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A PRELIMINARY STUDY OF WORKGROUP DYNAMICS:
A CRITIQUE AND RECONCEPTUALIZATION OF OETZEL'S EFFECTIVE
INTERCULTURAL WORKGROUP COMMUNICATION THEORY

by

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DISSERTATION

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CHAPTER 1. INTRODUCTION AND DEFINITIONS OF RESEARCH CONCEPTS

Introduction

The last two decades have witnessed a rapid demographic change in the United States, and consequently the increase of people of diverse nationalities and ethnicities in the workplace (McKinsey Global Institutes, 2010). Furthermore, since the complexity of work tasks has increased many companies have reorganized their work processes from individual to group oriented. These changes fueled research about group work in the 1990s. Major findings suggest that group composition (culturally homogenous vs. culturally diverse) influences group processes and outcomes, e.g. tension and conflict, with heterogeneous/diverse groups experiencing more tensions than homogenous groups. In addition, diversity was found to be associated with higher turnover in group membership and lower group member cohesiveness (van Knippenberg & Schippers, 2007). However, research also shows that diverse groups develop higher quality solutions (McLeod, Lobel, & Cox, 1996; Watson, Kumar, & Michaelsen, 1993) and have heightened quality of ideas compared to homogenous groups (Rodriguez, 1998; van Knippenberg & Schippers, 2007).

Much of the existing research about diverse groups teams comes from management and psychology scholars (e.g., Burleson & Mortenson, 2003; Chen & Chung, 1994; Law, Wong, Wang, & Wang, 2000; Li & Chi, 2004; Ma, 1992; Ma & Chuang, 2001; Seo, Miller, Schumidt, & Sowa, 2008; Tsui & Farh, 1997; Xin, 1997), as well as communication scholars (e.g. Eisenberger, Goodall, & Trethewey, 2007; Gudykunst et al., 1996; Stohl, 2001). However, the focus is rarely on communication behavior, which is particularly compelling considering the processes of communication in culturally diverse groups influence interaction between group members, which in turn shapes group dynamics and consequently group outcomes (Oetzel, McDermott, Torres, & Sanchez, 2012; Stohl, 1993; van Dick, van Knippenberg, Hagele,

Guillaume, & Brodbeck, 2008; Wiseman & Shuter, 1994). Cultural diversity may lead to less effective communication and bring tension and power struggles because of different communication styles, especially in the beginning stages of group formation (Cox, 1994). However, there has been a paucity of research focused explicitly on relationships between the cultural diversity of group members, the processes of communication within these groups, and the resultant group outcomes (McLeod et al., 1996).

Most research on workgroups has examined diversity in groups from either the social categorization perspective or the information/decision making perspective (Oetzel et al., 2012; van Knippenberg & Schippers, 2007). The first perspective builds on theories of similarity and attraction and claims that we are attracted to people we perceive to be most similar to ourselves (Byrne, 1971). Individuals categorize themselves and others into groups based on visible features such as age, race, sex or status. Members of one group may attempt to enhance their group distinctiveness by perceiving people outside the group as less attractive or even treat the differences as barriers to group cohesion. Thus, according to the social categorization theory, groups composed of people who are similar to each other are evaluated by their members more positively than groups composed of people from many different categories. According to the information/decision making perspective, workgroup diversity improves decision-making quality because group members from different backgrounds may provide a variety of ideas with greater potential for innovative solutions (Knouse & Dansby, 1999). Though the social categorization theory suggests a similarity of group members instills a positive self-view, the information/decision making perspective points out that groups benefit when work group members are from different backgrounds and have great variety of experiences. The social

categorization and information/decision making approaches complement one another when explaining the impact of diversity on groups.

Both of these perspectives, however, focus on surface-level diversity rather than deep-level diversity. Even though it is not immediately apparent, deep-level similarities in attitudes can ease interactions in groups and may neutralize the effects of surface level differences among group members, particularly when people from different social categories recognize their similar work orientations (Mohammed & Angell, 2004). However, it is important to note that deep-level differences may also remain salient for group members and create hidden tensions.

In addition, the traditional approaches of the social categorization and the information/decision-making theories attempt to explain diversity impact on workgroup behavior but minimize the importance of workgroup communication. These perspectives point out the impact of diversity on group outcomes without explaining how diversity creates these outcomes.

One of the very few but promising and comprehensive theories that addresses the importance of communication behavior in diverse work groups and considers the impact of both surface and deep-level diversity is Oetzel's (1995) Effective Decision Making Theory (EDMT), and its revised version – the Effective Intercultural Workgroup Communication Theory (EIWCT, Oetzel, 2005; see Figure 1 in Appendix A). The major premise of the theory is that cultural aspects, particularly individualistic and collectivistic characteristics of group members, manifested by ingroup/outgroup, self-construals and face-concerns characteristics of group members, influence the communication processes (interaction climate) within a workgroup and consequently impact the outcomes of the group, i.e. task and relational

effectiveness and satisfaction of group members. The theory, though theoretically promising, was recently tested by Oetzel et al. (2012) with inconclusive results.

The primary focus of this research is to critique and reconceptualize Oetzel's (2005) Effective Intercultural Workgroup Communication Theory (EIWCT) with an eye to addressing the question: how does cultural diversity link to group members' perception of communicative climate in workgroups and consequently their perception of group satisfaction and effectiveness? The focus of this study is on the deep-level diversity characteristics displayed by individuals working in a work group. Chapter 1 will define foundational research concepts; Chapter 2 is a literature review that explores related research concepts in depth; Chapter 3 is an explanation of the chosen methodology; and Chapter 4 focuses on the results of data analysis. Finally, Chapter 5 discusses findings in the context of current theories and research, identifies limitations and proposes future research directions.

Definition of Foundational Research Concepts

Culture and cultural diversity. The concept of culture can be defined in many ways and consequently applied differently (Lustig & Koester, 2005). Organizational communication and intercultural communication scholars have attempted to provide a comprehensive definition, however the attempts still remain problematic as suggested definitions are overly vague (Vodosek, 2003). In the organizational communication field, particularly through its interpretive perspective, culture has been studied through organizational metaphors, rituals, stories and artifacts (Eisenberg et al., 2007). From the behavioral and post-positivistic perspectives, however, culture and its influence on the organization have been studied by analyzing groups' and individuals' communicative behaviors (Gudykunst & Bella, 2002). Even within this approach, differentiation between specific groups is necessary as it determines the

subject of the study, e.g. ethnic groups, age groups. For instance, GLOBE's (2004, 2007) and Oetzel's (2005, 2012) studies primarily focused on ethnicity within work groups, while other researchers investigated able-bodied/disabled groups' communication (Braithwaite, Waldron, & Finn, 1999), gender communication (Edwards & Hamilton, 2004), or intergenerational communication (Williams & Garrett, 2002) outside the workplace. The paradigm focus has shifted from examining communication within different cultures to first defining the culture or group and then studying communication characteristics and patterns as an effect.

A conceptualization of culture, proposed by Triandis (1995), and currently widely accepted in the social sciences will be used in this study since it focuses on human behavior and consequently on group communication behaviors. This conceptualization emphasizes the social and psychological aspects.

> Culture emerges in interaction. As people interact, some of their ways of thinking, feeling, and behavior are transmitted to each other and become automatic ways of reacting to specific situations. The shared beliefs, attitudes, norms, roles, and behavior are aspects of culture. (1995, p. 4)

Triandis' (1995) definition of culture is employed in the current study as it appropriately complements the focus on people's communication behaviors as related to their upbringings. From this perspective, culture at the macro level is treated as a system of values, beliefs, attitudes, and norms, while at the micro-level culture is manifested in behavioral practices of its members. In this sense, organizational/corporate culture is treated as the moderator or the situational context that further shapes people's communicative behaviors affected by their belonging to different national, ethnic and racial groups. The micro-level is the focus of the current research.

Furthermore, cultural diversity has been defined as "representations, in one social system, of people with distinctly different group affiliations of cultural significance" (Cox, 1993, p. 6). This conceptualization of cultural diversity includes surface-level characteristics, such as sex and ethnicity and deep-level diversity, which emphasizes components that result from cultural socialization such as values, self-conceptions, and attitudes (Harrison, Price, Gavin, & Florey, 2002). Deep-level characteristics explain the mechanisms behind people's behaviors while surface-level characteristics help to categorize people belonging to certain groups thus providing the context. (Oetzel, 1998; Shachaf, 2008; van Dick et al., 2008).

In this study, I have chosen to focus on deep-level diversity characteristics because I believe that they more effectively capture what is influential in the diversity-communication connection, generally and may help explain some of the findings and non-findings of Oetzel's (2005) EIWCT. Specifically, I will discuss individualism and collectivism, which is considered a dimension of fundamental cultural difference (Triandis, 1994)) and introduce two of its derivatives: the horizontal-vertical variability within the individualism-collectivism dimension and relational models.

Individualism/collectivism dimension. Researchers have repeatedly indicated that the concepts of individualism and collectivism are perhaps the most important dimensions of cultural differences in social behaviors (Hui & Triandis, 1986; Triandis, 1994) The individualism-collectivism dimension has important implications for communication in diverse groups (Eisenberg et al., 2007). Although many researchers indicate that there are existing conceptual problems with the individualism/collectivism (I/C) model (e.g. Levine et al., 2003; Oyserman, Coon, & Kemmelmeier, 2002) proposed by Hofstede (1983), it is still widely used

by intercultural and communication scholars and considered fundamental in intercultural research. According to Hofstede (1983),

> Individualism, which stands for a preference for a loosely knit social framework in which individuals are supposed to take care of themselves and their immediate families only; as opposed to collectivism, which stands for a preference for a tightly knit social framework in which individuals are emotionally integrated into an extended family, clan, or other in-group which will protect them in exchange for unquestioning loyalty. (pp. 295-296)

Culture at the national level has been found to play a major role in determining work-related values, attitudes, behaviors and practices in organizational settings. Specifically, Hofstede's concepts have been used by communication, business and management scholars, and social psychologists to examine behavioral or management implications. For instance his I/C construct has been employed in developing effective advertising or marketing strategies in different countries (e.g. Bochner & Hesketh, 1994; Driskill, 1995; Earley, 1989; Smith & Tayeb, 1988; Stewart, Gudykunst, Ting-Toomey, & Nishida, 1986; Teboul, Chen, & Fritz, 1994; Vitell, Nwachuku, & Barnes, 1993).

Triandis (1994) expanded Hofstede's construct of the I/C model by adding the importance of norms and goals in societal structures. This theoretical construct is employed in the present research as it best explains the essence of necessary norms and goals constructs that are important when investigating interactions among group members.

> Collectivism may be initially defined as a social pattern consisting of closely linked individuals who see themselves as parts of one or more collectives (family, coworkers, tribe, nation); are primarily motivated by the norms of, and duties imposed by, those collectives; are willing to give priority to the goals of these collectives over their own personal goals; and emphasize their connectedness to members of these collectives. Individualism is a social pattern that consists of loosely linked individuals who view themselves as independent of collectives; are primarily motivated by their own preferences, needs, rights, and the contracts they have established with others, give priority to their personal goals over the goals of others; and emphasize rational analyses of the advantages and disadvantages to associating with others. (p. 2)

Individualism-Collectivism and work group members' communication behavior. Communication processes are the medium through which individual differences and diversity in group composition affects group outcomes. Research has pointed out the existence of distinct communication styles of collectivistic and individualistic cultures (Argyle, Henderson, Bond, Iizuka & Contarello, 1986; Burleson & Mortenson, 2003; Chen & Chung, 1994; Gudykunst et al., 1996; Law et al., 2000; Li & Chi, 2004; Ma, 1992; Ma & Chuang, 2001; Seo et al., 2008; Tsui & Farh, 1997; Xin, 1997; Yum, 1988). Individualistic cultures use a communication style that is more direct, expressive and exhibits low context characteristics (i.e., social position of the speaker and/or situation surrounding the conversation are perceived as relatively insignificant). Specifically, individualistic group members might voice their opinions more readily, challenging the direction of the group. In addition, individualistic members require specific task descriptions and take individual responsibilities for tasks, and might also need reminding that they are part of the group. In collectivistic cultures, on the other hand, the communication style is indirect, non-expressive, and exhibits high context characteristics. Collectivistic group members use non-verbal cues, tell stories to get to the point, and draw messages from the environment. Their messages expression might be vague or ambiguous from the individualistic member's perspective. In addition, collectivistic members may not feel comfortable giving information, particularly when there a problem exists and a there is the need to save face.

These findings suggest that variability on the individualism-collectivism dimension may be reflected in different communication strategies (Wang & Liu, 2010). Members of collectivistic cultures are characterized as more encouraging in conversations, giving credit to others, appealing to compromise and win-win solutions in conflict situations. They also consult

colleagues more often before making decisions. Individualistic communication strategies are described as more frequently resorting to threats, ultimatums, and employing confrontations and pressures in conflict situations. In addition, collectivistic members require less specific job descriptions or roles while at the same time they do what is needed for the group together with other members. Conversely, individualistic group members prefer direct, constructive feedback on their performance and rewards tied to their individual performance while most collectivistic members might feel embarrassed for being singled out for praise or an individual award.

Exploring the individualism-collectivism dimension has been useful in articulating the communication styles and strategies of various ethnic groups (Burleson & Mortenson, 2003; Gudykunst et al., 1996; Li & Chi, 2004; See et al., 2008). Past empirical findings confirmed previous observations that people in collectivist cultures, such as Korea and Japan are indirect, non-expressive, and high context in their communication styles. People in China (considered as another collectivist society) prefer to use "other-oriented" communication styles that include credit-giving, encouragement, and example setting while they attempt to exercise influences (Li & Chi, 2004; Ma & Chuang, 2001). Additionally, Chinese communicators rely more on unofficial mediation to resolve conflict (Ma, 1992). On the other hand, communicators in individualistic cultures, such as Australia and the U.S., are more direct, expressive, and low context (Gudykunst et al., 1996). People in North America, Scandinavia, Germany, and Switzerland (considered as highly individualistic societies) simply ask for information from the appropriate person. They also use a considerable amount of words to communicate, present messages that are clear, concise and rely on words to retrieve or deliver the message (Neuliep, 2015).

Relational models and horizontal/ vertical individualism/ collectivism. Despite its overall acceptance in the research community, the concept of individualism/ collectivism should be refined to provide more nuanced descriptions of individual's behaviors grounded in their cultural upbringing. The concepts of relational models (Fiske, 1991, 1992) and horizontal/ vertical individualism/ collectivism (Singelis, T. M., Triandis, H.C., Bhawuk, D., & Gelfand, M. J., 1995) provide more nuanced articulation of cultural influence.

Relational models theory (RMT) argues that people utilize mental models for interacting with others, generating social action, understanding and evaluating others' social behavior, as well as coordinating, planning, encoding, and remembering social interaction. The theory focuses on how individuals make sense of their social environment and why individuals use certain relational models in a given social context as influenced by their cultural upbringings.

According to Singelis et al. (1995) the most important attributes that distinguish different variations of individualism and collectivism are relative emphases on horizontal and vertical social relationships. Horizontal patterns assume that one's self is more or less like every other self. In contrast, vertical patterns consist of hierarchies, and one's self is different from other selves. Consequently, Singelis et al. (1995) introduced the concept of horizontal/ vertical individualism/ collectivism.

Deep-level diversity characteristics as captured by relational models and horizontal/ vertical individualism/ collectivism have an impact on individual group members' communication behaviors, and consequently can be expected to affect group interaction climate and subsequent outcomes.

Groups in the workplace. Despite the popularity of group-based work in contemporary organizational structures, definitions of what constitutes a group remain ambiguous in current

organizational literature. Yet, the identification of what distinguishes groups from other groups in the workplace is pivotal for a clear conceptualization of this construct. The criterion of existing sufficient interdependence between group members proposed by Eisenberg et al. (2007) distinguishes a collection of working people from a group. Three types of groups emerge from current organizational literature: project groups, quality improvement groups, and work groups.

Project groups. Project groups are groups of employees who work on the successful completion of a particular project, such as the design and development of new products or services that lasts from a few weeks to a few months. This type of group might be also assigned to address a specific issue or problem. Project groups consist of employees who represent a variety of functional areas within organizations, for instance sales, engineering, and marketing (Jassawalla & Sashittal, 1999). For example, successful presentation of a new product, such as a car model, to the audience at auto show requires cooperation between both engineering and marketing departments.

Quality-improvement groups. Quality-improvement groups are groups of employees that work on improving customer satisfaction, team performance and cost reduction. This type of work group originated from quality circles, which were popular in organizations in the 1980s. During that time, quality circles met voluntarily to address work-related issues on a weekly basis (Kreps, 1991). Quality-improvement groups, on the other hand, are formal organizational units that are typically cross-functional with members coming from a variety of areas and bringing diverse perspectives in an attempt to solve any existing quality issues (Eisenberg et al., 2007). For instance, issues related to meeting safety standards in new cars might be addressed by a group of engineers working together with quality inspectors.

