

DISSIMILARITY FROM MANAGERS AND PEERS: LACK OF EFFECT ON
ATTITUDINAL OUTCOMES

by

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Abstract

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The study explored whether dissimilarity between employees and managers or from peer to peer influence attitudes towards an organization and postulated mediating variables in an attempt to help explain the connection using responses to survey data collected in 1999. Specifically it considered the effects of gender, ethnicity, tenure and functional differences as independent variables. Proposed mediators include opportunities for skill enhancement, managerial effectiveness, communication, and workgroup cohesion (in the peer condition). Satisfaction and voluntary turnover acted as dependent variables and the measures of attitudes. Some 27,697 respondents contributed to the manager/employee dyad condition and 4,191 responses formed the workgroup condition sample. Large sample size coupled with low correlation magnitudes suggest a lack of support for hypotheses suggesting dissimilarity and heterogeneity would have an influence on attitudinal outcomes. Partialling out the effects of mediating variables from the independent / dependent relationship generally failed to produce a meaningful reduction. Conversely, mediating variables correlated strongly with satisfaction. Conclusions suggest that surface-level dissimilarity and heterogeneity variables may have only a modest and perhaps fleeting influence on the variables proposed as mediators as well as attitudinal outcomes. All four variables proposed as mediators strongly correlated with satisfaction.

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Chapter I: Introduction

Purpose

The purpose of this research is to add to the relational/organizational demography literature by examining if demographic dissimilarity from managers or from peers influences employee attitudes. It tests potential psychological mediators that may link relational and organizational demography to outcome variables. The impetus for this study is drawn partially from Lawrence's (1997) call for research into the mechanism of organizational demography's effects on outcomes and the rejection of Pfeffer's (1983) belief that such mediating variables are theoretically unnecessary and empirically impractical (known as "the congruence assumption"). A mediating variable is one that serves as a mechanism through which an independent variable influences a dependent variable (Baron & Kenny, 1986). In organizational psychology research, mediating variables normally describe internal psychological processes. Little research appears on mediating processes that underlie the impact of demographic dissimilarity on organizational outcomes; that is, little research has investigated how dissimilarity influences attitudes if it in fact does (Harrison & Klein, 2007). Understanding the links could prove valuable in efforts to managing an increasingly diverse workforce (Mannix & Neale, 2005).

Importance. Research on how diversity affects groups and manager/employee dyads is important because demographic and functional diversity within groups and organizations has become a fact (Van Knippenberg, DeDreu & Homan, 2004). The most direct reason for greater organizational heterogeneity is the increasing diversity of labor markets (Hermon, 1996). Bureau of Labor Statistics 50-year projections forecast declines in the prevalence of non-minority males and a proportional increase in labor force diversity (Jamrog, 2002). Companies sometimes drive greater diversity because they believe it helps to serve better diverse markets

(Raatikainen, 2002). Further, acquisitions, mergers, partnerships, joint ventures and other types of organizational interdependence bring together people of varying demographic and functional backgrounds. These types of business ventures are increasingly important to survival and success (Mannix & Neale, 2005).

Theoreticians and researchers speculate that greater heterogeneity, on multiple dimensions, may impart both positive and negative effects to group functioning and dyad interactions. On the positive side, a number of studies suggest workgroup heterogeneity enhances information available for problem solving (Amason, 1996; Ely & Thomas, 2001; Guzzo, 1986; Hoffman & Maier, 1961; Jackson, 1992; Janis, 1982; Moenaert & Souder, 1990; Pelz, 1957; Schneider & Northcraft, 1999; Souder, 1987). The presence of an individual or individuals with a different background may stimulate deeper analysis of complex problems (Mannix & Neale, 2005). Janis's (1982) ubiquitous groupthink concept proposes that excessive similarity in thinking contributes to poor decisions.

These potential advantages may come at a cost. Several studies show a decline in cooperation within groups more mixed on gender (Sessa & Jackson, 1995), ethnicity (Chattopadhyay, 1999) and function (Keller, 2001). Some studies show less satisfaction in more gender heterogeneity (Davis, Cheng, & Strube, 1996; Savicki, Kelley, & Lingenfelter, 1996; Wharton & Baron, 1987). Other studies reach the same conclusion on ethnic heterogeneity and satisfaction (Tsui & O'Reilly, 1989). Relationship quality between gender dissimilar managers and employees may be poorer relative to gender similar dyads (Shih, 2000). Some studies show a similar effect on ethnic demographic differences (Tsui & O'Reilly, 1989; Tsui, Porter, & Egan, 2002; Xin, 1997).

Research of this type also has value because of intentional and unintentional occupational segregation. Evidence suggests women continue to be overrepresented in lower-level jobs (Acker & Van Houten, 1974; Bielby & Baron, 1986; Ely & Thomas, 2001) and in lower-paying fields (Macpherson & Hirsch, 1995). Lefkowitz (1994b) observed that organizations assigned newly hired employees to ethnically congruous supervisors. Tomaskovic-Devey (1993) concluded based on a sample of jobs in North Carolina that 55% of Black employees would have to change jobs with a White employee in order to achieve integration. Bayard, Hellerstein, Neumark, & Troske (1999) concluded that a given Black employee worked with as much as 29% more Black employees than a randomly selected White employee. Occupational segregation is arguably partially a product of an overvaluing of individuals who are similar to those in power on salient variables including gender and ethnicity (Baugher, Varanelli, & Weisbord, 2000; Brewer, 1986; Ely, 1994; Mehra, Kinduff, & Brass, 1998; Stephan, 1978; Wiersema & Bird, 1993). The attraction-similarity hypothesis states that organizations have a tendency to attract, select, and retain employees in a manner that promotes homogenization (Schneider, 1987).

Research Questions

Does demographic dissimilarity from the manager or from the group influence employee attitudes? If so, what psychological mediators are present that may link organizational, relational and functional diversity to these outcome variables (Lawrence, 1997)? To investigate these questions, the study reviews the organizational and relational demography literature, particularly the concepts of social identity theory, homophily and Leader-Member Exchange theory (LMX) (Bedi, 2000; Dienesch & Linden, 1986). The literature suggests gender, ethnicity, tenure and functional area as major research threads and the paper reviews the empirical work on these. This literature also suggests mediating variables including opportunities for skill enhancement,

managerial effectiveness, communication and workgroup cohesion. Research on satisfaction and turnover, commonly used outcome variables in this literature, act as attitudinal variables in this paper. The chapter ends with discussion of a potential confound, workgroup size, which is also only meaningful in the study of workgroup heterogeneity.

This study is focused on two types of demographic dissimilarity. The first is the influence on organizational outcomes of being demographically dissimilar from the manager, termed “relational demography” or “dyadic demography.” The second is the impact of being different from the group, called “workgroup heterogeneity”, “organizational demography” or “peer group demography.” Demographic attributes can refer to any human variation that individuals use to make distinctions between people, but primarily focus on visible differences (Mannix & Neale, 2005).

Chapter II: Relational and Organizational Demography

Introduction

Congruence assumption. Originally, the basic model of relational and organizational demographic research focused on demographic differences that influence psychological mediators that, in turn, influence outcomes (Ziller, 1972). Pfeffer (1983) argued that demography research did not require the exploration of these psychological mediators. He justified this position by positing that psychological mediators generate error due to construct validity and measurement problems. In the Skinnerian tradition, he argues only outcomes of demographic differences are important and that trying to measure unobservable and intangible psychological variables does not lend sufficient insight to justify the effort. He assumes that the measurement of organizational demography variables is equivalent to or congruent with actually measuring the underlying psychological mechanism - - a belief known as the congruence assumption. Lawrence (1997) argued that the congruence assumption shortchanged researcher and practitioner. For the practitioner, the lack of explanation as to why demography influences outcomes offers little prescriptive direction. For the empiricist, not studying underlying psychological processes leaves important questions unanswered - - a problem referred to as the “black box” of demography.

Social Identity Theory. Social identity theory speculates on how demography affects attitudes suggesting that people partially define self-identity by social category membership (Chatman & Flynn, 2001; Ensher, Grant-Vallone & Donaldson, 2001; Tajfel & Turner, 1979; Thomas, 1993; Turner, 1987). The theory postulates that individuals see their social category or identity group as possessing certain traits and aptitudes (Kossek & Zonia, 1994). These traits and aptitudes interact with organizational facets to influence attitudes. For example, an identity

group that sees itself as free-spirited may react negatively to a command and control organizational culture. Group identification also works in the reverse. Specifically, members may work to distance themselves from those in the out-group. Rothgerber (1997) and Rothgerber and Worchel (1997) demonstrated this effect in a series of five studies with 798 Texas A&M University psychology students. The researchers separated students based on school affiliations into small groups and imposed manipulations leading to the creation of advantaged and disadvantaged groups. Advantaged groups responded to external threat through further homogenization and an increase in perceived homogeneity of the out-group. Advantaged groups were more willing to increase “harm” when the out-group evidenced signs of improving performance.

Homophily. Research also tends to find that individuals seek like others (Webber & Donahue, 2001) - - an effect known as homophily - - and that this affects attitudes. Mayhew, McPherson, Rotolo and Smith-Lovin (1995) hypothesized that naturally occurring, random, public groups would show greater homogeneity than would be predicted by chance. For this study, observers cataloged the composition of over 100,000 informal groups over 112 observational periods in South Carolina. The data supported the hypothesis particularly for ethnicity; mathematical probability predicts that researchers would find no ethnically homogeneous groups larger than seven people yet 53 were recorded. In a homophily study more representative of work situations, Baugher, et al., (2000) investigated whether self-formed decision-making groups would follow demographic lines. As expected, 358 college students in the sample created teams that were highly homogeneous on gender and ethnicity. Mehra, et al. (1998) found that friendship and identification connections among second-year MBA students followed demographic lines. In a similar study, Mollica, Gray and Trevino (2003) tracked the

friendship ties among first-year MBA students for the presence of ethnic homogeneity using measurement at two periods separated by 14 weeks. As hypothesized, networks among minorities ($n=65$ at time 2) demonstrated the presence of homophily beyond that predicted by the availability of like others. These dynamics persisted over time despite the promotion of integration. In a study of an actual work situation, Brass (1985) administered questionnaires to supervisors and subordinates on networking and influence. The study found that organizational and social networks formed along gender lines.

While homophily is commonly viewed as a natural by-product of the social orientation of human beings; it may also grow out of a commonality of the challenges that some groups face. As an example, women have traditionally found themselves tracked into lower-paid and less powerful organizational positions. This shared predicament may foster similar job attitudes towards the job and organization. Lefkowitz (1994a) demonstrated this effect in a questionnaire study of 371 men and 361 women. He hypothesized that women's concentration into lower level, lower-paying positions had an influence on their job attitudes often miscast as gender differences. Responses revealed often-cited attitudinal differences by gender with nine of 23 variables varying significantly on gender. However, most of the differences did not remain when other demographic variables and job characteristics, particularly income, were controlled.

