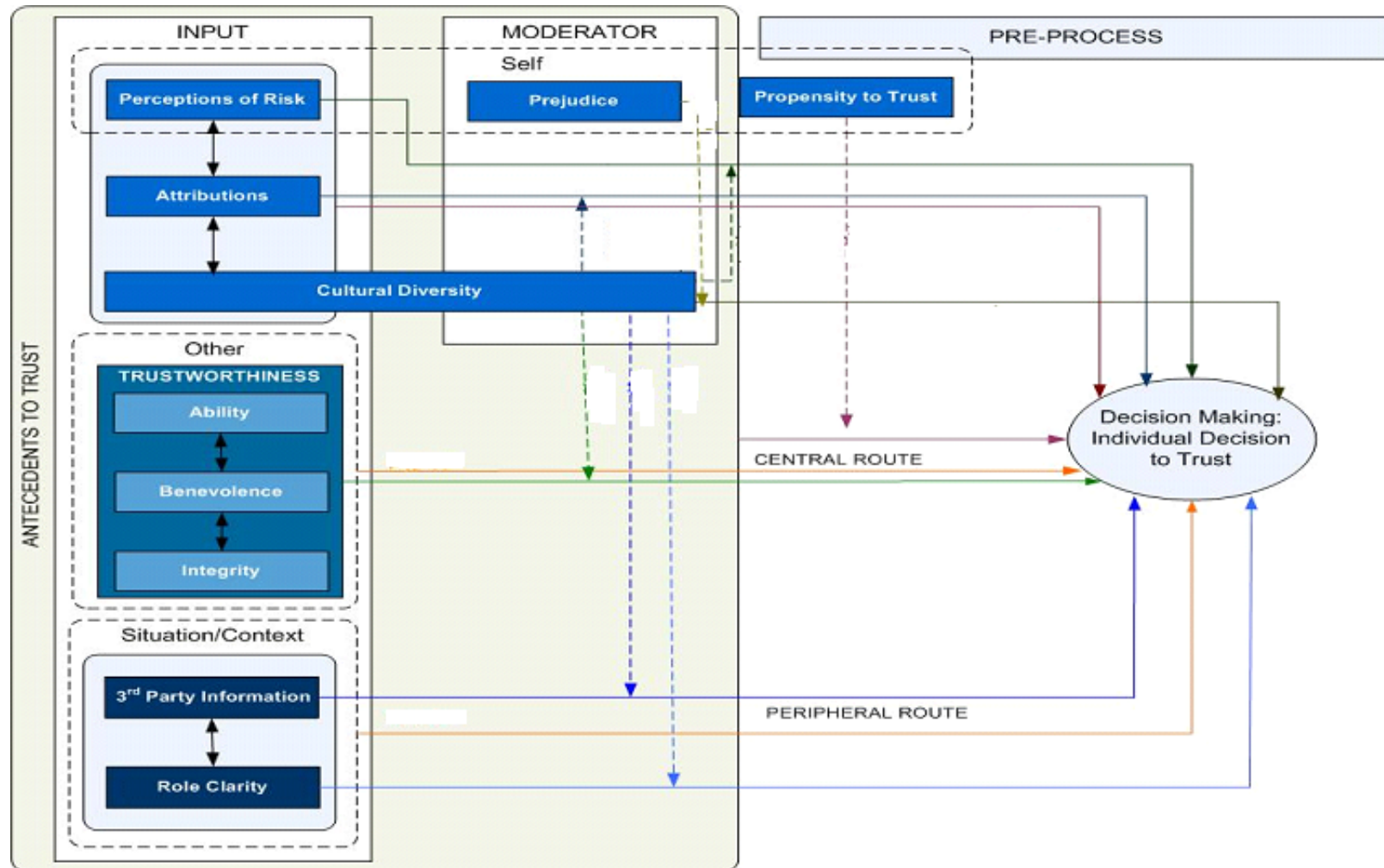


Figure 1. Framework of Antecedents and Decision to Trust at Team Formation

Theoretical Foundations

Pre-Process

The first step in the current effort is to define the constructs that will be targeted. Team interactions have traditionally been described according to what they bring (e.g., inputs) and what they do (e.g., processes) as related to task execution. In a majority of the literature, interactions are represented graphically through models of teamwork that consist of inputs, outputs, moderators, and mediators (e.g., IPO models, IMOI models, Input-throughput-output models). While most research has centered on in process teamwork, when examining the larger system of teamwork, including team formation and individual inputs, there are other considerations as well. Specifically, three types of interactions have been identified: pre-process interaction: (i.e., preparatory, pre-task behaviors), in-process interaction (i.e., during actual task), and post-process interaction (i.e., post-task reflection on performance; Fiore et al., 2003). Pre-process interaction takes place during team formation where initial expectations are created and shared in anticipation of team interaction (see Figure 1 for a representation of the pre-process stage, the outcome of the current study). These pre-processes may take place at the individual (e.g., decision to trust—creation of expectations) and team level (e.g., mutual trust—sharing expectations) and feed into future team processes, resulting in team performance and outputs.

Pre-processing also coincides with newcomer socialization, an important concept for team formation, especially when considering diversity. Newcomer socialization involves sense making that often depends on incomplete or inaccurate attributions affecting the integration of team members (Burke et al., 2008). Unfortunately, research

has also shown that during socialization, newcomers may mistakenly categorize actions of others as permanent rather than temporary, leading to increasingly permanent opinions of others that may be more difficult to overcome (Louis, 1980). As a result, newcomer socialization is thought to be significantly affected by diversity, leading to further facilitation of biases, prejudices, and, ultimately, effecting decisions to trust based on inaccurate or misleading perceptions. Referring back to the framework (Figure 1), the inputs that may contribute to those biases will be discussed next to answer what individuals may consider or weigh in their decision to trust in this pre-process phase, specifically how trust might form under unique circumstances (i.e., newly forming, multicultural teams).

Trust in general, typically thought of as a part of the in-process interaction or the post-process interaction of teams, has been examined in the literature for some time. However, the assumption for this study is that the development of trust at the formation of collective work relationships (i.e., pre-process), especially when considering the moderating effect of cultural diversity, is even more difficult to develop and, therefore, may be defined or conceptualized differently (e.g., different antecedents) from what is known about trust at any other stage of team development. The current research predicts that when trustees appear different because of divergent nationalities and cultures (i.e., they are ‘different than me’ as opposed to ‘they are like me’), trustors will be more dependent on superficial, outward variables that may encourage the use of heuristics and reinforce their biases.

While the literature to date has attempted to define trust and its importance with some degree of success, the picture of trust and culture in newly forming teams within

complex situations is incomplete. While there may be numerous mentions of the importance of trust in teams and cross-cultural interactions, there is little exploration into what it means, how it happens, or where trust fails when cultures diverge. In an effort to begin to do this, the decision to trust can be better understood by examining what trust is and how it is formed from the global level.

Decisions to Trust in Collective Contexts

Conceptualizing Trust

Deutsch proclaimed his work the “first attempt to experimentally investigate the phenomena of trust” (1958, p. 265). Foreshadowing modern definitions of trust, Deutsch identified two components of long-term or traditional trust: 1) motivational relevance and 2) the notion of predictability. Although it has been argued that Deutsch was really referring to cooperation, not trust (Rousseau et al., 1998), the notions of predictability and motivation are indicative of why and how people decide to trust. More recently, Early and Gibson have offered several similar definitions in their work on teams that overlap with these constructs. They report that trust has been envisioned as an individual’s “confidence in the character, integrity, strength, and abilities of another person” (Early & Gibson, 2002, p. 106). When taken in consideration with a person’s expectations, trust has been viewed as reflecting “a degree of predictability of another person’s actions when given a chance for opportunism” (Early & Gibson, 2002, p. 106).

While there are categories of trust in the literature (e.g., types, routes), one difficulty in understanding trust and building a coherent theory is that trust has not been defined as a unified construct, but rather by way of the factors that contribute to trust, the construct itself, and the outcomes of trust (Mayer, Davis, & Schoorman, 1995). In turn,

this has led to a lack of construct clarity, but can, none the less, help identify antecedents and outcomes for the decision to trust. Essentially, trust is studied at 3 levels in the literature, trust as 1) an antecedent, 2) a moderator, or 3) an outcome. Trust is universally argued to be a necessary input or precondition for collaboration (Lane & Bachman, 1998; Cullen, Johnson & Sakano, 2000; Nielsen, 2004). Specifically, it is argued that trust is an “enabling condition” that makes the formation of networks and strategic alliances possible (Das & Teng, 1998; Ring, 1996). For example, Anderson and Narus (1990) view trust as an input in that trust will determine the amount of cooperation and conflict within an interaction.

Mishra and Spreitzer (1998), however, present trust as a moderator of causal relationships of interpersonal behavior within organizations and social settings. This view is based on the assumption that trust develops incrementally as individuals interact (Lewicki & Bunker, 1996). In other studies, trust is examined as a dependent variable (i.e., an outcome) where the input is often the institutional settings or interpersonal interactions of individuals (e.g., personal experience with others leads to trust as the outcome; Mishra, 1996; Zucker, 1986). Ultimately, trust as a dependent variable “relates to later stages in the relationship development process” (Nielsen, 2004, p. 243). Still other studies examine trust in all three roles (i.e., input, output, and moderator) simultaneously (Das & Teng, 1998).

While the moderating effects of trust are a part of the big picture of trust, it is beyond the scope of the current study. In the current study, trust is operationalized as an input to cooperative work in the life span of a team, but as an output to the formation of a new team and the individual decision to trust (i.e., the pre-process phase). Specifically,

the decision to trust leads to the output of trust, which is itself an input of cooperative work in teams. The inputs for the decision to trust are the focus and the effort to determine how those are weighed within culturally diverse environments is what drives this study. Ultimately, regardless of how trust is envisioned, trust is in some way related to collaboration at every stage, whether it drives, develops during, or is a result of interactions. Since one goal of this study is to identify how people come to the decision to trust during the pre-process phase, a brief overview of current conceptualizations of trust can provide insight into how the existing, scientifically accepted definitions of trust may converge or diverge with decisions to trust during the pre-process phase in newly forming teams.

Literature Review

Types of Trust

Drawing from research dating back to the 1970's, Neilsen (2004) provided a summary of 5 types of trust: 1) cognitive-based or fragile trust; 2) affect-based or resilient trust; 3) calculus-based trust; 4) deterrence-based trust; and 5) institution-based trust (see Table 1). Of these 5 types of trust, calculus-based, deterrence-based and institution-based trust are most relevant to the current effort. Cognitive-based trust, which was relabeled fragile trust by Ring (1996), refers to trust based on past interactions with an individual and ability to predict what they will do in a given situation (McAllister, 1995). Cognitive-based trust is a result of assessments of past interactions, predictability, dependability, and fairness (Rempel, Homes, & Zanna, 1985). Affect-based trust, referred to as resilient trust by Ring (1996), is a result of the judgment of an individual's moral integrity, goodwill, and emotional bonds from interactions (Lewis & Weingart, 1985). However,

these types of trust are assumed to be unlikely in newly formed teams since they depend in large part on history and character judgments (e.g., trustworthiness), which is lacking at a first encounter and appear to be most similar to the category of relational trust discussed earlier.

Calculus-based trust takes an economic view and results from a kind of cost-benefit analysis in that trustors evaluate the perceived risks against the potential gains of interaction based on credible information (Barber 1983), which can be based on experience, reputation, and/or outward signs of competence (Neilsen, 2004). Similar to calculus-based trust, deterrence-based trust occurs simply because the costs or sanctions that will occur if there is a breach of trust far outweigh any individual gains for opportunistic behavior (Neilsen, 2004; Ring and Van de Ven, 1992). Finally, institutional trust, a concept taken from sociological literature, refers to trust based on institutional factors that act as support structures for risk taking and trust behaviors, like the role of the individual within that organization (Gulati, 1995; Neilsen, 2004; Zucker, 1989). Institution-based trust is specific to the situation but not necessarily to the person, in that the trust is attached to the institutional setting and not the person themselves (Lewicki, McAllister, & Bies, 1998; McKnight, & Chervany, 2001). It is believed that elements of these types of trust may be applied in the formation of trust when teams first come together. Specifically, individuals in new teams must assess outward signs of competence and assess the costs and benefits or risks specific to that situation, which may be effected by their role in the organization, even more so if the team members are diverse.

Trust from a Different Perspective

While these definitions appear quite comprehensive and may beg the question of why an investigation is even needed since trust is so well investigated, there are a few problems with generalizing these results to multicultural and newly formed teams. First of all, a majority of the work on trust that these definitions emerged from focus on interpersonal trust built on experience. Traditionally, trust has been viewed from 2 perspectives: 1) generalized and 2) relational. Generalized trust refers to a basic belief in human nature and is considered dispositional. Relational trust refers to trust in partners or others in a relationship of some kind. Relational trust is based on past experience with others and on their characteristics and actions, which is how trust is typically operationalized in the literature. For example, Boon and Holmes (1991), while emphasizing the changing nature of trust, only focused on dyadic relationships subsequently identifying 3 elements related to the decision to trust: 1) chronic disposition; 2) situational parameters; and 3) history of the relationship.

However, generalized and relational trust, while most closely related to traditional notions of trust, also feeds our discussion here in that it relates the elements described in the literature (e.g., situational characteristics) which still influence whether or not trustors decide to trust; although obviously, not all the information needed to inform the decision to trust in traditional ways (e.g., history) will be available. Therefore, it is theorized that how and when these available elements are applied will be different based on both inputs and moderators, as well as circumstances (e.g., the environment) that may affect motivation.

Table 1. Types of Trust (Nielsen, 2004)

Type of trust	Theoretical grounding	Definition	Level of analysis	Role of trust in collaboration
Cognitive-based trust or fragile trust	Rational prediction—sociology/psychology	Assessment of reliability is based on past behavior and cognitive reasoning (Lewis and Wiegert, 1985)	Interpersonal	Antecedent role as enabling condition which facilitates formation of ongoing networks (Ring, 1996; Das and Teng, 1998)
Affect-based trust or resilient trust	Emotional prediction—sociology/psychology	Non-calculative reliance on the moral integrity, or goodwill, of others based on emotional bonds between individual and social interaction (Homans, 1961; Lewis and Wiegert, 1985)	Interpersonal	Antecedent role as firms learn from each other and develop trust over time through ongoing interaction and reciprocity (Axelrod, 1984; Gulati, 1993; Ring, 1996)
Calculus-based trust	Rational choice—economics	Trust emerges when the trustor perceives that the trustee intends to perform an action that is beneficial (cost/benefit)	Interpersonal/ (inter)organizational	Antecedent role as firms seek credible information regarding intentions and competence of partner. (Luhmann, 1979) Moderating and effect role as risks are continually monitored and evaluated against performance (Das and Teng, 1998)
Deterrence-based trust	Utilitarian—economics	Enables one party to believe that another will be trustworthy, because the costly sanctions in place for breach of trust exceeds any potential benefits from opportunistic behavior (Ring and Van de Ven, 1992; 1994)	(Inter)organizational	Moderating role as institutional sanctions and assets specificity effects may act as substitutes for control (Bradach and Eccles, 1989) Effect role as cost of sanctions may deter from opportunistic behavior in performance evaluation
Institution-based trust	Conditional—institutional economics and sociology	Institutional factors can act as broad supports for the critical mass of trust that sustains further risk taking and trust behavior (Zucker, 1986; Gulati, 1995; Sitkin, 1995)	(Inter)organizational/ societal	Antecedent role as legal systems and reputational sanctions act as a deterrent from opportunism. (Fukuyama, 1995) Moderating role as facilitator of collaborative culture (Miles and Creed, 1995) Effect role as trust is dependent variable (Hagen and Choe, 1998)

Second, the literature implies that interpersonal trust, developed through traditional bonds and interactions based on common ground, which is the typical focus of experimental studies, is different from trust developed to further exchanges between individuals that may be different in modern, ambiguous settings. This idea is supported by similar findings on the concept of work trust discussed by Kelman in his study of negotiation between enemies in the Palestine and Israeli conflict. Kelman (2005) describes a concept called ‘working trust’ where the aim in trust development is not the interpersonal trust traditionally developed from “personal encounters, shared values, friendship, or even stable exchange relationships”, but trust “in the other side’s seriousness and sincerity in...its genuine commitment to finding a mutually acceptable accommodation” (p. 646). While this concept can sometimes be related to trust in teams

under certain circumstances, it is different in that working trust in negotiation is an agreement based on divergent goals. The outcome of trust in teamwork is cooperation and is based on shared goals.

In fact, several factors make decisions to trust in the modern environment more complex, including flattening structures, diversity, and the tempo of decisions to trust. For one, complicating the increase in cooperative work and the need for trust is that social structures are becoming more lateralized as opposed to hierarchical (Sheppard & Tuchinsky, 1996). This state exists even within organizations that have traditionally been extremely hierarchical. For example, even in the military, which has traditionally been staunchly hierarchical, information availability has ‘pushed down’ decision making to all levels. Within industry, self-managed teams are becoming more prevalent as organizations branch out into global markets. As the decision making process gets pushed down and more lateralized, the nature and type of trust changes. Trust becomes different in that it is no longer dependent on power, but rather the need to make a decision to trust based on additional, environmental cues and individual differences become more prevalent.