Work groups. Work groups are groups of employees responsible for the entire work process. Work groups reside together, work together, and usually come from the same department or organizational unit (Harrison, 1994; Wellins, Byham, & Wilson, 1991). They differ in degrees of empowerment, the highest level is represented by self-directed work teams (Tjosvold & Tjosvold, 1991; Wellins et al., 1991). For instance, successful design and sales to consumers of a new product, such as a new model of a car, requires coordinated efforts of engineers, marketing and sales forces.

The present research focuses on individual's experiences working in project groups and work groups as these groups involve ongoing work interactions. Ongoing, long-term work interactions are important factors as they influence interaction climate within the group, which is one of the foci of this study.

Summary

The primary focus of this research is a critique and reconceptualization of Oetzel's (2005) Effective Intercultural Workgroup Communication Theory (EIWCT). The theory was tested recently with inconclusive results (Oetzel et al., 2012). The current study investigates deep-level behavioral diversity characteristics as displayed by individual group members and the relationships to perceived communicative interaction climate and perceptions of group outcomes.

CHAPTER 2. LITERATURE REVIEW AND HYPOTHESES

One of the very few but promising and comprehensive theories that addresses the importance of communication behavior in diverse work teams and considers the impact of both surface and deep-level diversity is Oetzel's (1995) Effective Decision Making Theory (EDMT), and its revised version – the Effective Intercultural Workgroup Communication Theory (EIWCT, Oetzel, 2005; see Figure 1 in Appendix A). The major premise of the theory is that cultural aspects, particularly individualistic and collectivistic characteristics of group members, manifested by ingroup/outgroup, self-construals and face-concerns characteristics of group members, influence the communication processes (interaction climate) within a workgroup and consequently impact the outcomes of the group, i.e. task and relational effectiveness and satisfaction of group members. The theory, though theoretically promising, was recently tested by Oetzel et al. (2012) with inconclusive results.

There are five foundational elements in Oetzel's theory: situational features (history of unresolved conflicts, equal/unequal status, and the existence of ingroup/outgroup), self-construals, face-concerns, interaction climate, and task and relational group effectiveness and satisfaction. These constructs are included here because they have been used in prior research about intercultural interactions among individuals. They have not been used, however, to explain group dynamics, which makes EIWCT a pioneering effort in the small group research field. Below is a review of each construct.

Situational features. Situational features are the contextual factors that shape a workgroup's interactions, and include group members' history of unresolved conflict, ingroup/outgroup cultural composition, and equal/unequal status of group members within the group. According to Oetzel (2005), these features create a background that either helps or

prevents mutually satisfying interactions among group members. They are considered surface-level diversity characteristics.

Unresolved conflict historically relates to conflicts outside organizations and among different ethnic groups on a macro-level in society. For instance, ongoing political tensions between countries or even wars might make it difficult for workgroup members from these particular ethnic groups to work efficiently together. Instead of focusing on the task at hand they might focus on underlying ethnic tensions. The concept of equal/unequal status among group members refers to hierarchy established in groups as defined by seniority and superior/subordinate levels.

The other diversity characteristic included in EIWCT is the concept of in-group and out-group. Triandis (1990) defined an in-group as a group whose norms, aspirations, and values strongly influence the behavior of its members. An out-group designation is assigned to an individual whose attributes are dissimilar from those of the in-group. To be classified as an out-group member, the individual must be perceived as threatening to in-group values and achievement of goals. Most collectivistic cultures value strong group connections among group members (in-group) and loyalty toward the group with limited exposure to other groups and/or other groups' membership. For instance, in Greece, family and close friends are considered in–group members, whereas other Greeks are considered out-group members. On the other hand, in most individualistic cultures, memberships in a variety of groups are encouraged and loyalty toward any one group is much weaker. Tajfel and Turner (1979) argued that the mere presence of an out-group is sufficient to provoke intergroup competition or discriminatory responses from the in-group. In addition, the magnitude of in-group and out-group dissimilarity tends to

intensify in-group biases. That is, the more different the groups appear (e.g., in sex, race, religion, status), the greater the extent of in-group bias.

Self-construals and face concerns. EIWCT includes two deep-level diversity features: self-construal and face-concerns. Many scholars moved away from explanations that include only macro-level (e.g. ethnicity, nationality) cultural predictors of human behavior, recognizing that both individual and cultural variables jointly influence behavior (e.g., Gudykunst & Kim, 1997; Gudykunst & Lee, 2000; Kim, 1995). Gudykunst and Lee (2000) go as far as suggesting that if research does not include both cultural (macro) and individual (micro) level constructs or variables it is not valid. In response to this need, Markus and Kitayama (1991) introduced the concept of self-construal (independent and interdependent self-construals), referring to the individual's view of the self, which may sometimes differ from the individual's broader culture. This has led to research and revision of theories related to cultural influences on behaviors. Scholars who originally examined only the cultural dimension of individualism-collectivism have revised their theories to include self-construal (Gudykunst, 1995; Ting-Toomey & Kurogi, 1998; Ting-Toomey & Oetzel, 2002). As a result of employing the concept of self, researchers introduced "independent – interdependent construals of self" that parallels the cultural dimension of individualism and collectivism (Markus & Kitayama, 1991). The terms individual and collective or independent and interdependent are used to characterize individuals who are more likely to use personal versus social identities or to describe cultures that are more likely to prioritize personal versus social identities, respectively (Oyserman, 2009; Markus & Kitayama, 1991; Triandis, 1989). The independent and the interdependent construals of self can be measured on an individual level while individualism–collectivism is typically measured on a national (or societal) culture level.

The concept of self-construal is more complex than the individualism–collectivism dimension. However, on many occasions independent self-construal parallels individualistic culture characteristics while interdependent self-construal parallels collectivistic culture (Markus & Kitayama, 1991). That is, it is possible to find individuals with the independent self-construal in collectivistic societies, and individuals with the interdependent self-construal in individualistic societies but in many instances individual self-construal is consistent with the dominant culture. Independent self-construal is the degree to which one views the self as separate from others while interdependent self-construal is the degree to which one views the self as connected to other members of one's group (Markus & Kitayama, 1991). Individuals with independent self-construals perceive themselves as unique entities who express themselves and focus on internal emotions and desires that promote their goals (Markus & Kitayama, 1991; Singelis, 1994). Individuals with an interdependent self-construal, on the other hand, view themselves as connected to a larger entity such as the group. Their personal fulfillment comes from meeting group obligations, maintaining interpersonal relationships, valuing conformity and cooperation (Markus & Kitayama, 1991). Research (Oetzel, 1998) shows that the more independent group members are, the more likely they are to utilize competitive conflict strategies while the more interdependent group members are, the more likely they are to use cooperative conflict strategies. Communicators with independent self-construals are perceived as separate individuals who engage in diverse communicative practices to maximize their own self-interests (Yum, 1988). The goal of communication is to "stand out" and to express an individual's uniqueness. Communicators with independent construals are assertive with direct, clear, and non-ambiguous forms of communication that express the internal needs of the self (Kim & Sharkey, 1995). On the other hand, communicators with

interdependent construals tend to be more concerned about social-relational dynamics within the group that will take the form of indirect and nonverbal strategy use (Ting-Toomey, 1988; Yum, 1988). Thus, this type of communication is more attentive to the feelings of others (Markus & Kitayama, 1991). A person with a tendency toward interdependence will be concerned about the other's evaluation of him or her and not hurting the other's feelings rather than being direct during the pursuit of goals. Interactions between group members with independent self-construals and group members with interdependent self-construal might create tensions and misunderstandings. Thus, the way members of workgroups communicate with each other would be expected to have direct influence on creating a group's dynamics.

  Face-concerns. The face concept might be useful to explain communication behavior in culturally diverse groups (Earley & Randel, 1997; Oetzel, 1998). Generally speaking, the face concept refers to a sense of public image the individual tries to project, present and maintain. It is a cluster of identity and relational issues associated with respect, honor, status, reputation, credibility, loyalty, trust, competence, family/network connection, relational and obligation issues.

  The concept of face originated in Chinese culture and Goffman (1955) was one of the first Western scholars to examine it. Goffman conceptualized face as "the positive social value a person effectively claims for himself by the line others assume he has taken during a participant contact" (p. 213). Although individual verbal and nonverbal behaviors vary culturally, researchers believe that the concept of face applies universally, and communication scholar Ting-Toomey constructed the face-negotiation theory based on this concept (Ting-Toomey, 1988, 2005). The construct of face identifies an individual's sense of positive image in social interactions and consists of three types of concerns (Ting-Toomey & Kurogi, 1998).

Self-face is the concern for one's own image, *other-face* is the concern for another's image, and *mutual-face* is concern for both parties' images and/or the "image" of the relationship. As cultural members engage in presenting and maintaining impressions during their interactions they need to maintain their "faces" either to control, to be accepted, to be admired or respected (Lustig & Koester, 2003). The concept of *face* is about identity respect, and it is tied to the emotional significance that we attach to our own social self-worth and the social self-worth of others. A face-threatening act can arouse a mixed package of emotions related to our sense of identity. *Facework* refers to the specific verbal and nonverbal behaviors that we engage in to maintain or restore face loss and to uphold and honor face gain. According to Oetzel and Ting-Toomey (2003) facework is especially important in a cultural situation when we experience embarrassment or threat, or become excessively polite or apologetic.

While face and facework are universal phenomena, how we interpret the meaning of face and how we implement facework may vary from one culture to another. Individualism and collectivism shapes members' preferences for self-oriented facework versus other-oriented facework, respectively. While within cultural groups, there is individual variability on facework, generally speaking, members of individualistic cultures tend to be more concerned with protecting self-face images during any threatening situation, while collectivists tend to be more concerned with either accommodating the other-face images or saving mutual-face images (Ting-Toomey, 2005).

What may be an appropriate and acceptable face-negotiation strategy in one culture may not be in another. According to Ting-Toomey (1988), face concerns become especially important during interactions between members of individualistic cultures and collectivistic, e.g. the U.S. and China, respectively. The former tend to give more importance to face

restoration or safe-guarding their own face, while the latter tend to engage in protecting another's face.

Face can be negotiated along two different dimensions. The first dimension ranges from self-face concerns at one end of the spectrum to other face-concerns at the other. The second dimension ranges from positive-face need to negative-face need. An individual who approaches conflict with positive-face builds a sense of inclusion in the relationship and communicates respect, approval, and appreciation to the other party. On the other hand, approaching the conflict with negative face refers to exclusion and claiming basic rights of privacy and noninterference. Collectivistic cultures and individuals with interdependent self-construals tend to adopt positive-face/other-face concerns as behavioral strategies while individualistic, cultures, and individuals with independent self-construals tend to adopt negative-face/self-face concern. Consequently, relationship orientation and indirectness characterize collectivist cultures (mostly represented by interdependent self-construals) while directness and open expression reflect individualistic cultures (mostly represented by independent self-construals members).

Face has not been empirically tested in workgroups prior Oetzel et al.'s (2012) study, but Oetzel, Myers, Meares, and Lara (2003) examined the relationship of face concerns in conflict behavior among employees and managers from several organizations. They found that self-face concern was associated positively with dominating and emotionally expressive styles, while other-face concern and mutual-face concern were both associated positively with integrating, obliging, and compromising styles. They concluded that interdependence, other-face, and mutual-face are associated with positive communication processes such as

cooperation and respect while independence and self-face focus on individual goals, which tend not to be associated with group goals.

Task and Relational Group Effectiveness and Satisfaction

Through extensive interviewing, group dynamics researchers have identified eight characteristics common to effective teams: (a) a clear, elevating goal; (b) a results-driven structure; (c) competent team members; (d) unified commitment; (e) a collaborative climate; (f) standards of excellence; (g) external support and recognition; and (h) principled leadership. However, the above models of group effectiveness privilege one particular view of how groups should work by emphasizing work/task outcomes over relational outcomes (Oetzel, 2005). Bales (1950) along with other group scholars recognized a long time ago that there are two fundamental, interrelated dimensions to task-oriented groups: a task dimension (productivity of the group) and a social or relational dimension (cohesiveness of the group). Hofstede (1991) noted that people from individualistic cultures focus primarily on the task dimension whereas people from collectivistic cultures focus on the relational dimensions first with the task dimension as secondary. Oetzel and Bolton (1997) empirically tested whether certain individuals prefer a particular dimension of group effectiveness over another. They found that group members with independent self-construals focused more on task effectiveness while members with interdependent self-construals focused more on relational effectiveness.

The relevance of these two dimensions is clear when cultural diversity is considered. The variable of relational outcome in Oetzel's (2005) EIWCT is essential because understanding the relational nature of interaction will enhance understanding of diverse group processes and their outcomes. Specifically, it will help aid in explaining whether a group member values being satisfied with the interpersonal interaction within the group more and to

what extent or whether his/her focus is on the results of the group work and the productivity with less regard for the group members' relations.

Interaction Climate

Group communication plays a mediating role and affects group outcomes. Group communication labeled by Oetzel (1995) as "interaction climate" is characterized by cooperative conflict resolution, respectful communication, consensus decision-making, and participation, referring to the general "tone" of the group's interactions. Communication processes then are the medium through which individual differences in group composition affect group outcomes (Oetzel, Burtis, Chew, Sanchez, & Perez, 2001). Tjosvold, Sasaki and Moy (1998) examined several components of interactions between 29 Japanese workers in two Hong Kong organizations. They found that a cooperative goal pursuit of group members rather than a competitive approach led to open discussion, open discussion resulted in productive work, and productive work resulted in commitment and satisfaction from the workers. In addition, Oetzel (2001) found that the perceived level of cooperation, respect, and participation are associated with group members' task and relational effectiveness and satisfaction.

In summary, EIWCT argues that a culturally appropriate model of effective intercultural workgroups must include both task and relational outcomes (Oetzel, 2005; Oetzel et al., 2012). Communication processes that constitute group interaction climate are the medium through which individual differences and diversity in group composition affects group outcomes of task and relational effectiveness and satisfaction (Oetzel et al., 2001).

A Test of the Effective Intercultural Workgroup Communication Theory

Oetzel et al. (2012) tested EIWCT's propositions, predicting individual and group-level influences on perceptions of interaction climate and effectiveness and satisfaction (task and

relational) in culturally diverse groups of large organization. Employees (N = 562) belonging to 41 established workgroups at a large electronic component manufacturing company in the southwest U.S. participated in the study. The ethnic backgrounds were as follows: 38.4% Anglo or European Americans, 31% Hispanic Americans, 4.1% African Americans, 3.6% Asians or Asian Americans, 3.9% Native Americans, and 19.3% other (including those not reporting an ethnic background).

The hypothesis that interdependent self-construal is associated positively with interaction climate and self-face is associated negatively with interaction climate were supported. These findings were consistent with a number of studies of culturally diverse work groups (Oetzel, 1998; Oetzel, 2001; Oetzel et al., 2003). However, the expected relationship between independent self-construal and interaction climate, and other-face and interaction climate were not supported. Furthermore, the hypotheses about the relationship between independent self-construal and other-face with interaction climate and satisfaction were also not supported. In summary, only interdependent self-construal and self-face variables were found to be associated with interaction climate and satisfaction.

The hypothesis that the more culturally heterogeneous the group, the lower the ratings of interaction climate and satisfaction were partially supported. Interestingly, as more women were part of the groups (sex diversity), individuals' rating of the group's interaction climate declined (hypothesis supported). However, diversity due to ethnicity, was positively associated with interaction climate in these groups. Finally, the findings for interaction climate and satisfaction provided support for the hypothesis that heterogeneous composition will have negative moderating effects on the relationship between individual-level variables self-construals and face and interaction climate and satisfaction. In other words, the more diverse or

heterogeneous the composition of the group, the less positive the individual perception of group interaction climate and lower levels of satisfaction exist.

Critique of Effective Intercultural Workgroup Communication Theory and New Hypotheses

One possible reason for the lack of support of some hypotheses may lie in Oetzel's (1995, 2005) operationalization of diversity. Specifically, individuals' self-construals were assessed dichotomously as either independent or interdependent based on the individualistic-collectivistic dimension, respectively (participants took a self-construal survey). In other words, Oetzel's operationalization of diversity was limited and may have made it difficult to fully explore the proposed links. Based on existing research (Fiske, 2004; Triandis & Gelfand, 1998), the present study proposes that diversity may be more accurately captured using relational models instead of self-construals and face variables, and horizontal/vertical individualism/collectivism instead of ethnic group belonging.