There is some research supporting the effects of homophily on personnel selection and placement decisions. Ensher, et al. (2001) suggested that recruiter/candidate similarity correlated positively with likelihood to hire. In reviewing test validation data of 334 bank employees, Lefkowitz (1994b) discovered that new employees were assigned to supervisors of the same ethnicity to a degree twice as great as predicted by chance. Reassignments to a new supervisor during the 5-month observation period increased ethnic dyadic homogeneity further such that the

degree of ethnic congruence was 4 times as great as chance. This “ethnic drift” (Lefkowitz, 1994b) may be an example of homophily through employee-initiated moves to supervisors that are more similar.

The concepts of relational and organizational demography, illuminating the black box of demography and homophily underpin the review of literature. This will begin with a discussion of relevant studies involving the predictor demographic dissimilarity in dyads and demographic heterogeneity in workgroups.

Independent/Predictor Variables

Manager/employee dyad demographic dissimilarity. This section reviews manager/employee dyad demographic dissimilarity studies focusing on gender, ethnicity, and tenure and functional differences. These represent the predictor variables in the dyad condition (see Figure 1).

Social exchange theories suggest that a relationship develops between managers and employees by means of an ongoing exchange process that benefits both parties (Hollander, 1980; Homans, 1961). The most notable of the social exchange leadership theories is leader-member exchange (LMX) (Bedi, 2000; Dienesch & Linden, 1986). Prior to LMX, leadership theory focused on describing leadership styles and assumed leader/follower interactions were consistent (Allinson, Armstrong & Hayes, 2001). LMX recognizes that time and attention limitations make it impossible for a manager to forge equivalently close relationships with all employees. LMX also recognized the dependence the leader has on the follower (Dansereau, Graen & Haga, 1975) and suggests that the quality of the relationships, once established, is relatively stable over time (Allinson, et al., 2001; Bedi, 2000).

LMX theory proposes that more favored in-group members receive more communication, support, and enjoy higher value tasks. Out-group members have a more formal relationship with the manager and are more likely to receive routine, low growth assignments. LMX has shown its link to employee commitment, satisfaction, role clarity, role stress, turnover, high performer attrition and manager liking (Allinson, et al., 2001; Tanner, Ridnour, & Castleberry, 1997). In an early study, Mai-Dalton and Sullivan (1981) gave 117 male and 90 female college students and 88 male and 14 female bank employees the opportunity to assign simulated employees to a high-value or low-value task. Both males and females chose employees of their own gender for the high-value task significantly more often. As predicted by social exchange theory, both men and women cited the expectation of a better working relationship with the same gender employee in their reasoning. The finding did not differ between the professionals and students. Being part of the in-group is a considerable advantage for the employee and demography likely influences access (Lefkowitz, 2000). Jeanquart-Barone (1996) concluded this as well in a study of manager/employee ethnic similarity. Employees similar to their manager on ethnicity reported more supervisory support, development opportunities and less discrimination.

This section reviews relevant relational diversity studies but first discusses the use of “manager” and “employee”. This study utilizes “manager” to denote the dyad’s superior at each level of the management hierarchy. Managers in the study range from first-line supervisor to executives. The study applies “employee” to denote the junior in the relationship to avoid the negative connotations of “subordinate.” However, in the literature review, the text reflects terms as they appear in the published work.

Gender dissimilarity research. Research supporting the idea that demographic similarity influences interpersonal attraction due to similarities in worldviews, norms, values, goals,

priorities and heritage (Ely & Thomas, 2001) appears in the literature. Tsui and O'Reilly (1989) conducted a relational demography study that examined the effects of middle manager (n=344)/senior manager (n=272) demographic differences on performance ratings, interpersonal attraction, subordinate role ambiguity and subordinate role conflict. With the effects of individual demography controlled, senior manager/middle manager gender differences were found to be mildly and negatively associated with the senior manager's view of the middle manager, interpersonal attraction and role clarity. Female middle managers working for female senior managers fared best on the outcome variables while males with female senior managers reported the most ambiguity. Although ethnic differences were not significant, White middle managers with Black senior managers reported the least role clarity while Black middle managers with White senior managers reported the most role clarity. As a follow-up study, Tsui, et al., (2002) examined both in-role and extra-role performance and its link to manager/employee demography. Their sample included 335 dyads in ten companies. The researchers surveyed managers about employees' performance and surveyed employees on satisfaction, age, gender, race, education, job and organizational tenure. As hypothesized, results indicated that dyadic relational demography influenced extra-role but not in-role performance. Xin (1997) also examined demographic differences, but with a student sample. The study separated 186 business students into manager/employee dyads who worked together over a 10-week period. Demographic similarity predicted 9% of the variance in manager/employee relationship quality.

Ethnic dissimilarity research. Research supporting manager/employee ethnic dissimilarity's impact on performance ratings and compensation appears in the literature. Landy and Farr (1980) in a review of literature found that raters tended to give higher ratings to same ethnicity ratees as did Kraiger and Ford (1985) in a meta-analysis of 88 studies. Wohlers, Hall

and London (1993) analyzed data from fifty-four work groups from business organizations and the military. Ethnic similarity had a significant ($r=.16, p<.05$) correlation with self/employee rating similarity. Mount, Sytsma, Hazuch and Holt (1997) tested a large ($n=22,431$) and diverse sample on the Management Skills Profile and found same ethnicity ratings preference on ratings of subordinates, peers and management. Lefkowitz and Battista (1995) also employed a diverse sample ($n=334$) and found managers tended to rate same-ethnicity employees higher.

Research failing to support a demographic similarity bias on performance ratings also appears in the literature. Sacco, Scheu, Ryan and Schmitt (2003) hypothesized that similarity in gender or race would lead to higher ratings on highly structured interviews of 12,203 applicants. Using hierarchical linear regression modeling, they did not find significant similarity effects on race or gender.

Tenure dissimilarity research. Although published tenure dissimilarity research could not be found, Perry, Kulik, and Zhou (1999) examined how age incongruence, (tenure is often used as a proxy for age) influenced subordinate behaviors in a small, limited sample (23 college groundskeepers, nine supervisors and 3 higher-level managers). They hypothesized that age differential would negatively affect employee citizenship behavior particularly problematic where the employee is older than manager. Results partially supported hypotheses; being older than the manager predicted absenteeism, but age difference magnitude only marginally predicted citizenship.

In summary, research lends some support for homophily and manager/employee demographic dissimilarity effects on outcomes. Manager/employee dissimilarity may be related to less communication and satisfaction and less robust performance management. Limited work appears on mediating psychological variables (Pfeffer, 1983).

Relationship to manager carries strong salience to the working context for employees. Relationship to peers represents a second strongly salient interaction dynamic. Research on these relationships appears in the next section.

Workgroup demographic heterogeneity. This section reviews workgroup demographic heterogeneity studies focusing on gender, ethnicity, tenure and functional differences that are the independent variables (see Figure 2). First, a brief clarification about the use of “*gender*”, any differences in work attitude variables hypothesized by sex are considered products of the social construction of gender including traditionally accepted roles, stereotypes and norms associated with sex rather than variations due to actual biological sex (Lefkowitz, 1994a).

Gender heterogeneity research. There is some evidence that workgroup gender heterogeneity affects attitudes. Tsui, Egan, and O’Reilly (1992) collected survey data from 1,705 respondents working as part of teams (151 work units overall) in two Fortune 100 manufacturing companies and a state agency responsible for mental health hospitals. Due to the effects of self-categorization, the researchers expected that greater demographic distance between an individual and the group would have a deleterious effect on organizational attitudes. Regression analysis revealed that workgroup gender heterogeneity was related to lower-levels of organizational attachment as expressed by less psychological commitment, less intent to stay and more frequent absences. However, company membership negated the relational demographic effects potentially suggesting the impact of good personnel management.

Several studies concluded that gender demography specifically influenced satisfaction. Fields and Blum (1997) analyzed archival telephone interview data (n=1,634). The researchers defined workgroup heterogeneity as the respondent’s general impression of the group’s gender

mix. They found that both male and female employees working in more gender-heterogeneous groups reported higher job satisfaction but there was not a significant difference between mixed and all-female groups. Exclusively male groups suffered the lowest levels of job satisfaction. In a somewhat similar finding, Savicki, et al., (1996) concluded that women in female only groups reported more satisfaction with group processes versus women in mixed groups. Wharton and Baron (1987) also supported the Fields and Blum (1997) conclusion after studying 1973 Quality of Employment survey data and found that men reported lower job satisfaction and greater depression in mixed settings. Based on responses from 97 registered nurses, Solansky (1998) concluded that greater gender diversity negatively affected workgroup cohesion.

Ethnic heterogeneity research. Some evidence supporting homophily and the contention that workgroup ethnic heterogeneity affects attitudes exists. Tsui, et al., (1992), found that workgroup ethnic heterogeneity negatively influenced psychological commitment and intention to stay with the firm. Sorenson (2000) examined ethnic workgroup heterogeneity's impact on actual voluntary turnover. Their archival sample included personnel records of 1,673 new hires between 1996 and 1999 into retail branches of a large financial services institution. The data suggested that both initial same ethnicity representation in the group and changes to ethnicity representation influenced the likelihood of turnover. Voluntary turnover of dissimilar individuals did not significantly predict the departure of a given individual. Davis, et al., (1996) manipulated ethnic group composition in thirty groups each composed of four undergraduates. The students participated in a decision-making task and completed surveys. The study found workgroup ethnic heterogeneity to have a significant negative relationship to satisfaction with group experience with the most heterogeneous workgroups reporting the most conflict. Using a field sample, Moch (1980) conducted a study of industrial workers who reported workgroup

ethnic heterogeneity negatively affected job satisfaction. Also with a field sample, 100 British employees, Kirby and Jackson (1999) came to the same conclusion. Sessa and Jackson (1995) analyzed temporary teams of hospital employees assigned a case analysis project. They found that ethnically heterogeneous teams reported more conflict than did homogeneous teams.

Chattopadhyay (1999) collected data from transportation company workers on Organizational Citizenship Behavior (OCB). The study postulated that greater demographic distance between the individual and group would be associated with less OCB through the effects of self-esteem, attraction and trust. Analysis of data from the diverse sample ($n=401$) found that non-minorities in groups with a greater concentration of minorities demonstrated less altruism compared those in more homogeneous groups. Ammeter (2001) also investigated trust but with a student sample of MBA project team members. Ethnic heterogeneity in workgroups tended to lower affective-based trust.

Tenure heterogeneity research. Workgroup tenure heterogeneity research is substantial relative to other workgroup demographic variables (Carroll & Harrison, 1998). Many of these studies are of top management partially due to easy accessibility of archival data (Cohen & Bailey, 1997; Sorenson, 2000). Wagner, Pfeffer and O'Reilly (1984) examined top management turnover and tenure heterogeneity hypothesizing that those with dates of entry similar to their workgroup have stronger social interactions and are less likely to exit the organization. The study used archival public record data taken from 31 randomly chosen organizations that consisted of 599 top management group members collected between 1976 and 1980. The study concluded that tenure heterogeneity was mildly but positively associated with turnover when controlling for group size and firm age. O'Reilly, Snyder and Boothe (1993) sampled 24 American top management teams and similarly found a positive correlation between tenure

heterogeneity and turnover. In a similar study using a different population, Wiersema and Bird (1993) conducted a tenure heterogeneity and turnover study of Japanese top management teams finding turnover associated with tenure heterogeneity.