In addition, the lateralized power structure may be particularly challenging at the formation of teams. Evidence for this can be leveraged from Tuckman’s (1965) seminal work on the group stages. Specifically, group formation relies heavily on leader direction to set the norms, roles, and goals for the group since members are unclear of their own and others’ responsibilities. While Tuckman’s work focused on groups, team requirements like coordination and shared goals makes this need even more immediate. Therefore, this work further highlights the obstacles to developing trust that may be

present, especially in new teams where strong and clear leadership may be lacking. Related to this, within self managed teams, as leadership becomes more ambiguous or less transparent, the decision to trust also becomes more immediate as more individuals must assess others and their environment quickly, speeding up the tempo of the decision to trust. Individual team members are receiving more information directly and making more decisions on their own rather than all decisions being localized to a superior.

Also related to tempo, a characteristic of the modern, high stress environment is that teams must form quickly and act immediately. This requires quicker decisions and, with increased interdependency and almost forced cooperation that has been termed ‘uneasy coalitions’ (Kelman, 2005) in some circumstances, the development of “quicker” trust. Again, the nature of modern teams and the conditions they are required to operate in changes the way that trust is operationalized. This changing nature of trust has led to different, but preliminary, conceptualizations of trust, such as ‘swift trust’ which attempts to address the difficulty of developing trust in temporary work groups (Meyerson et al., 1996). As a result, focus on temporary work groups have led to different views on trust (i.e., swift trust).

Swift Trust

Swift trust attempts to directly address the difficulty of developing trust in temporary work groups who have no history and very little time for team and relationship building (Meyerson et al., 1996). Meyerson and colleagues maintain that under these circumstances, members import trust from other settings with which they are familiar since they have no past experience or basis for their decision to trust. Specifically, individuals in these situations “make initial use of category-driven information

processing to form stereotypical impressions of others” (Jarvenpaa & Leidner, 1999, p. 794). Therefore, swift trust is a different process than traditional trust development in that trust typically is based on interpersonal relationships and past experience. In contrast, swift trust is based on initial broad categorical social structures and is only strengthened by actions that reinforce those initial impressions and decisions (Mayer et al., 1995).

Swift trust is more strongly associated with belief in the other’s faithful and competent acting within a specific role than belief in their personal integrity or benevolence. As a result, actions not consistent with an individual’s perception of that role will lead to distrust (Mayer et al., 1995). Ultimately, swift trust is different from most forms of traditional trust in that it is not rooted in an interpersonal form, but is based on action and cognition, most similar to cognitive-based trust discussed previously. In turn, swift trust is more often developed when the interactions are viewed as a mix of voluntary and mandatory, focusing less on relating and more on doing. Swift trust also depends on factors external to the other, like the nature of the network, the labor pool where the temporary work group is pulled, avoidance of personal disclosure, contextual cues, moderate interdependency, and absorption in the task (Mayern et al., 1995). Namely, swift trust is driven by “generic features of the setting rather than by personalities or interpersonal relations” (Mayer et al., 1995, p. 192). Rather than relying on judgments of the trustworthiness of the other, individuals in temporary work groups must judge the environment, the role, and rely on their own best assessment of the situation. Based on this literature, one assumption of this study is that swift trust and working trust more closely resembles the focus of the current effort (i.e., trust formed

early in a team's life span between diverse individuals) than interpersonal trust (e.g., affect-based trust).

Similar to temporary work groups, teams early in their life span will obviously not have the experience with each other to have interpersonal relationships and knowledge of another team member's benevolence or character and, as has been argued, team needs and interactions vary depending on where in their life span they are at a given time (Hackman & Morris, 1983; Zaccaro, Ardison, & Orvis, 2004). Due to the difficulty this presents in forming trust, this snap shot in team time is the point of interest for the current study. While it is theorized that this particular picture of trust formation may look different (but related), the factors that influence traditional trust may still be the drivers of the decision to trust and are, therefore, the focus of the hypotheses that follow.

Antecedents to Trust

Building on definitions of trust, the empirical, psychological study of trust and cooperation has provided some evidence as to how people evaluate others in their decision to trust in general. Tyler and DeGoey (1996) present empirical evidence that trust "is primarily determined by relational and intentional concerns for receiving desired outcomes" (pp. 333). Their research supports the importance of trust and its strong relationship to procedural justice. Tyler and DeGoey (1996) argue that the nature of trust is more complex than instrumental conceptions of trust (e.g., calculus-based), which are helpful but insufficient to explain trust decisions. Individual's feelings about trust are more social in nature than might be thought. Specifically, individuals may think they are more rational than they are, weighing pros and cons, risks and benefits, but there is

actually an affective and emotional nature of decisions to trust that has been evidenced in the literature (Tyler, 1994; Tyler & Degoey, 1996).

Ultimately, when individuals exist in collective contexts, they are presented with both opportunity and vulnerability: opportunities in the perceived gains at both the individual and group level and vulnerabilities in the possible costs associated with misplaced trust (Kramer, Brewer, & Hanna, 1996). Therefore, the decision to trust in collectives is mistakenly perceived as simple in that individuals consciously or semi-consciously choose to accept potential risk at some level. While this is true in some regards, where the opportunities may far outweigh the potential risks and knowledge of those individuals may be extensive. There are also numerous examples, especially within modern environments, where the opposite may be true, especially when diversity is present early in team development. Therefore, it is important to understand how the combination and weighting of antecedents to trust may be evaluated by individuals in making a decision to trust in order to understand the factors that influence its development. We next turn to a discussion of the available elements of antecedents and how they may be utilized under given circumstances presented in this study and the development of nontraditional trust (See Figure 1 for the antecedents to trust or inputs).

A Culturally Diverse Framework of Trust

One of the challenges with examining trust from a different perspective (i.e., early in team formation with culturally diversity) is selecting the appropriate variables that influence the decision to trust. Part of the problem is that there are multiple antecedents identified in the literature based on multiple, theory-driven efforts, but often with no significant empirical evidence to guide selection. Until recently (Mayer et al., 1995; Gill

et al., 2005), there has been a consistent failure in research to consider both the trustor and the trustee, with most focusing on one to the exclusion of the other. Even within recent models (e.g., Mayer et al., 1995; Gill et al., 2005), the investigations have been a preliminary attempt with little experimental effort to explore the issues surrounding their selection. Therefore, the framework presented earlier (Figure 1) encompasses numerous, possible antecedents that lead to a decision to trust in newly formed teams and this investigation attempted to determine how they may be different when cultural diversity is introduced. In an effort to simplify the presentation of hypotheses and ensure that factors that were internal (e.g., internal factors to the person being judged or the trustee), external (e.g., environmental factors to both the person being judged or the trustee and the person making the decision to trust or the trustor), and moderators (e.g., factors internal to the trustor). See Figure 2 for a revised, simplified framework that will guide the hypotheses.

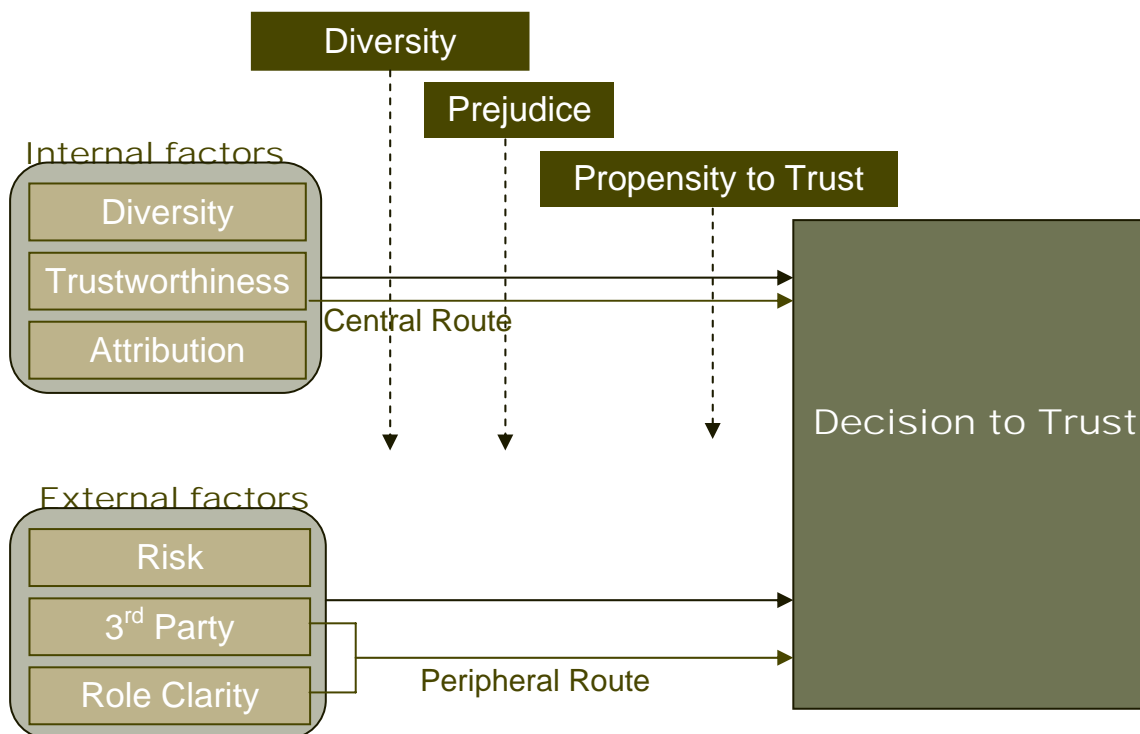


Figure 2. Revised Framework of Hypotheses

Again, while there are models presenting theories of trust (e.g., McKnight, et al., 1998; Whitner, et al., 1998; Williams, 2001), the amount of research done to validate what actually precedes trust is limited in general (Sims et al., under revision) and severely limited if you add cultural diversity into the equation. The number and influence of antecedents of trust must be more fully understood as the ambiguity of operational environments, diversity, and perceptions of risk increase. Therefore, the original framework (Figure 1) as well as the revised framework (Figure 2) presented here is based on theoretical work and will be used to guide these efforts to examine the decision to trust and diversity. These antecedents are not intended to be exhaustive but representative of what the literature indicates may happen. Time and resource constraints realistically preclude a full examination of every aspect of trust at every stage of the team life span. This is presented as one step in a fuller, more comprehensive research agenda to examine trust and diversity.

As defined in the current study, the decision to trust (or distrust) is an outcome of the formation of teams or the pre-process. A number of antecedents are proposed to influence the development of trust in general and five of these will be included as the core of this framework: 1) trustworthiness, 2) attributions, 3) perceptions of risk, 4) 3rd party information, and 5) role clarity. Three additional variables are also included in this examination: 6) cultural diversity, 7) propensity to trust, and 8) the route in the decision to trust. Cultural diversity is theorized to influence the antecedents used and how they are weighted to decide to trust at team formation. Therefore, the sixth variable addresses diversity: culturally similar versus culturally diverse, which will be used as an overall antecedent and as a categorical variable to analyze the other five antecedents included.

Also, as a consequence of the examination of diversity, individual prejudice will be evaluated as a moderator between those relationships. The seventh variable is the dispositional factor of propensity to trust and is theorized to moderate the relationship between antecedents and the decision to trust early in team formation, especially if members are culturally diverse. The eighth and final variable encompasses the five antecedents and is influenced by culture: the route taken in the decision to trust. Within our framework, the central (i.e., decision to trust based on evaluations of integrity, benevolence, and ability) and peripheral (i.e., decision to trust based on evaluation of third party and category-based inputs) routes are included and are based on the factors that guide their route (e.g., other antecedents), with the habitual route being intentionally left out since the population of interest is teams at formation. Trust cannot be formed through this route at this stage in team formation and team members will rely on the other two routes. These routes, along with the other variables will be further explained in the following sections

With consideration of culture and operational settings, this framework (Figure 2) of the decision to trust is offered to guide the research. The next sections outline the variables included in this framework and targeted in the methods section, along with a description of the literature that supports their inclusion. The presentation is organized around the internal, external, and moderating factors contained in the model.

Internal Factors

Trustworthiness

Trustworthiness, a variable that is emphasized strongly in the literature, consists of variables internal to the trustees. Specifically, when deciding to trust another

individual, the trustor must assess the ability and character of that other person because it is assumed to affect their subsequent behavior (Mayer, Davis, Schoorman, 1995). Perceived trustworthiness is made up of the perceived ability of the trustee (e.g., competence), perceived benevolence of the trustee (e.g., caring, openness, loyalty, receptivity), and the perceived integrity of the trustee (e.g., consistency, discreteness, fairness, integrity, promise fulfillment, reliability, openness, value congruence).

Trustworthiness is widely discussed and it is accepted within the literature that individuals use perceptions of trustworthiness in their decisions to trust. However, neglected in the literature is how diversity may effect these perceptions and how that impacts the decision to trust. For example, do individuals make different judgments of trustworthiness of others when they are culturally different with all other variables being held constant? Do individuals forego the central route, where trustworthiness resides, for the antecedents housed under the peripheral route when faced with diversity because of the unknown or, even worse, stereotypic opinion about other cultures? Some support for the effect of diversity at team formation can be found, however, referring back to findings on swift trust. This literature holds that swift trust is more strongly associated with belief in the other's faithful and competent acting within a specific role than belief in their personal integrity or benevolence, the traditional view of trustworthiness outlined in the literature (Mayer et al., 1995).

Attributions

As the literature points out, however, trustworthiness is not always readily available given the perimeters outlined within the current study. Therefore, based on the literature and anecdotal observations from the field, the argument provided by Rempel

and colleagues (1985) is adopted: that individuals attempt to understand their fellow team members based on the acts, dispositions, and motives that would help them predict their responses in given situations. Attributions are defined as “judgments made about the intentions and circumstances behind another person’s behaviors and the amount of control that he or she is believed to have over his or her behavior” (Sims et al., under revision, pp. 51-52). Evidence for the importance of attribution is the recent work by Popa, in which research is presented that both affect and proactive attributions of trustworthiness influence the formation of swift trust (2005). In the current effort, attributions are assumed to be made based on superficial cues presented to them through scenarios.

Kramer (1997) found that trust eroded and, consequently, distrust increased when trustors perceived that the trustees did not want to fulfill the trust-expectations when they could conceivably do so, with as little as two violations leading to the significant erosion of trust. Research (Louis, 1980) has also shown that during socialization, newcomers to a situation may mistakenly categorize actions of others as permanent rather than temporary (e.g., instead of perceiving a bad attitude as someone ‘having a bad day’, a newcomer may assign negative personality traits to someone). This is due to newcomer socialization where sense making often depends on incomplete or inaccurate attributions, affecting the integration of team members, which, as argued here, is exasperated by diversity.

Diversity

Overall, diversity (e.g., different expertise, different backgrounds, and different cultures) enables creativity in problem solving and offers numerous benefits. However, it

hinders interpersonal relationships and the formation of a team identity (Cox, Lobel, & McLeod, 1991; Earley & Mosakowski, 2000; Rink & Ellemers, 2007), indicating a mix of process loss and process gain in heterogeneous teams. This contradiction has direct relevance for the study of trust, both in how it is developed and leveraged for effective team performance. Within the concept of diversity, there are also many factors that constitute diversity in teams (e.g., gender, expertise, organizational). Based on a number of arguments contained within the current effort, it is hoped that some of these findings would generalize to different types of diversity. However, based on the problem focus of the purpose and the need for simplicity, the diversity factor of national culture and the assumed background (i.e., common versus diverse) that comes from that is selected.

Culture is defined as the collective mental programming of people, based upon shared values, norms, and modes of action that distinguishes members of the group from other groups, tribes, regions, or nations (Erez, 1994; Hofstede, 1980). However, culture can be examined at a number of levels (e.g., organizational, national). According to the literature on national culture, members of a culture hold common assumptions based upon shared belief systems, attitudes, stereotypes, and roles (Bhagat & McQuaid, 1982; Erez, 1994). National culture has been widely examined since Hofstede's (1980) seminal work, using IBM employees from 70 countries, determined that individuals differ on a number of dimensions between cultures, including power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity. Organizational culture also influences an individual's behavior, but can be at odds with national culture. Organizational culture refers to the shared values, norms, and modes of actions for members within an organization pertaining to factors such as modes of communication

and appropriate workplace behavior. There are times the norms and values observed by an individual's national culture are unacceptable according to the norms of their organization. Therefore, while there are common aspects to the formation and application of national and organizational culture, these levels are often distinguishable and prioritized based on environment and extenuating factors.

For the purpose of the current study, the focus revolves around national culture as the need for understanding the multicultural interactions that has grown in recent years. Ultimately, this focus is based on the belief that cultural diversity in the workplace increases the need for understanding the development of trust. For example, Mayer and colleagues (1995) point to a lack of interpersonal shared experiences and common background as a barrier to mutual trust and willingness to work together, which is a common problem within a diverse work force. This will continue to become an issue because cultural and national diversity in the workforce is on the rise.

Social Identity Theory

This contradiction has been largely addressed in the literature through the application of social identity theory. Social identity theory helps explain how individuals develop their sense of self derived from group membership, and identify what social groups they belong to. This overarching theory provides initial guidance on the heuristics that individuals use to assign meaning to cues and other members, especially early in team formation (Burke et al., in press). Related to diversity in collectives, team and group interaction have often been explained through the application of the social identity theory and how that effects self-categorization (Yuki, Maddux, Brewer, & Takemura, 2005).

The importance of this theory is further demonstrated through the assertion by some that social-identity theory could theoretically explain all group behavior and the cognitive processes underlying those interactions (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). While this may be overreaching its application, social identity theory provides a good starting point for understanding individuals' social selves, an obvious factor in teams and collaboration. Social-identity theory refers to the dependence of an individual's behavior on their cognitive representation of their self as a member of a shared social category (Yuki, 2003). This theory is further bolstered by connected theories. For example, the importance of the shared social category can lead an individual to shift from a personal self to a collective self where they perceive themselves as interchangeable exemplars of the group, rather than unique, a process called depersonalization of self-representation (i.e., self-categorization theory; Turner et al., 1987). Therefore, an individual may view members as 'like me' and as a consequence, as more trustworthy than they are because of some similarity and membership in an ingroup.