Relational model characteristics and horizontal/vertical individualism/collectivism are considered deep-level diversity features. Researchers (Harrison et al., 2002) pointed out that cultural diversity includes surface-level characteristics, such as sex and ethnicity and deep-level diversity emphasizing components that are the result of cultural socialization: values, self-conceptions, and attitudes. Deep-level diversity explains communication behavior and group outcomes better than surface-level diversity, however, both factors are important in explaining workgroup behavior (Oetzel, 1998; Shachaf, 2008; van Dick et al., 2008)

Relational Models

Relational model theory (RMT; Fiske, 1991, 1992, 2004) provides a more comprehensive picture of diversity in workgroup interactions than the variables of self-

construals and face-concerns proposed by Oetzel (2005, 2012) because of its focus on the mechanism of building interactions and relations among individuals in groups rather than individual interactions. RMT argues that people utilize mental models for interacting with others, generating social action, understanding and evaluating others' social behavior, as well as coordinating, planning, encoding, and remembering social interaction. In other words, the theory focuses on how individuals make sense of their social environment and why individuals use certain relational models in a given social context. Groupwork is one example of such a social context.

According to this theory, there are four fundamental forms of relating and interacting: communal sharing, authority ranking, equality matching, and market pricing. Cultures vary in the degree to which these models are triggered for group members.

1. *communal sharing model* - individuals organize relationships in terms of collective belonging or solidarity. Members of a group are treated as equivalent elements of a bounded set, and individual distinctiveness is ignored. Group members seek unanimity, try to speak with one voice, and make decisions by consensus. They also pool resources and do not distinguish who contributed what.

2. *Authority ranking* creates an ordinal ranking among persons or social goods. For instance, more senior people may be given priority in promotion decisions, or the decision of a manager might have precedence over the decision of one of the subordinates.

3. *Equality matching* is characterized by reciprocity and balanced exchange and is manifested in turn-taking and democratic voting.

4.   *Market pricing* organizes social relationships in terms of ratios, where the ratio may concern monetary value, utility, efficiency, effort, or merit. Decisions are made by group members who contribute the most in terms of ratios.

Vodosek (2003) argues that the more different the relational model used by group members is, the more frequently the group would experience conflict, i.e., the more challenging the interaction climate. In some groups, relational models used by group members differ significantly, for instance market pricing from communal sharing. These predictions were partially supported in terms of relational outcomes, (i.e. the more different the RMs, the less positive the relational outcome), however, they were not supported in terms of task outcomes (Vodosek, 2003). Even though relational models theory was applied in business research (Vodosek, 2003, 2009), organizational studies (Sondak, 1998) and psychology (Haslam, 1995; Haslam & Fiske, 1999), it has not been used in intercultural communication research to evaluate group members' communicative behaviors.

Vodosek (2003) argued that in workgroup dynamics, members might share one relational model while being dissimilar with others. This ambiguity affects the dynamics of harmonious and/or conflict groups as well as tension-ridden groups. For instance, Japanese group members display authority ranking and communal sharing relational models while U.S. employees manifest market pricing but also maintain authority ranking relational models (Vodosek, 2009). Therefore, even though Japanese and U.S. employees have very different cultural backgrounds (Japanese are collectivistic while Americans are individualistic), they both share many common characteristics reflected in the authority ranking relational model.

There is a limited number of research applications of relational models in the organizational context. Sheppard and Sherman (1998) used relational models theory to develop their concept of trust in organizations. They proposed that each relational model is associated with the development of trust along two dimensions: shallow/deep and dependence/interdependence. The depth dimension relates to the importance, range, and number of contacts between individuals, while the interdependence refers to the degree to which the parties' behaviors are contingent upon one another. In a dependent relationship one person depends on the other, but not vice versa, while in an interdependent relationship both parties depend on each other. Sheppard and Sherman proposed that market pricing and equality matching are characterized by shallow dependence between the individuals while authority ranking and communal sharing are characterized by deep interdependence. The deeper the interdependence, the more trusting are the relationships that develop and consequently the higher the ratings of group interaction climate, member satisfaction and ratings.

Taking into account individual group members' preference of the relational model used in group interaction, the next step is to test the relationship of relational models to the individual group member's perception of group interaction climate, group effectiveness and the satisfaction with the group. The following hypotheses were thus tested based on the above arguments:

H1: Greater endorsement of individual use of relational models of communal sharing is associated with

a) higher ratings of the group interaction climate.

b) higher ratings of the group member satisfaction.

c) higher ratings of the group effectiveness.

H2: Greater endorsement of individual use of relational models of authority ranking is

associated with

a) higher ratings of the group interaction climate.

b) higher ratings of the group member satisfaction.

c) higher ratings of the group effectiveness.

H3: Lower endorsement of individual use of relational models of market pricing is

associated with

a) higher ratings of the group interaction climate.

b) higher ratings of the group member satisfaction.

c) higher ratings of the group effectiveness.

H4: Lower endorsement of individual use of relational models of equality matching is

associated with

a) higher ratings of the group interaction climate.

b) higher ratings of the group member satisfaction.

c) higher ratings of the group effectiveness.

Horizontal/ Vertical Individualism/ Collectivism

Past research has indicated that there are conceptual problems with the individualism/collectivism (I/C) model, and the dimension should be treated as a more complex construct than previously perceived. Since the most problematic issue with the I/C model is that the construct is treated as a dichotomous or categorical variable, some researchers have attempted to expand it. Singelis, Triandis, Bhawuk and Gelfand (1995), for example, introduced the concept of horizontal and vertical I/C. In horizontal and vertical I/C (Singelis et al., 1995;

Triandis & Gelfand, 1998) both individualism and collectivism may be horizontal (emphasizing equality) or vertical (emphasizing hierarchy). Thus, the I/C dimension and an equality/hierarchy dimension are orthogonal. In their study of Korean and U.S. participants, Triandis and Gelfand (1998) found that even though Korea is considered a collectivistic culture and the U.S. is considered an individualistic culture, participants from both of these cultures share many characteristics. Particularly, the four categories, HI, VI, HC, and VC, which were previously found in the U.S.'s individualist culture, were also found in Korea's collectivist culture, meaning that in addition to ethnic background each individual's self-construal plays a significant role.

Triandis (1995) and Triandis and Gelfand (1998) argued that there are at least four defining attributes of individualism and collectivism: (a) the definition of the self, which can emphasize personal or collective aspects and can be independent or interdependent (Markus & Kitayama, 1991); (b) personal goals that can have priority over in-group goals or vice versa; (c) an emphasis on market pricing (rationality) rather than communal sharing (relatedness) - (concepts from RMT, Fiske, 1992), and (d) the importance of attitudes and norms as determinants of social behavior. According to Triandis and Gelfand (1998), the most important attributes that distinguish different variations of individualism and collectivism are relative emphases on horizontal and vertical social relationships. In other words, horizontal patterns assume that one's self is more or less like every other self. In contrast, vertical patterns consist of hierarchies, and one's self is different from other selves. Horizontal collectivism (HC) is a cultural pattern in which the individual perceives self as a part of an in-group. The members of the in-group are expected to be very similar to each other, and the self is interdependent with the others. Equality, in terms of the group status, is very important in this cultural pattern

(Singelis et al., 1995). In vertical collectivism (VC) the individual perceives the self to be an aspect of an in-group membership but unlike horizontal collectivism, the members of the in-group are different from each other and some have more status than others. The self is still interdependent but different from the self of others and inequality, in terms of the status in-group, is accepted in this pattern (Singelis et al., 1995). Therefore, even though individuals display collectivistic preferences their vertical features might take precedence and consequently impacting lack of focus on interaction climate or group outcomes. In horizontal individualism (HI) an autonomous self is expected, but individuals hold a more or less equal to others. The self is independent but the same as the self of others. Finally, in vertical individualism (VI) an autonomous self is also expected but unlike in horizontal individualism, individuals see each other as different, and inequality is expected. The self is not only independent but also different from the self of others. Competition is a very important aspect of this cultural pattern (Singelis et al., 1995). Triandis (1995) indicated that the U.S. and France might be good examples of vertical individualism, Sweden and Australia horizontal individualism, India and Greece vertical collectivism, and the Israeli kibbutz model horizontal collectivism.

Triandis, Kurowski and Gelfand (1994) suggest that horizontal and vertical individualism/collectivism dimensions could be considered as the antecedent to relational models because culture shapes the choice of the relational model used by an individual. In some cases the model is implied and choice does not exist. Fiske (1991, 1992) argued that the way people use the four relational models is culturally learned. Triandis, Kurowski and Gelfand (1994) and Vodosek (2003, 2009) documented an empirical relationship between the constructs of horizontal and vertical individualism and collectivism and Fiske's relational models (see Figure 1):

	Individualism	Collectivism
Horizontal	Equality Matching Market Pricing	Equality Matching Communal Sharing
Vertical	Authority Ranking Market Pricing	Authority Ranking Communal Sharing

Figure 1. Relational models and horizontal and vertical I/C (Triandis et al., 1994).

The frequency of using certain relational models by individuals should be carefully observed as they may be represented by continuous degrees. Earley (1997, 1998) expanding on Triandis et al.'s (1994) assumptions, suggested that communal sharing is the dominant relational model in horizontal collectivism, market pricing in vertical individualism, authority ranking in vertical collectivism, and equality matching in horizontal individualism. The following hypotheses are offered based on the relations between horizontal/ vertical individualism/ collectivism constructs and their possible connections with interaction climate, perception of group effectiveness and group satisfaction:

H5: Greater endorsement of vertical individualism is associated with

a) lower ratings of the group interaction climate.

b) lower ratings of the group member satisfaction.

c) lower ratings of the group effectiveness.

H6: Greater endorsement of vertical collectivism is associated with

a) lower ratings of the group interaction climate.

b) lower ratings of the group member satisfaction.

c) lower ratings of the group effectiveness.

H7: Greater endorsement of horizontal individualism is associated with

a) lower ratings of the group interaction climate.

b) lower ratings of the group member satisfaction.

c) lower ratings of the group effectiveness.

H8: Greater endorsement of horizontal collectivism is associated with

a) higher ratings of the group interaction climate.

b) higher ratings of the group member satisfaction.

c) higher ratings of the group effectiveness.

Interaction Climate as the Mediator

Oetzel argued that interaction climate fully mediates the influence of diversity on the outcome. In his study Oetzel (1995) found that communication behaviors that constitute group interaction climate influence groups' tasks and relational outcomes. Cox (1994) and Watson and Michaelson (1988) found that communication process difficulties manifested in high levels of conflict and tension, power struggles, lack of cooperation, lack of respect for group members, and inequality in turn-taking, interfered with group productivity. Cox (1994) and Watson et al. (1993) found that culturally heterogeneous groups have less effective communication interaction processes than culturally homogenous groups. Based on these findings and assumptions the following hypotheses are proposed:

H9a: Relational models (communal sharing, authority ranking, market pricing, equality

matching) are expected to relate to group satisfaction through their relationship to

interaction climate.

H9b: Relational models (communal sharing, authority ranking, market pricing, equality

matching) are expected to relate to group effectiveness through their relationship to interaction climate.

H10a: Horizontal collectivism, horizontal individualism, vertical individualism, and vertical individualism are expected to relate to group satisfaction through their relationship to interaction climate.

H10b: Horizontal collectivism, horizontal individualism, vertical individualism, and vertical individualism are expected to relate to group effectiveness through their relationship to interaction climate.

See Figure 3 in the Appendix A, which depicts the new model.

Summary

The primary focus of this research was to critique and reconceptualize Oetzel's (2005) EIWCT with the goal of addressing the question of how diversity as measured by relational models and horizontal/ vertical individualism/ collectivism impact group communication (interaction climate) and consequently group task (effectiveness) and relational (satisfaction) outcomes. Because many hypotheses proposed by Oetzel et al. (2012) were not supported, this research argues for including deeper-level diversity indicators of horizontal/vertical individualism/collectivism and relational models. These variables capture diversity more accurately than self-construals and face concerns variables proposed by Oetzel (2005) and Oetzel et al. (2012).

CHAPTER 3. METHOD

Participants

A total of 155 participants out of 161, who indicated they were full-time employees, completed all survey questions. As can be seen in Table 1, the majority of participants identified themselves as Anglos (61%), with the second largest group as Latin Americans (8%). The majority of the participants were male (58%). More than half (51.6%) indicated a wide variety of types of industry as their employment place (2-3% per category): real estate, finance, retail, construction, manufacturing, public administration, entertainment, customer service, business, consulting, landscaping, transportation, restaurant work, marketing, mining, logistics, security, and telecommunication.

Table 1

Frequencies and Percentages for Participant Characteristics (N=155)

Variables	n	%
Gender		
Female	65	41.9
Male	90	58.1
Race		
White	111	71.6
Black	21	13.5
Asian	12	7.7
Other	11	7.1
Age		
18 to 29	37	23.9
30 to 39	54	34.9
40 to 49	27	17.4
50 or above	36	23.8
Type of industry		
Healthcare	20	12.9
Automotive	8	5.2
Education	18	11.6
IT	29	18.7
Other	80	51.6

Table 2

Frequencies and Percentages for Group Characteristics (N=155)

Variables	n	%
Company size		
Up to 100 employees	61	39.4
101 to 500 employees	37	23.9
501 to 1000 employees	22	14.2
More than 1000 employees	35	22.6
Length of time spent working with other teams		
0 to 2 years	37	23.9
3 to 5 years	47	30.3
More than 5 years	71	45.8
Type of work team		
College team	19	12.3
Organization team	136	87.7
Number of members in team		
1 to 3	28	18.1
4 to 6	47	30.3
7 to 10	34	21.9
11 to 15	18	11.6
More than 15	28	18.1

Measures (See Appendix D)

  Horizontal and vertical individualism collectivism (H/V I/C). Horizontal and vertical I/C were measured with Triandis and Gelfand's (1998) 16-item scale that was adapted from the *Horizontal and Vertical Dimensions of Individualism and Collectivism Scale*, developed by Singelis, Triandis, Bhawuk and Gelfand (1995). Psychometrics of this scale are reasonable with horizontal individualism (HI; $\alpha = .67$), vertical individualism (VI; $\alpha = .74$), horizontal collectivism (HC; $\alpha = .74$), and vertical collectivism (VC; $\alpha = .68$). Such reliability scores are considered high for scales in intercultural research. HI was based on four items, for example: "I often do my own thing." VI was based on three items, for example: "When another person does better than I do, I get tense and aroused." HC was based on four items, for example: "The well-being of my coworkers is important to me." VC was based on four items, for example: "It is important to me that I respect the decisions made by my groups." Items were answered on 9-point scale, where 1= *never*, and 9 = *always*. Participants were asked to respond to the items based on their general life experience. Items within each scale were summed and the mean determined. Thus, each respondent had a score on each combination. Cronbach's alphas for this sample were as follows: horizontal individualism ($\alpha =. 80$), vertical individualism ($\alpha = .79$), horizontal collectivism ($\alpha = 76$), and vertical collectivism ($\alpha = .75$).

  Relational models. The preference of relational models was measured using Vodosek's (2009) 16-item Relational Models Scale adaptation of Haslam and Fiske (1999) and Haslam (1994, 1995) measure of relational models. Vodosek (2009) reported Cronbach alphas for communal sharing, .60, authority ranking, .78, equality matching, .74, and market pricing, .68 (Fiske, 2004).

  To assess the relational models considered desirable, respondents were asked to indicate how often a particular statement should be true in an ideal group. Communal sharing

(CS) was measured with four items, for example: "The group makes decisions together by consensus;" and "Group members share many important responsibilities jointly without assigning them to one group member alone." Authority ranking (AR) was measured with four items, for example: "One of the group members directs the work of the group, the other group members pretty much do what they are told to do;" and "One of the group members makes the decisions and the other group members generally go along." Equality matching (EM) was measured with four items, for example: "Group members typically divide things up into shares that are the same size;" and "The group makes decisions by a simple majority vote." Market pricing (MP) was measured with four items, for example: "Group members divide things up according to how much they have paid or contributed;" and "Group members make decisions according to the ratio of the benefits they get and the costs to them."