Workgroup tenure heterogeneity studies frequently employ cohorts and often examine their effects on turnover. McCain, O'Reilly, and Pfeffer (1983) conducted an archival turnover study using university personnel records gathered between 1974 and 1979. In studying 32 academic departments, they found that in departments where professors were more homogeneous on tenure turnover was lower. Pfeffer and O'Reilly (1987) compared the effects of economic conditions and unionization on voluntary turnover with the effects of cohorts. The study drew on archival data from nurses in 250 hospitals, a hospital survey dataset and community economic data. Hospitals where cohort heterogeneity was greater had higher voluntary turnover, controlling for local unemployment rates, wage rate variability, and unionization.

Functional heterogeneity research. The final workgroup demography variable is functional heterogeneity. Through mergers and acquisitions, globalization, and increased use of cross-functional project-based employees with disparate occupational backgrounds find themselves interacting. The research has only recently begun investigating what psychological impact these changes carry. Cummings (2004) hypothesized that structurally diverse work groups would enjoy better performance because they bring a variety of perspectives. His sample of 182 workgroups in a Fortune 500 telecommunications company answered 957 surveys on external knowledge sharing. Workgroups brought together people representing engineering, manufacturing, operations, quality, strategy, customer service and other disciplines. Results controlling for group size demonstrated that more structurally diverse workgroups exhibited more knowledge sharing and higher performance. However, Randel and Jaussi (2003) found

limitations on the extent to which functional diversity has positive effects on performance. They surveyed 191 employees working in 37 cross-functional teams in seven organizations. Functions included accounting, information systems, human resources and six others. Hierarchical regression analysis showed that when those who identified strongly with their functional background were in the minority, individual performance declined. Therefore, more functionally diverse workgroups meant more team members were in mathematically minority functions and therefore the collective performance contribution was less.

This section presented studies on two types of work relationships: manager/employee dyad and workgroups. For each relationship, four types of demographic differences serve as possible points of difference: gender, ethnicity, tenure and functional area (see Figures 1 and 2). The following section explores the mediating factors that may underlie the relationship between demographic dissimilarity in dyads and groups and organizational outcomes.

Mediating Variables – Employee in Dyad Condition

This section reviews the literature on the study's mediating variables where it relates to the employee in the dyad condition. The proposed mediating variables in this condition are opportunities for skill enhancement, managerial effectiveness and communication. This study first tests whether there is a connection between manager/employee demographic differences and satisfaction, an outcome variable. Assuming such relationships exist, the study will test whether the relationship between these predictors and outcomes operates through the proposed mediating variables (Baron & Kenny, 1986).

Opportunities for skill enhancement. Homophily suggests that managers will have a greater comfort level when delegating challenging assignments to those with whom they feel a kinship partially related to demographic similarity (Kanter, 1977; McNeilly & Russ, 2000).

Given that individuals normally see themselves and their worldviews as superior, they likely distribute coveted assignments to those more similar to themselves. Similarity theory conjectures that managers are more likely to provide career information and support to similar subordinates (DiTomaso, Thompson, & Blake, 1988; Kanter, 1977). When those who received skill-improving opportunities and greater manager support eventually obtain promotions, the self-fulfilling prophecy reinforces the stereotype.

Similarity theory research, such as Lindholm (1990), supports the claim that managers make distinctions among subordinates investing more time, attention and other resources in a favored subset. Lindholm (1990) gathered data from 127 upper-level managers in a 9-week management education program. He examined manager characteristics, perceptions of the subordinate and organizational structure characteristics. The data demonstrated that managers spent varying amounts of time with subordinates investing more time in those they believed were more likely to receive promotions. Results suggested greater familiarity facilitates greater attribute differentiation and this may translate into a manager better recognizing potential and performance among in-group members.

Better familiarity with employee's strengths may motivate managers to recommend them. Linville, Fischer, and Salovey (1989) demonstrated this by comparing separate age cohorts (retirees and undergraduates). Differentiation on eight attributes measured over a seven-point scale was much greater when young people rated younger people versus their rating of older people (the opposite was also true).

Research has also examined if dissimilarity engenders less performance feedback acceptance in the recipient. Geddes and Konrad (2003) hypothesized that feedback from demographically dissimilar managers would meet with less acceptance. The results did find that

men reacted less favorably to feedback from women but ethnicity differences did not show a significant effect.

In summary, employees who believe they have more opportunity to advance their skills should be more similar to their managers as well as more satisfied with their jobs. The extent to which one's manager is moving ahead with his or her career has a big influence on career advancement and thus managerial effectiveness should be a salient variable in the connection between organizational or relational demography and job attitudes.

Managerial effectiveness. Like opportunities for skill enhancement, the performance of the manager also likely influences satisfaction and may provide a link from demographic dissimilarity to outcome variables. Managers tend to have a strong effect on job satisfaction, stress and performance.

Ely (1994) conducted an interview and questionnaire study involving 30 female attorneys intending to understand how management gender composition affects dyadic relationships. Half the sample worked in law firms with male-dominated management and the other half worked under more demographically balanced management. The author expected that lower-level female lawyers in firms with male-dominated management would view senior female managers less favorably and would be more competitive with female peers. As anticipated, data indicated that lower-level female attorneys viewed female managers at more integrated firms more favorably. Further, female peer relationships were less competitive at more integrated firms.

Vecchio and Bullis (2001) tested the effects of ethnicity as well as gender in a population that differed considerably from Ely (1994). They examined 2,883 military managers/employee dyads from a diverse population. Respect for diversity and the length of time worked with the manager were included as moderators while satisfaction with manager and intention to reenlist

acted as dependent variables. The data suggested that dyadic demographic similarity was weakly but significantly related to the outcome variables. Contrary to expectations, female subordinates were less satisfied when working under female officers. In addition, there were differences by ethnic category with White employees under the supervision of other ethnicities expressing the least amount of satisfaction with the manager.

Communication. The study defines communication as the employees' perceptions of how effectively the organization conveys information. The proposed study will measure perceived communication quality rather than perceived frequency because it is interested in the quality of relationships unlike most studies that focus on frequency rather than quality of communication (Johlke, et al., 2000). Kacmar, Witt, Zivnuska & Gully (2003) tested LMX and communication hypothesizing that communication frequency was important in the association between exchange quality and performance ratings in a series of two studies. In the first, the largely female sample of 188 employees and their managers completed a seven-item LMX scale, and a four-item communication scale. Hierarchical linear regression suggested that communication frequency was positively associated with performance ratings among high quality relationships and vice versa. The second study reached the same conclusion with a more gender-balanced sample of 153 dyads. These participants completed the same LMX scale and an eight-item communication scale developed for the study. Becerra and Gupta (2003) also investigated exchange quality but under the construct of trust. Trust is distinct from but is likely a major component of exchange quality. Their study included 157 dyads found among the most senior and powerful managers within an organization that operated in several countries. They found that in low-communication environments, managers must directly foster trust while in high-communication environments, modeling appropriate behaviors helped to foster trust.

Communication is a key driver of the quality of the direct reporting relationship and relationships with peers thus strongly impacting satisfaction. For these reasons, it should have a mediating role. As a research variable, the quality of communication is both important and practical (Johlke, et al., 2000; Wilson, 1992). Business problems are increasingly complex and environments less stable leaving business organizations more reliant on effective communication flows (Burns & Stalker, 1966; Lawrence & Lorsch, 1967; Perrow, 1967; Tushman, 1978; Tushman, 1979). Communication, particularly formal communication quality, has been shown to have a link with trust, worker performance, employee retention and job satisfaction (Mayfield & Mayfield, 2002). Goris, Vaught and Pettit (2000) sampled 302 employees in two companies and found that downward communication predicted job satisfaction in individuals who have lower job fit. Johlke, et al., (2000) also examined the effects of supervisor communication on employee satisfaction with 318 salespeople in six organizations. Structural equation modeling fit statistics supported the connection between informal communication quality and satisfaction. Sobo and Sadler (2002) reported on a non-empirical study of efforts to establish a formal program of employee communication in a major U.S. pediatric hospital. The program was evaluated using response pattern changes year over year on the hospital's employee survey and saw large gains in employee satisfaction and attitudes towards management.

Perceived quality of downward communication is also important as a contributor to employee performance. Employees who are better informed should have a better understanding of goals and workflow and thus be more capable of making decisions and taking action (Lawler, 1992; Spreitzer, 1996). Employees receive information from multiple organizational sources, but insight into important issues, such as strategic plans, tend to come through the manager (Kacmar, et al., 2003). Managers more freely share information with subordinates with whom

they feel more comfortable. Homophily suggests that managers will have a greater comfort level and more trust with similar subordinates.

Research on communication and demography often examines gender and communication style. Carli (1990) compared videotapes of 229 undergraduate psychology students finding that women used more tentative speech patterns in mixed gender groups. A follow-up study (Carli, LaFleur & Loeber, 1995) proposed that societal gender roles made it less acceptable for women to use a task-oriented communication style. Analysis of videotapes of 80 male and 80 female psychology students revealed that men enjoyed more influence in the task-oriented style condition. Also in an observational study, Preisler (1986) analyzed conversations of 48 men and women at multiple levels in an organization. Women used language that researchers categorized as more tentative when compared with males. In a similar series of studies, Dovidio, Ellyson, Keating, Heltman and Brown (1988) analyzed verbal and nonverbal social power behaviors found on videotapes of twenty-four mixed-gender student dyads. Men demonstrated more visual power when the level of expertise was equivalent between participants. Finally, in a demonstration of societal expectations, Wood and Karten (1986) found that men enjoyed the presupposition of competence in the absence of objective data perhaps related to a greater tendency to participate. Research on communication quality has also frequently investigated gender and the intention of communication. Smeltzer and Fann (1989) asked small business principals about the advantages of networking behaviors. Men mentioned only instrumental gains while women cited both instrumental and affiliative advantages. Baird and Bradley (1979) found that subordinates answering a questionnaire on communication style perceived female managers as more concerned with interpersonal relationships when communicating.

Specifically on the topic of manager/employee dyads and communication, Yrie, Hartman and Galle (2002) researched the link between the quality of the leader-member exchange and communication quality. Their primary assumption was that communication styles used by managers differ depending on the nature of the relationship with a particular employee. Specifically, they hypothesized that in-group members would enjoy better quality exchanges. Those employees in lower quality relationships reported less participatory conversations among 164 manager/employee dyads in a hospital setting.

In summary to Lawrence (1997)'s call for further studies into the potential mechanisms of relational demography, the extant research has offered a number of possibilities with varying degrees of explanatory power. Of these, the present research has chosen to examine common and well-recognized aspects of careers: skill-building opportunities, manager competency and the quality of information available.