Relating to an individual's judgments and decisions, social identity theory provides insight into three mechanisms for creating a social identity: 1) categorization (i.e., the process of placing ourselves and others into categories based on similarities), 2) identification (i.e., the process of identifying oneself with a group to which they perceive themselves as belonging), and 3) comparison (e.g., the process of learning about our own norms and ideals through comparing them to others we see as like us). This process creates an overall social identity, with categorization happening most often in ambiguous situations and identification creating ingroups and outgroups. This ingroup/outgroup

distinctions are even more likely to form before they get to know each other and feel cohesion with others, forming, perhaps a more cohesive group.

The comparison part of social identity theory stipulates that, in order to fulfill a human need for self-esteem, individuals will continually compare their performance to others (Cunningham & Chelladurai, 2004). The targets of these self-evaluations are usually chosen based on a number of characteristics that classify others as similar to us. These characteristics may include demography, attitudes, roles, functions or affiliations. Groups or individuals which differ based on these characteristics are then defined as “out-group” members, whose definitions are created during the identification phase. The creation of these categories, while cognitively beneficial (i.e., saves time and effort), can create biases. Often, due to the drive to maintain a positive regard for self, out-group members are defined by negative attributes and the in-group, as a whole, will attempt to differentiate themselves from the opposing group based on shared, positive attributes. Biases relating to group membership address beliefs about social groups in a comparative manner: in-groups define their beliefs in comparison to the out-group’s perceived attributes.

Because of this, what an in-group believes the out-group thinks, intrinsically relates to the attributes the in-group ascribes to the out-group (Judd et al., 1995). It would stand then that members of the ingroup would project their own traits onto other members of their group, assuming they believe they are the exemplar of the social entity, despite a lack of knowledge about ingroup members. As a consequence, research shows that sample populations are more cooperative with their ingroup members than outgroup (Brewer & Campbell, 1976; Hewstone et al., 2002; Rabbie & Horwitz, 1969; Ruffle &

Sosis, 2006; Tajfel et al., 1971). Building on this, Turner and colleague's (1985, 1987) self-categorization theory holds that individuals will derive membership when they "feel they share relevant features with others, this will induce them to cognitively categorize themselves into a group together with these others (self-categorization)" (Rink & Ellemers, 2007, p. S19).

These theories are closely related in that the need for a social identity that will drive the categorization of the self into a group that seems the most similar based on certain features. Therefore, it is proposed that the contradiction in the literature reflects the paradox that exists between group membership and individual contribution (i.e., individuals seek to define themselves as group members, to achieve a social identity, yet still retain the value inherent in different perspectives is at odds with the development of a common identity; Barkema et al., 1982; Jehn, Northcraft, & Neale, 1999; Rink & Ellemers, 2007; Williams & O'Reilly, 1998). The emphasis here is on cultural differences, simulated through nationality and perceptions of shared backgrounds, described later in the methods section. These differences between social groups, referred to by some as the cultural distance (i.e., an individual's subjective perception of differences between their own country and a foreign country in cultural values; Evans & Movondo, 2002) is believed to lead to difficulty in developing trust.

Hogg and colleagues (2007, 2003, 1988, 1987) offer a number of resources that provide insight into why and how people identify with groups. Namely, group identification generates group behaviors (e.g., stereotyping, cohesion, conformity, ethnocentrism), which answers the 'why', and is motivated and strengthened by self-enhancement and uncertainty reduction, which provides the 'how'. Therefore, culture is

extremely influential in group identification within the ambiguous and dynamic situations we are discussing (i.e., team formation) in that it is an observable factor that has strong implications for group behavior when attempting to reduce uncertainty and define the self within new environments.

So what is meant by cultural diversity within the current context and how does that relate to social identity and trust? Culture has been defined as the collective mental programming of people, based upon shared values, norms, and modes of action that distinguishes members of the group from other groups, tribes, regions, or nations (Erez, 1994; Hofstede, 1980) and can be examined at a number of levels (e.g., organizational, national). According to the literature on national culture, members of a culture hold common assumptions based upon shared belief systems, attitudes, stereotypes, and roles (Bhagat & McQuaid, 1982; Erez, 1994). National culture has been widely examined since Hofstede's (1980) seminal work determined that individuals differ on a number of dimensions between cultures, including power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity.

In examining the literature on cultural diversity, there is evidence that multicultural teams perform better than homogeneous teams 'over time' (Hoffman & Maier, 1961; Janis, 1972; Thomas, 1999; Watson, Kumar, & Michaelsen, 1993). However, early in their life span, multicultural members describe culturally heterogeneous teams as challenging and frustrating (Helmreich & Merritt, 1998). Examples of the frustration and difficulties can be found in a number of sources that provide evidence that multi-cultural teams initially tend to result in: (a) process loss (Thomas, 1999; Helmreich, 2000), (b) lower levels of cohesion (Katz, Goldston, & Benjamin, 1958), (c) trust issues (Adler,

1997; Distefano & Maznevski, 2000; Triandis, 2000), and (d) an increased use of inappropriate stereotypes to assign attributions (Horenczyk & Berkerman, 1997). These findings suggest that difficulties in the early formation of diverse teams call for a need to understand the development of trust. Mayer and colleagues (1995) point to a lack of interpersonal shared experiences and common background as a barrier to mutual trust and willingness to work together, which is a common problem within a diverse work force, but absolutely necessary for collaboration.

While this is a well-documented phenomenon in the psychological literature, additional exploration is needed as it relates to trust and teamwork. While in-group/out-group bias and Hogg's uncertainty reduction theory can't solely explain the variables individuals use to make decisions to trust in culturally diverse interactions, it can serve as a starting point to theorizing how individuals might decide to trust given the information available to them and how their own biases and prejudices may affect that. While not directly measured, these in-group/out-group biases serve as an explanation for expected findings in regards to diversity, prejudice, and trust. In addition, theories on how culture may affect our judgment and, thus, color our judgments will add to the development of the framework and the predictive power of the hypotheses. Specifically, it may help to explain why individuals use certain antecedents to make the decision to trust others that are in their in-group as opposed to their out-group when limited, unsubstantial information is available and culture is a factor.

External/Environmental Factors

Perceptions of Risk

Perceptions of risk have often been identified as a moderator of trust development (see Ring & Van de Ven, 1992). It is also argued in the current effort that the importance of trustworthiness lies in the inherent risk involved in trust and, therefore, is influential in the decision to trust. As can be seen in the framework (Figure 2), the perception of risk is proposed to be a direct antecedent, rather than a moderator. With increasing pressure in high stakes, global organizational settings, the perception of risk for a given task has a direct influence on the decision to trust due to the risk to reputation and livelihood. Traditionally, most researchers have agreed with the original findings of Deutsch (1958) that in order to trust, individuals must have something of value invested or a perception of risk (Coleman, 1990; Griffin et al., 1998; Lewis & Weingart, 1985; Luhmann, 1988; Mayer, et al., 1995; Schlenker, Helm, & Tedeschi, 1973).

In fact, the willingness to risk has been used as a definition for the concept of trust itself in a number of studies. For example, Mayer and colleagues (2005) cited Johnson-George and Swap's (1982) assertion that "willingness to take risks may be one of the few characteristics common to all trust situations" (p. 1306). Based on this requirement and the assumption that in order to study trust, some type of meaningful incentive must be at stake (Kee & Knox, 1970), Mayer and colleagues offered the following definition of trust, which has been applied to the current effort: "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party" (2006, p. 712).

Third Party Information

There is a significant amount of anecdotal and theoretical evidence to support the hypothesis that 3rd party information will influence an individual's decision to trust in newly formed, diverse teams. Soldiers reported that many factors influence expectations, including insignia, how the other individuals talk about and treat new members, and physical appearance. Furthermore, Kramer (1999) identified 3rd party information as a peripheral cue as to the trustworthiness of individuals, particularly when there is limited direct information available (e.g., experience with the individual). These positive and negative inputs from others, whether or not accurate, can determine how willing individuals are to trust, especially if the 3rd party is someone already proven to be trustworthy. It is theorized that third party information, often a result of an individual's reputation, significantly impacts the perceptions of others, particularly when the source of the information is trusted or known.

Role Clarity

Similarly to category and rule-based information processing, individual team members also make trust judgments based on team member roles. Specifically, the role of a team member denotes certain skills and expertise that help others decide whether or not the person that inhabits that role can be trusted. For example, a simple real world example comes from a tendency to trust doctors, police, and firemen. Their role denotes a level of trustworthiness that is attached to their role, not them personally. Ultimately, individuals tend to import trust from other similar settings and apply it within the new setting to a person in a similar role when they have nothing else to go on (Hung et al.,

2004; Mayer et al., 1995). Further evidence comes from interviews where soldiers reported: “We all wanted to go to Ranger schools, so seeing the Ranger school patch suggests that he knows his stuff” and “I respect the rank, but don’t necessarily respect the person. I have to obey because of the rank”.

Individual Decisions: Routes to Trust

While these antecedents have theoretical support, there is little to guide predictions of how they may interact or be used. One of the few exceptions is Hung and colleagues (2004) who offer an attempt to explain how factors within modern environments may effect how individuals make the decision to trust other team members by proposing that there are different routes for trust formation depending on the stage of the trusting relationship. These routes use combinations of some of the antecedents described above, as can be seen in the framework (see Figure 2). Hung and colleagues’ (2004) work hints at the complexity of the decision to trust by identifying different routes activated by situational and internal factors. This argument is based on dual process theories of cognition (i.e., Elaboration Likelihood Model, Petty & Cacioppo, 1986; and Heuristic-Systematic Model, Chaiken, 1987) and argues that attitudes are formed through three routes: central, peripheral, and habitual.

Similar to the definitions of trust, Hung and colleagues (2004) argue that an individual’s decision of which route they will use to make trust judgments depends on 2 factors: 1) motivation and 2) ability to expend cognitive effort (Chaiken, 1980; Petty & Cacioppo, 1986). For example, the central route (i.e., leverages perceptions of trustworthiness based on perceived ability, integrity, and benevolence) is cognitively taxing and will not be used unless the value to do so exceeds the effort that will be

needed (Chaiken, 1980; Hung et al., 2004; Petty & Cacioppo, 1986). However, even if an individual is motivated enough, they can not use the central route if they do not have the necessary information available, which is often the case with newly forming, multicultural teams. In the absence of adequate information, individuals rely on the peripheral route to develop trust (i.e., leveraging role and category driven information and superficial cues) which is supported by anecdotal evidence from soldier interviews conducted in preparation for this study. However, the peripheral route is less stable and is often based on superficial factors that may not be representative of whether or not a person should be trusted.

The habitual route (i.e., leveraging personal experience with the other person), the least relevant to the purpose of the current effort, requires repeated experience with another and relies on the development of strong emotional bonds, which is often not possible in dynamic environments with heterogeneous teams. While this route establishes strong trust, it too has drawbacks since trust formed this way can be deceiving in that the emotional bonds may cause individuals to ignore the central route or trustworthiness of the other individual.

The route taken to developing trust is significantly influenced by the environment and resources available to the individuals (Hung et al., 2004). For example, the central route is cognitively costly (i.e., judgment of other's internal state based on available information) and requires experience with or insight into another person, while the habitual route is less cognitively taxing (i.e., have multiple inputs) but requires time in that it is based on repeated exposure. This is similar to both rational and calculus-based trust (See Table 1), which individuals think they do, but actually do a lot less, mostly

because it is so cognitively taxing. The reality may be that, despite what they think, a majority of individuals operating in complex, dynamic, multicultural environments often must rely on peripheral routes, which was also supported by soldier interviews.

While not explicitly brought out in the literature, anecdotal, real world evidence exists as to how individuals may make decisions under less than optimal conditions. Examples can be found in soldier interviews (see Table 2) that served as an anecdotal guide to the literature review and experimental plan. For example, soldiers discussed the amount of risk they face and a need to push off less risky tasks on less trustworthy people because their lives are at stake, saving high risk endeavors for soldiers that seem the most trustworthy. One soldier explained it like this: “If I were an E-5 and the company or platoon leaders don’t trust me, they won’t make me a squad leader even though I have been one in the past. Instead, they have me do something that requires less competence.” However, these judgments are often based on purely superficial cues because the decisions are put on teams with little history. One soldier referred to cues he used to form initial trust: “When we have inspection on Monday, is your hair cut, boots shined, etc.? You had all weekend. If he is sloppy, you can’t trust him on that, compared to other soldiers.” That lends itself to the credibility of the examination of what factors or antecedents lead to the decision to trust in complex, dynamic environments where no prior experience is available. It also begs the question of how diversity may affect the decision to trust in these environments, which serves as both an antecedent and moderator in the framework (see Figure 2).

Moderators: Factors Internal to the Trustor

Prejudice

Regarding diversity and social categorization, the observable characteristics that often drive social categorization (e.g., race, gender, age, departmental affiliation, education, tenure) can also be particularly likely to lead to biases and stereotypes, which can influence categorization (Harrison, Price, and Bell, 1998; Pelled et al., 1999; Watson, Kumar, & Michaelsen, 1993). There is a great deal of research on how stereotypes bias judgments of others, with research emphasizing the impact of both cognitive and affective predispositions toward other social groups, which led to a phenomena called the labeling effect (Jussim, Nelson, Manis, & Soffin, 1995). This ultimately provides evidence that, in addition to stereotypes (i.e., the cognitive component), “affective predispositions (i.e., prejudice) may influence people's judgments regarding individual labeling effects refer to phenomena whereby perceivers' interpretations, evaluations, or judgments of different targets depends on the groups to which the individual targets belong (or seem to belong)” (Jussim et al., 1995, p. 228). While stereotypes may be an additional influence; the concentration of this effort on the decision to trust led to a focus on the effect of prejudice on the “judgments of different targets”. Consequently, the label assigned to the other person effects the judgments of them, a phenomena that has been supported using a number of groupings and settings (e.g., Grant & Holmes, 1981; Krueger & Rothbart, 1988; Rosenhan, 1973). Furthermore, directly on point to the current effort, findings suggest “that labeling effects show that perceivers interpret

ambiguous target behavior in ways consistent with their beliefs about the targets' group” (Jussim et al., 1995, p. 229).

Not to say that all individuals are prejudiced or have negative affect toward dissimilar others, but as Devine’s 1989 model of prejudice argues, all individuals, “high and low prejudiced persons are equally knowledgeable of the culturally shared stereotype and automatically activate this knowledge in the presence of a member of the relevant groups” (Kawakami, Dion, & Dovidio, p. 7), even if no discriminating behaviors result. In other words, we automatically rely on heuristics that are readily accessible, but often not accurate, in the absence of more detailed and personal information, especially when individuals are members of out-groups, leading to reliance on shortcuts (e.g., peripheral versus central routes). Even if these heuristics are not acted upon, they are there and likely have some influence on the weighting of the different decision making variables or antecedents available to us. For individuals who do have high affective predispositions (i.e., prejudice), however, a more direct effect would be expected.

Similarly, Verkuyten and DeWolf (2002) found that when assuming a social identity, which is common at team formation (Burke et al., 2008; Chao & Moon, 2005) salient perceptions and corresponding explanations contain more stereotypes. The dependence of individuals on their social identity will affect the magnitude of the difference between in-groups and out-groups. Therefore, the next focus of this review is on an area of diversity directly related to the demographic, outward characteristics of individuals, which often are used to identify this out-group: cultural diversity. While diversity can be defined in a number of ways and, we acknowledge, that demographic diversity does not directly transfer to cultural diversity. However, it is an accepted tenet

that culture does, in general, tie to the region or demography of the individual and nationality is often tied to culture in studies on diversity. It is an assumption and possible future focus of investigation that these findings would generalize to other cultural or diversity variables, so long as an outgroup is created.

Propensity to Trust

It is also important to remember that internal judgments of external information are not the sole predictor of decisions to trust. In addition to prejudice and biases, each individual also has a predisposition or propensity to trust, which allows us to consider both the trustor and the trustee in our study. Predisposition (propensity to trust) of the trustor is an individual characteristic or dispositional variable of the trustor and refers to a person's general willingness to trust (Mayer et al., 1995; Meyerson, Weick, & Kramer, 1996). The debate in the literature on propensity to trust revolves around conflicting reports of the influence of this independent variable on decisions to trust (Gill, et al., 2005; Johnson-George & Swap, 1982; Lewis & Weigert, 1985; Rotter, 1971; Stack, 1988), with some studies suggesting that propensity to trust explains significant variability in the decision to trust (e.g., Van Dyne, et al., 2000; Mayer & Davis, 1999), and others (e.g., Mintu-Wimsatt & Lozada, 1999) have found the opposite.

One explanation of these contrary findings can be found in the work of Gill and colleagues (2005) who found that propensity to trust correlated with an individual's intention to trust only when the trustworthiness of the other person was ambiguous. These findings seem to suggest that the predisposition has significant influence on newly formed teams since diversity and a lack of past experience make the trustworthiness of the other more ambiguous. Further evidence was provided by Kramer (1997) who

showed that trustors who were relatively more forgiving were less likely to lose trust in the trustee after a violation, as were younger and less experienced individuals. One possible variable that may influence this ambiguity is the cultural identification of the trustor with the trustee. This theory supports findings that individuals make negative judgments of members of outgroups (i.e., internal attributions) that they do not of members of their ingroups. The ambiguity of cultural norms that are different than your own will bring out an individual predisposition. Based on all of the information discussed above, a set of hypotheses emerges from the literature, which are presented next.