The response scale for each item was a 5-point Likert-type scale ranging from 1= *none of the time* to 5= *always*. To determine the preference of relational model used, participants' mean score for each relational model was determined – the highest mean indicated the preference for the particular relational model. Cronbach's alphas for these scales in the current sample were strong: communal sharing (α = .77), authority ranking (α = .78), equality matching (α = 83), and market pricing (α = .82)

Group satisfaction (relational outcome). Measurement of group satisfaction utilized Oetzel's (2001) 6 item scale, which was an adaptation of Canary and Spitzberg's (1987) measure of group satisfaction. The Cronbach alpha for this scale was .90 (Oetzel, 2001). Respondents were asked to think of their most recent workgroup experience and respond to items about that experience. Sample scale items are: "I am extremely satisfied with our group's outcomes;" "I have confidence in the members of my group;" "I like working with my group;"

and "My group performs at an excellent level." The variable of group satisfaction was measured using a Likert-type self-report questionnaire. All responses were measured on a five-point scale (5=*strongly agree* to 1=*strongly disagree* Cronbach's alpha in this sample was .91). Participants' mean score on the scale was used in subsequent analyses.

Group effectiveness (task outcome). Participants judged the effectiveness of their group by responding to the 7- item scale of workgroup effectiveness, which was Oetzel's (2001) adaptation of Canary and Spitzberg (1987) measure of group processes. Oetzel reports a Cronbach alpha of .80. Sample items include: "I was extremely satisfied with the group outcomes;" "I am confident that our performance during the activity was satisfactory;" "We shared the work equally;" and "All of our members were prepared." All responses were measured on a five-point Likert scale (5=*strongly agree* to 1=*strongly disagree*). Cronbach's alpha in this sample was .84. Participants' mean score on the scale was used in subsequent analyses.

Interaction climate. Measurement of group interaction climate utilized the 23-item scale from Oetzel (2001), which was an adaptation of Watson and Michaelson's (1988) group-style description and Canary and Spitzberg's (1987) measure of communication competence. The scale was chosen because the measures contain items that specifically describe communication behaviors (i.e. equal participation, consensus decision making, and cooperative conflict) that occur during a group interaction. Cronbach alpha for Oetzel's (2001) scale was .88.. Sample items from this scale are: "An atmosphere of trust exists in our group;" "Everyone in our group participates in achieving our goals;" "We listen to each other;" "We use empathy among members;" "We handle conflicts well in my group;" and "My group members listen to people with different perspectives." Participants indicated their degree of agreement with each

statement using a five-point scale (5=*strongly agree* to 1=*strongly disagree*). In this sample Cronbach's alpha was .84. Participants' mean score on the scale was utilized in subsequent analyses.

Demographics. Participants were asked to indicate their sex, race, and age. They were also asked to indicate their ethnicity/nationality using GLOBE (2004, 2007) clusters (see criteria in Appendix D), and length of time spent working in groups

Design and Procedure

Because this study focused on experience in diverse work groups, potential study respondents had to meet the following criteria: employed full-time, experience working in workgroups that are diverse (based on race, ethnicity, nationality) for a minimum of one year.

Data for this study were collected by means of an online, cross-sectional survey. I used the Qualtrics panel data collecting service, an official online survey software solution available for use by Wayne State University faculty, staff, and students. Qualtrics software enables users to do online data collection and analysis including market research, customer satisfaction and loyalty, product and concept testing, employee evaluations and website feedback. Qualtrics is a paid service and has partnership with organizations across all states. After identifying companies which most closely fulfilled the stipulated criteria, Qualtrics representatives contacted employees and ask them to complete a survey. Names of the companies could not be provided but participants could provide information about the type of industry. The data gathering process was very efficient and took four days for this study.

Participants were encouraged to complete the online questionnaire wherever they wished, and by the provided deadline. While respondent data were collected, the email addresses of the respondents were not tracked or collected. The survey software was

programmed to allow only one response per person and access to the survey was blocked on a predetermined date after the completion deadline passed.

Upon gaining access to the survey's website, participants were presented with an information sheet that provided an overview of the study (see Appendix C for the complete survey).

Participants were first asked to select a workgroup from their past experience and then base their responses to the questions on those experiences. The survey consisted of 79 questions, There were five blocks of questions: relational models (17 items), interaction climate (23 questions; communication characteristics of the group), satisfaction with the group and group effectiveness (13 questions), cultural characteristics of horizontal and vertical individualism and collectivism (16 questions), and demographic (4 questions).

CHAPTER 4. RESULTS

Analytic approach

I used structural equation modeling (SEM) to analyze the data and test the hypotheses using the analytic software AMOS (Analysis of a Moment Structures). SEM allows simultaneous analysis of all the variables in the model instead of separately assessing them. In addition, SEM includes factor analysis and assesses the measurement model. Furthermore, while using SEM, measurement error is not aggregated in a residual error term, therefore research data is measured more accurately. SEM has been applied to a variety of research problems because of these reasons (Hair, Black, Babin, & Anderson, 2010).

The model was tested using the variables that were confirmed by the factor analysis. All the measures were reconstructed as some items were deleted. Furthermore, as a result of lack of discriminant validity two outcome variables: group satisfaction and group effectiveness were combined into one – group performance; and two relational models: communal sharing and authority ranking were eliminated. Factor scores for the reconstructed variables were used in the SEM analysis.

Preliminary Screening Procedures

Multivariate normality and outliers. Multivariate normality was assessed via the multivariate kurtosis value. As suggested by Kline (2011), multivariate normality is met when the critical ratio of the kurtosis statistic is above 1.96. Given that the critical ratio was 18.51, the assumption of multivariate normality was not fulfilled. Therefore, bootstrapping procedures ($N = 5000$) were conducted to generate bias-corrected 95% confidence intervals. Multivariate outliers were identified. As suggested by Byrne (2010), cases in which Mahalanobis D2 p values are smaller than .001 can be considered as multivariate outliers. Four cases met this

criterion and were thus deleted from subsequent analyses. These were multivariate outliers, so they were not excluded based on an extreme score on one variable rather being extreme in terms of a linear combination of variables. All four deleted cases had very high equality matching scores and very low vertical individualism scores.

Descriptive Statistics for the Study Variables

As shown in Table 3 the relational model with the highest mean was Equality Matching (M = 3.58, SD = .88); the model with the lowest mean was Market Pricing (M = 2.83, SD = 1.05). The cultural dimension with the highest mean was Vertical Collectivism (M = 7.44, SD = 1.22) and the dimension with the lowest mean was Vertical Individualism (M = 5.62, SD = 1.86). Mean Interaction Climate was 3.73 (SD = .56) and was above average. The mean Group Satisfaction (M = 4.13, SD = .78) was very high and the mean Group Effectiveness score (M = 3.68, SD = .77) scores was above average.

Table 3

Descriptive Statistics for the Study Variables (N = 155)

Variable	Range	M	SD
Relational model			
Communal sharing	1.40 to 5.00	3.48	.76
Authority ranking	1.00 to 5.00	3.00	.92
Equality matching	1.00 to 5.00	3.58	.88
Market pricing	1.00 to 5.00	2.83	1.05
Cultural dimension			
Horizontal individualism	1.50 to 9.00	7.18	1.51
Vertical individualism	1.25 to 9.00	5.62	1.86
Horizontal collectivism	3.75 to 9.00	7.14	1.31
Vertical collectivism	2.50 to 9.00	7.44	1.22
Interaction climate	1.79 to 5.00	3.73	.56
Group satisfaction	1.20 to 5.00	2.07	.78
Group effectiveness	1.14 to 5.00	3.67	.77

As shown in Table 4, interaction climate was positively associated with group satisfaction and negatively associated with all of the relational models and horizontal individualism, vertical individualism, horizontal collectivism, and vertical collectivism. Group satisfaction was positively correlated with group effectiveness and negatively correlated with communal sharing, authority ranking, equality matching, market pricing and horizontal individualism, vertical individualism, horizontal collectivism, and horizontal collectivism. Group effectiveness was negatively associated with communal sharing, equality matching and horizontal and vertical collectivism. These initial correlations were partially in line with relationships I expected based on the hypotheses: interaction climate was negatively associated with authority ranking, market pricing, and equality matching relational models, and vertical individualism, horizontal individualism, vertical collectivism. Group satisfaction was negatively correlated with authority ranking, equality matching and market pricing relational models, and vertical individualism, vertical collectivism, and horizontal individualism. Group effectiveness was negatively associated with equality matching relational model and vertical collectivism. Length of time working in group does not correlate with any of other variables.

Table 4

Intercorrelations among Study Variables

Construct	1	2	3	4	5	6	7	8	9	10	11
1 Interaction climate											
2 Group satisfaction	.49 ***										
3 Group effectiveness	.02	.63 ***									
4 Communal sharing	-.17 *	-.33 ***	-.24 **								
5 Authority ranking	-.39 ***	-.13	.11	.27 **							
6 Equality matching	-.29 ***	-.43 ***	-.27 **	.65 ***	.17 *						
7 Market pricing	-.47 ***	-.22 **	.10	.29 ***	.63 ***	.30 ***					
8 Horizontal individualism	-.33 ***	-.14	.00	.11	.14	.15	.16				
9 Vertical individualism	-.41 ***	-.10	.10	-.01	.25 **	.00	.28 ***	.54 ***			
10 Horizontal collectivism	-.25 **	-.40 ***	-.32 ***	.35 ***	.11	.43 ***	.13	.15	.11		
11 Vertical collectivism	-. 25 **	-.44 ***	-.28 **	.42 ***	.21 **	.42 ***	.16 *	.30 ***	.07	.61 ***	
12 Group tenure	.01	.12	-.15	.10	.00	.-12	-.01	.06	.11	.14	

*$p < .05$. **$p < .01$. ***$p < .001$*

Results for the Structural Model

As suggested by Anderson and Gerbing (1988), a two-step procedure was followed to test the proposed model (see Appendix A). The measurement model was tested first via a confirmatory factor analysis. Once the model had acceptable fit, its constructs were tested for convergent and discriminant validity. Then, the structural model was tested. The fit of both the measurement and structural models was assessed via the chi-square statistic and the fit indices shown in Table 5. Kline (2011) pointed out that the Normed Chi-square (chi square/*df*) should not be reported because it is not statistically sound and no acceptable thresholds have been agreed upon. However, it is reported since most researchers include it in their evaluations of

model fit. The study hypotheses were evaluated in the context of the proposed structural model.

Table 5

Fit Indices and Their Threshold Values

Index	Threshold
Goodness of Fit Index (GFI)	> .80
Tucker-Lewis Index (TLI)	> .95
Comparative Fit Index (CFI)	> .95
Root Mean Square Error of Approximation (RMSEA)	< .06
Standardized root mean square residual (SRMR)	< .08

Results for the Measurement Model

Parceling of interaction climate items. As Little, Cunningham, Shahar, and Widaman (2002) pointed out, models with single-item indicators are less parsimonious and often increase sampling error. According to these authors, measures are considered single-item indicators if there are more than six items in the scale. To ensure reliability, in scale with many items, parcels (subscales) need to be created. Because interaction climate was measured using 23 items, parcels were created using the item-to-construct balance method, as recommended by Little et al. (2002). Other scales use far fewer items, therefore there was no need to parcel them. For instance, relational models were measured using 16 items, however, each relational model (communal sharing, equality matching, market pricing, authority ranking) was measured using four items, thus four subscales (parcels) measuring relational models already existed.

The item-total correlations from the reliability analyses results were used to create the parcels. The correlations were sorted from lowest to highest. Items with the highest item-total correlation anchored each of the parcels. The items with the next highest item-to-construct loadings were added to the anchors in the reverse order. The item with the highest loading among the anchor items was matched with the lowest loading item from the second selection.

This basic procedure where lower loaded items were matched with higher loaded items was repeated until all items were categorized into three parcels.

Proposed measurement model. The measurement model did not fit the data well. As shown in Table 6, the values of all the fit indices did not meet their acceptable thresholds. All indicator variables, however, loaded significantly onto their respective constructs. Because the model did not fit the data well, it was revised based on two criteria. First, only indicator variables with standardized factor loadings above .70 were retained (Hair, Black, Babin, & Anderson, 2009). An exception to this was made when deletion would lead the construct to have only a single indicator. Second, indicator variables with high modification indices (MI) were deleted as this was an indication that the variables were either highly correlated with other variables or were cross-loading onto other constructs (Byrne, 2001). Based on these criteria, several items were deleted. A list of the deleted items and the reasons for deletion are displayed in Table 7, and a list of the specific items in Table 8.

Table 6

Fit Indices for the Measurement Models

Index	Proposed	Final
Chi-square	2145.27	384.38
Degrees of freedom	1025	263
Probability level	.00	.00
Normed chi-square	2.09	1.46
Goodness of Fit Index (GFI)	.63	.85
Comparative Fit Index (CFI)	.75	.94
Tucker-Lewis Index (TLI)	.73	.95
Root Mean Square Error of Approximation (RMSEA)	.09	.06
Lower bound 90% confidence interval	.08	.04
Upper bound 90% confidence interval	.09	.07
P-close	.00	.22
Standardized root mean square residual (SRMR)	.10	.06

Note. At $p < .001$, critical χ^2_{crit} (800) = 929.33.

Table 7

Items Deleted from the Proposed Measurement Model

Item	SFL/MI
Standardized factor loading less than .70	
Interaction climate parcel 3 (items 12,15, 16, 23,29)	.63
Group effectiveness item 33	.39
Group effectiveness item 34	.42
Group effectiveness item 35	.51
Communal sharing item 41	.50
Communal sharing item 42	.60
Authority ranking item 47	.66
Equality matching item 49	.65
Market pricing item 56	.62
Horizontal individualism item 58	.69
Horizontal individualism item 61	.58
Vertical individualism item 65	.62
Horizontal collectivism item 68	.66
Vertical collectivism item 70	.51
Vertical collectivism item 71	.64
Group satisfaction item 37 loaded on highly to equality matching item 50	10.67

Note. SFL = standardized factor loading; MI = modification index.

Table 8

Specific Deleted Items from the Proposed Measurement Model

Item

Interaction climate parcel 3:
"Everyone had a chance to express his or her opinion."
"We listened to each other."
"The way my group related was appropriate."
"We showed encouragement to each other."
"Even though we didn't have total agreement all the time, we did reach
a kind of consensus that we all accepted."

Group effectiveness item 33, 34, 35:
"Some members of the team took the work too lightly."
"Once or more times some of the members did not do their fair share."
"I was happy with the way my team interacted."

Communal sharing item 41, 42:
"Members of the team tend to have very similar attitudes and values."
"One for all and all for one' is true of the members in the team."

Authority ranking item 47:
"One of the team members makes the decisions and the other team
members generally go along."

Equality matching item 49:
"Team members often take turns doing things."

Market pricing item 56:
"Team members choose to participate in the team when it is worth their
while to do so."

Horizontal individualism item 58, 61:
"I rely on myself most of the time; I rarely rely on others."
"It is important that I do my job better than others."

Vertical individualism item 61, 65:
"It is important that I do my job better than others."
"If a coworkers gets a prize, I would feel proud."

Horizontal collectivism item 68:
"I feel good when I cooperate with others."

Vertical collectivism item 70, 71:
"It is my duty to take care of my family, even when I have to sacrifice
what I want."
"Family members should stick together, no matter what sacrifices are required."

Revised measurement model. The revised model fit the data well as it met all of the criteria

for good fit: the GFI was above .80, the TLI value was close to acceptable, the CFI was .95,

and the RMSEA and SRMR were .06. Further, the change in chi-square between the proposed

and revised model was statistically significant, $\Delta\chi^2 (762) = 1760.89$, $p < .001$. In addition, all

item indicators loaded significantly on their respective constructs. Therefore, the convergent

and discriminant validity of the constructs of this revised model were assessed.

Convergent validity of construct. The composite reliability and the average variance

extracted were used to measure the convergent validity of the constructs. Constructs have

convergent validity when the composite reliability exceeds the criterion of .70 (Hair et al., 2010)

and the average variance extracted is above .50 (Bagozzi & Yi, 1988). As shown in Table 9, the composite reliability values of all the constructs were above .70. Further, all the average variance extracted values were all above .50. Thus, all the constructs had convergent validity. A list of the items are displayed in Table 10.

Table 9

Convergent Validity for the Constructs

Construct	SFL	CR	AVE
Interaction climate		.90	.78
Parcel 1	.84		
Parcel 2	.84		
Parcel 4	.92		
Group effectiveness		.87	.68
Item 29	.85		
Item 30	.78		
Item 31	.76		
Item 32	.78		
Group satisfaction		.89	.71
Item 36	.77		
Item 37	.92		
Item 38	.81		
Item 39	.78		
Communal sharing		.71	.55
Item 43	.66		
Item 44	.65		
Item 45	.70		
Construct	SFL	CR	AVE
Authority ranking		.74	.65
Item 46	.76		
Item 48	.77		
Equality matching			
Item 50	.75	.88	.74
Item 51	.88		
Item 52	.89		
Market pricing			
Item 54	.78	.85	.70
Item 55	.87		
Item 56	.77		
Horizontal individualism		.78	.68
Item 59	.80		

	SFL	CR	AVE
Item 60	.79		
Vertical individualism		.80	.63
Item 62	.69		
Item 63	.81		
Item 64	.76		
Horizontal collectivism		.80	.71
Item 67	.79		
Item 69	.85		
Vertical collectivism		.71	.63
Item 71	.64		
Item 72	.84		

Note. SFL = standardized factor loading. CR = composite reliability. AVE = average variance extracted. All items loaded on significantly to their respective constructs at *p* < .001

Table 10

Specific Item Component

Item

Interaction climate parcel 1:
"We used empathy among members."
"The interaction of my team was proper."
"An atmosphere of trust exists in my team."
"The way the other members said some of their remarks was inappropriate."