Mediating Variables – Workgroup Condition

The proposed mediating variables in this condition are opportunities for skill enhancement, managerial effectiveness, communication and workgroup cohesion. In the workgroup condition, the study tests whether group heterogeneity predicts satisfaction and/or turnover. Assuming such relationships exist, the study will test whether the relationship between these predictors and outcomes flows through the proposed mediating variables (Baron & Kenny, 1986).

Workgroup skill enhancement. Individuals more representative of group norms are likely to be chosen to take on those assignments more important to the group. These more important assignments carry more potent skill-improving qualities. Further, those most representative of the group likely receive the most support from it. Thus, the combination of

better assignments and greater peer support enhances the chances for promotion or the expansion of the employee's power or responsibility.

Workgroup managerial effectiveness. Some research exists on the effects of managerial effectiveness and organizational demography such as Chatman, Polzer, Barsade and Neale (1998) who found evidence that managerial effectiveness has an influence on the link between group composition and outcomes. Their study of 258 MBA students used a business simulation recording the frequency and type of inter-group communication. The authors manipulated organizational culture using either team-based or individualistic reward structures. Hierarchical regressions indicated that a collectivist culture dampens the effects of demographic differences within a group.

Workgroup communication. Interpersonal attraction influences within group communication and organizational demography influences this attraction. It is expected that more heterogeneous groups will experience a lessening in the strength of these bonds, increased conflict and therefore less effective communication. Further, there may be a use of exclusive communication styles and terminology used by in-group members intended to exclude minority group members out of communication networks (Ayoko, Hartel & Callan, 2002). Ayoko, et al.'s (2002) observation study of diverse workgroups found that ninety percent of participants reported that half or more of conflict resulted from cultural differences. Stewart and Garcia-Prieto (2008) examined ethnic heterogeneity in groups and their effect on communication hypothesizing that the magnitude of their identification with race would be salient. The diverse student sample engaged in a simulated, 24-minute group work task after answering 50 items including questions meant to gauge ethnic identification. They found a link between ethnic

dissimilarity and communication moderated by the degree to which participants found the independent variable to be personally salient.

A least one, often quoted study compared workgroup tenure heterogeneity and communication. Zenger and Lawrence (1989) assessed technical communication frequency in 88 U.S engineers and managers who worked in teams. Groups more diverse on tenure communicated less frequently and demonstrated less group cohesion.

A number of studies on function examine cross-functional work teams or groups where the members represent different departments such as new product development teams. Sarin and O'Connor (2009) suspect that cross-functional teams will struggle with communication issues because members differ in how they think and have their own lexicon common to their background.

Workgroup cohesion. Moreno and Jennings (1937) first discussed group cohesion and French (1941) first conducted research on it. Carron's (1982) definition states that group cohesion refers to the tendency for a group to stay together and to work cooperatively toward common objectives. Riordan and McFarland Shore (1997) used the term workgroup cohesion to define the concept more narrowly to refer to just groups in a work setting. Theoretically, workgroup cohesion is valuable as it reduces conflict, social loafing and the need to spend time and energy on group-process maintenance activities such as ensuring good information flow. Cohesion fosters commitment-based rather than rule-based control (Bacharach, Bamberger & Vashdi, 2005). Finally, cohesive groups are also better able to attract higher quality employees.

Similarity theory (Byrne, 1971; Tziner, 1985) proposed that more demographically similar workgroup members would work together more cohesively, exhibit less conflict and greater cooperation and satisfaction (Finklestein & Hambrick, 1996; Lichtenstein, Alexander,

Jinnett, & Ullman, 1997; Riordan & McFarland Shore, 1997; Young & Buchholtz, 2002). Similarity theory is based on the homophily effect which is the tendency for individuals to interact with and favor similar others when given autonomy (Brewer, 1986; Ibarra, 1997; Wiersema & Bird, 1993). In part this preference for similar others comes from the need to develop self-identity through affiliation with like others (Tsui & Farh, 1997). Homophily is predictive of greater workgroup cohesion when individuals in the group are demographically similar.

There is some research on the effects of workgroup demography on workgroup cohesion and similar variables. Prototypicality was defined by asking which members best exemplified the team. The results suggested prototypicality influences social attraction and that social attraction affects cohesion. Li and Hambrick (2005) tested the effects of demographic differences including age, gender, tenure and ethnicity (in this case Chinese vs. non-Chinese). Survey data were collected from 513 business teams working on joint ventures between Chinese and non-Chinese companies. They propose that task and emotional conflict lead to declines in workgroup cohesion (called “behavioral disintegration”). They analyzed the data using hierarchical linear regression controlling for group size. The analysis suggested that group heterogeneity negatively affected emotional conflict. Emotional conflict drove poorer cohesion, which had a negative influence on performance (as measured via survey items).

Baugh and Graen (1997) studied teamwork, a component of workgroup cohesion. This study of 184 members of 31 teams was carried out in a 500-person state government agency. The research operationalized heterogeneity as a team that had at least one person with distinct demographic characteristics. When controlling for team size and project completion, heterogeneous teams rated level of teamwork lower.

Another component of workgroup cohesion is cooperation. Glew (2000) conducted a multiphase survey study initially questioning 353 undergraduates and later 700 employees. The study found a connection between person/group similarity and cooperation. With a graduate rather than undergraduate sample, Chatman and Flynn (2001) conducted a workgroup demography study proposing that workgroup cooperative norms mediate the demography/job satisfaction relationship. They surmised that group cooperation norms are lower in heterogeneous groups because of less intra-group trust. The 119 MBA student-participants completed a consulting assignment and later described the experience in a four-page papers that were content-coded for within-group cooperation. Results indicated that satisfaction correlated with cooperation. To address issues of external validity, they did a second study, this time with 165 officers from a U.S. financial services firm comparing archival personnel data to satisfaction responses and group cooperation ratings. Workgroup demography differences included citizenship, race and gender. Results indicated that cooperation was a precursor of satisfaction. In a second study done with this same data, Flynn, Chatman and Spataro (2001) examined whether personality aspects mediate the negative effects of workgroup demography. They hypothesized that demographic similarity to the group engenders positive impressions and that extroversion and self-monitoring would more positively influence demographically dissimilar individuals. Demographically diverse employees suffered lesser impression quality, performance, satisfaction and total compensation; however, extraversion and particularly self-monitoring significantly ameliorated these losses.

Finally, along this same line of research, Chatman and Spataro (2005) completed a study of demographic differences, organizational norms and coworker cooperation. They hypothesized that organizational norms of cooperation and inclusiveness can waylay the normal categorization

of dissimilar individuals as outgroup members. Fifty-eight individuals considered cultural subject matter experts complemented a sample of 128 financial services employees (18% women and 11% minorities) from one organization. Hierarchical linear regression modeling demonstrated a significant relational demography and culture interaction. For demographically dissimilar employees there was a clear cultural norm effect; organizations that promoted collectivistic behavior prompted more cooperation.

Another means of drawing empirical evidence on cohesion is to examine the effects of its antonym: conflict. Davis, et al. (1996) concluded that group composition predicted the enjoyment of the group experience and that demographically mixed groups reported the most conflict. Tsui, et al. (1992) concluded that workgroup gender and ethnic diversity positively correlated with conflict. Pelled, Eisenhardt and Xin (1999) measured the attitudes of 317 work team members in the electronics divisions of three major corporations. The research participants completed group diversity, task conflict, emotional conflict, and task banality measures. Ethnic group heterogeneity was positively associated with affective conflict and lower workgroup cohesion.

In summary, similarity theory suggests that demographically similar employees will exhibit higher workgroup cohesion. There is some research supporting the idea that groups with a higher proportion of people conforming to the group's conception of a typical employee see less conflict, greater teamwork and more cooperation.

In the workgroup condition, the study proposes to examine four potential workgroup mediators: workgroup skill enhancement, workgroup managerial effectiveness, workgroup communication and workgroup cohesion. The first three of these proposed mediators mirror those offered in the dyad condition on the scale of the workgroup with similar rationale for

inclusion. There is little research supporting their potential connection to workgroup heterogeneity or satisfaction so postulated relationships draw largely from theory. The fourth variable, workgroup cohesion, arises directly from the organizational demography research mostly in the form of similar constructs such as cooperation and teamwork. As with all of the demography research, its association with heterogeneity and outcome variable is suggestive but not definitive.

Outcome Variables

The following section covers the outcome variables predicted by the demographic and mediating variables. These include job satisfaction and voluntary turnover only in the workgroup condition.

Job satisfaction and workgroup satisfaction. Job satisfaction is measured at both the individual and workgroup levels depending on the condition. Despite the large number of job satisfaction studies, demographic variables appear infrequently (Ensher et al., 2001). Cunningham (2007) examined the connection between values incongruence and outcome variables. Analysis of study data suggested values incongruence had a significant, positive correlation with demographic dissimilarity and significant, negative correlations with satisfaction and turnover. Muhonen and Torkelson (2004) examined gender, work locus of control, health and job satisfaction. Male (60 managers and 85 non-managers) and female (40 managers and 94 non-managers) Swedish telecom workers participated in the study. ANOVAs showed no gender differences for work locus of control. However, hierarchical multiple regression found a significant relationship between work locus of control and job satisfaction for women only.

Voluntary turnover. Voluntary turnover applies only to the workgroup condition and includes voluntary separation rate during a two-year period following the study

(Chandrashekar, McNeilly, Russ & Marinova, 2000). Much of the turnover literature related to demography deals with the effects of workgroup similarity on tenure. O'Reilly, et al. (1993), Wagner, et al. (1984), and Wiersema and Bird (1993) all found a relationship between top management team tenure heterogeneity and the rate of turnover. McCain, et al. (1983), Pfeffer, and O'Reilly (1987) researched the tenure similarity of cohorts and found a connection to turnover. Sacco and Schmitt (2005) measured the gender, ethnicity and age fit of an individual within a food service work crew (n=203,766) using Blau's (1970) heterogeneity index. The analysis found individual dissimilarity from the group to be related to turnover.

At least one study directly covered gender demography and turnover although not specifically a relational or organizational demographic study. Elvira (2001) examined whether demography of employees at the same or next higher level in the organization influenced turnover. The study also tested whether demography of the executive level had an influence on turnover. Turnover was defined using employee records and was limited to only those employees who had voluntarily left the organization. The results were significant but mixed. Female turnover incidents were negatively associated with better female representation at the same level. However, greater female representation at the next or executive level was associated with greater turnover.

In summary, voluntary turnover and satisfaction are important attitudinal outcome variables and the limited research done in connection to demography is a significant gap in the literature. There is one other type of variable at play in the research, the confound variable of workgroup size, discussed below after which hypotheses will be proposed.

Other Issues

Potential confound. Research suggests that workgroup size influences some of the variables under study (Amason, 1996; Blau, 1970; Li & Hambrick, 2005; Porter & Lawler, 1966). Cohen and Bailey (1997) in their review of the groups literature between 1990 and 1996 found that some studies support a curvilinear relationship between workgroup size and effectiveness. Alderfer and Smith (1982) suggest that in workgroups bigger than twelve members workgroup cohesion is negatively affected. Smaller groups, in general, have shown fewer issues with communication, coordination and integration (Wagner, et al., 1984). In a study of 48 top management teams, Amason and Sapienza (1997) found that team size was associated with greater conflict. With a very different sample, Greenberg, Wang and Dossett (1982) had 40 students participate in a simulated assembly line. Students working in the smaller groups constructed by the researchers reported more satisfaction and these groups had a greater potential for higher worker motivation. Fuchs, et al. (2000) found workgroup size effects in a study of 36 third and fourth graders. Smaller groups performed better and students enjoyed the experience more. These empirical results have prompted many researchers to control for or test the effects of workgroup size.