Diversity: Through a Cultural, Social Lens

Individuals, especially when placed in a team setting, are social in nature and have a strong tendency to view situations in terms of groups to which they belong, viewed positively, or do not belong, often viewed negatively (Barkema et al., 1996; Tajfel, 1974; Tajfel and Turner, 1979; Turner, 1982). This requires team members to assign themselves and others to categories based on available information (Hogg, 1996), which in newly formed teams often only consists of demographic, superficial information or, in the case of work teams, role and category-driven information (Barkema et al., 1996; Byrne, 1971; Earley & Mosakowski, 2000; Lau & Murnighan, 1998; Levine and Moreland, 1998). This social categorization of one's self and others within a team setting relies on a cultural lens determined by contextual cues and observable input (Klein, 2004). This theory further supports the expected impact of diversity within the settings described in the methods section.

Specifically, the cultural lens model assumes that members of a national group, growing up in similar ecological and social contexts, have shared experiences that they

can draw on. This assumption is based on the perceptions, accurate or not, that members of a national group have experienced childhood into adulthood with at least some contextual commonalities. These commonalities are perceived to lead to similarities, based on learning and modeling, that, taken together, generate common behavioral, social, and cognitive patterns, leading to the definition of the ingroups and, consequently, outgroups (Klein, 2004).

Furthermore, soldiers on the ground themselves (see Table 2) and workers in industries like manufacturing, who are increasingly placed in global teams, have encountered the difficulty in trust formation first hand. For example, interviews and focus groups conducted with soldiers who had either recently deployed or were preparing to deploy at a US Army post training exercise (2006) provided evidence of the difficulty in developing trust toward foreign nationals. Specifically, the soldiers interviewed, who ranged in rank from privates to majors, reported a general distrust of foreign nationals, unless they have had past positive experiences with that particular culture. Soldiers said things like “[we were] integrated with the Iraqi army, but really don’t know which ones you can trust at first, but we were forced to work with them” (See Table 2 for additional information). There are a hundred or more examples of these types of statements coming from soldiers, mostly based on the amount of risk they encounter in a foreign country and the attributions they make about individuals who are different based on initial, visible, superficial characteristics. One soldier gave a specific example of being in such a situation that illustrates the difficulty of forming trust in multinational environments with high risk:

“Doing a patrol, they’re supposed to be leading first because they are taking over their own country. If we need to go to check a building, don’t

want them to go by themselves, because could have a cache and sister unit could get killed. Don't know them, so send a team of 2 or 3 with them. I personally don't trust them. They are working with you and against you, have seen Iraqi police one day working with you the next day shoot you...I don't trust them, period."

Less threatening, but still similar examples exist within the cross-cultural literature in organizational settings.

Table 2. Soldier Quotes on Trust and Foreign Nationals

"You never know. They might tell the enemy where we are going. Also, we don't know much about their training."
"Dealing with foreign nationals, how do you cope? Never trusted the interpreter, or any of them. Needed to double check, and needed to keep things from him."
"I have my Joe's I worry about first, don't trust them, trust my unit first."
"Overall, I don't trust them. May do their job, but overall I don't trust them. Maybe over time."
"IA, basically we have to trust the IA because it is part of our mission statement, we don't but we have to use them to cover our flank. Doesn't mean we won't send other Bradley to watch them."
"If you watch them you can tell if they are truthful or if they are trying to do a good job, but still don't fully trust them."
"Would not have ever given them a more central role...ever."
"To earn their trust...take more then one time to build a foundation...other than that don't think the average Joe is ever going to trust them...may be working with you today but them or family may try to kill you tomorrow."
"Not to mention most soldiers don't want to go over there at all...makes them resent them even more."
"When I was there, we had an interpreter that was kidnapped 12 times in 2 weeks, and dropped off in the same spot each time...so can't take him out on important missions...leadership eventually just let him go."

Related to potential risks, another element of the decision to trust is conditioned on the belief that others will reciprocate. Specifically, whether or not an individual will cooperate is predicated, at least in part, on their belief that the other individual will do the same (Bran & Foddy, 1988; Kramer, 1999; Kramer et al., 1996; Messick & McClelland, 1983). However, there are factors that may influence an individual's motivation or belief that another will reciprocate. Diversity is one of those factors. To date, research has failed

to show how trust antecedents and the process of trust building can be facilitated or hindered, based on cultural factors, shared norms, and societal values of the individuals involved and whether or not the process of trust development may cause trustors to put more or less weight on these antecedents in the decision to trust (Doney, Cannon, & Mullen, 1998). Research has provided evidence that individuals in multicultural situations “make initial use of category-driven information processing to form stereotypical impressions of others” (Jarvenpaa & Leidner, 1999, p. 794), which can have a significant effect on trust.

As mentioned earlier, the relationship between culture and trust in teams has yielded mixed results. DeSanctis and Poole (1997) found that the greater the diversity in teams within organizations (i.e., the greater the cultural distance), the more time was required for them to form bonds, with other work indicating that some, but not all, teams may develop high trust and strong bonds in a short period of time (DeSanctis & Poole, 1994; Poole & DeSanctis, 1992; Jarvenpaa & Leidner, 1999). The problem is that there has not been a sufficient investigation as to why some teams develop trust and others do not. Empirical evidence of the how and why is minimal to date. However, there is some evidence for how trust is developed differently across cultures; although findings are not entirely generalizable to all multicultural teams in that the research so far has been mostly specific to nations or cultural dimensions. For example, Yuki and colleagues (2005) found that Americans trusted in-group members more than out-group members, a finding that is no surprise. However, they also found that trust for out-group members increased if a potential indirect relationship link was established for Americans, but not for Japanese trustors, who required a direct link, indicating that Americans may have less

stringent criteria for in-group inclusion. This also leads to a related and contributing factor that requires exploration beyond this study: how different cultures define and develop trust. This question is beyond the scope of the current effort but is related and will be discussed in the discussion section.

In addition, Gelfand, Erez, and Aycan (2007) found that different conditions influence feelings of attraction and trust toward group members from divergent cultures. Some examples of how these conditions relate to trust and other similar processes (e.g., attraction, cohesion) throughout the literature showed that job complexity and autonomy were much more important for group cohesiveness in the United States than in Taiwan (Man & Lam, 2003) and similar research has shown that job enrichment (i.e., high task identity and flexibility) had a negative effect on team support in high-power-distance groups (Drach-Zahavy, 2004). Also taking a more contextual or situation-based approach, Chen and colleagues (1998) proposed that with members of individualistic cultures, cooperation was facilitated by instrumental factors such as high goal interdependence, enhancement of personal identity, and cognitive-based trust. In contrast, members from collectivistic cultures, socio-emotional factors such as goal sharing, enhancement of group identity, and affect-based trust led to cooperation. These findings further emphasize the importance of trust to cooperation in culturally diverse populations and, while showing evidence of how diversity may affect similar constructs (e.g., attraction), we know very little about how cultural diversity affects trust.

So what does this mean for team formation and processes? Based on the concept of social identity, it is theorized that process loss and further alienation is caused by individual team members identifying with team members who are demographically

similar, forming homogeneous subgroups within the team (Barkema et al, 1996; Byrne, 1971). The formation of these subgroups creates what Lau and Murnighan (1998) identified as ‘fault lines’. Depending on how strong the fault lines are between subgroups, process loss can be significant. If the fault lines are based on several variables (e.g., gender, nationality, and age similarities) then the group identity, and as a consequence, the distance between subgroups, becomes even stronger, leading to less communication and less trust, resulting in more process loss. As can be seen in the framework (see Figure 2), there are two additional moderators that affect the decision to trust: prejudice and the propensity to trust, which will be discussed next.

Hypotheses

Propensity to Trust

Dispositional factors can have a significant impact on the decision to trust at the individual level. It is believed that this bias will come out in the data of the current study in a couple of ways. The current effort predicts that the propensity to trust explain more of the variance in the decision to trust in situations where diversity makes trustworthiness ambiguous (i.e., where the trustor and trustee are culturally diverse). Overall, we expect a moderating affect of propensity to trust on decisions to trust. However, we also believe culture will play a role. Specifically, it is predicted that individuals who are asked to make trust judgments of individuals from their own culture will not bear out the findings in the literature that support the moderating effect of propensity to trust, since they will be more likely overall to trust. This is due to the lack of negative feelings toward members of their ingroup, leading to the suppression of this individual difference. On the other hand, we believe that individuals who are asked to make the decision to trust

individuals from other cultures will face more ambiguity as to the other, leading to their reliance on their general propensity to trust others or not.

The rationale is that the lack of information and possible negative attributions toward members not in their ingroup, leads to the emergence of this individual difference. The current study proposes that individuals who are asked to make the decision to trust individuals from other cultures will rely on the antecedent variables available to them but be guided or influenced by their natural propensity to trust, based on the ambiguity created about unknown others or outgroup members. This hypothesis addresses whether or not individuals who are asked to make trust judgments of individuals from other cultures will bear out the findings in the literature that support the moderating effect of propensity to trust.

However, it is also predicted that propensity to trust will moderate the relationship between which antecedents to trust will influence the decision to trust. This is based on past research that suggests that 1) ambiguity leads to reliance on predisposition and 2) similar others who may not be trustworthy may cause confusion or cognitive dissonance. Specifically, we predict that individuals who are more likely to trust will rely more heavily on external factors, believing, despite what the antecedents say, people are trustworthy and perhaps the circumstances may dictate more whether you trust the person. In the most simplistic view, it may be said that people with a high propensity to trust believe people are good in general and situations influence them more, so they will evaluate external factors that may cause that person, who is generally trustworthy, to behave in an untrustworthy manner. Consequently, people with low propensity to trust do

not generally trust others, so they will evaluate an individual based on perceptions of an individual's integrity and intentions, leading to evaluations of internal factors.

Hypothesis 1: Propensity to trust is expected to moderate the relationship between the trust antecedents and the decision to trust at team formation, but will have a more significant impact in high cultural diversity conditions.

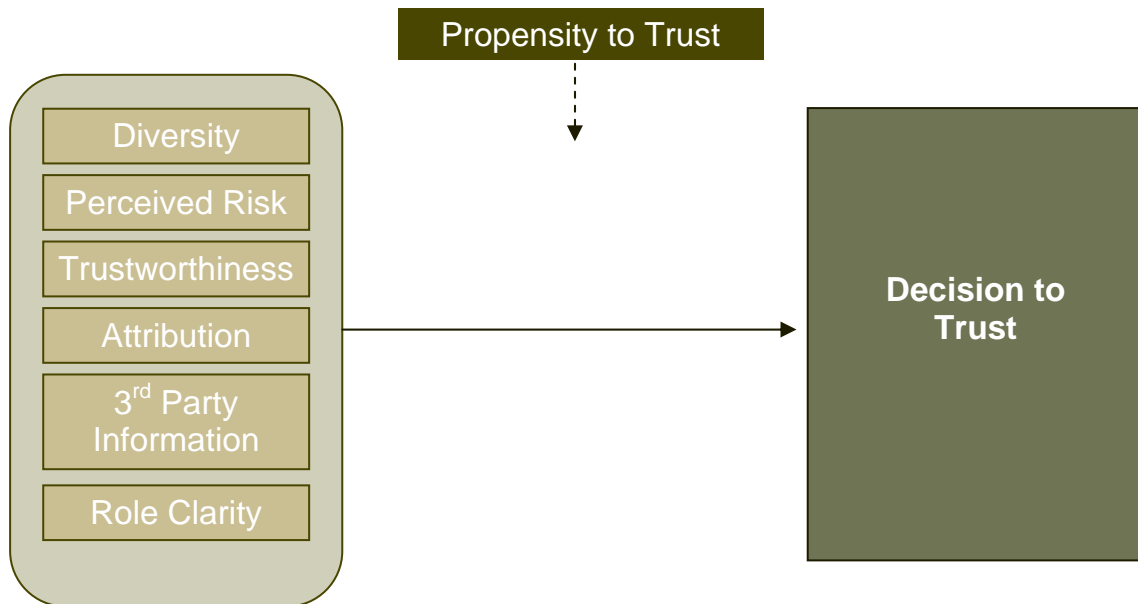


Figure 3: Hypothesis 1

Hypothesis 1a: Those with a high propensity to trust others were expected to weigh the antecedents that provide information about the target of trust more than the antecedents that are external to the target of trust.

Hypothesis 1b: Those with a low propensity to trust were expected to place greater emphasis on the antecedents that are external to the target of trust rather than antecedents that reflect information about the target of trust.

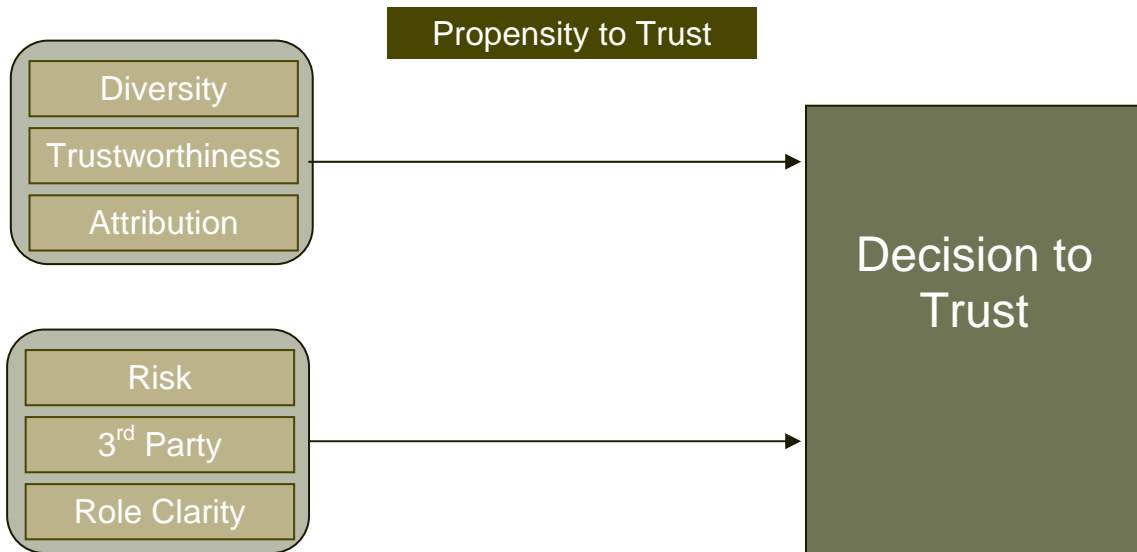


Figure 4. Hypotheses 1a and 1b

Diversity, Risk, and Attribution

The next hypothesis is based on qualitative evidence from the field and involves the assessment of risk and intention in a situation where diversity is a salient factors. Specifically, it is predicted, based on the interviews with soldiers described earlier, that the presence of diversity, an individuals attributions about the other’s intentions as well as control of a situation, and the perceived risk of trusting that person will be the most influential in the decision to trust. Ultimately, soldiers interviewed reporting assessing those three factors overwhelming when deciding to trust given newly forming teams where they had no history. Therefore, this hypothesis revolves around the testing of self assessment of decisions to trust made by soldiers and predicts that the diversity, perceived risk, and attributions will predict more of the variance in the decision tot rust.

Hypothesis 2: Culture diversity, perceived risk, and attributions will be more important to the decision to trust than perceived trustworthiness, role clarity, and third party information.

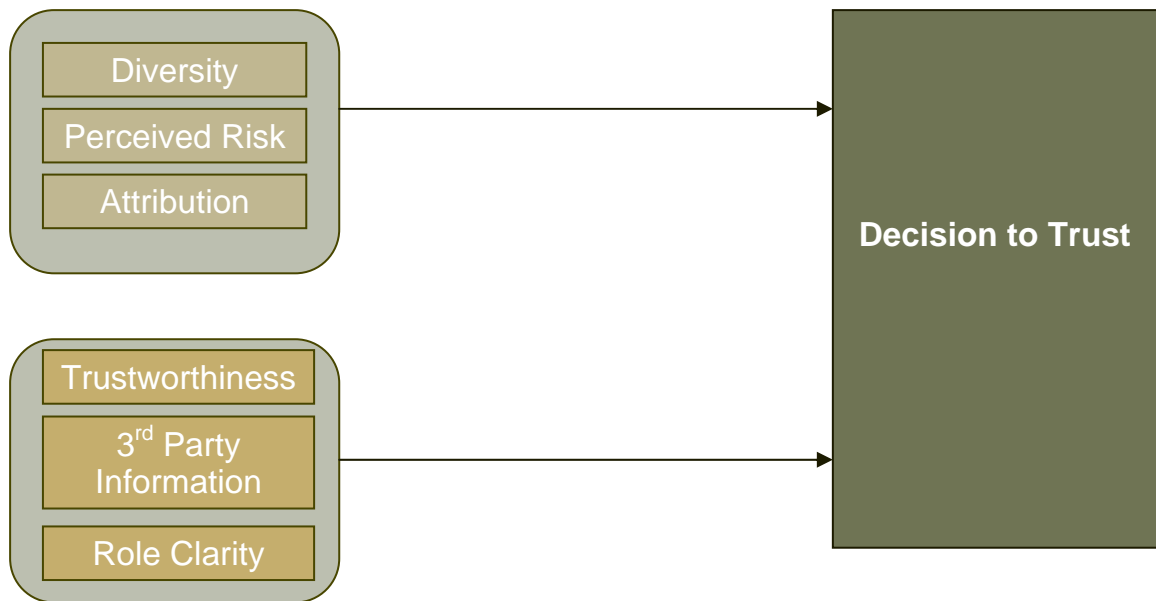


Figure 5. Hypothesis 2

Prejudice

Taking all of this literature together, there are a few predictions that seem the most logical. For example, a person’s ethnicity, accent, and nationality are all superficial cues to a person’s cultural tendencies. When forming new teams and associations, individuals use these cues to make initial judgments and, it is predicted, that the diversity of trustors and trustees will influence how antecedents are weighed and applied to make decisions to trust with regards to attributions, relying heavily on perceptions of outgroup members. Furthermore, with regards to what defines an outgroup, research has found that while gender has a nonsignificant effect on the perceived trustworthiness of others in a business setting, culture influences the perception of trust in a number of ways (Golesorkhi, 2006).