Interaction climate parcel 2:
"When disagreement occurred, we worked together to resolve them."
"There were rude remarks made during our conversation."
"There was conflict and hostility among the members."
"The other members were considerate."
"I was extremely satisfied with the team outcomes."

Interaction climate parcel 4:
"One or two members were stubborn in their views."
"Everyone spoke about the same amount of time while we were working on projects."
"We had constructive arguments while working together."
"One or two members tended to dominate the discussion."

Group effectiveness item 29, 30, 31, 32:
"I am confident that our performance was satisfactory."
"We shared the work equally."
"All of our members were prepared."
"One or two members pretended to be prepared when they really were not."

Group satisfaction item 36, 37, 38, 39:
"I have confidence in the members of my team."
"My personal level of satisfaction with the team was high."
"I would like to work with this team again."
"I feel a sense of pride being a part of this team."

Communal sharing item 43, 44, 45:
"Team members have many things in common that make them
essentially the same."
"If one of the team members needs something, other team members give
it without expecting anything in return."
"One of the team members directs the work of the team while the other team
members pretty much do what they are told to do."

Authority ranking item 46, 48
"One of the team members tends to lead."
"Team members typically divide things up into shares that are the same size."

Equality matching item 50, 51, 52:
"When team members work together, they usually split the work evenly."
"Team members make sure that the team's workload is shared equally."
"The team makes decisions by a simple majority vote."

Market pricing item 54, 55, 56:
"Team members divide things up according to how much they have paid
 or contributed."
"Team members make decisions according to the ration of the benefits they
get and the costs to them."
"Team members choose to participate in the team when it is worth their while
to do so."

Horizontal individualism item 59, 60:
"I often do 'my own thing'".
"My personal identity, independent of others, is very important to me."

Vertical individualism item 62, 63, 64:
"Winning is everything."
"Competition is the law of nature."
"When another person does better than I do, I get tense and aroused."

Horizontal collectivism item 67, 69:
"To me, pleasure is spending time with others."
"Parents and children must stay together as much as possible."

Vertical collectivism item 71, 72:
"Family members should stick together, no matter what sacrifices
are required."
"It is important to me that I respect the decisions made by my groups."

Discriminant validity of constructs. Discriminant validity was assessed by comparing

the absolute value of the correlations between the constructs and the square root of the average

variance extracted by a construct. When the correlations are lower than the square root of the

average variance extracted by a construct, constructs have discriminant validity (Fornell &

Larcker, 1981). The findings in Table 11 reveal that group satisfaction and group effectiveness

did not exhibit discriminant validity. Because these two constructs were highly correlated with

each other, they were made to load onto a second-order construct in the structural model, which

is called "group performance" and it is the combination of group satisfaction and group

effectiveness. Equality matching and communal sharing also did not exhibit discriminant

validity. Because communal sharing was the weaker construct (i.e., its composite reliability and

AVE were lower than those of equality matching), this construct was removed from the model.

Market pricing and authority ranking also did not demonstrate discriminant validity. Because

authority ranking was the weaker construct, it was also removed from the model. Thus, as a

result of lack of discriminant validity two outcome variables: group satisfaction and group

effectiveness were combined into one – group performance; and two predictor variables:

communal sharing and authority ranking were eliminated.

Table 11

Discriminant Validity Results for the Revised Measurement Model

Construct	1	2	3	4	5	6	7	8	9	10	11
1 Interaction climate	.88										
2 Group effectiveness	.81 ***	.83									
3 Group satisfaction	.78 ***	.89 ***	.84								
4 Communal sharing	.32 **	.34 **	.31 **	.74							
5 Authority ranking	.06	.14 **	.20 **	.42 **	.80						
6 Equality matching	.32 ***	.37 ***	.32 **	.77 ***	.01	.86					
7 Market pricing	.10	.21 *	.26 **	.38 **	.81 ***	.23 *	.84				
8 Horizontal individualism	.10	.08	.02	.06	.11	.03	.10	.83			
9 Vertical individualism	.00 ***	.21 *	.21 *	.05 ***	.18	.09 ***	.20 *	.65 ***	.80	.84	
10 Horizontal collectivism	.36 ***	.34 **	.29 **	.48 ***	.13	.50 ***	.07	.00	.14	.79 ***	.79
11 Vertical collectivism	.47	.49 ***	.50 ***	.64	.16	.56	.11	.24 *	.14		

Note. The values of the square root of the average variance extracted are on the diagonal; all other entries are the correlations.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Reliability. The summary of the Cronbach's alpha results for the revised scales is presented

below:

Table 12

Reliability for the Composite Scales

	Alpha
Interaction Climate	.80
Group performance	.82
Relational model – equality matching	.80
Relational models – market pricing	.81
Horizontal individualism	.80
Vertical individualism	.79
Horizontal collectivism	.76
Vertical collectivism	.75

Results for the Structural Models

    Direct effects. The resulting direct effects structural model had acceptable fit. As

shown in Table 13, all fit indices had acceptable values. The model accounted for 32% of the

variance of interaction climate and 87% of the variance of group performance. The findings in

Table 14 reveal, however, that only five path coefficients were statistically significant. I will discuss findings further in the evaluation of hypotheses.

Table 13

Fit Indices for the Structural Models

Index	Value
Chi-square	434.41
Degrees of freedom	276
Probability level	.00
Normed chi-square	1.57
Goodness of Fit Index (GFI)	.83
Tucker-Lewis Index (TLI)	.92
Comparative Fit Index (CFI)	.93
Root Mean Square Error of Approximation (RMSEA)	.06
Lower bound 90% confidence interval	.05
Upper bound 90% confidence interval	.07
P-close	.04
Standardized root mean square residual (SRMR)	.09

Table 14

Unstandardized and Standardized Path Coefficients for the Proposed Direct Effects Structural

Model

Path	B	SE	β	t	
Equality matching to interaction climate	.12	.09	.15	1.24	
Market pricing to interaction climate	-.13	.06	-.21	-2.09	*
Horizontal individualism to interaction climate	-.14	.07	-.40	-1.94	
Vertical individualism to interaction climate	.10	.07	.26	1.45	
Horizontal collectivism to interaction climate	-.12	.13	-.25	-.93	
Vertical collectivism to interaction climate	.42	.19	.65	2.18	*
Equality matching to group performance	.02	.07	.02	.27	
Market pricing to group performance	.20	.05	.27	3.91	***
Horizontal individualism to group performance	-.06	.06	-.13	-.97	
Vertical individualism to group performance	.12	.06	.26	2.14	*
Horizontal collectivism to group performance	-.15	.10	-.25	-1.46	
Vertical collectivism to group performance	.23	.16	.30	1.49	
Interaction climate to group performance	.97	.11	.80	8.68	***

*$p < .05$. **$p < .01$. ***$p < .001$.

Indirect effects. The resulting structural model, had close-to-acceptable fit, because not all indices reached their acceptable criterion. For example, the acceptable criterion for the TLI and CFI is .95 – but the model TLI and CFI values were .92 and .93 respectively. However, as shown in Table 12, the GFI and RMSEA were acceptable; and the TLI, CFI, and SRMR were close-to-acceptable. Therefore, the model should be considered as acceptable as the whole (Brown & Cudeck, 1993; Hu & Bentler, 1999). The model accounted for 34.1% of the variance of interaction climate and 71.5% of the variance of group performance. The findings in Table 15 reveal, however, that only two path coefficients were statistically significant. I will discuss findings further in the evaluation of mediation section.

Table 15

Unstandardized and Standardized Path Coefficients for the Proposed Indirect Effects Structural Model

Path	B	*SE*	β	t	
Equality matching to interaction climate	.11	.10	.15	1.19	
Market pricing to interaction climate	-.10	.06	-.16	-1.62	
Horizontal individualism to interaction climate	-.16	.08	-.43	-1.95	
Vertical individualism to interaction climate	.12	.07	.30	1.60	
Horizontal collectivism to interaction climate	-.16	.14	-.33	-1.09	
Vertical collectivism to interaction climate	.47	.21	.74	2.21	*
Interaction climate to group performance	1.03	.10	.85	10.66	***

$^*p < .05.$ $^{**}p < .01.$ $^{***}p < .001.$

Testing for Mediation

To test the mediating effect of interaction climate, bootstrapping procedures were conducted ($N = 5000$ samples). As suggested by Kline (2011), a variable is deemed a mediator when the following criteria are met: the independent variable significantly predicts the

mediator; the mediator significantly predicts the dependent variable; and the indirect effect is statistically significant but the direct effect is not statistically significant. Bootstrapping procedures were conducted to determine the significance of the direct and indirect effects.

As shown in Table 15, equality matching, market pricing, horizontal individualism, vertical individualism, horizontal collectivism did not significantly predict interaction climate. Therefore, the first criterion for mediation was not met. Because these constructs did not meet this first criterion, the mediating effect of interaction climate on these constructs and group performance will not be further evaluated.

Only vertical collectivism significantly predicted interaction climate, $\beta = .74$, $p < .05$. Thus, this construct met the first criterion for mediation. Interaction climate also significantly predicted group performance, $\beta = .85$, $p < .001$. Therefore, the second criterion for mediation was met. Finally, as shown in Table 16, the indirect effect of vertical collectivism on group performance was statistically significant but its direct effect was not significant. As such, the third criterion for mediation was met. Therefore, interaction climate fully mediated the relationship between vertical collectivism and group performance.

Table 16

Standardized Direct and Indirect Effects of Vertical Collectivism on Group Performance

Effect	Model w/o Direct Effect		Model w/ Direct Effect	
Indirect	.62	**	.53	**
Direct	--		.17	

* $p < .05$. ** $p < .01$. *** $p < .001$.

Summary of Findings

  Hypothesis 1. It was hypothesized that communal sharing would be positively correlated with group interaction climate, group member satisfaction, and group effectiveness. Due to lack of discriminant validity of the construct communal sharing variable was removed from SEM. Therefore, the hypothesis was not tested.

  Hypothesis 2. It was hypothesized that authority ranking would be positively correlated with group interaction climate, group member satisfaction, and group effectiveness. Due to lack of discriminant validity of the construct authority ranking variable was removed from SEM. Therefore, the hypothesis was not tested.

  Hypothesis 3. It was hypothesized that market pricing would be negatively correlated with group interaction climate, group member satisfaction, and group effectiveness. The findings in Table 14 show that market pricing is negatively correlated with interaction climate, $\beta = -.21$, $p < .05$, but positively with group member satisfaction and group effectiveness, $\beta = .27$, $p < .001$. As such, the third hypothesis was partly supported.

  Hypothesis 4. It was hypothesized that equality matching would be negatively correlated with group interaction climate, group member satisfaction, and group effectiveness. The findings in Table 14 reveal that equality matching was not significantly correlated with group interaction climate; nor with group effectiveness and satisfaction. Thus, the fourth hypothesis was not supported.

  Hypothesis 5. It was hypothesized that vertical individualism would be negatively correlated with group interaction climate, group member satisfaction, and group effectiveness. As shown in Table 14, vertical individualism was not significantly correlated with interaction

climate; but positively with group effectiveness and satisfaction. Accordingly, the fifth hypothesis was not supported.

Hypothesis 6. It was hypothesized that vertical collectivism would be negatively correlated with group interaction climate, group member satisfaction, and group effectiveness. The findings in Table 14 reveal that vertical collectivism was not significantly correlated with group member satisfaction and group effectiveness, but positively correlated with interaction climate. Thus, the sixth hypothesis was not supported.

Hypothesis 7. It was hypothesized that horizontal individualism would be positively correlated with group interaction climate, group member satisfaction, and group effectiveness. The findings in Table 14 show that horizontal individualism was not significantly related with any of the dependent measures. Therefore, the seventh hypothesis was not supported.

Hypothesis 8. It was hypothesized that horizontal collectivism would be positively correlated with group interaction climate, group member satisfaction, and group effectiveness. The findings in Table 14 indicate that horizontal collectivism was not significantly related with any of the dependent measures. As such, the eighth hypothesis was not supported.

Hypotheses 9 a, b. It was hypothesized that relational models would relate to group satisfaction and group effectiveness through their effects on interaction climate. The findings in Table 15 indicate that these hypotheses were not supported.

Hypotheses 10 a, b. It was hypothesized that horizontal collectivism, horizontal individualism, vertical collectivism, and vertical individualism would affect group satisfaction and group effectiveness through its effect on interaction climate. Vertical collectivism did affect group satisfaction and group effectiveness through its effect on interaction climate (as shown in Table 15). Therefore, these hypotheses were partly supported.

Table 17

Summary of Findings

Hypothesis	Result
1 Communal sharing, interaction climate, satisfaction, and effectiveness	Not supported
2 Authority ranking, interaction climate, satisfaction, and effectiveness	Not supported
3 Market pricing, interaction climate, satisfaction, and effectiveness	Partly supported (inter. climate)
4 Equality matching, interaction climate, satisfaction, and effectiveness	Not supported
5 Vertical individualism, interaction climate, satisfaction, and effectiveness	Not supported
6 Vertical collectivism, interaction climate, satisfaction, and effectiveness	Not supported
7 Horizontal individualism, interaction climate, satisfaction, and effectiveness	Not supported
8 Horizontal collectivism, interaction climate, satisfaction, and effectiveness	Not supported
9a Relational model affects group satisfaction through interaction climate	Not supported
9b Relational model affects group effectiveness through interaction climate	Not supported
10a Cultural dimensions affect group satisfaction through interaction climate	Partly supported (vertical collect)
10b Cultural dimensions affect group effectiveness through interaction climate	Partly supported (vertical collect)

CHAPTER 5. DISCUSSION

Review of Major Propositions and Findings

At the beginning the question was posed: "How does cultural diversity link to perception of communicative climate in workgroups and consequently perceptions of group satisfaction and effectiveness?" The primary focus of this research was to critique and reconceptualize Oetzel's (2005) Effective Intercultural Workgroup Communication Theory (EIWCT). The research explored the foundational research concepts in Oetzel's theory: situational features (history of unresolved conflicts, equal/unequal status, and ingroup/outgroup), self-construals, face-concerns, interaction climate, and task and relational group effectiveness and satisfaction. The central critique of Oetzel's theory was the operationalization of group diversity through self-construals, face concerns and ethnic identification. The current study proposed that relational models and horizontal/vertical individualism/collectivism may more completely and accurately capture diversity dimensions because they are considered deep-level diversity features (Fiske, 2004; Triandis & Gelfand, 1998). Even though not all hypotheses were supported, several variables were significantly correlated with the tested outcomes, i.e. interaction climate, group satisfaction and group effectiveness. Specifically, the relational model of market pricing, and the cultural dimensions of vertical collectivism and vertical individualism were significantly related to some outcomes variables.

Study findings suggest that the use of at least one of the relational models (market pricing) in a given situation, and cultural dimensions of vertical collectivism and vertical individualism might be influential in terms of explaining group members' perception of interaction climate, and perception of group satisfaction and effectiveness. These findings do not contradict Oetzel's (2012) study results of the EIWCT testing but rather reconceptualize the theory by adding new dimensions of relational models and horizontal/vertical

individualism/collectivism concepts as indicators of deep level diversity. In the following sections these findings and conclusions will be further explored and discussed. Implications for theory and practice will also be discussed.

Relational Models and Perceived Interaction Climate, Group Satisfaction and Effectiveness

This section will briefly summarize the results regarding the relational models (RMs) and then discuss the implications of these findings. The first two hypotheses were not supported because two RMs, communal sharing and authority ranking, were removed from SEM modeling as they were not statistically different from equality matching and market pricing, respectively. As predicted, in the third hypothesis, a negative correlation between the relational model of market pricing and interaction climate (H3a) was found, but there was a positive (vs the predicted negative) correlation between the relational model of market pricing and group member's satisfaction and effectiveness (H3b, c). Therefore, only part of the third hypothesis was supported (H3a). Finally, the results of the fourth hypothesis tests show that the relational model of equality matching was unrelated to the group interaction climate and to group members' performance (H4a, b, c). Thus, the fourth hypothesis was not supported.