Summary

This chapter began by outlining the purpose of the study and by showing how diversity research has sufficient empirical, practical and societal value to be worthy of empirical investigation. The review of literature defined the scope of the study's interests, traced the development of relational and organizational demography literature and examined the concepts of social identity theory, homophily and LMX theory. It then reviewed the influence of gender, ethnicity, tenure and functional differences between the employee and the manager and the

employee and his/her peers. Following this, the mediating variable including opportunities for skill development, managerial effectiveness, communication and workgroup cohesion (only in the workgroup condition). Next, the paper reviewed the outcome variables satisfaction and voluntary turnover. The chapter ended with the introduction of a potential confound, workgroup size, in the relationship between mediating and outcome variables.

Chapter III: Hypotheses

Assumptions

Much of the relational and organizational demography research covered in the prior chapter derives impetus from social identity theory and the theory of homophily. Consequently, the hypotheses below also find root in these arguments. Social identity theory assumes that personal identity development is partially driven by identification with similar others and by contrasting the self versus dissimilar others (Chatman & Flynn, 2001; Ensher, et al., 2001; Tajfel & Turner, 1979; Thomas, 1993; Turner, 1987). Homophily theory suggests individuals will seek others who they perceive to be like themselves. Self-identity building efforts and natural attraction to similar others are at the core of the assumption that demographic homogeneity influences work attitudes (Pfeffer, 1983; Ziller, 1972). From these general intellectual constructs specific hypotheses are formed and are described below. The hypotheses are separated by condition.

Hypotheses - Dyad Condition

This section covers hypotheses dealing with the dyad condition. Homophily and social identification suggest that differences in demographic category should be related to satisfaction. In theory, employees more similar to their manager should enjoy a better experience with the organization and thus higher satisfaction. Research supports the idea as well. Tsui and O'Reilly (1989) found that with effects of individual demography controlled, supervisor-subordinate gender differences were mildly and negatively associated with the manager's view of the individual, interpersonal attraction and role clarity. Shih (2000) found women with male supervisors felt less well informed compared to those with female supervisors. The specific hypothesis is similar to that proposed by David, Avery and Elliott (2010) who examined

organizational commitment instead of satisfaction. It follows the first of Baron and Kenny's (1986) steps of mediation testing - - to test the relationship of the independent and outcome variables.

Hypothesis 1: Employees demographically dissimilar from their manager will report lesser satisfaction than those demographically similar.

After the establishment of a direct relational demography and satisfaction relationship, the second to fourth of the Baron and Kenny (1986) steps are tested. These are: the establishment of an independent / mediating variable relationship, the establishment of the mediating / dependent variable relationship and the partialling out of the mediating variables to see if the relationship found in the first step falls to insignificance. The first mediator to be tested would be opportunities for skill enhancement.

Opportunities for skill enhancement. Growing in a career involves acquiring skills, knowledge and experience. Some employees pursue or find themselves chosen to take on so-called "stretch" assignments, to take positions of leadership on a project, to attend classes or conferences, to act as a liaison with another group or other such skill-building opportunities. Female employees and those not in the ethnic majority frequently complain of entrenched networks which distribute these beneficial assignments to similar others (Smith, 2002). The dearth of women and people of color among high-level business leaders provides evidence of the veracity of these charges. It may be that a lack of chances to hone skills leaves them unprepared when higher-level positions open up -- in addition to stereotyping and discrimination in promotion decisions. Managers have several mechanisms for aiding or restricting skill enhancement among their subordinates including: distribution of developmentally beneficial assignments, providing network connections (McGuire, 1998), mentoring (Fagenson, 1993;

Walsh & Borkowski, 1999), providing recommendations (Lindholm, 1990), and providing performance feedback.

Research on opportunities for skill enhancement suggests that managers may be more willing to aid and advance more similar employees (DiTomaso, et al., 1988; Kanter, 1977; Riordan & McFarland Shore, 1997). Schaubroeck and Lam (2002) found that manager/subordinate value similarity was associated with a greater likelihood of career advancement in a multi-country sample. McNeilly and Russ (2000) found that gender dissimilarity between manager and salesperson had a significant, negative correlation with perceived level of opportunities for skill enhancement. The opposite – managers may be more willing to assign dissimilar employees to low consequence assignments – may also be true. Maidalton and Sullivan (1981) found that males in a laboratory exercise were more likely to pick a woman for a low-value task when compared to the female condition.

Some research demonstrates that dissimilarity influences performance evaluation. Schmitt and Lappin (1980), Kraiger and Ford (1985) and Lefkowitz and Battista (1995) all found a same-ethnicity bias in performance ratings. Elvira and Town (2001) also found this to be the case despite the lack of performance differentiation on a more objective measure. Linville, et al., (1989) found that raters made more clear distinctions on rates of a similar age.

The extent to which employees feel they have opportunities to improve skills should relate to job satisfaction. Getting ahead and building a career is a key driver of an individual's contentment particularly in business enterprises. Morrison, Cordery, Girardi and Payne (2005) conducted two studies, the first at an Australian meat packing plant ($n=165$) and the second at a wastewater treatment facility ($n=119$). The study was looking for job demands and job control to predict satisfaction through the mediating influence of skill utilization. Although the

questionnaire data did not support the mediating relationships, it did indicate that the ability to grow and apply skills was predictive of satisfaction. In a study with methodology similar to the one reported in this paper, Hausknecht, Rodda and Howard (2009) analyzed 24,829 written open-ended responses from a leisure and hospitality company survey. Among higher performing employees and those at higher levels in the organization, opportunities to improve skills and to get ahead drove intentions to stay.

Managerial effectiveness. Homophily suggests employees who are more similar to the manager will feel more comfortable and thus have a better relationship with him or her on average (Baugher, et al., 2000; Mayhew, et al., 1995; Rothgerber, 1997; Rothgerber & Worchel, 1997). The dissimilar manager is more likely to have a different personal style perceived by the employee as less effective given that individuals tend to judge their own approach as superior. Smeltzer and Fann (1989) asked respondents about the intention and approach of networking behaviors. Men talked about making instrumental gains (expanding their circle of contacts and identifying individuals who may help them in the future) whereas women also discussed the affiliative advantages. Baird and Bradley (1979) found that respondents felt that female managers expressed more concern about relationships when interacting with employees while men presumably expressed more interest in the task under discussion. While these studies only measure one type of dissimilarity, they tend to support the idea that style differences between managers and employee may contribute to a less favorable view of the dissimilar manager.

Substantial research suggests that people tend to evaluate similar others more leniently. Bigoness (1976), Elvira and Town (2001), Kraiger and Ford (1985), Lefkowitz and Battista (1995), Linville, et al., (1989), Schmitt and Lippin (1980) and others found that more similar others received more favorable judgments. This was particularly the case when looking at ethnic

similarities or differences. This suggests that employees of a more similar manager will tend to rate management more highly.

Managerial competence in terms of both the technical aspects of the job and in relating to employees has a strong effect on employee job satisfaction. Management has a pervasive and broad impact on nearly all aspects of working life such that it would be difficult to have a satisfying work experience under the management perceived to be unskilled. Cheung, Wu, Chan and Wong (2009) surveyed 196 Chinese manufacturing employees regarding their managerial relationship and satisfaction. This sample reported that job satisfaction had a strong and positive ($r=.27, p<0.01$) relationship with a variable known as *guanxi* which is a Chinese term for the manager/employee interaction. Wyld (2009) reviewed survey research also conducted in China and found that workers were more likely to stay with an employer with good management practices despite poor working conditions and low pay. Acquavita, Pittman, Gibbons, and Castellanos-Brown (2009) examined 119 social workers (9% response rate) via a seventy-three item internet survey. A multiple regression on satisfaction yielded a substantial R^2 of .62 with predictive power coming from a supervisor support perception scale as well as measures of openness to diversity and a fairness scale.

Managerial effectiveness should thus provide a connection or mediator between manager/employee dyad dissimilarity and job satisfaction. The connection should be relatively strong given the level of influence management has on organizational experience.

Communication. Homophily also suggests that employees more similar to their manager will also interrelate more often and with greater quality. A driver of this may be communication style (Josefowitz, 1980; Lockheed & Hall, 1976; Young & Buchholtz, 2002). Carli (1990) and Preisler (1986) found that women use a more tentative phrasing while Dovidio,

et al., (1988) found that men use more power related phrasing. Smeltzer and Fann (1989) and Baird and Bradley (1979) both concluded that women use communication more to satisfy affiliative needs while men's speech is more task-oriented.

Employees who feel they receive better quality communication from management should show a higher level of satisfaction. Kim (2002) studied this connection via a multiple regression analysis and found that the quality of communication with managers significantly predicted satisfaction.

Research studies tend to support the intuitive association between job satisfaction and communication proposed by Likert (Vinnicombe, 1984). Gopinath and Becker (2000) concluded from a study of 950 survivors of an organizational divestiture that communication correlated with perceived procedural justice. Goris, et al., (2000) found that downward communication predicted job satisfaction in low-congruence situations. Schappe (1996) found that knowledge of organizational procedures had a positive impact on satisfaction with the organization ($r=.27$, $p<.01$). Alexander, Helms, and Wilkins (1989) concluded that communicating information about the job and the reasons for decisions had a positive effect on job satisfaction. Johnson and McIntye (1998) conducted a wide-ranging study of climate and job satisfaction. They concluded that among 19 different measures of organizational culture and climate, communication was most highly associated with job satisfaction. Ward's (1997) study of communication and job satisfaction among 137 members of autonomous work groups in a single company did not find that communication was most highly correlated with job satisfaction as did Johnson and McIntye (1998). However, communication was among the constructs that significantly correlated with job satisfaction.

The connection between job satisfaction and communication has been found across a number of different environments. Outside the formal experimental paradigm, Sobo and Sadler (2002) showed a connection between an organizational development effort towards building communication and employee satisfaction as measured with an employee survey. Several published traditional empirical studies exist. Orpen (1995) found a relationship between communication quality and job satisfaction with turnover intentions in a business organization sample of 101 middle managers. In an industrial setting, Muchinsky (1977) asked 695 employees of a large public utility to report on communication, organizational commitment and job satisfaction. The results suggested communication and job satisfaction correlated well. Frone and Major (1988) came to the same conclusion in an institutional setting with 93 nurse managers. In an academic setting, Biggs, Barnhart and Bakkenist (1975) found that communication and job satisfaction correlated based on a questionnaire study of 148 professional student affairs staff members within a large state university. Finally, in a military setting, O'Reilly (1978) found the same relationship in a different way. Two hundred and eighteen students in a lab study and 1,393 people in a military study participated in research on information distortion (i.e., poor communication), job satisfaction and performance. These studies concluded that amount of distortion negatively related to job satisfaction.