Furthermore, not only was culture found to effect the decision to trust, but cultural differences were credited with misunderstanding cues of trustworthiness (Golesorkhi, 2006). Specifically, behavioral cues that signal trustworthiness in America might be

different than cues that signal trustworthiness in India. This may lead to cultural bias in trusting others based on misinterpretation of cues. This study also found that different genders weighed cues differently (e.g., women weighed benevolence more highly than men), but authors speculate that this also may differ according to culture, providing further support for the influence of culture on the decision to trust (Golesorkhi, 2006) and the negative impact of fault lines and outgroups. Again, while outside the confines of the current effort, the different conceptualizations of trust between genders and cultures is a continuing concern and will be addressed within the discussion section.

It is theorized that culturally diverse teams with no prior interaction will change the relationships of the antecedents to the decision to trust. Specifically, the research strongly supports the pervasiveness of culture and its influence on how we judge others. Therefore, it is predicted that overall, the antecedent of culture, either similar or dissimilar, will be the single biggest influence on the decision to trust in newly formed teams. Furthermore, an individual level of prejudice, as established in the literature, leads to stereotypes which color their judgments. Therefore, it is also hypothesized that an individual's prejudice will influence the decision to trust.

Hypothesis 3: The cultural diversity IV will predict more variance than all other variables tested in the decision to trust.

Hypothesis 3a: Prejudice will moderate the relationship between the cultural diversity IV and the decision to trust.

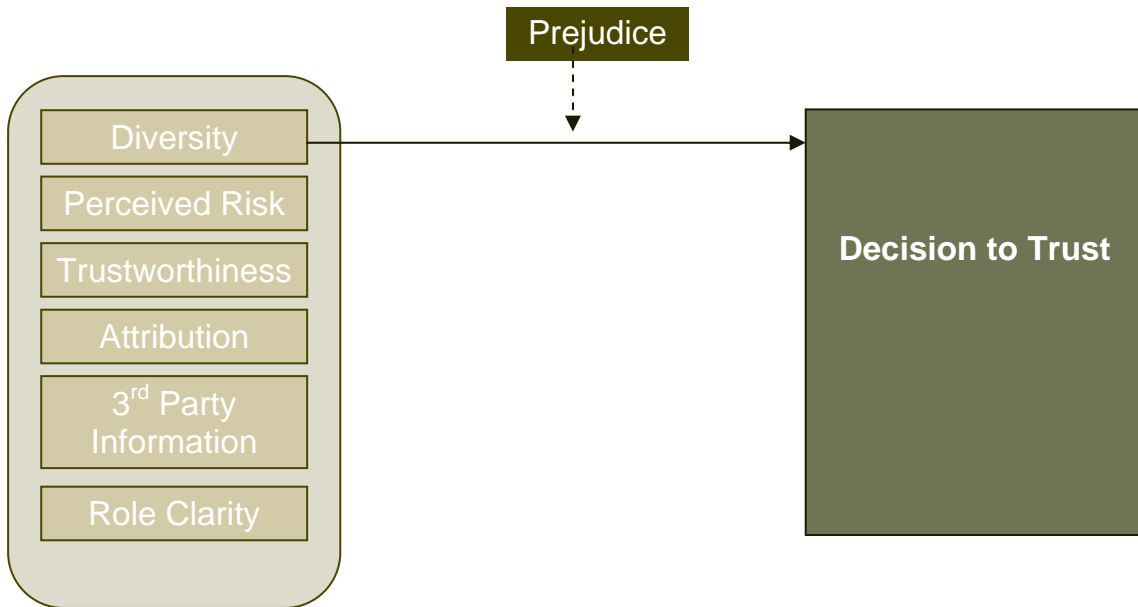


Figure 6: Hypothesis 3 and 3a

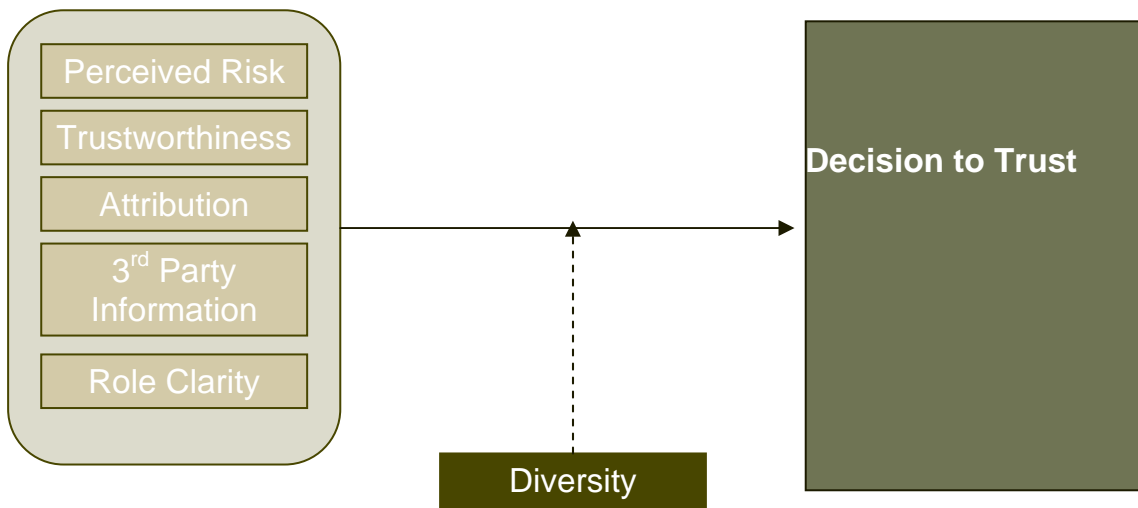


Figure 7: Hypothesis 4

Perceptions of Risk

Based on earlier discussions of risk and vulnerability and the likelihood that they may increase with ambiguous and diverse environments that are pervasive throughout this work, the trustor’s perception of the risk involved in being vulnerable would be

assumed to have a bigger impact on their decision to trust than previously theorized, especially in dealing with someone they may not know much about. Recent research has also been published that may indicate an overall rise in sensitivity to risk when traveling internationally (Kozak, Crotts, & Law, 2007). Specifically, while as expected, researchers found differences in what the perceived risks were based on Hofstede's uncertainty avoidance groupings, research also found that international travelers to Hong Kong were universally sensitive to the amount of perceived risk, with a majority of travelers canceling their plans to international destinations when perceived risks were high (Kozak et al, 2007).

While no direct link exists between these findings and the current effort, these findings support the assertion that when cultural diversity is introduced into the situation, perceptions of risk will explain more of the variance in the decision to trust in newly formed teams. This link is made based on theoretical assumptions that when individuals are faced with ambiguity, like with international travel, in this case both the situations and trustworthiness are ambiguous; individuals will weigh the risk to themselves more heavily. Therefore, individuals making decision to trust based on heterogeneous interactions will weigh the risk more than individual differences perceived in others, while homogeneous teams will not have the degree of ambiguity and will, therefore, weigh the individual differences more. Ultimately, if risk is low, then trust will not cost them much, even if the other does not deliver. If risk is extremely high, there may be no amount of positive, superficial information that will convince individuals to trust.

Hypothesis 4a: Culture will moderate the influence of the perceptions of risk at team formation.

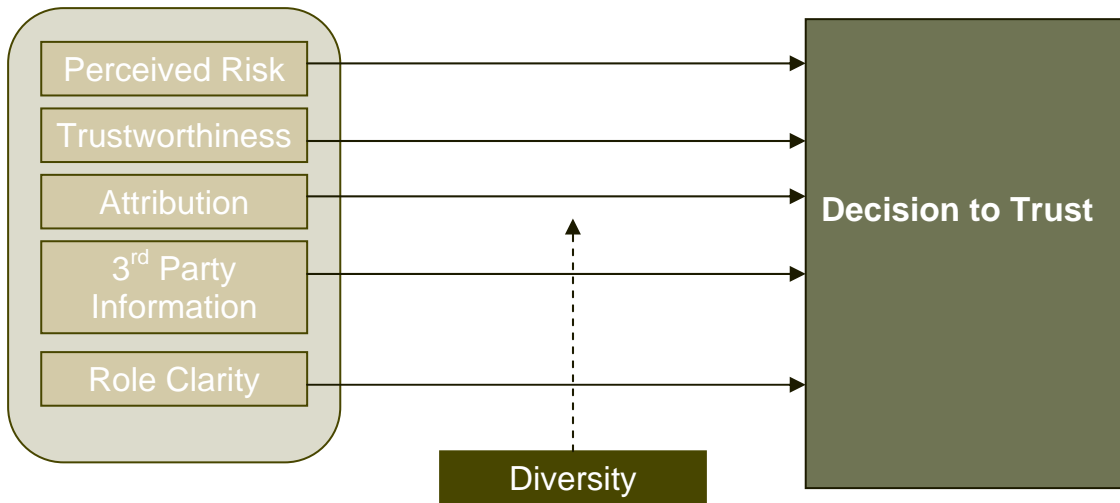


Figure 8: Hypothesis 4a-e

Attribution

The current paper argues that the attributions individuals make about team members, either internal or external to the trustee, are influenced by diversity based on ingroup and outgroup perceptions. Specifically, the current effort predicts that the attributions antecedent will explain more of the variance in the decision to trust when the trustor and trustee are culturally diverse. Consequently, it is predicted that attributions will explain less of the variance in the decision to trust when the trustor and trustee are culturally similar. This too is based on ingroup membership theories and findings on diverse populations in that culturally similar individuals will allow positive attributions, negating its influence on the decision to trust, while culturally diverse individuals will lead individuals to judge the attributions of the other more critically, leading to a stronger influence on the decision to trust.

Lastly, an interaction between cultural diversity, perception of risks, and attribution is predicted. Looking at definitions of trust, the emphasis is mostly on risk and motivation. Based on the weight given to other antecedents in the literature, at least

theoretically, it is predicted that culture may be even more influential when combined with antecedents that may become more salient with ambiguity: perceptions of risk and attributions.

Hypothesis 4b: Culture will moderate attributions affect on decisions to trust at team formation.

Trustworthiness

Trustworthiness of another is highly salient in all discussions of the decision to trust from the literature. However, like swift trust, the decision to trust in diverse teams with no history is different from traditional trust in that it can not be rooted in an interpersonal form, but must be based on other variables. This means that individuals must often depend on factors external to the other, like role clarity and 3rd party information (Mayer et al., 1995) and, like swift trust, individuals must rely on judgments of the environment, the role, and rely on their own best assessment of the situation. In turn, it is predicted that individuals who can make assumptions based on perceived interpersonal factors (e.g., cultural similarity infers similarity of norms) will rely more heavily on trustworthiness to make the decision to trust.

Related to this, the current effort assumes that individuals with perceived shared common experience or norms will be more likely to make assumptions about their ability and intentions, adopting affect-based trust, referred to as resilient trust by Ring (1996). Affect-based trust is a result of the judgment of an individual's moral integrity, goodwill, and emotional bonds (Lewis & Weingart, 1985). It originates when members perceive a 'relationship' or ingroup bond with others (e.g., "they are like me"). However, individuals who must make decisions to trust individuals from other cultures, will adopt deterrence-based trust, which arises when the costs or sanctions that will occur if there is

a breach of trust far outweigh any individual gains for opportunistic behavior (Neilsen, 2004; Ring and Van de Ven, 1992). This occurs because of 1) a negative perception of outgroup members and 2) a lack of any other information about their character than superficial cues. Therefore, individuals making decision to trust based on heterogeneous interactions will weigh the risk more than individual differences perceived in others.

It is predicted that trustworthiness will explain less of the variance in the decision to trust where the trustor and trustee are culturally diverse. However, the current effort predicts that trustworthiness will explain more of the variance in the decision to trust where the trustor and trustee are culturally similar. Essentially, it is theorized that when others are culturally different, individual team members must rely on superficial and environmental factors, more similar to swift trust formation. While if individuals perceive the other as ‘like them’, at least culturally, there will be assumptions made about their trustworthiness, even if they do not have complete information or previous experience with them or perhaps, even in the face of conflicting information. When other team members are culturally diverse, they are identified as members of the outgroup, which increases ambiguity about their integrity, benevolence and ability, which can not be overcome by low salient information. Therefore, individuals rely more on role and environmental cues to assess whether or not to trust diverse others.

Hypothesis 4c: Culture will moderate the relationship between perceived trustworthiness and the decision to trust at team formation.

3rd Party Information

This prediction is based on research that has shown that especially early in the socialization process, newcomers often over rely on ‘others interpretations’ or ‘local

interpretations', when faced with a lack of other more substantive input (Louis, 1980). The current effort predicts that this will be even more pronounced when diversity is introduced into the equation. In fact, within organizational settings, a lack of knowledge of organizational culture can be cited as a reason for a difficulty in socialization, which is predicted to extend to an even deeper degree given cultural diversity.

It is theorized then that 3rd party information will explain more of the variance in the decision to trust where the trustor and trustee are culturally diverse and that it will explain less of the variance in the decision to trust where the trustor and trustee are culturally similar. The basis for this prediction lies in the reliance of individuals on superficial or nonmeaningful information when they have no factual information on which to base their decision to trust and their assumptions about the information they are given may be biased, inaccurate, or incomplete.

Hypothesis 4d: Culture will moderate the relationship between 3rd party information and the decision to trust at team formation.

Role Clarity

Based on both theoretical and anecdotal evidence, it is predicted that role information will explain more of the variance in the decision to trust where the trustor and trustee are culturally diverse. Based on the literature on swift trust (Mayer et al., 1995), it is likely that under unknown or ambiguous circumstances, individuals use category-driven cues to make the decision to trust. Consequently, it is predicted that role information will explain less of the variance in the decision to trust where the trustor and trustee are culturally similar. When faced with the unknown, individuals will depend on situational and role characteristics to determine the competency and motivation of the other.

Hypothesis 4e: Role clarity will be more important in the decision to trust a culturally diverse individual at team formation than the decision to trust a culturally similar individual.

Routes to Trust

It is also predicted that culture will influence the route to trust. Based on what is known about the different routes while considering culture, it is predicted that homogeneous teams find the central route less cognitively taxing since certain assumptions will be made about their team members' trustworthiness based on superficial information because of their membership in their ingroup. For example, being told a similar individual or member of your ingroup 'appears trustworthy', confirms what you feel about yourself so you are more willing to trust based on that because there is less of a risk in your eyes. Members of an outgroup will be viewed as unknown and individuals will rely on the peripheral route more because of the ambiguity of their trustworthiness and the lack of similarity will lead to an individual relying on role, risk, and attributions more.

Hypothesis 5: Diversity will moderate the route taken to trust

Hypothesis 5a: The IVs in the peripheral route (i.e., 3rd Party Information, Role Clarity) will be more important in the decision to trust a culturally diverse individual than the central route.

Hypothesis 5b: The IV in the central route (i.e., Perceived Trustworthiness) will more important in the decision to trust a culturally similar individual at team formation than the peripheral route.

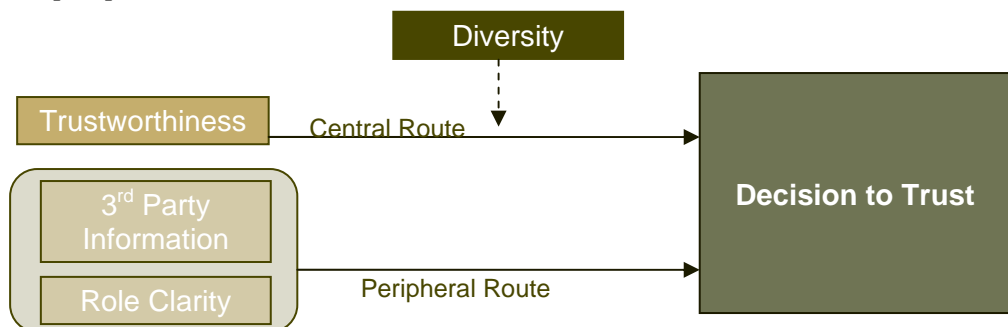


Figure 9. Hypothesis 5, a-b

CHAPTER 2: MATERIALS AND METHODS

Experimental Design

Policy capturing was used to indirectly measure decision making within this context. Policy capturing analysis is designed to allow researchers to examine and evaluate implicit, internal policies used for decision making (Hobson & Gibson, 1983). In a manner of speaking, policy capturing allows us to eavesdrop into the decision making process to evaluate what variables experts use to make decisions (Doyle et al., 1996). Ultimately, policy capturing is useful in the examination of decision making in three ways: 1) to examine the unique information processing behaviors in decision making; 2) to compare how people think they make decisions to how they actually do; and 3) to train decision makers in how they should make decisions (Hobson & Gibson, 1983). The current study focuses on the first application.

The primary objective of any policy capturing analysis is to model the underlying informational processing that occurs through decision making (Prohaska & Frank, 1990). The primary objective of the current study, as outlined in the introduction, was to examine the differences in the decision making process to trust based on the cultural profile of the person described in a scenario that sets up a realistic situation.