These varied results of RMs regarding their relationships to perceived group processes suggest that other influences may be at play here. Specifically, I will examine these results through the concept of trust and its implications for RMs, the role of sample variability of relevant variables, and the impact of other participant characteristics such as sex and age on participants' perceptions.

Of relevance in terms of group qualities is the concept of trust. Sheppard and Sherman (1998) proposed that each relational model is associated with the development of trust along

two dimensions: shallow/deep and dependence/ interdependence. The depth dimension relates to the importance, range, and number of contacts between the individuals, while the interdependence dimension refers to the degree to which the parties' behaviors are contingent. In a dependent relationship one person depends on the other, but not vice versa, while in an interdependent relationship both parties depend on each other. Sheppard and Sherman (1998) proposed that market pricing is characterized by shallow dependence between the individuals, authority ranking by deep interdependence, equality matching by shallow dependence, and communal sharing by deep interdependence. The deeper the interdependence, the more trusting relationships are developed. Based on Sheppard and Sherman's argument, one could expect that the more trusting the relationship, the higher the ratings of group interaction climate, group member satisfaction and group effectiveness would be.

Market pricing and equality matching relational models (the two relational models retained in this study) are characterized by shallow dependence indicating that the importance, range, and number of contacts between individuals are relatively low within groups that prefer these models. This suggests that workgroup members may place little value on relationships and connections but rather on their own versus the group's goals and success. Consequently, interaction climate, perception of group satisfaction or effectiveness might not be prioritized by group members who display market pricing and equality matching characteristics.

In this study, as predicted, greater endorsement of the market pricing relational model was associated with lower ratings of the group interaction climate. However, contrary to the prediction, higher market pricing was associated with greater perception of group performance. This finding is inconsistent with the theories of Shepard and Sherman (1998), and it might suggest that Shepard and Sherman's trust concept is not as critical in forming the perception of

group effectiveness or satisfaction with the group as they suggest. Finally, contrary to predictions, the individual use of relational model of equality matching (shallow dependence based on Shepard & Sherman, 1998) was not related to climate, satisfaction or group effectiveness.

Another possible reason for these results concerns the range of variability of each variable, i.e., a restriction of range that might have an impact on the ability to detect true relationships. Variability of the relational models constructs in the sample was examined on a 5-point scale: equality matching ($M = 3.58$, $SD = 0.88$) and market pricing ($M = 2.83$, $SD = 1.05$). This restricted variability might, for instance, explain the lack of correlation between the relational model of equality matching, interaction climate, and group performance. That is the less variability in the sample on this RM, the less variability there is to correlate with these proposed outcomes. It might also serve as evidence that relational models are displayed on a continuum where individuals might endorse one relational model while not necessarily excluding others, meaning that the same individual might use a couple of models depending on the situation. In this study, focusing on the mean scores of 4 or higher on the 5-point scale, 84% of participants endorsed communal sharing, 61% authority ranking, 81% equality matching, and 56% market pricing. Finally, the restricted variability of market pricing and equality matching might indicate that the concept of trust and shallow dependence (Shepard & Sherman, 1998) need to be examined further in future studies. Since both of these models reflect shallow dependence, a fuller test of the concept of trust and depth and interdependence/dependence should be part of future research.

These varied results of RMs regarding their relationships to perceived group processes and outcomes suggest that other participant characteristics that were not utilized in the analysis,

may have been affecting the results. Harrison et al. (2002) suggested that age and sex might have moderating effects on group processes and people's perceptions of them. Specifically, differences in age are often negatively related to within-group functioning (Kirchmeyer, 1995), lack of cohesion (O'Reilly et al., 1989), ineffective communication (Zenger & Lawrence, 1989), and higher turnover (Jackson et al., 1991; O'Reilly et al., 1989; Tsui, Egan, & O'Reilly, 1992). Similar relationships exist for sex diversity in groups: negative outcomes such as feelings of isolation, dissatisfaction, and lack of attachment in sex-dissimilar situations for females (Konrad, Winter, & Gutek, 1992; Pelled & Xin, 1997), and lower organizational attachment for males (Tsui et al., 1992). Harrison et al. (2002) found, however, that even though age and sex are important factors connected to group work, their influence tends to diminish over time and more individual characteristics such as personality and attitude influence teamwork more profoundly. Even though Harrison et al. (2002) and others did not examine the links of age and sex to relational models or horizontal/ vertical collectivism/ individualism, they established the link between age/sex factors to teamwork interactions. In the current study the majority of participants (68%) were younger than 45, and the sex composition was 58% male and 42% women. Thus, because the sample varied in terms of age and sex, examining the relationships of these demographics becomes relevant in helping to understand the results of the current study.

A post hoc moderating analysis (see Appendix E), which used the newly constructed measures based on the factor analysis for the SEM, found no significant moderating effect of sex on the relationship between equality matching and group performance, and no moderating effect of sex on equality matching and interaction climate. That is, neither women's nor men's perception of group performance or interaction climate was associated with their individual

preferences of using equality matching relational model. The first SEM analysis (without moderation) showed no significant relationship between equality matching and group performance (H4b,c) either. An examination of the relationship between EM and group performance for men and for women suggests a possible reason for this lack of the relationship. It may be that the sex-related differences in relationships effectively cancelled each other out, resulting in an overall relationship of zero. These findings are surprising, particularly because for equality matching relational models status and position within the group have influence on interaction among group members. Status and position within the group have been strongly influenced by perception of sex equality, meaning that in some groups there might be different expectations of men and women, resulting in different responsibilities and pay structures (Williams & O'Reilly's, 1998). Since for the EM relational model equality plays an important role, sex was expected to influence the relationships between this relational model and outcomes. It is possible then that other factors, i.e. organizational culture, influenced these outcomes.

The post-hoc analysis found a significant moderating effect of sex on the relationship between market pricing and interaction climate but only for men. One of the present hypotheses (H3a,b,c) predicted a negative relationship between market pricing and interaction climate, and group performance, thus the negative relationship with interaction climate was predicted. The relationship between market pricing and interaction climate was negative for men compared to women, where the relationship was zero. That is, men who display market-pricing behavior evaluate interaction climate less favorably than women who display market-pricing behavior. However, no moderating effect of sex on the relationship between market pricing and group performance was found. Thus, sex did not seem to be a consistent factor in explaining the results

of findings in the first empirical SEM analysis of a positive relationship between market pricing and group performance.

Cultural Dimensions and Perceived Interaction Climate, Group Satisfaction and Effectiveness

The results of the hypothesis tests (H5a, b, c) show that the cultural dimension of vertical individualism is not significantly correlated with the group interaction climate, but positively correlated with the perception of group performance, contrary to expectations that higher scores on vertical individualism are associated with the lower ratings of perceived group interaction climate, satisfaction with the group and group effectiveness. These findings were inconsistent with the existing literature (Triandis & Gelfand, 1998, Singelis et al., 1995), which argues that vertical individualism reflects an autonomous self where individuals see each other as different, and inequality is expected. The self is not only independent but also different from the others. Competition is a very important aspect of this cultural pattern while group cooperation and quality interaction are less likely (Singelis et al., 1995). Interestingly, there was a positive correlation found between vertical individualism and participants' perceptions of group performance meaning that higher endorsement of vertical individualism use was associated with higher ratings of perceived satisfaction with the group, and the group's effectiveness. The aspect of verticality was explored by some researchers in more depth (e.g. Singelis et al., 1995) because it is represented in North American "mainstream" culture more visibly than in other Western cultures. It may be that many findings that included vertical dimension were statistically significant because the sample was collected among employees in North America.

As with the results regarding RMs, it may be that other participant characteristics may be at play here. As mentioned earlier, Harrison et al. (2002) suggested that factors such as age

or sex of team members might influence the impact of the cultural dimension on the group members' perceptions of their teams and group interaction climate. Age and sex are considered surface-level diversity characteristics that might reflect deep level individualism/collectivism vertical/horizontal cultural dimensions. The moderating effect of age and sex on the relationship between the vertical individualism and interaction climate were tested, however, the results were not statistically significant (see Appendix E).

Because I assessed the individual perceptions and not the group level perceived satisfaction and effectiveness (group performance), the direction of correlation (positive instead of negative) might have been affected because participants may have been motivated to evaluate themselves in more positive light. Actual data on the composition of the group to which respondents belong was not collected. Consequently, the degree of heterogeneity/diversity of the respondents' groups could not be assessed. It might be that respondents indicating vertical individualism preferences were recalling their experience working in teams where the level of heterogeneity was low and other group members' preferences for vertical individualism was similar. Therefore, their expectations regarding group performance were similar, meaning that vertical individualism group members focus on their own achievements reflected in group performance and not on the interaction among group members.

The hypothesis (H6a, b, c) that the greater endorsement of vertical collectivism characteristics, the lower participants' ratings of the perceived group interaction climate, satisfaction with the group and group effectiveness was not supported. It was found that vertical collectivism was significantly positively correlated with interaction climate. Thus, the greater the endorsement of vertical collectivism, the greater perceived group interaction climate by a group member. These findings are contradictory with the existing literature; the most important

attributes that distinguish among different kinds of individualism and collectivism are the relative emphases on horizontal and vertical social relationships (Triandis & Gelfand, 1998). In other words, horizontal patterns assume that one's self is more or less like every other self and group cooperation is expected. By contrast, vertical patterns consist of hierarchies, and one's self is different from other selves. In essence then, in vertical collectivism (VC) the individual perceives the self as an aspect of the in-group but unlike in horizontal collectivism the members of the in-group are different from each other and some are higher status than others. The self is still interdependent but different from the self of others. Unequal status within the group is accepted in the vertical pattern (Singelis et al., 1995). Thus, the perceived interaction climate of the group, and the perception of satisfaction with the group and group effectiveness may not be viewed as important because individuals may focus more on their own achievements rather than on cooperation. As with vertical individualism, whether age and sex moderated these relationships was examined and findings suggested that they did not.

So what would be the possible reason for the positive relationship between vertical collectivism and interaction climate? It might be the collectivism element, i.e., considerations of the group and working together to achieve goals. The vertical element could be interpreted as a recognition that each group member brings their own strengths (i.e., group members are not the same as each other) and that all of those parts are important in enhancing group performance. That is, being different is a good thing. This recognition may contribute to viewing group interaction as something of value and indeed critical in the achievement of desired group outcomes. Thus, collectivism may be the critical discerning aspect here, i.e., belief that all parts are needed in order to achieve. This interpretation suggests that interaction

climate as a dimension would be important and have value in and of itself regardless of group achievement.

The hypothesis (H7a, b, c) that the more individuals display horizontal individualism, the higher their ratings of group interaction climate and group member performance was not supported. Neither positive nor negative correlations were found. This finding is inconsistent with the existing literature. In horizontal individualism an autonomous self is expected. At the same time, however, as pointed out by Triandis and Gelfand (1998) the horizontal dimension emphasizes interconnectedness. Neither age nor sex was found to have a moderating effect on the relationship between horizontal individualism, interaction climate or group performance. It is possible then that other factors might have contributed to these findings, for example, the nature of projects and tasks performed. In some instances projects might require more individual attention, thus group cohesion is not fully developed because a group effort is not really required.

Finally, the hypothesis (H8a, b, c) that higher endorsement of horizontal collectivism is associated with the higher ratings of perceived interaction climate, group satisfaction and group effectiveness was also not supported. Again, this finding is inconsistent with the existing literature that claims horizontal collectivism is a cultural pattern in which the individual perceives the self as a part of an in-group. The members of the in-group are expected to be extremely similar to each other, and the self is interdependent. Equality is very important in this cultural pattern and quality interactions expected (Singelis et al., 1995). Sex was found to have a moderating effect on the relationship between horizontal collectivism and group performance (satisfaction and effectiveness), and between horizontal collectivism and interaction climate. Men's relationship was slightly negative while women's was positive, taken together the two

may effectively cancel each other out. This pattern is true for both interaction climate and group performance. Thus, the above prediction is true for women but not for men. One of the possible explanations of these findings might lie in the fact that women may focus more on interconnectedness (one of the main characteristics of horizontal dimension) than men (Tannen, 1990).

Regarding the cultural dimensions of H/V and I/C, an examination of participants' variability is useful. The findings of horizontal individualism ($M = 7.18$, $SD = 1.51$), vertical individualism ($M = 5.62$, $SD = 1.86$), horizontal collectivism ($M = 7.14$, $SD = 1.31$, and vertical collectivism ($M = 7.44$, $SD = 1.22$), are consistent with the assumption (Earley, 1997, 1998) that individuals may vary their endorsement and display of these dimensions based upon the situation. For example, an individual might display characteristics of one cultural dimension in one work group situation but in other situations, their behaviors might be the reflection of a different dimension or model. With respect to these measures, respondents were asked to think about different life experiences rather than tie them to a specific work group experiences. In this study, focusing on mean scores of 7 or higher on the 9-point scale: 76% of participants exhibited horizontal individualism, 31% vertical individualism, 81% horizontal collectivism and 88% vertical collectivism. As with relational models, individuals have the tendency to exhibit different characteristics depending on the situation, and it is possible to display, for instance, horizontal individualism as a primary characteristic under certain circumstances such as assuming the role as a leader in a group when a deadline is approaching. Horizontal collectivism may be more relevant in a different situation, for instance, being a group member exhibiting shared and collaborative leadership style when there is less time constraint. Thus, different circumstances or different groups might provoke different characteristics being

displayed. As noted before, no specific data was collected on the composition and activities of the groups' participants were thinking of when responding to the survey.

In order to make sense of these varied results, this research analyzed the connections between horizontal, vertical, individualism, collectivism and the relational models of equality matching and market pricing (see Appendix E). In the present study equality matching was correlated with horizontal and vertical collectivism, and market pricing with vertical individualism. This observation partially confirms Triandis et al.'s (1994) theory that the relational model of equality matching is a reflection of horizontal individualism and collectivism. In addition, the results align with Earley's (1997, 1998) suggestions about the connections between horizontal collectivism and equality matching relational model. These findings help explain the link between relational models and cultural dimensions as their antecedents. It appears, as suggested by Triandis and Gelfand (1998), that relational models which are applied in different settings are culturally socialized. These observations might enable future researchers to explain and predict what relational models are likely to be used by individuals from different cultures based on their responses to horizontal/vertical and individualism/collectivism. Furthermore, the present results confirm Earley's (1997, 1998) findings that relational models, similar to horizontal/ vertical individualism/collectivism cultural dimensions, should be treated on a continuum and even though one specific relational model may be used by a group member in a certain situation it does not mean that the same model will be used in a different situation.

Mediation of Relational Models, Cultural Dimensions, Perceived Group Satisfaction and Effectiveness by Perceived Interaction Climate

Contrary to expectation, interaction climate had a mediating effect only for the relationship between vertical collectivism and group performance (H10a,b). Because equality matching, market pricing, horizontal individualism, vertical individualism and horizontal collectivism did not significantly predict interaction climate, it could not function as a mediator in the relationship between these variables and the group performance outcome.

With the exception of vertical collectivism, the findings of the mediation hypotheses testing are inconsistent with existing literature. Oetzel (1995) argued that interaction climate fully mediates the influence of diversity on the outcome. In their study Oetzel et al. (2012) found that communication behaviors that constitute group interaction climate influence groups' task and relational outcomes. Oetzel et al. did not test the mediating effect of interaction climate in the same study where EIWCT was tested.

Oetzel et al. (2012) tested the influence of independent/interdependent self -construals, other/ mutual face and self –face on interaction climate. His findings were inconclusive as an independent self-construal was not found to significantly influence interaction climate while an interdependent self-construal was found to impact the interaction climate. Also, other and mutual face constructs were not found to have a significant effect on the interaction climate while the self-face variable was found to significantly influence it. Specifically, there was a positive relationship between individuals' interdependent self-construal and their report of the satisfaction with the group (the more individuals are interdependent, the better the rating of the satisfaction with the group), and a negative relationship between self-face and satisfaction with the group (the less individuals have self-face, the better the rating of satisfaction with the

group). Thus, people who value group and group goals over their own goals and those who were least concerned about their own image were most likely to be satisfied with the group.

In light of this study then, it might be helpful to include variables of self-construal and face construct in addition to horizontal/vertical individualism/collectivism and relational models in future research. This might be particularly relevant in terms of self-construal variables that exhibit the dimension of independence and interdependence that are similar to the horizontal/vertical individualism/collectivism construct and that is highlighted in Sheppard and Shermann's (1998) work on trust. In the present study, vertical collectivism was correlated with interaction climate while vertical individualism was correlated with group performance. Oetzel et al. (2012) found that the more individuals are interdependent (interdependent self – construal), the better the ratings of group satisfaction while the hypothesis that the less individuals are independent, the better the rating of the satisfaction with the group was not supported. Perhaps, then, including the vertical collectivism/individualism dimension with the study of self-construal could bring a more nuanced understanding of cultural dimensions. The concept of vertical collectivism would add the vertical orientation (an emphasis on hierarchy, an acceptance of inequality, and the assumption that rank has its privilege) while at the same time maintain the feature of interdependence. The construct of interdependence should then be viewed as more complex than suggested by Oetzel et al. (2012).