Hypothesis 2: Opportunities for skill enhancement, managerial effectiveness, and communication will mediate the relationship between dyadic dissimilarity and dissatisfaction found in the first hypothesis.

Hypotheses – Workgroup Conditions

Homophily and social identification theory suggest that workgroup demographic heterogeneity should affect satisfaction. Employees who feel more connected to and strongly

represent their workgroup should enjoy a better work experience and thus higher satisfaction.

There is research pointing to links between both workgroup gender and ethnic heterogeneity with satisfaction. Tsui, et al., (1992) found that group gender diversity was related to lower-levels of organizational attachment. Wharton and Baron (1987) found that men reported lower job satisfaction and greater depression in mixed settings. Savicki, et al., (1996) concluded that women in female only groups reported more satisfaction with group processes. Davis, et al., (1996) and Moch (1980) found ethnic workgroup heterogeneity had a significant negative relationship to enjoyment of the group experience. Kirby and Jackson (1999) found that employees in homogeneous workgroups were more satisfied compared to those in mixed workgroups. Sessa and Jackson (1995) found that ethnically heterogeneous teams reported more conflict. Sorenson (2000) found that both initial same race representation in the group and changes to race representation influenced the likelihood of turnover.

Research also finds some links between tenure heterogeneity and satisfaction and turnover. Top management team studies, including Wagner, et al., (1984), O'Reilly, et al., (1993) and Wiersema and Bird (1993), concluded that tenure heterogeneity was positively associated with turnover. Tenure cohort studies, including McCain, et al., (1983) and Pfeffer and O'Reilly (1987) also found that more tenure homogeneous cohorts experienced lesser turnover.

Although no research turned up examining attitudinal outcomes of functional work role diversity, homophily would suggest that it would follow the same patterns as these other types of demography discussed above. The two hypotheses follow the Baron and Kenny (1986) steps as well. Hypothesis 3 proposes the first step - - establishing an independent / dependent relationship.

Hypothesis 3: With workgroup size taken into account, more heterogeneous will report lesser workgroup satisfaction and greater voluntary turnover than more homogeneous workgroups.

Once the study establishes a direct link between organizational demography and outcome variables workgroup satisfaction and voluntary turnover, the presence of mediation can be sought (Baron and Kenny, 1986). The first mediator to be tested would again be opportunities for skill enhancement.

Workgroup skill enhancement. By definition, individuals within workgroups share common goals and common burdens (Guzzo & Dickson, 1996). Thus, additional discretionary activities affect not only the individual who decides to pursue them but also other workgroup members. Workgroup members have leeway to react in a supportive or non-supportive manner. The individual attempting to improve his or her skills by taking training classes, attending conferences or additional education often requires backup from fellow workgroup members to cover time away from ordinary responsibilities. Homophily (Baugher, et al., 2000; Mayhew, et al., 1995; Rothgerber, 1997; Rothgerber and Worchel, 1997) suggests people are more likely to want to help those who are more similar. Thus, the individual working in a more diverse group is more likely to find less support for attempts at skill improvement.

Formal skill improvement such as classes and education is only one avenue for enhancing capabilities. Skills improved by taking on informal leadership positions such as projects. Leading a project normally requires reliance on cooperation from members of the group involved in the project. Homophily suggests people would be more cooperative under the direction of similar others (Baugher, et al., 2000; Mayhew, et al., 1995; Rothgerber, 1997; Rothgerber and Worchel, 1997). Thus taking on and succeeding in a project management position with a more

diverse project team is hypothesized to be more of a challenge. Therefore, it is likely that working in a more demographically heterogeneous workgroup may negatively affect attempts to improve skills by taking on project management roles.

Of course, those who take on project management roles or special assignments must meet with the approval of an authority figure, often the workgroup manager, and often the formal leader chooses among subordinates for such roles. Fellow team members may be asked for or may volunteer evaluations of peers that are incorporated into decisions about whom to ask to take on larger roles such as project leadership or promotion. As shown in performance rating and diversity studies, individuals tend to rate similar others more leniently. Thus, candidates from less heterogeneous groups possess an advantage.

Employees who seek additional responsibility or are considered for it normally face some measure of evaluation from leadership - - often the workgroup manager. Fellow team members may have to submit or volunteer evaluations of peers. As shown in performance rating and diversity studies (Elvira & Town, 2001; Lefkowitz & Battista, 1995; and Wohlers, et., al., 1993) evaluations of similar others tend to be more discerning and positive (these studies deal with formal rater/ratee dyads but the general principle holds). Again, candidates from the less heterogeneous groups possess an advantage. Individuals within workgroups should sense this lack of mutual support and respond to the survey accordingly.

Finally, improving decision-making skills benefits, like all skills, from practice. The extent to which individuals within workgroups have opportunities to make or participate in decision-making depends on the workgroup's level of decision-making decentralization. Homophily (Baugher, et al., 2000; Mayhew, et al., 1995; Rothgerber, 1997; Rothgerber & Worchel, 1997) suggests that workgroup managers may hold decisions closer to the vest in

workgroups where they have a lesser comfort level. This reduces the chances to make or participate in decision-making and thus the development of skills in this area.

In summary, employees responding to the survey from more diverse groups should report a lesser general opportunity to improve skills. More diverse groups should also have a poorer view of managerial effectiveness as discussed below.

Workgroup managerial effectiveness. Some studies found a decline in cooperation among groups with greater gender heterogeneity (Sessa & Jackson, 1995), ethnic heterogeneity (Chattopadhyay, 1999) and functional heterogeneity (Keller, 2001). A few other studies found declines in workgroup functioning in ethnically more heterogeneous workgroups including Watson, Kumar and Michaelson (1993), Ammeter (2001) and Townsend and Scott (2001). These findings suggest, all else being equal (e.g., difficulty of workgroup tasks, available resources, etc.), that more heterogeneous workgroups may encounter more performance issues. Thus, managers of more heterogeneous workgroups may face a greater challenge and employees may perceive them as less effective.

Workgroup communication. Homophily suggests that individuals who are more similar will interrelate more often effectively and in greater quality. This may also have to do with the communication barriers between subgroups with the workgroup. Foldy, Rivard and Buck (2009) posit that society's power differences exist within the workgroup as well. Members of smaller, less favored subgroups have been shown to receive poorer quality information (Yrie, et al., 2002), sometimes intentionally (Ayoko, et al., 2002). Workgroup members who are from traditionally advantaged groups may feel empowered to dominate and direct communication in workgroups potentially favoring their in-group while making

communication quality poorer for those in the out-group (Stewart & Garcia-Prieto, 2008). There may also be the effect of shared viewpoints and experiences facilitating communication.

Workgroup cohesion. Because resources and rewards are limited, subgroups within workgroups compete against each other fostering an environment where there is more conflict and less teamwork, cooperation, integration, and communication known collectively as workgroup cohesion (Finklestein & Hambrick, 1996; Lichtenstein, et al., 1997; Riordan & McFarland Shore, 1997; Shenhav & Haberfeld, 1992; Zenger & Lawrence, 1989). Hogg and Terry (2000) suggest that the in-group/out-group dynamic created by social categorization leads to conflict. Due to this within-group conflict, theory suggests and research has shown a relationship between workgroup cohesion and workgroup demographic heterogeneity (Baugh & Graen, 1997). Pelled and Xin (2000) argue that the teaming together of people with varying priorities, assumptions and experiences leads to conflict. Eisenhardt, Kahwajy and Bougeois (1998) propose that the presence of dissimilar others raises the expectation for conflict. Solansky (1998) found greater workgroup gender heterogeneity negatively affected workgroup cohesion. Lichtenstein, et al., (1997) found that groups diverse on gender exhibited lower integration and coordination. Sessa and Jackson (1995), in a study of temporary hospital teams, found ethnically heterogeneous teams reported more conflict than did homogeneous teams. Pelled, et al., (1999)'s study of electronics workers found that ethnically diverse groups reported less cohesion. Williams and O'Reilly (1998) concluded that homogeneous workgroups were more cooperative and experienced less turnover. Glew (2000) found person/group similarity and cooperation were connected in a study involving students and business employees. Davis, et al. (1996) concluded that mixed groups reported the most conflict in a lab study. Hobman,

Bordia and Gallois (2003) did find some evidence for a connection between conflict and demographic dissimilarity.

Some research suggests that poorer communication in diverse groups relate to lower cohesion in those groups (Ragins & Cotton, 1993; Walsh & Borkowski, 1999). Tsui, et al, (1992) concluded that gender and ethnic diversity were related to communication. Hoffman (1985) found that ethnic heterogeneity inversely related to interpersonal communication that naturally facilitates cooperation. In a more generalizable study, Bacharach, et al. (2005) examined how workgroup demography influenced interpersonal supportive relationships and found that heterogeneity was inversely related to contact with dissimilar others. Also in 2005, Li and Hambrick (2005) used hierarchical linear regression controlling for group size to demonstrate an association between greater group heterogeneity and conflict. They found that coding groups as either heterogeneous or not was a significant predictor of task and emotional conflict as well as cohesion. Marquis, Guetzkow and Heyns (1951) measured satisfaction and cohesion within groups gathered for decision-making conferences. They found that cohesion significantly correlated with satisfaction. Chatman and Flynn (2001) found this effect in two studies, the first with a student sample and the second with a field sample of financial services officers. The effect of cohesion on intent to leave and actual turnover should work in a similar manner to overall satisfaction.

Workgroup Size. Workgroup size affects results (Amason, 1996; Blau, 1970; Li & Hambrick, 2005; Porter & Lawler, 1966). Specifically, Cohen and Bailey (1997) found some support for a curvilinear relationship between workgroup size and effectiveness. Alderfer and Smith (1982) found that group size negatively related to workgroup cohesion. Smaller groups have shown fewer issues with communication, coordination and integration (Wagner, et al.,

1984) and conflict (Amason & Sapienza, 1997). Mindful of these results, workgroup size is controlled for in Hypothesis 4.

Hypothesis 4: Workgroup skill enhancement, workgroup managerial effectiveness, workgroup communication and workgroup cohesion will mediate the relationships of workgroup heterogeneity with satisfaction and voluntary turnover found in the third hypothesis.

The preceding section set forth four hypotheses collectively suggesting that demographic composition in the manager/employee dyad and in the workgroup have an influence on attitudinal outcome variables through the effects of certain mediating variables. In both conditions, the study proposes opportunities for skill enhancement, perceptions of managerial effectiveness and communication as mediators. It adds an additional mediator, workgroup cohesion, in the workgroup condition.