One of the benefits of using policy capturing to assess trust is that it is an indirect measure (Karren & Barringer, 2002). Specifically, rather than asking participants directly what factors they use to decide to trust someone or not, policy capturing provides a scenario with different variables to which participants respond as to how much they trust the subject of the scenario. The whole goal of an indirect measure is subtlety so that participants do not consciously mold their answers to appear one way or another. This is

especially helpful with trust since it may be seen as socially undesirable or “politically incorrect” to use superficial or cultural cues in the decision to trust. Therefore, the goal of this study was to gain access into what people actually use for decision to trust, not what they think they should use.

Related to this, policy capturing offers several strengths over traditional self-report surveys. Some advantages include a decrease in the influence of social desirability on answers and avoiding some of the weaknesses of other self report measures (e.g., a lack of metacognitive awareness, people pleasing tendencies). Also, the fact that policy capturing allows the inclusion of multi-attribute scenarios means that it more accurately approximates real world decision making. Specifically, individuals do not make decisions to trust based on a single factor but must evaluate multiple inputs.

A full factorial design was employed to ensure the inclusion of every possible combination of the antecedents to the decision to trust outlined earlier. The result of this is a set of 64. Specifically, due to concerns over fatigue, each participant was only asked to complete a set of 32 scenarios, which was determined during pilot tests. Furthermore, in order to ensure the most robust results for the culture dimension, the study consisted of two phases: 1) demographics/ pre-surveys; and 2) policy capturing. Based on demographic information gathered in phase 1, participants for phase 2 were selected to ensure that the scenarios created perceptions of cultural similarity and diversity as intended. The participants and measures used for phase 1 will be described followed by those implemented within phase 2.

Phase 1

Participants

The overall sample ($N = 207$) for Phase 1 consisted of students recruited over the web (i.e., email or the university data collection site) and ranged in age from 18 to 50 years old ($M = 21.9$) and consisted of both males and females (males: $N = 51$; females: $N = 156$).

Measures & Tools

Phase 1 consisted of a demographics survey (APPENDIX A: DEMOGRAPHICS QUESTIONNAIRE) and pre-surveys including the propensity to trust scale (APPENDIX B: PROPENSITY TO TRUST) and a prejudice scale (APPENDIX C: PREJUDICE SURVEY).

Demographics Questionnaire

Participants were asked to provide researchers with limited and unidentifiable demographic information targeting their experience with other cultures (see APPENDIX A: DEMOGRAPHICS QUESTIONNAIRE). The questionnaire consisted of approximately 15 questions and took no more than 2 to 3 minutes. The demographics questionnaire results served two purposes: 1) to be used as a control variable during analysis and 2) to select participation in the policy capturing portion of the study (i.e., phase 2).

Propensity to trust

In order to assess participants' propensity to trust, a revised version of the Couch, Adams, and Jones' (1996) Trust Inventory was used. In order to target individual participants generalized propensity to trust, only one of the trust scales was selected (i.e., generalized trust). Partner trust and network trust were dropped because it is believed they are not relevant to the current study due to the temporary nature and lack of history of the relationships defined in the current study. Following the lead of other researchers, the scale was presented on a continuum, rather than as a dichotomous, scale. This technique has been used in previous work on trust utilizing policy capturing (see Sims et al, in press) and was shown to have a reliability ($\alpha=0.80$) approaching the original scale within the current effort (Couch et al., 1996). The measure now contains 20 questions covering a general propensity to trust, including statements such as "I tend to be accepting of others", "Basically I am a trusting person", and "I expect others at 'face value'" (Couch et al., 1996). The respondents were asked to rate the statements as they relate to themselves from 1 (i.e., very true of me) to 5 (i.e., very untrue of me) with a possible score of 20 to 100 (see APPENDIX B: PROPENSITY TO TRUST).

Prejudice Scale

In order to examine the moderating effect of personality predispositions on the impact of culture in the decision to trust, a measure of prejudice that is linked to social domination theory was included (Jost & Thompson, 2000). This measure of prejudice was designed by adopting a multidimensional approach to the measurement and conceptualization of social dominance orientation (Pratto, Sidanius, Stallworth, & Malle, 1994). This measure, used in numerous studies in the social psychology literature since

2000, includes two related ideological factors, one that measures general opposition to equality (OEQ) and another that measures support for group-based dominance (GBD) (see APPENDIX C: PREJUDICE SURVEY) and showed low, but acceptable reliability ($\alpha = .71$). This will allow analysis of the effect of individual predisposition to make assumptions of others based on their race or culture.

Procedure

Students were recruited using the university web based research tool and compensated with extra credit points approved by the university. The participants were first asked to complete the demographics survey, a propensity to trust questionnaire, and a prejudice scale (i.e., phase 1). They received one extra credit point (for a half hour) for this portion of the study. Once the surveys had been completed, a portion of the sample was selected to complete the policy capturing study and were contacted through email and directed to the web-based survey. Selection was based on answers to key demographics questions about race, travel, living abroad, and nationality of immediate family members. The goal of this selection was to ensure the cultural diversity antecedent was illustrated. Caucasian participants with little experience with foreign or multinational others were selected to ensure difference in high and low cultural diversity in policy capturing scenarios. Specifically, if their demographic information indicated that participants were Caucasian and at least third generation Americans, they were asked to complete the second phase of the study (i.e., policy capturing) for additional credit points based on time to complete (which is estimated to be one and half hours for 3 additional credit points). The time between phase 1 and 2 was also designed to lessen the influence

of the prejudice scale on their future answers, since the invitation to participate in phase 2 was not sent until at least 24 hours after completion of phase 1.

Phase 2

Participants

The sample that met the criteria outlined in phase 1 ($N = 129$), were invited to participate in phase 2. Of those invited, a smaller sample of students responded and completed the 32 scenarios ($N=107$), consisting of high and low combinations of six variables ($k=6$). The relatively large participation rate for phase 2 allowed for techniques unique to policy capturing that are used to ensure stable internal judgment policies (i.e., decisions based on evaluation of stable factors and not just randomly made), while still maintaining the minimum requirements for power, based on Chen's (1992) formula where N/K . This will be used to test $H_0: P_I^2 = P_{II}^2$; $H_R: P_I^2 > P_{II}^2$. A final sample of 51 was used for testing of the 6 antecedents. Interactions between variable were tested using regression models, more stable sample consisted of sufficient power for all hypothesis related analysis (See APPENDIX D: COHEN SAMPLE SIZE TABLE). Participants ranged in age from 18 to 50 ($M = 22.38$) and consisted of both males and females (males: $N = 31$; females: $N = 76$).

Measures & Tools

Scenario

A generic, common story line was provided for each combination of antecedents that describes a situation in which the participant was assigned a new team member for a class project. In this scenario, the participant was told they know two of their team members, but the third is someone they do not know. The participant was asked to

decide how much they trust the team member based on limited information, approximating real team formation, and how confident they are in that decision. Although the story line was common across all participants, additional information about the new teammate reflecting the trust antecedents of interest was provided to form a number of different scenarios. The different scenarios were described based on different antecedents which informed their first meeting with an unknown team member (See APPENDIX E: POLICY CAPTURING VIGNETTES). Each scenario had varied levels of the antecedents and over the sample; participants received all of the possible scenarios.

Procedure

Participants were randomly assigned to conditions once selected based on phase 1 criterion to ensure that every possible combination of scenarios was represented across multiple participants. The order of presentation was also varied to ensure there were no order effects. Participants were then asked to complete a total of 32 scenarios, namely half of the designated 64 possible samples. This was done to decrease fatigue and increase the likelihood of representative and true results. Scenarios were developed to be as generic as possible so that no domain specific knowledge was required but were constructed from the point of view of a classroom exercise to make them as generalizable as possible. Also, each participant was given both high and low diversity scenarios, in that each participant was in both samples one with high cultural diversity and one with low. Participants were required to be over 18 and were not restricted based on culture, for the initial survey data but will be selected as outlined above for the policy capturing portion to ensure diversity.

Participants were asked to read a portion of 64 scenarios which in total will vary all possible combination of variables of interest (high and low). At the conclusion of reading each scenario, the participant was asked to make a decision to trust based on a 5-point likert scale, ranging from “I do not trust this person at all” to “I trust this person completely” and then rate their confidence in this decision on a scale of 1 (least confident) to 5 (most confident). See APPENDIX F: EXPAMPLE SCENARIOS. All materials were approved by the internal review board of the university (see APPENDIXG: UCF IRB HUMAN SUBJECTS PERMISSION LETTER).

CHAPTER 3: RESULTS

Within Subjects Analyses: Assessment of Individual Policy Stability

Multiple regression analysis was used to model each participant's decisions to trust. For each participant, an equation was generated, corresponding to the dependent variable (i.e., decision to trust). Dummy coding was used (Cohen & Cohen, 1983) and one regression equation was calculated for each participant using the adjusted R^2 as an index for decision making consistency, which is a technique applied by other researchers (Zedeck, 1977; Zhou & Martocchio, 2001). The number of scenarios per participant (i.e. 32) served as the sample size in the multiple regression analysis. The closer the R^2 coefficient was to 1.0, the more consistent that individual's judgment policy was. In conjunction with this first analysis, correlation coefficients were determined for each judgment to determine overlap or relatedness of variables.

Participant responses were regressed on each scenario for each vignette to determine individual judgment policy consistency. The squared multiple correlation coefficients (R^2) reflected the predictability of the likelihood to trust from the cues and the stability of individual judgment policies. The R^2 ranged from 0.051 to 0.903, indicating internal policies ranged from completely random to extremely stable. Based on the literature (e.g., Keely & Doherty, 1972), an $R^2 > .50$ was designated as acceptable and all others were removed from the sample since the low R^2 indicated their individual policy was not adequately modeled.

Furthermore, to ensure that the remaining sample was responding systematically to the stimuli, each scenario was rated by the number of positive levels of the cues (e.g.,

the scenario with all positive cues were given a 6, all negative cues were given 0) with seven possible types of scenarios (0-6). Diversity and Risk variables were reverse coded, since high diversity and high risk were assumed to be negative. The results support that the more positive the scenarios were, the higher they were rated in terms of both trust and confidence, with the most positive scenario having a mean rating of 4.16 ($SD = .65$) and a mean confidence rating of 4.07 ($SD = .790$). The least positive scenarios had mean trust ratings of 2.41 ($SD = 1.11$) and a mean confidence rating of 3.04 ($SD = 1.26$). In addition, a significant positive correlation was found between the ratings given and the degree to which the scenario was positive for the decision to trust ($r = .440, p < .001$). This indicated internal consistency in that if the scenario was 'positive', then they rated the other as more trusted and if it was 'negative', they rated them as lower.

One last analysis was performed based on predictions about diversity. Specifically, the sample was split and the R^2 for each diversity grouping was assessed by individual. Since each individual received the same number of high and low diversity scenarios, it might be expected that there would be no significant differences between individual consistencies reflected by the participants' individual R^2 . However, there was a significant difference between R^2 based on diversity. Specifically, mean R^2 was significantly different from the overall mean R^2 ($M = .501$) for both high diversity ($M = .566$) and low diversity ($M = .564$) scenarios. This indicates that the mix of high and low diversity made decision policies less predictive, while consistent diversity conditions made the judgment policies more predictive, whether they were high or low diversity.

Based on the .50 cutoff for individual policy stability, a smaller sample was used in the overall analyses ($N = 51$) and with each individual responding to 32 scenarios ($N = 1632$).

Table 3. Mean and SD for trust and confidence by how positive the scenarios were.

	TRUST		CONFIDENCE	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
0	2.41	1.11	3.04	1.26
1	2.65	1.00	3.07	1.03
2	3.00	1.03	3.25	.991
3	3.21	1.02	3.34	.935
4	3.59	.938	3.52	.939
5	3.79	.860	3.75	.852
6	4.02	.698	4.07	.790

In regards to the normal distribution of the final sample, both skewness and kurtosis statistics are in the acceptable range (± 1) for all dependent and moderating variables (Hammer and Landau, 1981), with the total prejudice score (skewness = $-.924$; kurtosis = $.904$), total propensity to trust score (skewness = $.126$; kurtosis = $-.473$), trust score, and individual R^2 (skewness = $.481$; kurtosis = $-.367$), ranged between negative and positive one. Therefore, despite the homogeneous sample obtained, there appears to be a normal distribution.

Between Subjects Analyses: Overall Analyses

The current study utilized a within subjects design, but also compared data across participants to see how decision structures differed. The six within subject variables (i.e., diversity, trustworthiness, attributions, perceptions of risk, 3rd party information, and role clarity) were completely crossed, utilizing a full factorial design into 64 scenarios.

Results from the propensity to trust questionnaire was analyzed as a mediator of those relationships. Comparisons were made between the conditions. The design used the predisposition to trust (i.e., propensity to trust) and the demographics questionnaires to assess experience and exposure to culture that allowed assessments on differences based on individual attributes and allowed for control variables that may exist between people who score high versus low on the prejudice scale. The prejudice scale was also used to assess any differences in decision policies that may exist.

The next step under the initial analysis involved either the raw regression coefficients (Beta Weights), which were compared for each of the 6 variables. The raw or unscaled coefficients were used since the variables were not highly correlated (Cooksey, 1996). Lastly, in order to assess interactions between cues beyond the main effect, policy capturing techniques will be used post survey. Specifically, Cohen (1978) outlined a way to handle nonlinear cues in general and cue interaction specifically. Cue interactions will be formed by creating new variables which are the products of the cues thought to interact (i.e., “multiply the values for the two cues together for each cue profile and using this new product variable as an additional predictor of judgments”—p. 183). For example, for the culture, attribution, and perceived risk interaction, an additional interaction variable was created by multiplying the dummy coded values for each possible combination. The new interaction variable will then be used as a predictor in the analyses and will allow us to see how much variance the interaction predicts. Cohen (1978) offered proof that the appropriate testing for significant contributions of interactive predictors is a hierarchical regression analysis. In addition, the hierarchical method must be used since product terms carry information about the main effects with

them. Therefore, the main effects must be partialled out to determine the impact of the interactions. Therefore, two regression models are created based on the two sets of cues. The first set will be the original set of cues (i.e., the main effect) and is entered into the regression model first yielding $R^2_{\text{Cue Main Effects}}$ and is tested using the partial F-test. The second stage will add in the set of cue interactions to the equation which yields $R^2_{\text{Cue Main Effects + interactions}}$. The difference between the $R^2_{\text{Cue Main Effects + interactions}}$ and the $R^2_{\text{Cue Main Effects}}$ produces the $sr^2_{\text{cue interactions}}$, referred to within the text as the interaction coefficients.

Lastly, to examine the possible group differences outlined in the hypotheses, on the consistency and reliability measures, a series of one-way analysis of variance (ANOVAS) using diversity, prejudice, and propensity to trust as the grouping variable and the standardized multiple R values as the dependent variables for each of the antecedents (Cohen & Cohen, 1983; Kline & Sulsky, 1995) were run. The R^2 values were significantly different between all groups, indicating a significant difference for the variance explained within diversity groups ($t(1631) = -3.36, p \leq .05$). Within prejudice groups, the difference in variance explained was significantly different based on the significant contribution differences in third party information ($t(1631) = -2.61, p \leq .05$). For propensity to trust groups, there was also significant difference in the variance explained, based on a number of antecedents contribution differences (attributions: $t(1631) = 2.78, p \leq .05$; trustworthiness: $t(1631) = 2.08, p \leq .05$; third party information: $t(1631) = -2.97, p \leq .05$). These results indicate a significant difference between high and low within all groupings and warrant further examination of these effects.

Data Analysis by Hypothesis

Due to the complexity of the different analyses, what follows is a breakdown of analyses by hypotheses (see Table 3).

Hypothesis 1: Propensity to trust is expected to moderate the relationship between the IVs and the decision to trust at team formation.

Hypothesis 1a: Those with a high propensity to trust others were expected to weigh the antecedents that provide information about variables external to the target of trust (i.e., perceived risk, role clarity, third party information) more than the target of trust (i.e., culture, attributions, and the perceived trustworthiness of others) more heavily than

Hypothesis 1b: Those with a low propensity to trust were expected to place greater emphasis on the target of trust rather than variables that reflect information about the target of trust than on antecedents that are external to the target.

With regards to the moderating effect of the propensity to trust (hypothesis 10), results from the propensity to trust questionnaire were analyzed as a mediator of the relationships between the antecedents and the decision to trust. A median split was performed between high and low propensity to trust and comparisons were made between the conditions. Scores on the propensity to trust ranged from 56 to 90 ($M = 71.79$, $SD = 7.45$). Specifically the propensity to trust scale was used to assess any differences in decision policies that may exist between the 2 groups (high and low).

For hypothesis 1, 1a, and 1b, two linear regressions were conducted, one for high propensity to trust, and one for low. Interactions were also assessed. Hypothesis 1 was supported, as there were differences between the overall sample and both groups: the antecedents to trust predicted 40% of the variance in the high propensity to trust sample and the antecedents predicted 32% in the low propensity to trust. However, there was no additional impact when looking at the high cultural diversity condition, with the antecedents explaining 37% and 32% of the variance. For differences in unstandardized coefficients for each of the antecedents based on the propensity to trust, see Table 9.

Also, hypothesis 1a was supported. Specifically, the high propensity to trust group depended on external factors more, predicting 29% of the variance, while the low propensity to trust depending on less external antecedents, which predicted only 14% in the low propensity to trust group. Hypothesis 1b was also supported. The low propensity to trust group relied more on internal factors, which predicted 17% of the variance, than high propensity to trust groups, where internal factors predicted only 12% of the variance. However, the external factors predicted more of the variance in both groups. Similar relationships were found using the interaction variables but less of the variance was explained in both high and low groups. See Table 9 for the unstandardized coefficients of the interactions and original variables.