Methodological and Theoretical Contributions

This dissertation makes several contributions to the organizational communication literature on workgroups. First, it applies relational models theory (Fiske, 1991) to workgroups, which has been done only by Vodosek (2003, 2009). Although Vodosek's research shows no construct issues in terms of the relational models application, the findings in this study reveal

that communal sharing and authority ranking relational models were not distinct from equality matching and market pricing, respectively, and had to be removed from the SEM analysis. One possible conceptual explanation might be related to Triandis et al.'s (1994) suggestions that both communal sharing and authority ranking share a common cultural characteristic: vertical collectivism. Given that communal sharing and authority ranking relational models were not included, the variability in them that reflects vertical collectivism is excluded. In this situation, the vertical collectivism variable itself captures such variability uniquely in the analysis making it available to correlate with interaction climate and group performance.

Secondly, in this study group effectiveness and group satisfaction constructs did not exhibit discriminant validity. Because these two constructs were highly correlated, they were made to load onto a second-order construct in the structural model: group performance. Both of these constructs (reflecting task and relational outcomes, respectively) were used by Oetzel et al. (2012) in his testing of the EIWCT with no report of these types of issues. Since group effectiveness and satisfaction were combined into one construct it was impossible to discover if the cultural background of individuals relates to their focus on either perceived group effectiveness (task) or perceived group satisfaction (relational). One of the goals of this study was to test this assumption, thus lack of testing of these predictions is one of the current study's shortcomings. Many scholars claim that cultural background is a crucial factor determining how individuals approach work with groups. Hofstede (1991) noted that people from individualistic cultures focus primarily on the task dimension whereas people from collectivistic cultures primarily focus on the relational dimensions and then focus on the task dimension. Oetzel (2005) included relational and task dimensions in his EIWCT but they were not tested empirically. As explained earlier, the current study was conducted only at the individual level

and furthermore study participants were not in the same group together. Thus, the data that was gathered reflected only individual perception rather than the experience of all members working in the same group. Vodosek (2003) emphasized the importance of examining both individual and group level results so there is no bias in perception, i.e. group level results would provide information on how particular group performed as a whole which might be different than individual perception of the group member.

Thirdly, this study explicitly applied horizontal/vertical and individualism/collectivism constructs to organizational communication research, generally and on workgroups specifically, which has not been previously done. The finding of this study reveals that vertical collectivism connects to interaction climate while vertical individualism connects to group performance. This finding might suggest that verticality and individualism/collectivism dimensions are valuable cultural characteristics that add more complexity to the self-construal variable proposed by Oetzel (2005) and Oetzel et al. (2012). It needs to be emphasized, however, that both horizontal and vertical dimensions (H/V) are important in refining the individualism/ collectivism (I/C) construct. Oetzel (2005) and Oetzel et al. (2012) focused only on the I/C dimension. The current study suggests that the dimension of H/V needs to be considered along with I/C in examining how diversity influences group processes and outcomes.

Furthermore, relational models and cultural dimensions, as indicators of deep level diversity, are important considerations in understanding communication behavior and group performance in workgroups. In addition, while not initially investigated, sex appears to be an important indicator of diversity with influences beyond what is captured in RM and H/V and I/C. A closer examination of how sex as a surface level indicator of diversity maps onto these

deeper level indicators would be important in order to tease apart the effects uniquely linked to sex.

Practical Implications

Culturally diverse groups pose a challenge to their members and their leaders. Research suggests that cultural diversity, if not managed well, might bring tensions, conflicts, and unfavorable group outcomes. Group members and managers tend to be unprepared for the differences that employees from varied cultural backgrounds bring to the workplace (Barsade, Ward, Turner, & Sonnenfeld, 2000; Riordan, 2000). However, research also shows that if managed well, diverse workgroups bring more valuable solutions and creativity to the workplace as compared to homogenous work groups (Rodriguez, 1998; van Knippenberg & Schippers, 2007). Thus, they bring the competitive advantage to organizations.

This study demonstrates that individuals vary in the degree to which they display/endorse horizontal/vertical and individualism/collectivism. They also differ in terms of the extent of use of specific relational models in a group context, and these differences are likely linked to individuals' cultural backgrounds. Lack of knowledge about, or appreciation for these "unseen" differences might bring tension and discontent to group members as well as difficulties with managing workgroups in diverse workplaces. More broadly, the organization may miss opportunities to capitalize on these differences in ways that could enhance creativity and performance.

Based on the evidence from this study, in companies where group work is prioritized, employees might be evaluated based on their relational models or cultural dimensions preferences to find a particular grouping of individuals with compatible relational models. This would enhance the likelihood of effective cooperation in work group in terms of interaction

climate. It is possible to find members who have the same relational models preferences but come from different cultures, thus their different perspectives and resulting creativity of heterogenous group composition would not be eliminated. From another perspective, group members could be educated about the differences among them, what it means for their preferences and ways of communicating, and ways to capitalize on these differences to enhance quality interaction and outcomes. The current study suggests articulation and discussion of deep level diversity may be of value.

Limitations and Future Directions

There are several limitations of this study. Of note is that all measures were self-report, reflecting perceptions of outcomes and interactions rather than the actual or objective outcomes and interactions. Ideally, in addition to the individuals' responses, observations of communication behavior should be included for example, group supervisor ratings of group interaction, effectiveness and satisfaction. The measures of relational models, cultural dimensions, and group performance were self-reported in this research, and since this study focused on individuals' perceptions of group-work they are adequate. It is, however, important to indicate that additional observations would bring more objective measures, thus enhancing the practical value of this study and the potential of implementation in work settings. The first design of this study included this measure, however, due to the difficulties in obtaining actual workgroups as the subject of study, the self-reported individual-level measures were used, which made outside evaluations of behaviors difficult. Given this study focused only on the individuals' experience in groups rather than on individuals working together in a group, this was not possible. Future research needs to build in additional "objective" assessments of

communication behaviors in groups as well as their outcomes both relationally and in terms of task accomplishment and quality.

In addition, even though this study investigated group features, it reflected an individual's perspective of their group's behavior. The main purpose of this study was to critique and reconceptualize Oetzel's (2005,) EIWCT. The theory was originally tested on three levels: individual, group, and multi-level (examining both levels simultaneously) but only on the individual level in this study. Future research should address this limitation by gathering data from established workgroups to ensure the analysis on the group and multi-levels.

Furthermore, since the main focus of this study was to consider the connection of diversity of group members to group interaction and performance, a larger pool of participants with more diverse backgrounds would provide more comprehensive understanding of factors influencing interaction in intercultural work groups. In addition, gathering information regarding the diversity of each participant's group, might be critical in addressing these questions. These factors should be considered in future research.

Finally, even though SEM analysis is the analytic approach of choice when multiple relationships are being examined, it proved to be a challenging tool in this study because it eliminated variables of communal sharing and authority ranking, restructured interaction climate, combined group effectiveness and group satisfaction into one variable of group performance, and restructured all the measures. Consequently, some of the hypotheses could not be tested. Future research needs to consider the strengths and challenges of different analytical techniques.

APPENDIX A. MODELS

Situational Features:
History of Unresolved Conflicts
In-group/Outgroup
Equal/Unequal Status

Self-Construals

Face-Concerns

Group Communication Process: Interaction Climate
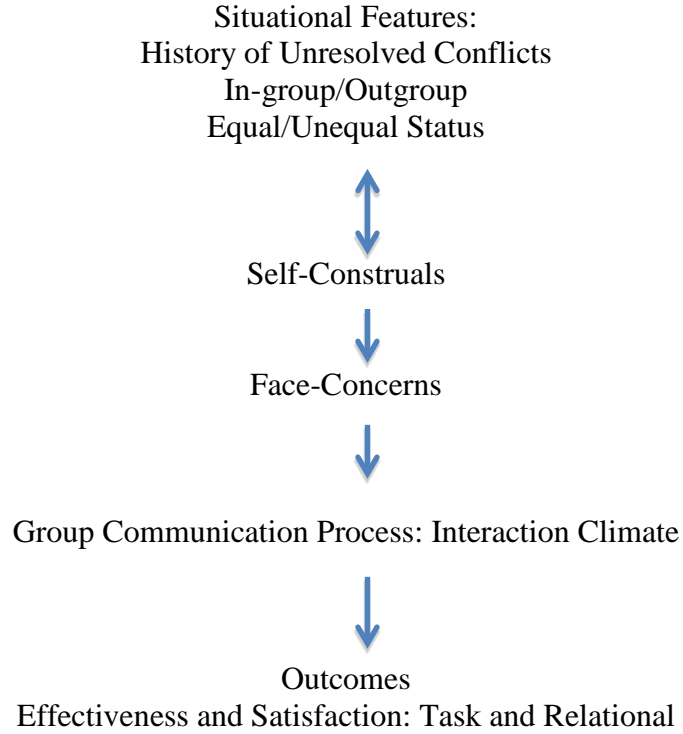
Outcomes
Effectiveness and Satisfaction: Task and Relational

Figure 1. Oetzel's effective intercultural workgroup communication model.
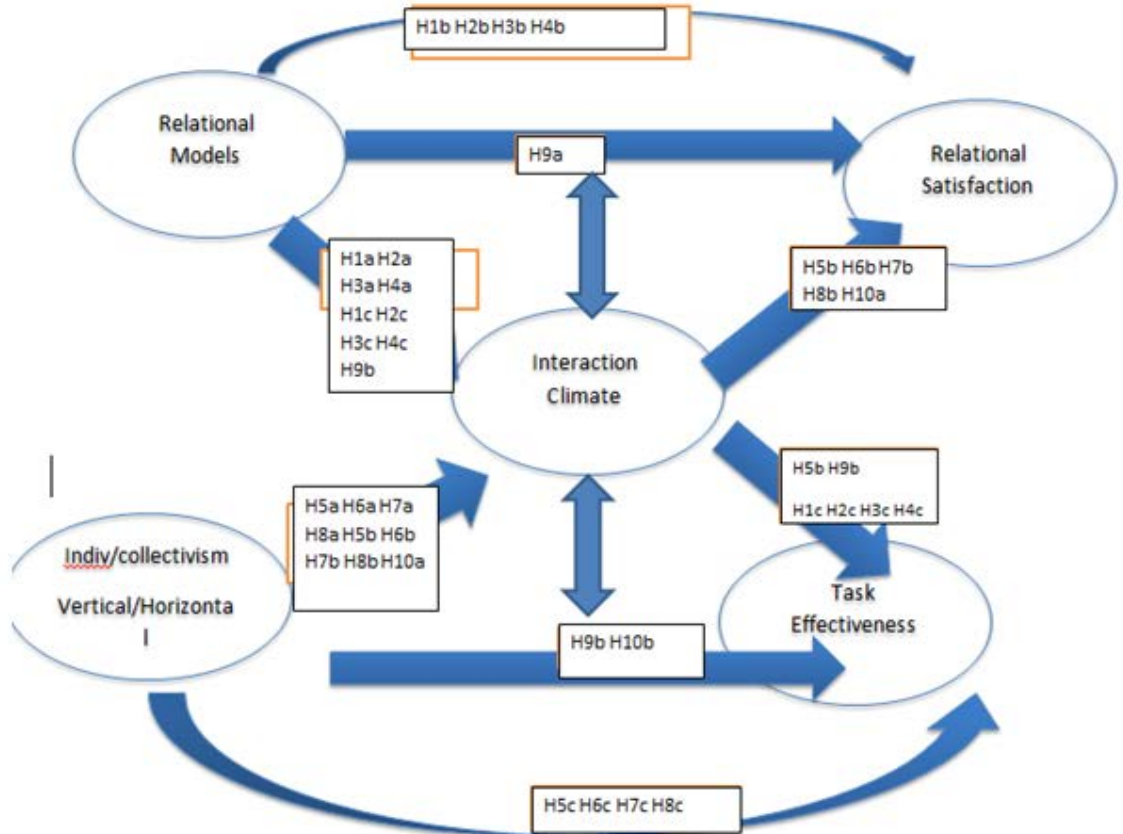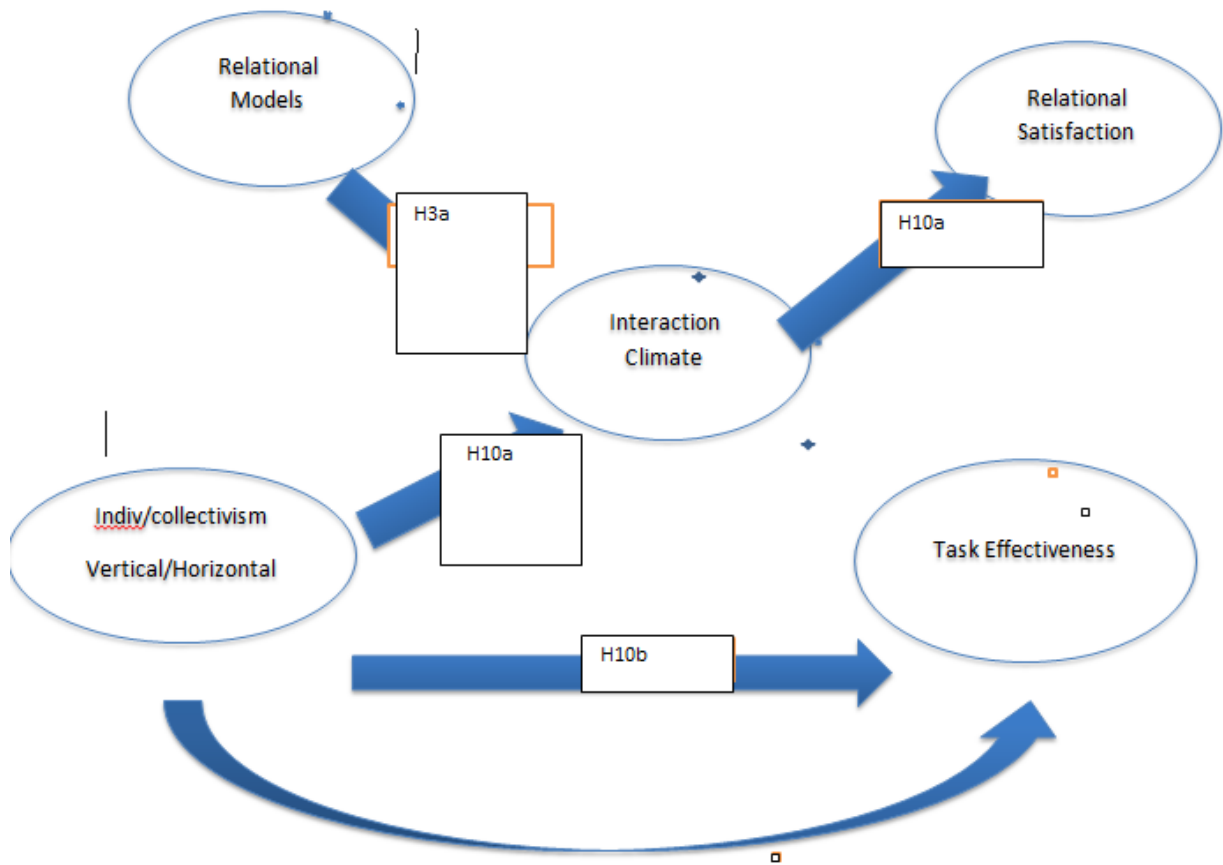
Figure 2. Proposed model.

Figure 3. Tested model with significant relationship paths.

APPENDIX B. POWER ANALYSIS

In this study several models were examined using structural equation modeling (SEM).

The first model tested whether vertical individualism, horizontal individualism, vertical collectivism, horizontal collectivism, use of relational models of communal sharing, use of relational models of authority ranking, use of relational models of market pricing, and use of relational models of equality matching predict the ratings of the group interaction climate. The α for the test of this model was set at .05. To achieve power of .80 and a medium effect size (f^2=.15), a sample size of 109 was required to detect a statistically significant model (F (8, 100) = 2.19).

The second model tested whether vertical individualism, horizontal individualism, vertical collectivism, horizontal collectivism, interaction climate, use of relational models of communal sharing, use of relational models of authority ranking, use of relational models of market pricing, and use of relational models of equality matching predict ratings of the group member satisfaction. The α for the test of this model was set at .05. To achieve power of .80 and a medium effect size (f^2=.15), a sample size of 103 was required to detect a statistically significant model (F (7, 95) = 2.10).