Chapter IV: Method

Participants

Responses ($n=27,697$) to a 1999 survey of U.S. financial services professionals working for the same organization were analyzed. To ensure reasonable organizational knowledge respondents had to be with the organization for at least 4 months. Respondents who did not disclose gender (4%), chose the “*other*” category or did not disclose ethnicity (7%), or did not disclose tenure (5%) were excluded from the analysis. Respondents were 46% female and 18% minority. The use of organizational survey data is common in this literature (Campion, Medsker, & Higgs, 1993; Chen, 1996; Clark, 1996; D'Arcy, Syrotuik, & Siddique, 1984; Ensher, et al., 2001; Gavin & Ewen, 1974; Gerhart, 1990; Hausknecht, et al., 2009; Johnson & McIntye, 1998; Mason, 1994; McCain, et al., 1983; McNeely, 1989; Mueller, Finley, Iverson, & Price, 1999; Murray, 1989; Niebuhr & Oswald, 1992; Pelled & Xin, 2000; Pfeffer & O'Reilly, 1987; Riordan & McFarland Shore, 1997; Ryan, Chan, Ployhart & Slade, 1999; Schnake, Dumler, Cochran & Barnett, 1990; Sessa & Jackson, 1995; Sorenson, 2000; Vecchio & Gobdel, 1984; Wagner, et al., 1984; Whaton & Baron, 1987; Wiersema & Bantel, 1992; Young & Buchholtz, 2002).

Procedure

Distribution. The use of electronic direct distribution to employees avoids certain common pitfalls that lead to concerns over confidentiality, coercion and selective sampling. For example, Lundberg and Peterson (1994) and Spreitzer (1996) relied on managers to choose respondents and deliver surveys to them. Lundberg and Peterson (1994) also distributed surveys using group meetings meaning that employees who did not want to participate had to refuse publicly.

Cover letter. A cover letter encouraging participants to respond candidly from the chief executive of the firm accompanied the survey. This cover letter also guaranteed the confidentiality of responses and that management of the company would not see the raw survey responses. Further, the letter assures respondents that managers would review the data only in summary form.

Confidentiality. The survey achieved confidentiality by using non-individual respondent identification and offsite data processing (Riordan & McFarland Shore, 1997). The use of electronic data capture contributes to confidentiality by eliminating the chance that a completed paper response would be misdirected. Survey coding allowed identification of members of the same workgroup (i.e., department) but did not allow for individual identification.

Conditions.

Dyad Condition. Survey responses include a department code; this does not allow for isolating an individual manager's survey responses but does make it possible to identify to whom a respondent reports (91 did not have an identifiable manager). However, it was not possible to tell if the responses were from the manager due to the lack of individual coding. To remedy this, only employees with a title not matching the manager were analyzed. This left the full dyad dataset of 27,697 although some survey respondents did not disclose demographic information and would not be included in certain analyses (e.g., those who did not disclose gender will not be included in the gender dyad analysis).

The operationalization above produces the independent variable manager/employee dissimilarity tested separately on four separate demographic variables: gender, ethnicity, tenure and departmental function. For gender, ethnicity and tenure, dissimilarity is coded as "0" and similarity as "1" resulting in a measure of dissimilarity. Thus managers may be dissimilar on

variable (e.g., gender) but similar on ethnicity. This conceptualization of dissimilarity does mask some demographic variance in the manager/employee dyad. Male employees reporting to female managers likely feel differently on the outcome variables compared to females employees reporting to male managers, yet both dyads receive the same score. This issue extends through each of the demographic variables except functional dissimilarity where there are ten (five functions x 2 conditions) configurations.

Demographic variables – Dyad Condition. The paper uses the term “gender” incorrectly but consistently with much of the relevant literature. Gender refers to degree of masculinity or femininity while the term “sex” refers to actual biological difference. The roster file used to determine manager sex and the self-reported sex item on the survey instrument do not measure degrees of femininity but ask for self-reported sex. Common usage fails to honor the distinction between gender and sex and the error continues with this paper for the sake of consistency with the literature. Manager/employee gender dissimilarity is determined by comparing manager gender from the file used to control survey distribution with gender as indicated by respondents. A mismatch is coded as “0” while a match is coded as “1”. Manager/employee ethnic dissimilarity is operationalized similarly.

Scientific studies into racial classification based on more than surface physical differences do not reproduce the racial divisions perceived by the ordinary person (Betancourt & Lopez, 1993). Therefore, racial and ethnic categories are somewhat arbitrary and reflect more social convention than actual differences (Nkomo, 1992). Each of the commonly used racial categories is an umbrella term that pulls together people whose ancestors originated from widely differing parts of the world (Geddes & Konrad, 2003). Since the social conception of race mixes both biological and cultural distinctions, the term “race” does not fully capture the concept. Cox (1990) used the

term “racioethnic” to capture the multifaceted nature of this variable. However, this term seems to appear in only one subsequent article (Kossek & Zonia, 1994). The current study employs “ethnicity” instead of race as it somewhat better describes the variable and has less emotional connotation. Like gender-related differences, the current study views ethnicity-related differences on organizational and job attitudes as reflecting the social conceptualization of ethnicity including stereotypes, role expectations and norms rather than differences actually related to biology (Lefkowitz, 1994b). Also like gender-related differences, the study employs a self-report definition of ethnicity to avoid definitional problems and to reflect ethnicity as a socially defined construct.

Responses to the EEO items (“African-American/Black”, “Asian/Pacific Islander”, “Hispanic”, “Native American”, and “White/Caucasian”) are collapsed to minority/non-minority for employees and compared to manager minority/non-minority status. Dissimilarity is coded as “0” while a match is coded as “1”. As stated above, it is recognized that the collapsing of the EEO item and the EEO item itself mask vast self-recognized differences between people.

To protect confidentiality, tenure is measured imprecisely using somewhat arbitrary categories using a self report item with 7 categories: “Less than 1 year”, “1 year but less than 2 years”, “2 years but less than 4 years”, “4 years but less than 5 years”, “5 years but less than 6 years”, “6 years but less than 11 years”, and “11 years or more”. Data are dichotomized into distinct short tenure (38%) (responses 1 to 3) and long tenure (41%) (responses 6 and 7) groups leaving out the narrow 4th and 5th categories. Employees are compared to managers on tenure where dissimilarity is coded as “0” where manager and employee fall into different categories and “1” if they match. The resulting dichotomization of 0-4 year as short-tenure and 6+ years as long-tenure reflects practical concerns and lacks grounding in empirical literature. Thus,

dissimilarity comparisons based on these operationalizations suffer some construct validity problems.

Employee were categorized into high-level work roles or functions. These five groupings include: (1) direct salespeople (2) indirect salespeople, (3) sales support (4) administrative and operational personnel and (5) corporate support. The study defines functional dyad dissimilarity simply as whether the manager and employee share a common job function or do not. Survey responses include a measure of work function and these are compared to the work function of the manager. Again, it is recognized that the collapse of functions here has the advantage of ease of analysis but the problem of compressing different types of functional backgrounds.

Workgroup Condition. Workgroup is defined as interdependent individuals who see themselves and are seen by the larger social system as a structural entity (Guzzo & Dickson, 1996). Literature uses the term synonymously with “team” and “group” (Cohen & Bailey, 1997). Some research in the empirical literature constructs workgroups using student samples with a desired level of heterogeneity. While this paradigm connotes control advantages, it may entail only limited group interactions and simulated scenarios without significant consequences (Davis, et al., 1996; Kerr & Sullaway, 1983; Miller, 1995; Ruhe & Eatman, 1973).

For the field sample in this study, workgroups were operationalized as follows. Survey responses included a code that identified department. To ensure only intact workgroups were being used, the workgroup sample (n=4,191) included workgroups between three and 15 members only resulting in 766 workgroups analyzed. To protect confidentiality, no individual coding existed so it was impossible to remove workgroup manager responses from the workgroup’s dataset. To avoid response bias all responses tied to respondents at the same level as a workgroup manager were removed.

Demographic variables – Workgroup condition. Workgroup heterogeneity lends itself to easy understanding but not easy operationalization. Workgroup demography heterogeneity varies along a multitude of vectors (e.g., gender, ethnicity, gender by ethnicity, etc.) as well as an untenable number of possible compositions (e.g., 10% male / 90% female, 40% male, 60% female, etc.). To cope with these challenges the study tests two operationalizations.

Workgroup condition – First operationalization. In the first operationalization, the study dichotomizes each demographic variable and examines them one at a time (gender, then ethnicity, then tenure, then functional heterogeneity). This method follows practices in some of the literature such as Harrison and Klein (2007) who argue that inclusion of more than one demographic vector obscures the relative contribution of included variables. Other than gender, this dichotomization represents an admittedly artificial split. For minority members, the split between non-minorities and minorities collapses an important wealth of ethnic differences (Asian American, Black/African American, Caribbean Islander, etc.). On tenure, the definition collapses a spectrum of experience levels. The functional categories used also combine very different types of work (e.g., human resources versus information technology, etc.) Beyond these construct validity issues, these artificial dichotomies result in less variance in each measure, hence a lowered likelihood of observing relationships with other variables.

The workgroup demography calculation, with the exception of that for functional diversity, dichotomizes workgroups into two proportions (e.g., percentage female and therefore percentage male). Thus, the workgroup becomes more diverse as the percentage female rises from 1% to 50% after which relative diversity begins to decline. To account for this, where the percentage female or minority exceeds .5 the following formulas are applied:

$$\text{Workgroup gender heterogeneity} = (.5 - (\text{Proportion Female} - .5))$$

$$\text{Workgroup ethnicity heterogeneity} = (.5 - (\text{Proportion Minority} - .5))$$

$$\text{Workgroup tenure heterogeneity} = (.5 - (\text{Proportion Tenure} - .5))$$

$$\text{Workgroup functional heterogeneity} = (.5 - (\text{Proportion Function} - .5))$$

These calculations normalize the percentage female or minority such that .5 or perfect integration becomes the maximum heterogeneity. However, this will lead to some interpretive ambiguity.

For example, a group comprised of 30% females receives the same heterogeneity score as a group comprised of 70% females (i.e., 30% males).

Workgroup condition – Second operationalization. In an attempt to obviate the interpretive problem, the second operationalization resembles the first except the percentage of employees of each demographic variable runs, potentially, the full range of variance from 0% (e.g., all male) to 100% (e.g., all female). This more simple calculation may indicate whether the magnitude of one demographic group or another carries an influence. The calculation for each of the demographic heterogeneity variables follows:

$$\text{Percentage Female} = \frac{\text{number of female employees}}{\text{number of employees in a department with valid gender indicator}}$$

number of employees in a department with valid gender indicator

$$\text{Percentage Minority} = \frac{\text{number of minority employees}}{\text{number of employees in a department with valid ethnic indicator}}$$

number of employees in a department with valid ethnic indicator

$$\text{Percentage Long Tenure} = \frac{\text{number of long-tenured employees}}{\text{number of employees in a department with valid tenure indicator}}$$

number of employees in a department with valid tenure indicator

Workgroup functional heterogeneity also presents further operationalization difficulties. The study aggregates job indicators into five potential job functions (direct salespeople, indirect salespeople, sales support, administrative and operational personnel and corporate support). The composition of workgroups can vary from including just one to all possible job functions with an

effectively infinite number of combinations (e.g., 10% administration/90% sales, 20% administration/80% indirect sales, etc.). To avoid this complexity, the study examines just the level of mixing of different functions in a given workgroup or its basic functional heterogeneity.