Table 1. Beta weights for propensity to trust moderation

	Prop	Coefficient	SE	t
Risk	Hi	-.153	.06	-.185
	Lo	-.014	.07	8.97*
3 rd Party	Hi	1.12	.06	11.15*
	Lo	.823	.07	2.96*
Role	Hi	.178	.06	3.35*
	Lo	.247	.07	8.70*
Interaction1	Hi	.690	.12	6.14*
	Lo	.472	.12	3.82*
Diversity	Hi	.090	.06	1.30*
	Lo	.038	.07	.517
Attribution	Hi	.384	.06	5.58*
	Lo	.531	.07	7.31*
Trust	Hi	.654	.06	9.54*
	Lo	.776	.07	10.68*
Interaction2	Hi	.614	.11	5.81*
	Lo	.892	.12	7.02*

Note. $n = 816$

* $p \leq .05$

Hypothesis 2: Culture, perceived risk, and attributions will be more important to the decision to trust than perceived trustworthiness, role clarity, and third party information.

For hypothesis 2, a multiple regression analysis was conducted with culture, attributions, and perceptions of risk. A separate regression analysis was run using trustworthiness, third party information, and role clarity as the predictors to the decision to trust rating for each participant to determine which grouping explains more of the variance in the decision to trust. Also, the interactions between each group of variables were assessed using multiple regression and unstandardized regression coefficients. The combination of diversity, perceived risk, and attributions, predicted 4% of the variance ($p = .000$) and the combination of trustworthiness, third party information, and role clarity, predicted 30% of the variance ($p = .000$). While there were differences between the variance explained by diversity, perceived risk, and attributions, $R^2 = .039$, $F(3, 1629) = 22.92$, $p = .000$, grouping and the grouping of trustworthiness, third party information, and role clarity, $R^2 = .300$, $F(3, 1629) = 237.39$, $p = .000$, the importance of the grouping predicted in hypothesis 6, namely that diversity, perceived risk, and attributions would be more important, was not supported. See Table 2 for a full reporting on unstandardized coefficients and t-scores.

When the interaction was tested, a similar relationship between diversity, perceived risk, and attributions, $R^2 = .005$, $F(1, 1631) = 178.35$, $p = .000$, grouping and, respectively with the grouping of trustworthiness, third party information, and role clarity, $R^2 = .097$, $F(1, 1631) = 172.75$, $p = .000$, and the decision to trust was observed.

Table 2. Beta weights for antecedents for cultural groupings versus others

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>
CUES			
Diversity	.083	.05	1.59
Risk	-.075	.05	-1.43
Attribution	.409	.05	7.80*
Interaction 1	.220	.08	2.80*
Trust	.650	.05	14.56*
3 rd Party	.963	.05	21.54*
Role	.218	.05	4.88*
Interaction 2	1.05	.08	13.35*

Note. $n = 1632$

* $p \leq .05$

Hypothesis 3: The cultural antecedent will predict more variance than all other variables tested in the decision to trust.

For hypothesis 3, a linear regression was conducted on the overall sample. Comparisons of R^2 scores were used to determine which antecedent(s) predict the most variance. To determine if cultural diversity predicts more variance than other variables combined, the diversity variable was regressed then compared to all other variables regressed to see if culture's R^2 explained more variance. The unstandardised regression coefficients were also compared to see if they were different. It is the difference between them (i.e. the interaction) which is important for moderation rather than whether the regression coefficients are themselves significant.

Overall, the antecedents combined, including the diversity variable, explained 35% of the variance in the decision to trust. However, the data did not support the hypothesis that culture would explain a majority of the variance. Specifically, diversity alone only explained about an insignificant amount of the variance, namely less than 1%, while the other variables combined explained 35%. (See Table 3 for a list of each

variables contribution to the decision to trust). Regarding the confidence ratings, the antecedents predicted lower but significant variance, about 11%. The beta weights for each of the antecedents and the confidence rating are in Table 4. All relationships are consistent with trust ratings except for the diversity variable ($B = -.107, p = .058$) and the perception of risk ($B = .080, p = .061$), which similar impact on confidence but both switched in the direction of the relationship.

Table 3. Beta weights for antecedents and trust

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	<i>r</i>
CUES				
Diversity	.101	.04	1.90	.046
Risk	-.081	.04	-1.88	-.035
Attribution	.463	.04	10.72	.190**
Trust	.694	.04	15.57	.313**
3 rd Party	.971	.04	22.48	.449**
Role	.216	.04	5.01	.078**

Note. $n = 1632$

* $p \leq .05$

Table 4. Beta weights for antecedents and confidence

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	<i>r</i>
CUES				
Diversity	-.107	.05	-2.51*	-.031
Risk	.080	.05	.182	.002
Attribution	.234	.05	5.29*	.086*
Trust	.270	.05	5.97*	.110*
3 rd Party	.532	.05	10.59*	.193*
Role	.146	.05	2.78*	.040*

Note. $n = 1632$

* $p \leq .05$

Hypothesis 3a: Prejudice will moderate the relationship between the cultural antecedent and the decision to trust.

In order to assess moderation, a median split was performed between high and low prejudice, and the predictor variable (i.e., diversity) was regressed to the outcome variable (i.e., decision to trust) for each sample. The unstandardised regression coefficients were then compared to see if there were differences based on the predictions. It is the difference between them which is important for moderation rather than whether the regression coefficients are themselves significant, so unstandardized beta weights (B) will be reported along with the standardized error and t-test.

Hypothesis 1a was partially supported in that there were differences between high and low prejudice groups, with diversity switching from a positive to a negative beta weight. However, the beta weight for diversity (low prejudiced: $B = .006$, $p = .919$; high prejudiced: $B = -.014$, $p = .944$) did not show a significant relationship with the decision to trust and were not significantly different based on the sum of their standard errors. However, since the relationship was negative in the high prejudiced group and positive in the low prejudice group, a difference would appear to be, at the least, qualitatively different. See Table 5 for a full list of beta weights by prejudice group.

Hypothesis 4: Culture will moderate the relationship between the IVs and the decision to trust.

Hypothesis 4a: Culture will moderate the influence of the perceptions of risk at team formation.

To assess hypothesis 4a, the sample was again split between high and low diversity, and the predictor variable (i.e., perceptions of risk) was regressed on the outcome variable (i.e., decision to trust) for each sample. The unstandardised regression coefficients were then compared to see if they were different. Findings supported the

predictions of hypothesis 4a, with differences found between high ($B = -.160, p = .032$) and low ($B = .001; p = .983$) diversity groups, with perception of risk switching from a positive to a negative correlation based on diversity, as well as becoming significant ($p < .05$).

Hypothesis 4b: Culture will moderate attributions affect on decisions to trust at team formation.

Hypothesis 4b predicts that the attributions antecedent will explain more of the variance in the decision to trust where the trustor and trustee are culturally diverse. Therefore, for hypothesis 4b, to assess moderation, the predictor variable (i.e., attributions) was regressed to the outcome variable (i.e., decision to trust) for each diversity condition based on the split between high and low diversity scenarios. The unstandardised regression coefficients were then compared to see if they were different. Findings based on this analysis support the predictions in hypothesis 5. There were differences between high ($B = .462, p = .000$) and low diversity ($B = .375, p = .000$) groups, with more impact found in the high diversity group.

Table 6. Beta weights for diversity moderation for decision routes

	Div	Coefficient	SE	t
3 rd Party.	Hi	.933	.06	9.94*
	Lo	1.01	.06	8.97*
Role	Hi	.250	.06	4.09*
	Lo	.182	.06	2.96*
Interaction (3 rd Party x Role)	Hi	.762	.09	9.27*
	Lo	.766	.08	8.70*
Trust	Hi	.704	.06	9.94*
	Lo	.651	.06	8.97*

Note. $n = 1632$; * $p \leq .05$

Hypothesis 4c: Culture will moderate the relationship between perceived trustworthiness and the decision to trust at team formation.

It was also predicted that there would be a difference in the predictive power of the trustworthiness antecedents, with the theory that trustworthiness would explain less of the variance in the decision to trust where the trustor and trustee are culturally diverse. To test for hypothesis 4c, to assess moderation, the sample was again split between high and low diversity, and the predictor variable (i.e., perceived trustworthiness) was regressed to the outcome variable (i.e., decision to trust) for each sample. The unstandardised regression coefficients were then compared to see if they were different. Findings partially supported hypothesis 7 predictions. Specifically, there was a difference between high ($B = .712, p = .000$) and low diversity ($B = .669, p = .000$) groups, but the antecedent trustworthiness was slightly higher in the high diversity group.

Hypothesis 4d: Culture will moderate the relationship between 3rd party information and the decision to trust at team formation.

Similar to hypothesis 4c, hypothesis 4d predicted that there would be a difference in the predictive power of third party information, with the theory that this antecedent would explain more of the variance in the decision to trust where the trustor and trustee are culturally diverse and that it would explain less of the variance in the decision to trust where the trustor and trustee are culturally similar. The unstandardised regression coefficients were again compared to see if they are different. Hypothesis 8 was partially supported, indicating a small difference between high ($B = .933, p = .000$) and low diversity groups ($B = 1.01, p = .000$).

Hypothesis 4e: Role clarity will be more important in the decision to trust a culturally diverse individual at team formation than the decision to trust a culturally similar individual.

Based on both theoretical and anecdotal evidence, it was predicted that role information would explain more of the variance in the decision to trust where the trustor and trustee are culturally diverse. Consequently, role information would be predicted to explain less of the variance in the decision to trust where the trustor and trustee are culturally similar. When faced with the unknown, individuals will depend on situational and role characteristics to determine the competency and motivation of the other. Identical to the procedure used in the previous moderation analyses, the sample was split between high and low diversity, and the predictor variable (i.e., role clarity) was regressed to the outcome variable (i.e., decision to trust) for each sample. Hypothesis 4e was supported as the unstandardized coefficient was larger and more significant in the high diversity group ($B = .250, p = .000$) than in the low diversity group ($B = .182, p = .003$).

Hypothesis 5: Diversity will moderate the route taken to trust.

Hypothesis 5a: The IVs in the peripheral route (i.e., 3rd Party Information, Role Clarity) will be more important in the decision to trust a culturally diverse individual than the central route.

Hypothesis 5b: The IV in the central route (i.e., Perceived Trustworthiness) will more important in the decision to trust a culturally similar individual at team formation than the peripheral route.

In order to assess hypothesis 5a and 5b, a median split was performed based on the diversity level in the scenarios presented, creating a within subjects analysis of decision to trust in order to assess the moderating affect of diversity. Two methods were used to assess differences between the two groups. First, a multiple regression was performed with the individual antecedents that make up both the peripheral route (third

party information and role clarity) and the central route (trustworthiness) to determine 1) how much variance was explained by each and 2) what differences existed between the unstandardized regression coefficients. This analysis showed that overall, the Peripheral Route predicted more of the overall variance, about 21%, than the central route, which predicted about 10%. Third Party information had the strongest unstandardized regression coefficient ($B = .971$; $p = .000$), followed by trustworthiness ($B = .694$ $p = .000$) and role clarity ($B = .216$, $p = .000$).

Table 5. Beta weights for prejudice moderation

	Prej	Coefficient	SE	t
Diversity	Hi	-.014	.07	-.070
	Lo	.006	.06	1.02
Risk	Hi	-.041	.07	-.580
	Lo	-.116	.06	-2.09*
Attribution	Hi	.408	.07	5.94*
	Lo	.498	.06	8.97*
Trust	Hi	.575	.07	8.35*
	Lo	.733	.06	13.22*
3 rd Party	Hi	1.13	.07	16.45*
	Lo	.872	.06	15.73*
Role	Hi	.231	.07	3.36*
	Lo	.205	.06	3.69*

Note. $n = 816$

* $p \leq .05$

Regarding the specific hypotheses, Hypothesis 5a was supported, while hypothesis 5b was not. Namely, the peripheral route was more important to both groups, but explained more variance in the high diversity group than the low diversity group. Specifically, the central route explained 11% of the variance in the high diversity group,

while the peripheral route explained 19% of the variance in the high diversity group. Regarding hypothesis 3 and the low diversity group, the central route only explained 9% of the variance ($p = .000$), while the peripheral route explained 22% of the variance in the low diversity group. Overall, though, the peripheral route explained the most variance in both conditions. The second method for analysis with these hypotheses was to use the Cohen and Cohen (1983) recommended method for calculating interactions for the peripheral route to assess the interaction between role clarity and third party information. Results indicated an identical relationship to what was brought out in the previous grouping analysis, although the amount of variance explained was slightly less, 9% for high diversity and 10% for low diversity. See Table 6 for a summary of unstandardized regression weights for all antecedents that make up the routes, as well as the interaction variable created for the peripheral route.

SECTION 4: DISCUSSION

Overall, the antecedents combined explained over a third of the variance in the decision to trust, which is a significant amount given the indirect nature of this measure and the stability of the decision policies used in the final analysis. Stated simply, the participants in the final sample, were consistent in their predictions with subtle cue differences resulting in the prediction of 35% of the variance, lending credibility to the inclusion of these variables and the need to identify other influential antecedents. The amount of variance predicted in the three grouping variables (diversity, propensity to trust, and prejudice, was also significant, indicating group differences. Also, given the complex nature of trust and the number of possible predictors, the amount of variance predicted in the current study is significant for future investigation. While the overarching prediction made in hypothesis 1 was perhaps too bold and, as a result, not supported (i.e., cultural diversity predicted an insignificant amount of variance and only predicted more variance than the perceptions of risk antecedent), these results offer evidence of the influence of cultural diversity on the decision to trust, specifically as a moderator of how individuals weigh antecedents to trust. Overall, third party information, trustworthiness, and attribution respectively were more important to the overall decision to trust.

Cultural diversity, as operationalized here, does appear to have a strong moderating affect on the other antecedents. For example, results indicate differences between the amounts of variance in decisions to trust explained by the different routes (i.e., peripheral and central routes) based on high and low diversity. The peripheral route was the most influential in the decision to trust for both groups, which, when examining

the information available to participants, would be expected based on a lack of history or interpersonal relationships, even given the creation of a simulated outgroup influence. However, differences were still observed based on whether or not participants were judging diverse or similar others, lending support to the overarching argument.

There were also differences in the amount of variance the individual antecedents within these routes. For example, third party information was highly predictive in both high and low diversity, but role clarity was more important in the high diversity condition. One conclusion based on these findings is that it is likely that third party information is influential regardless of the cultural make up in newly formed teams, while role clarity varies as a function of culture. Support for this can also be found in the importance of third party information overall, which appears to be the most important factor, regardless of diversity, with an unstandardized coefficient of .971, over role clarity, which is also a variable in the peripheral route ($B = .216$), and trustworthiness ($B = .694$), which is highly emphasized in the traditional trust literature. It could be argued, based on the findings of the current study that teams with no history will rely more heavily on third party information than traditional teams, regardless of cultural composition. The current study would argue that this is due to missing or minimal information on benevolence, integrity, and competence.

Furthermore, when participants with stable decision making policies were split into high and low diversity groups, cultural diversity did moderate the antecedents' influence on the decision to trust for every proposed antecedent, although, admittedly, to differing degrees. These findings strongly suggest that there are differences at many levels in how individuals make the decision to trust given a culturally diverse interaction.

Specifically, as predicted, perceptions of risk, attributions, and role clarity were all found to be more important to trust in high diversity conditions, supporting the theory integrated from the literature that individuals rely on risk and motivation, as well as category-driven information to make decisions to trust under these ambiguous situations. Also, as predicted, there were differences in perceived trust and third party information between low and high diversity groups, which further bolsters this argument. Trustworthiness was predicted to be more important in low cultural diversity conditions, but was found to be slightly more important in high diversity conditions, perhaps a residual of being given concrete information of the character of another which to some extent overrides the participant's own judgment making it less ambiguous. Third party information, again, was the most important antecedents in both groups, but was slightly more important in low diversity groups than high. This finding lends support for the universal importance of reputation, particularly in dealing with unknown others.

Regarding interactions, the unstandardized coefficients mostly supported other findings and were only slightly different when looking at their variance. This was to be expected and offered further evidence to the credibility of the theorized relationships. Specifically, the interaction between third party information and role clarity, the peripheral route, indicated an identical relationship to what was brought out in the previous grouping analysis not using the interaction variable, although the amount of variance explained was slightly less. Furthermore, the other interaction tested for in hypothesis 6 (i.e., an interaction between diversity, risk, and attributions versus an interaction between trustworthiness, third party information, and role clarity) supported the relationship brought out through the regression models in the analyses. Namely,

trustworthiness, third party information, and role clarity were found to be more important, as was their interaction variable, supporting the earlier findings, as well as the lack of direct effect of diversity on the decision to trust. This further substantiates the more moderating effect diversity has on the decision to trust, rather than direct. This finding lead us to conclude that individuals may not make decisions based solely or largely on someone's cultural profile, but may weigh the information received about them differently based on culture.

Regarding the moderating affect of the individual propensity to trust, the moderating effect was found as predicted overall, as well as when internal versus external factors were examined. The interactions based on Cohen and Cohen's methodology also brought out these same relationships. Evidence suggests that propensity to trust had a moderating effect on how heavily antecedents were weighed, as well as whether or not individuals looked at variables internal to the other or external to the other more. This would indicate that based on internal, more stable traits, internal versus external factors of the other individual will be more or less influential. Further investigation into that interaction should be explored in future work.