The third model tested whether vertical individualism, vertical collectivism, vertical collectivism, horizontal collectivism, interaction climate, use of relational models of communal sharing, use of relational models of authority ranking, use of relational models of market pricing, and use of relational models of equality matching predict ratings of the group member effectiveness. The α for the test of this model was set at .05. To achieve power of .80 and a medium effect size (f^2=.15), a sample size of 103 was required to detect a statistically significant model (F (7, 95) = 2.10).

The first mediation model tested whether interaction climate mediates the relationship between relational models (communal sharing, authority ranking, market pricing, equality matching) and group satisfaction. The α for the test of this model was set at .05. To achieve power of .80 and a medium effect size (f^2=.15), a sample size of 92 was required to detect a statistically significant model (F (5, 86) = 2.32).

The second mediation model tested whether interaction climate mediates the relationship between relational models (communal sharing, authority ranking, market pricing, equality matching) and group effectiveness. The α for the test of this model was set at .05. To achieve power of .80 and a medium effect size (f^2=.15), a sample size of 92 was required to detect a statistically significant model (F (5, 86) = 2.32).

The third mediation model tested whether interaction climate mediates the relationship between horizontal collectivism, horizontal individualism, vertical individualism, and vertical individualism and group satisfaction. The α for the test of this model was set at .05. To achieve power of .80 and a medium effect size (f^2=.15), a sample size of 92 was required to detect a statistically significant model (F (5, 86) = 2.32).

The fourth mediation model tested whether interaction climate mediates the relationship between horizontal collectivism, horizontal individualism, vertical individualism, and vertical individualism and group effectiveness. The α for the test of this model was set at .05. To achieve power of .80 and a medium effect size (f^2=.15), a sample size of 92 was required to detect a statistically significant model (F (5, 86) = 2.32).

A sample of at least 109 was needed to meet statistical power.

APPENDIX C. RESEARCH INFORMATION SHEET

Title of Study: **Organizational Behavior in Intercultural Work Teams**

Principal Investigator (PI):   Renata Kolodziej-Smith
                                    Department of Communication Wayne State University
                                    rksmith@wayne.edu

Purpose:
You are being asked to be in a research study about interactions in intercultural work teams in organizations because you work in intercultural work teams. This study is being conducted at Wayne State University main campus.

Study Procedures:
If you take part in the study, you will be asked to fill out an online survey that will take approximately 20 minutes. There will be multiple choice and true/false questions asking about your cultural background and experiences in teamwork.

Benefits
As a participant in this research study, there will be no direct benefit for you; however, information from this study may benefit other people now or in the future.

Risks
There are no known risks at this time to participation in this study.

Costs
There will be no costs to you for participation in this research study.

Compensation
You will not be paid for taking part in this study.

Confidentiality:
You will be identified in the research records by a code number. There will be no list that links your identity with this code.

Voluntary Participation /Withdrawal:
Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or its affiliates.

Questions:
If you have any questions about this study now or in the future, you may contact Renata Kolodziej-Smith at rksmith@wayne.edu. If you have questions or concerns about your rights as a research participant, the Chair of the Institutional Review Board can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation:
By completing the survey you are agreeing to participate in this study.

APPENDIX D. SURVEY ITEMS

Please indicate your:

1. Sex: Male   Female
2. Age
3. Ethnicity (GLOBE categories country clusters)
   House, R.J., P.J. Hanges, M. Javidan, P.W. Dorfman, V. Gupta, and GLOBE Associates (2004, 2007). *Leadership, culture and organizations: The globe study of 62 societies.* Thousand Oaks, CA: Sage.

Anglo (e.g. Canada, U.S.A., Australia, Ireland, England, South Africa (White Sample), New Zealand
Germanic (e.g. Austria, The Netherlands, Switzerland (German Speaking), Germany)
Latin European (e.g. Israel, Italy, Switzerland (French Speaking), Spain, Portugal, France)
African (e.g. Zimbabwe, Namibia, Zambia, Nigeria, South Africa (Black Sample))
Eastern European (e.g. Greece, Hungary, Albania, Slovenia, Poland, Russia, Georgia, Kazakhstan)
Middle Eastern (e.g. Turkey, Kuwait, Egypt, Morocco, Qatar)
Confucian (e.g. Singapore, Hong Kong, Taiwan, China, South Korea, Japan)
Southeast Asian (e.g. Philippines, Indonesia, Malaysia, India, Thailand, Iran)
Latin American (e.g. Ecuador, El Salvador, Columbia, Bolivia, Brazil, Guatemala, Argentina, Costa Rica, Venezuela, Mexico)
Nordic (e.g. Denmark, Finland, Sweden)

4. Race: White, Black (African American), American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific

Based on your prior experience working in groups (choose ONE specific group in the past) please indicate
5. Length of time spent working in your group: 0-2 years, 3-5 years, more than 5 years
6. Type of group: work group in organization, work group in college
7. Indicate number of members in your group
8. Length of time spent working in the organization: 0-2 years, 3-5 years, more than 5 years

Thinking of this specific group, respond to the following items based on your experience working in that group.
Group interaction climate
Oetzel, J. G., McDermott, V. M., Torres, A., & Sanchez, C. (2012). The impact of individual differences and group diversity on group interaction climate and satisfaction: a test of the effective intercultural workgroup communication theory. *Journal of International and Intercultural Communication,* 5, 144-167.

9. To resolve an issue, we voted and used the majority decision.
10. One or two members were stubborn in their views.
11. We showed positive attitudes towards one another.
12. Everyone had a chance to express his or her opinion.
13. Arguments carried on too long.
14. We used empathy among members.
15. We listened to each other.
16. The way our group related was appropriate.
17. When disagreement occurred, we worked together to resolve them.
18. The interaction of our group was proper.
19. An atmosphere of trust exists in our group.
20. Everyone spoke about the same amount during the activity.
21. The way the other members said some of their remarks was inappropriate.
22. Some members interrupt when another is speaking.
23. We showed encouragement to each other.
24. We had constructive arguments during the activity.
25. At times, people with good ideas didn't speak up.
26. There were rude remarks made during the conversation.
27. There was conflict and hostility among the members.
28. One or two members tended to dominate the discussion.
29. Even though we didn't have total agreement, we did reach a kind of consensus that we all accept.
30. The other members were considerate.

Group effectiveness (task outcome) (Oetzel et al., 2012)
31. I was extremely satisfied with the group outcomes.
32. I am confident that our performance during the activity was satisfactory.
33. We shared the work equally.
34. All of our members were prepared.
35. One or two members pretended to be prepared when they really were not.
36. Some members of the group took the work too lightly.
37. Once or more of the members did not do their fair share.

Group satisfaction (relational outcome) (Oetzel et al., 2012)
38. I was happy with the way our group interacted.
39. I have confidence in the members of my group.
40. I was happy with the way our group worked together.
41. My personal level of satisfaction with the group was high.
42. I would like to work with this group again.
43. I feel a sense of pride being a part of this group.

Horizontal individualism

Triandis, H. C., & Gelfand, M. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology, 74,* 118-128

44. I'd rather depend on myself than others.
45. I rely on myself most of the time; I rarely rely on others.
46. I often do "my own thing."
47. My personal identity, independent of others, is very important to me.

Vertical individualism It is important that I do my job better than others.

48. Winning is everything.
49. Competition is the law of nature.
50. When another person does better than I do, I get tense and aroused.

Horizontal collectivism

51. If a coworker gets a prize, I would feel proud.
52. The well-being of my coworkers is important to me.
53. To me, pleasure is spending time with others.
54. I feel good when I cooperate with others.

Vertical collectivism

55. Parents and children must stay together as much as possible.
56. It is my duty to take care of my family, even when I have to sacrifice what I want.
57. Family members should stick together, no matter what sacrifices are required.
58. It is important to me that I respect the decisions made by my groups.

We all have some idea of what an ideal group should be like in terms of the relationships among group members. Please refer to the statements below and indicate how often – in your personal opinion – each statement should be true in an *ideal* group:

Vodosek, M. (2003). *Finding the right chemistry: relational models and relationship, process, and task conflict in culturally diverse research groups.* (Dissertation). Ann Arbor, MI: University of Michigan Press

Relational models – communal sharing

59. The group makes decisions together by consensus.
60. Members of the group tend to have very similar attitudes and values.
61. "One for all and all for one" is true of the members in the group.
62. Group members have many things in common that make them essentially the same.
63. If one of the group members needs something, other group members give it without expecting anything in return.

Relational models – authority ranking

    64. One of the group members directs the work of the group while the other group members pretty much do what they are told to do.

    65. One of the group members tends to lead.

    66. One of the group members makes the decisions and the other group members generally go along.

Relational models – equality matching

    67. Group members typically divide things up into shares that are the same size.

    68. Group members often take turns doing things.

    69. When group members work together, they usually split the work evenly.

    70. Group members make sure that the group's workload is shared equally.

    71. The group makes decisions by a simple majority vote.

Relational models – market pricing

    72. Group members calculate what their payoffs are in this group and act accordingly.

    73. Group members divide things up according to how much they have paid or contributed.

    74. Group members make decisions according to the ratio of the benefits they get and the costs to them.

    75. Group members choose to participate in the group when it is worth their while to do so.

APPENDIX E. ADDITIONAL ANALYSES

AMOS 23 statistical package was used to run the SEM-model for the independent variables. Furthermore, the moderation of sex and age on the relationship between the DVs and IVs was tested with the help of critical ratios of significance. The reconstructed variables were used in the analysis.

Results for Age

Age was tested as a moderation variable on the relationship between cultural dimensions (horizontal individualism, vertical individualism, horizontal collectivism, horizontal individualism) and relational models (market pricing, equality matching) as independent variables and group performance and interaction climate.

As seen in Table 1, age is not a significant moderator. There is no statistically significant difference between the results of the age groups in terms of the relationship between the independent and dependent variables.

Table 1

Age as a Moderator of the Relationship between the Independent and Dependent Variables

			18-39 years		40 and above		
			Estimate	*p*	Estimate	*p*	z-score
Interaction Climate	<---	Equality Matching	-0.016	.88	0.210	.64	0.497
Interaction Climate	<---	Market Pricing	0.022	.82	-0.099	.49	-0.708
Interaction Climate	<---	Horizontal Individualism	-0.045	.45	-0.464	.36	-0.826
Interaction Climate	<---	Vertical Individualism	0.016	.82	0.533	.37	0.859
Interaction Climate	<---	Horizontal Collectivism	0.015	.88	-0.659	.55	-0.609
Interaction Climate	<---	Vertical Collectivism	0.180	.22	0.945	.44	0.624
Group Performance	<---	Equality Matching	0.062	.54	-0.057	.63	-0.760
Group Performance	<---	Market Pricing	0.157	.08	0.065	.29	-0.850
Group Performance	<---	Horizontal Individualism	-0.018	.74	-0.021	.93	-0.011
Group Performance	<---	Vertical Individualism	0.104	.13	0.048	.86	-0.196
Group Performance	<---	Horizontal Collectivism	-0.107	.25	-0.034	.94	0.169
Group Performance	<---	Vertical Collectivism	0.201	.16	0.032	.95	-0.319

| Group Performance | <--- | Interaction Climate | 0.917 | .00 | 1.238 | .00 | 1.029 |

Note. *** *p* < .01; ** *p* < .05; * *p* < .10.

Sex

Sex was tested as a moderation variable on the relationship between cultural dimensions (horizontal individualism, vertical individualism, horizontal collectivism, horizontal individualism) and relational models (market pricing, equality matching) as independent variables and group performance and interaction climate.

Table 2 shows that the only occasion when sex acts as a significant moderation variable is in the case of the influence of market pricing on interaction climate. Market pricing is a significant predictor of interaction climate for men ($B = 0.201$, $p = .01$) but not for women ($B = 0.025$, $p = 0.83$). In all other relationship there is no significant difference between the group of males and females.

Table 2

Sex as a Moderator of the Relationship between the Independent and Dependent Variables

			Male Estimate	*p*	Female Estimate	*p*	*z* score
Interaction Climate	<---	Equality Matching	0.113	0.37	0.063	0.66	-0.268
Interaction Climate	<---	Market Pricing	-0.201	0.01	0.025	0.83	1.669*
Interaction Climate	<---	Horizontal Individualism	-0.124	0.20	-0.111	0.21	0.101
Interaction Climate	<---	Vertical Individualism	0.081	0.40	0.070	0.45	-0.079
Interaction Climate	<---	Horizontal Collectivism	-0.053	0.64	-0.150	0.67	-0.262
Interaction Climate	<---	Vertical Collectivism	0.293	0.10	0.546	0.25	0.500
Group Performance	<---	Equality Matching	0.131	0.16	-0.111	0.33	-1.639
Group Performance	<---	Market Pricing	0.200	0.00	0.160	0.09	-0.361
Group Performance	<---	Horizontal Individualism	-0.022	0.77	-0.046	0.57	-0.221
Group Performance	<---	Vertical Individualism	0.179	0.02	0.022	0.78	-1.432
Group Performance	<---	Horizontal Collectivism	-0.073	0.37	-0.239	0.45	-0.510
Group Performance	<---	Vertical Collectivism	0.008	0.95	0.474	0.31	0.971

Group Performance	<---	Interaction Climate	1.034	0.00	0.929	0.00	-0.427

Notes. *** *p* < .01; ** *p* < .05; * *p* < .10.

Regression Model 1

IVs: Horizontal collectivism, Vertical collectivism, Horizontal individualism, Vertical individualism

DV: Equality matching relational model

Multiple regression analysis was used to test if cultural dimensions significantly predicted equality matching. The results of the regression indicated the four predictors explained 23.8% of the variance in equality matching ($R^2=.238$, $F(4,27) = 11.30$, $p < .01$). It was found that horizontal collectivism ($\beta = .31$, $p < .01$) and vertical collectivism ($\beta = .22$, $p < .05$) were positive statistically significant predictors of equality matching.

Table 3

Regression Coefficients for Equality Matching (The Dependent Variable)

Model	B	Std. Error	β	t	p
Horizontal individualism	.03	.05	.05	.60	.54
Vertical individualism	-.06	.04	-.13	-1.56	.12
Horizontal collectivism	.20	.06	.31	3.36	.001
Vertical collectivism	.15	.06	.22	2.36	.02

Regression Model 2

IVs: Horizontal collectivism, Vertical collectivism, Horizontal individualism, Vertical individualism

DV: Market pricing relational model

Multiple regression analysis was used to test if cultural dimensions significantly predicted market pricing. The results of the regression indicated the four predictors explained 8.9% of the variance ($R^2 = .089$, $F(4,14) = 3.52$, $p < .01$). Vertical individualism ($\beta = .22$, $p < .05$) was a negative statistically significant predictor of market pricing.

Table 4

Regression Coefficients for Market Pricing (The Dependent Variable)

Model	B	Std. Error	β	t	p
Horizontal individualism	-.04	.06	-.06	-.67	.50
Vertical individualism	.16	.05	.29	3.05	.003
Horizontal collectivism	.04	.08	.05	.55	.57
Vertical collectivism	.06	.08	.08	.78	.43

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ABSTRACT

A PRELIMINARY STUDY OF WORKGROUP DYNAMICS – A CRITIQUE AND RECONCEPTUALIZATION OF OETZEL'S EFFECTIVE INTERCULTURAL WORKGROUP COMMUNICATION THEORY

by

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The primary focus of this research was to critique and reconceptualize Oetzel's (2005) Effective Intercultural Workgroup Communication Theory (EIWCT). The research explored the foundational research concepts in Oetzel's theory: situational features (history of unresolved conflicts, equal/unequal status, and ingroup/outgroup), self-construals, face-concerns, interaction climate, and task and relational group effectiveness and satisfaction. The central critique of Oetzel's theory was the operationalization of group diversity through self-construals, face concerns and ethnic identification. The current study proposed that relational models and horizontal/vertical individualism/collectivism may more completely and accurately capture diversity dimensions because they are considered deep-level diversity features (Fiske, 2004; Triandis & Gelfand, 1998). Even though not all hypotheses were supported, several variables were significantly correlated with the tested outcomes, i.e. interaction climate, group satisfaction and group effectiveness. Specifically, the relational model of market pricing, and the cultural dimensions of vertical collectivism and vertical individualism were significantly related to some outcomes variables.

AUTOBIOGRAPHICAL STATEMENT

Doctoral candidate at Wayne State University Communication Department in Detroit, Michigan, who has participated and presented her research in numerous conferences such as National Communication Association conventions and Central States Communication Association conventions. Her research interest focuses on intercultural communication and organizational communication. She received a "My favorite professor" award at Wayne State University, where she was nominated and recognized by her students for her pedagogy.