While these results are promising, there are some issues with this study that should be addressed. For one, a trade off was made between power and stability of decision making policies in the final analysis. Ideally, a larger sample would be preferred. However, given the parameters of the data, the overall stability of the sample, while still in predicted sample size range, was deemed acceptable for the current effort. In future studies, a larger sample size should be secured based on stable decision policies. Second, the subtlety of the levels of cues may need to be adjusted. In an effort to maintain indirect

measures of the decision policy, an effort was made to make the different levels as seamless as possible, perhaps resulting in less robust findings. Future iterations should manipulate different levels of antecedents in an effort to tease out more robust results.

Another issue that should be raised is the fact that the method of policy capturing was created to be used with expert decision makers, who predictably have more stable and consistent decision making policies. While this was the intention of the current study in that the effects predicted were assumed to be for a novice population and so, therefore, a novice sample was targeted, an examination of the decision policies of experts in culture and teams would be beneficial as a supplement of the current study. This also helps explain the size of reduction in the sample after selecting for .50 or higher policies. Lastly, the sample selected in this study was very homogeneous on a number of demographic factors to ensure the emergence of the manipulation (i.e., perceptions of diversity). However, a more heterogeneous sample with perhaps a more robust manipulation may help bring out some of the more complicated interactions present in the real world.

The last limitation of the current study deals with some methodological issues that discovered during analyses. While participants were not limited on the time allowed to complete the policy capturing portion of the study, the time they spent on the decisions does reflect a level of motivation and consideration that could possibly result in differences. There was a large variability in time to complete task and a number of individuals who were quicker to complete the task, possibly reflecting less consideration, were dropped from the final analysis based on instability of policies. Also, the operationalization of cultural diversity may be confounded with other concepts such as

‘familiarity’ and shared background. In an effort to prime participants for ingroup and outgroup identification, the description of high and low diversity may have included cues to other factors. In future iterations of this study, these constructs should be more clearly delineated and perhaps tested separately.

CHAPTER 5: CONCLUSION

Future work should center on further examination of these and other antecedents. For example, other antecedents should now begun to be tested in combination with some of the more influential variables evidenced in the current study. Third party information was found to be universally influential and should be tested with different populations and compared for newly formed and existing teams. Second, diversity needs to be more fully explored as it relates to these particular determinants of trust with more heterogeneous samples to determine if these results generalize to ingroups and outgroups with other, non-Western cultures. The homogeneous nature of the sample makes the generalizability of the results an open question and warrant further investigation. Third, the interaction between external and internal states is a significant area in need of exploration, both in regards to the antecedents used to make the decisions (e.g., trustworthiness, risk) as well as the moderators (e.g., propensity to trust, diversity). A further exploration of the expert decision policy should also be evaluated in connection with the current, novice sample. Overall, exploration to the generalizability of these results to other operationalizations of culture with other, less homogenized samples is necessary to take advantage to the full impact of diversity on decision to trust. Lastly, this study would logically lead to a deeper examination of trust on a number of levels. For example, a further investigation of trust versus distrust is warranted. The literature currently is engaged in discussions of whether these two constructs are opposites or exist along a continuum (Bigler et al., 1998). The policy capturing methodology could be a tool for this and cultural diversity could be a manipulation in testing these constructs. Also, in considering cultural differences, further research should examine the different

conceptualizations of trust across cultures (Osland & Bird, 2007). It is difficult to trust across cultures when individuals use different cues and have different outcomes of trust. This too must be further explored within the context of multicultural, newly forming teams.

These results, taken with future work, have real world implications. For example, understanding how individuals make the decision to trust at the pre-process stage can better help researchers and scientists develop training for how to be trusted, as well as what to look for as cues to trust others in multicultural teams. Also, the understanding of underlying variables can help in the development of metrics of trust. At a more global level, new team types (e.g., temporary, newly formed, distributed, or multi-team systems) have begun to call into question whether trust is necessary or even possible in some situations. This question, in and of itself, requires a deeper understanding of what has been termed a ‘trust from a different perspective’ in the current work and how that affects both team process and performance. The evolution of the modern world requires adjustments to the conceptualization of certain constructs (i.e., trust) given the circumstances that change the way individuals relate to each other and work together. The current effort is a first step in doing this.

APPENDIX A: DEMOGRAPHICS QUESTIONNAIRE

1. Age _____
2. Gender _____
3. Race
 - a. American Indian or Alaska Native
 - b. Asian or Pacific Islander
 - c. Black or African American
 - d. Hispanic or Latino
 - e. Caucasian
4. Are you currently a college student
 - a. Yes
 - b. No

If yes to #4 list student status:

- a. Freshman
- b. Sophomore
- c. Junior
- d. Senior
- e. Graduate

If no to #4 select current education level completed:

5. Education
 - a. Less than High School
 - b. High School/GED
 - c. Some College
 - d. 2 year degree
 - e. 4 year degree
 - f. Master's
 - g. Doctoral
 - h. Professional (MD, JD, etc.)
6. (If no to #7) Have you traveled to other countries?
If yes, which one(s)? _____
How long? _____
7. Have you ever lived in another country?
If yes, which one(s)? _____
How long? _____
8. Were your parents born in the United States?
If no, which country were they born in? _____

9. Were your grandparents born in the United States?

If no, which country were they born in? _____

10. Do you have experience working in teams?

- a. Yes, a great deal of experience
- b. A little experience
- c. No experience

APPENDIX B: PROPENSITY TO TRUST

1. I tend to be accepting of others.

① STRONGLY DISAGREE ② ③ NEITHER AGREE NOR DISAGREE ④ ⑤ STRONGLY AGREE

2. My relationships with others are characterized by trust and acceptance.

① STRONGLY DISAGREE ② ③ NEITHER AGREE NOR DISAGREE ④ ⑤ STRONGLY AGREE

3. Basically, I am a trusting person.

① STRONGLY DISAGREE ② ③ NEITHER AGREE NOR DISAGREE ④ ⑤ STRONGLY AGREE

4. It is better to trust people until they prove otherwise than to be suspicious of others until they prove otherwise.

① STRONGLY DISAGREE ② ③ NEITHER AGREE NOR DISAGREE ④ ⑤ STRONGLY AGREE

5. I accept others at “face value.”

① STRONGLY DISAGREE ② ③ NEITHER AGREE NOR DISAGREE ④ ⑤ STRONGLY AGREE

6. Most people are trustworthy.

① STRONGLY DISAGREE ② ③ NEITHER AGREE NOR DISAGREE ④ ⑤ STRONGLY AGREE

7. It is better to be suspicious of people you have just met, until you know them better.

① STRONGLY DISAGREE ② ③ NEITHER AGREE NOR DISAGREE ④ ⑤ STRONGLY AGREE

8. I make friends easily.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

9. Only a fool would trust people.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

10. I find it better to accept others for what they say and what they appear to be.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

11. I would admit to being more than a little paranoid about people I meet.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

12. I have a few difficulties in trusting people.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

13. Basically, I tend to be distrustful of others.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

14. Experience has taught me to be doubtful of others until I know they can be trusted.

①	②	③	④	⑤
---	---	---	---	---

STRONGLY
DISAGREE

NEITHER AGREE
NOR DISAGREE

STRONGLY
AGREE

15. I have a lot of faith in the people I know.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

16. Even during the ‘bad times,’ I tend to think that things will work out in the end.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

17. I tend to take others at their word.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

18. When it comes to people I know, I am believing and accepting.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

19. I feel I can depend on most people I know.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

20. I almost always believe what people tell me.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

APPENDIX C: PREJUDICE SURVEY

1. Group equality is not a worthwhile ideal.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

2. To get ahead in life, it is sometimes necessary to step on other groups.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

3. No group of people is more worthy than any other.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

4. It would be good if all groups could be equal.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

5. In getting what your own group wants, it should never be necessary to use force against other groups.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

6. Increased social equality would be a bad thing.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

7. All groups should be given an equal chance in life.

①	②	③	④	⑤
STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE

8. If certain groups of people stayed in their place, we would have fewer problems.

①	②	③	④	⑤
---	---	---	---	---

STRONGLY
DISAGREE

NEITHER AGREE
NOR DISAGREE

STRONGLY
AGREE

9. We should do what we can to equalize conditions for different groups.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

10. Superior groups should not seek to dominate inferior groups.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

11. Inferior groups should stay in their place.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

12. Treating different groups more equally would create more problems than it would solve.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

13. There is no point in trying to make incomes more equal.

14.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

15. It's a real problem that certain groups are at the top and other groups are at the bottom.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

16. No one group should dominate in society.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

17. Sometimes other groups must be kept in their place.

①
STRONGLY
DISAGREE

②

③
NEITHER AGREE
NOR DISAGREE

④

⑤

STRONGLY
AGREE

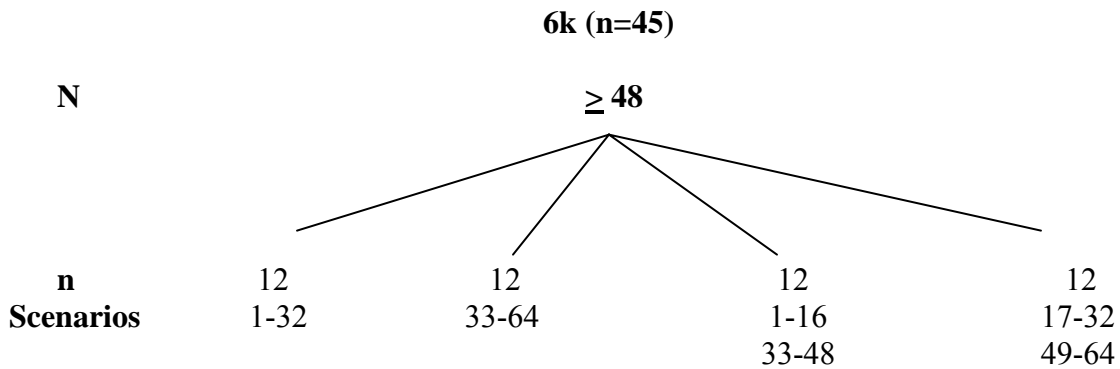
APPENDIX D: COHEN (1983) SAMPLE SIZE TABLE

Table 2
N for Small, Medium, and Large ES at Power = .80 for $\alpha = .01, .05, \text{ and } .10$

Test	α								
	.01			.05			.10		
	Sm	Med	Lg	Sm	Med	Lg	Sm	Med	Lg
1. Mean dif	586	95	38	393	64	26	310	50	20
2. Sig <i>r</i>	1,163	125	41	783	85	28	617	68	22
3. <i>r</i> dif	2,339	263	96	1,573	177	66	1,240	140	52
4. <i>P</i> = .5	1,165	127	44	783	85	30	616	67	23
5. <i>P</i> dif	584	93	36	392	63	25	309	49	19
6. χ^2									
1 <i>df</i>	1,168	130	38	785	87	26	618	69	25
2 <i>df</i>	1,388	154	56	964	107	39	771	86	31
3 <i>df</i>	1,546	172	62	1,090	121	44	880	98	35
4 <i>df</i>	1,675	186	67	1,194	133	48	968	108	39
5 <i>df</i>	1,787	199	71	1,293	143	51	1,045	116	42
6 <i>df</i>	1,887	210	75	1,362	151	54	1,113	124	45
7. ANOVA									
2 <i>g</i> ^a	586	95	38	393	64	26	310	50	20
3 <i>g</i> ^a	464	76	30	322	52	21	258	41	17
4 <i>g</i> ^a	388	63	25	274	45	18	221	36	15
5 <i>g</i> ^a	336	55	22	240	39	16	193	32	13
6 <i>g</i> ^a	299	49	20	215	35	14	174	28	12
7 <i>g</i> ^a	271	44	18	195	32	13	159	26	11
8. Mult <i>R</i>									
2 <i>k</i> ^b	698	97	45	481	67	30			
3 <i>k</i> ^b	780	108	50	547	76	34			
4 <i>k</i> ^b	841	118	55	599	84	38			
5 <i>k</i> ^b	901	126	59	645	91	42			
6 <i>k</i> ^b	953	134	63	686	97	45			
7 <i>k</i> ^b	998	141	66	726	102	48			
8 <i>k</i> ^b	1,039	147	69	757	107	50			

Note. ES = population effect size, Sm = small, Med = medium, Lg = large, dif = difference, ANOVA = analysis of variance. Tests numbered as in Table 1.

^a Number of groups. ^b Number of independent variables.



APPENDIX E: POLICY CAPTURING VIGNETTE CUES

Construct	Level	Vignette
Diversity	High	Your new team member tells you that he was born and raised in the Middle East in a small village. He just recently moved to the United States to pursue an education.
	Low	Your new team member tells you that he was born and raised in the same town you grew up in and knows some of the same people.
Perceived Trustworthiness	High	You do not know much about the new team member, however, you believe that the new team member has the skills and abilities to complete the project you have been assigned. Furthermore, you believe that this team member will work as hard and contribute to the team. Your impression of him is that he will be fair and reasonable in your dealings.
	Low	You do not know much about the new team member and, as a result, are not sure he has the skills and abilities to contribute to the project. You also do not believe that the new team member will work as hard as you will to make sure your project is completed and done well. You're not sure that your teammate will treat you fairly.
Attributions	Positive	During your first meeting with your new teammate you discuss past projects that you both have worked on. You get the impression that he has always taken a lot of control over how projects were completed and his successes are due to his own hard work and abilities.
	Negative	During your first meeting with your new teammate you discuss past projects that you both have worked on. You get the impression that he does not usually have control over how his/her projects were completed and his successes are due to other's hard work and abilities.
Perceptions of Risk	High	You have not done as well on the past tests in this class, you need a <u>high grade on this project</u> to pass the class.
	Low	You have done well enough on the past tests in this class that will end up with a high grade in this class regardless.
3 rd Party Information	Positive	While you may not know the other person directly, you have heard a few comments from people who may have worked with the other and they are overwhelmingly positive.
	Negative	While you may not know the other person directly, you have heard a number of negative comments from people who have worked with the other in the past.
Role Clarity	High	While you do not know much about this person, you have a deep understanding of their role and responsibilities within the team.
	Low	While you do not know much about this person, you are not even really sure what this person's role is within the team.

APPENDIX F: EXAMPLE SCENARIOS

Scenario 1

You are taking an interdisciplinary class to fulfill your elective requirements. One of the assignments is to team with three classmates on a project that will be 30% of your final grade. You are assigned to a team with 2 people you recognize from some of the different campus activities you participate in and 1 team member that you do not know. Therefore, you arrange a meeting with the team member you do not know that allows you to make a few observations about him. Your new team member tells you that he was born and raised in the Middle East in a small village. He just recently moved to the United States to pursue an education. You have done well enough on the past tests in this class that will end up with a high grade in this class regardless. During your first meeting with your new teammate you discuss past projects that you both have worked on. You get the impression that he/she does not usually have control over how his/her projects were completed and his/her successes are due to other's hard work and abilities. You do not know much about the new team member and, as a result, are not sure he has the skills and abilities to contribute to the project. You also do not believe that the new team member will work as hard as you will to make sure your project is completed and done well. You're not sure that your teammate will treat you fairly. While you may not know the other person directly, you have heard a number of negative comments from people who have worked with the other in the past. While you do not know much about this person, you are not even really sure what this person's role is within the team.

Scenario 2

You are taking an interdisciplinary class to fulfill your elective requirements. One of the assignments is to team with three classmates on a project that will be 30% of your final grade. You are assigned to a team with 2 people you recognize from some of the different campus activities you participate in and 1 team member that you do not know. Therefore, you arrange a meeting with the team member you do not know that allows you to make a few observations about him. Your new team member tells you that he was born and raised in the same town you grew up in and knows some of the same people. You have not done as well on the past tests in this class, you need a high grade on this project to pass the class. During your first meeting with your new teammate you discuss past projects that you both have worked on. You get the impression that he/she has always taken a lot of control over how projects were completed and his successes are due to his/her own hard work and abilities. You do not know much about the new team member, however, you believe that the new team member has the skills and abilities to complete the project you have been assigned. Furthermore, you believe that this team member will work as hard and contribute to the team. Your impression of him is that he will be fair and reasonable in your dealings. While you may not know the other person directly, you have heard a few comments from people who may have worked with the other and they are overwhelmingly positive. While you do not know much about this person, you have a deep understanding of their role and responsibilities within the team.

APPENDIX G: UCF IRB HUMAN SUBJECTS PERMISSION LETTER



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901, 407-882-2012 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Notice of Expedited Review and Approval of Requested Addendum/Modification Changes

From: UCF Institutional Review Board
FWA00000351, Exp. 5/07/10, IRB00001138

To: Heather A. Priest

Date: May 30, 2008

IRB Number: SBE-08-05661

Study Title: THE INFLUENCE OF DIVERSITY ON INITIAL DECISIONS TO TRUST: A POLICY CAPTURING APPROACH

Dear Researcher:

Your requested addendum/modification changes to your study noted above which were submitted to the IRB on 05/27/2008 were approved by **expedited** review on 5/29/2008.

Per federal regulations, 45 CFR 46.110, the expeditable modifications were determined to be minor changes in previously approved research during the period for which approval was authorized.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Subjects or their representatives must receive a copy of the consent form(s).

This addendum approval does NOT extend the IRB approval period or replace the Continuing Review form for renewal of the study.

On behalf of Tracy Dietz, Ph.D., IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 05/30/2008 09:12:56 AM EDT

A handwritten signature in cursive script that reads 'Joanne Muratori'.

IRB Coordinator

Internal IRB Submission Reference Number: 003058

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