The actual calculation is:

$$\text{Functional workgroup heterogeneity} = \frac{\text{\# of functions represented}}{\text{Total number of possible functions (5)}}$$

Again, it is recognized that this scoring reduces variability, hence is a conservative estimate of workgroup heterogeneity, and limits the relationship likely to be found in other variables.

Further, departments tend to be concentrated on a single function which further reduces variability.

Scales.

Responding to the demands of field research, the study uses scales with fewer items in comparison to scales found in many laboratory studies (Campion, et al., 1993). In field settings, researchers report difficulty in getting organizations to participate when there are a large number of items on a survey.

Item development. Items were chosen from long-standing measures considered appropriate to the organization's culture and judged to have face validity with organizational personnel (Harrison, Price & Bell, 1998). Alderfer and Smith (1982) reviewed the research literature on group study methodology and found that items developed with sensitivity to organizational context yield greater respondent involvement and decreased psychological distance between researcher and participant. Diversity subject matter experts assessed the items for appropriateness (Katzell, Ewen, & Korman, 1974).

Opportunities for skill enhancement/Workgroup skill enhancement. Five of the six career development items (see Table 1) directly measure opportunity to acquire or use skills: “*Q11-My job makes good use of my skills and abilities*”, “*Q28-I have the authority to make decisions that improve the quality of my work*”, “*Q31-I have the opportunity to learn new technologies at work*”, “*Q32-I have sufficient training in the technology I use for my job*” and “*Q51-How satisfied are you with your opportunity to develop additional skills?*” Mason (1994) used similar items including: “*My job provides a chance to do challenging and interesting work*”, “*My job provides a chance to learn new skills and develop new talents*”, “*How would you rate the company on your opportunity for advancement*” and “*how would you rate the company on providing training to help you qualify for a better job?*” The other - “*Q28-I have the authority to make decisions that improve the quality of my work*” – was understood by reviewers to measure the decentralization of power within the workgroup which leads to having more or fewer opportunities to improve decision-making skills. This item is similar to that used by Mason (1994): “*My present job provides me with the opportunity to make decisions.*” An exploratory factor analysis (Table 1) demonstrates that this item clusters well with these other five, which more clearly measure skill enhancement. Further, the items show acceptable reliability with an alpha of .82 ($n=26,527$).

In the dyad condition, opportunities for skill enhancement pulls data across items at the individual level. In the workgroup condition, workgroup skill enhancement utilizes data across items across the workgroup.

Managerial effectiveness / Workgroup managerial effectiveness. As expected, focus groups conducted as part of item development identified items that specifically asked for manager evaluations as management items. These direct measures of the manager’s behavior

include interpersonal skills, congruence between words and behavior, and reasonableness of demands. These include: “*Q05-My manager promotes teamwork with other workgroups*“, “*Q08-My manager encourages employees to bring concerns regarding questionable practices to his/her attention*“, “*Q15-My manager's actions match his/her words*“, “*Q17-My manager is considerate of my needs to balance work and personal life*“, “*Q35-My manager creates a work environment where diverse cultures, people and ideas are respected*“, “*Q41-My manager gives me feedback that helps me improve my performance*“, “*Q43-My manager promotes teamwork within my workgroup*” and most obviously “*Q47-Overall, how good a job do you feel is being done by your manager?*” Respondents felt that other two items - - “*Q03-Everyone in my workgroup is treated with respect*” and “*Q44-Different opinions can be expressed without fear of negative consequences*” - - were most influenced by the extent to which the manager established and promoted a culture of tolerance toward individuals and disconfirming information.

Statistical testing supports further evidence of the extent to which these items measure a common construct. Table 1 shows the factor loadings of the items demonstrating that they cluster together well. In addition, the scores on the items produce very strong reliability with an alpha of .92 ($n=26,161$).

In the dyad condition, managerial effectiveness pulls data across items at the individual level. In the workgroup condition, workgroup managerial effectiveness utilizes data across items across the workgroup.

Communication / Workgroup communication. Communication items focus on the value and utility of communication that flows from management. The five items are similar and one is identical to five items proposed to measure critical communication issues by Young and

Post (1993) and later included in a communications textbook as critical evaluative items (Robbins, 2001).

Three items ask about communication directly: “*Q19-Management does a good job of communicating the reasons behind important changes*”, “*Q23-[Company Name's] vision of the future has been clearly communicated*” and “*Q54-How satisfied are you with the information you receive from management on what's going on at [Company Name]?*” One of the items uses company name rather than “management” as its focus because they are asking about larger organizational response to environmental issues. Information about organizational responses to environmental challenges would tend to come from the manager serving as conduit and interpreter of downward communication.

Two items do not ask about communication directly: “*Q12-[Company Name] is making the changes necessary to compete effectively*” and “*Q24-Management lives up to its promises and commitments.*” When reviewed by the survey group respondents during item development, reviewers felt that item Q12 was a measure of communication because it is only through the formal communication of upcoming plans that employees who would have a means of assessing whether the firm was making appropriate changes. Focus groups considered Q24 to be a communication item because evaluating follow-up on commitments requires that some communication of those commitments.

Reliability testing of the scores on communication items yields a very strong alpha of .82 ($n=26,444$). Factor analysis as shown in Table 1 shows that these items cluster together well. It also shows that the indirect communication items function as well as those that directly measure communication.

In the dyad condition, communication pulls data across items at the individual level. In the workgroup condition, workgroup communication utilizes data across items across the workgroup.

Workgroup cohesion. As a term, “*workgroup cohesion*” is a research construct not normally used in business settings. However, its underlying concepts - workgroup performance, communication within and with other teams, cooperation level and esprit de corps - are similar to the business construct of teamwork. Items constituting this construct come from items on the survey which focus group reviewers considered part of the teamwork scale.

Three of the eight workgroup cohesion items measure the extent to which the workgroup functions as a whole to provide effective service to clients. These include: “*Day-to-day decisions in my work group demonstrate that quality is a top priority*”, “*My workgroup uses client feedback to improve the quality of our services*”, and “*My workgroup adapts quickly when client needs change*”. Riordan and McFarland Shore (1997) measured workgroup functioning including some similar items including: “*Most of the time my work group produces high-quality work*” and “*Most of the time my workgroup tries new ways to improve productivity*”.

Three of the eight workgroup cohesion items measure the basics of the concept – cooperation and communication within the workgroup and by the workgroup towards others. These include: “*Q34-The people I work with cooperate to get the job done*”, “*Q40-There is good communication within my workgroup*”, and “*Q42-There is good communication across workgroups*”. There are similarities with items used in Riordan and McFarland Shore (1997) including: “*Most of the employees in my work group cooperate to get the job done*” and “*Most of the employees in my work group are willing to share ideas and information*”.

The final two items measure the culture and tenor within the workgroup. A strong sense that the organizational culture is prevalent within the workgroup is an indicator of strong group identity measured with the item: “*Q37-The [Company Name Values] are reflected in the day-to-day operations of my workgroup*”. The specific reference to a set of principles repeated widely throughout the company makes the item highly appropriate to the setting. Morale within the workgroup is measured directly through “*Q45-Rate morale in your workgroup*”. Taken together these items form a scale with strong reliability - alpha of .86 ($n=26,401$). As shown in Table 1, an exploratory factor analysis demonstrates that these items hold together as a scale.

Job satisfaction / workgroup satisfaction. The number of items used in the job satisfaction scale, seven including the intent to leave item, is intentionally small to avoid respondent fatigue while satisfactorily covering the concept (Summers & DeCotiis, 1988). Using shorter, broad-based job satisfaction measures is consistent with many studies including Brashear, Boles, Bellenger & Brooks (2003) (4 items), Buzawa (1984) (6 items), D’Arcy, et al. (1984) (6 items), Mannheim (1993) (2 items), Moch (1980) (3 items), and Mueller, et al. (1999) (4 items).

At the job satisfaction scale’s core are items directly measuring satisfaction with the job and organization: “*Q55-Considering everything how satisfied are you with your job?*” and “*Q56-Considering everything, how would you rate your overall satisfaction with [Company Name] at the present time?*” Organizations frequently employ these items and they appear in studies such as Pitts (2009). Closely related to direct satisfaction is the intent to leave item which lends a behavioral intention to measures of job satisfaction. In the present study the item is: “*Q14-I intend to start looking for another job outside of [Company Name] within the next six months.*” This item measures actual intent to terminate employment and psychological

withdrawal from the organization without actually leaving due to the lack of employment alternatives (Ghiselli, LaLopa, & Bai, 2001; Tsui, et al., 1992). Previous studies have used similar items (Brashear, et al., 2003; Sanker & Yeong, 1997) when measuring job satisfaction. This single-item measure of intent to leave is consistent with the phrasing suggested by Nagy (2002) in a review of satisfaction measures. The wording here is superior to other less specific items such as that used in Koberg, Boss, Senjem, and Goodman (1999) because it directly asks about leaving the company in a given timeframe. It is also superior to items that do not recognize that some employees see their employment as indefinite such as Gerhart (1990) which asked: *“How much longer do you intend to stay at this job?”*

The job satisfaction scale incorporates elements of recognition fairness: *“Q46-How do you rate the amount of pay (salary and bonus) you get on the job?”*, *“Q26-People here are paid fairly for the work they do”*, *“Q49-How satisfied are you with the recognition you receive for doing a good job?”* and *“Q29-I feel valued as an employee of [Company Name]”*. Beyond being culturally appropriate these items are also consistent with research demonstrating a strong link between job satisfaction and relative compensation satisfaction (Clark, 1996; Locke, 1976). Researchers including Forgionne and Peeters (1982) and Katzell, et al., (1974) incorporated recognition satisfaction in their measures of satisfaction. Specifically, Koberg, et al., (1999) used the item: *“I am fairly paid compared with other employees.”* Nagy's (2002) job satisfaction literature review recommended the use of a recognition item, specifically, *“How does the amount of pay compare to what you think it should be?”*

Similarly, career advancement was also culturally seen as an element of satisfaction items: *“Q10-The people who get ahead at [Company Name] are those who perform well on the*

job” and “Q48-How satisfied are you with your opportunity to get a better job in [Company Name]?”

Satisfaction scale internal consistency reliability proves to be excellent with an alpha of .90 ($n=26,154$). Satisfaction scale items hang together well according to the exploratory factor analysis shown in Table 1. In the dyad condition, satisfaction pulls data across items at the individual level. In the workgroup condition, workgroup satisfaction utilizes data across items across the workgroup.

Voluntary Turnover. The calculation of voluntary turnover includes in its numerator those who voluntarily left the organization in the two years that followed the distribution of the survey excluding retirements and deaths. The denominator includes department population at the time of the survey.

Response scales. Respondents answered on five-point Likert-type response scales for all non-demographic items. A five-point response scale choice strikes a balance between precision in capturing the gradients of responses while providing a reasonable number of options. According to a review of the literature reported in, scales should offer between five and nine response choices. It also provides a balanced presentation of positive and negative choices with a neutral middle choice. Schaeffer and Presser (2003) suggests that the use of a neutral middle choice helps to decrease the amount of random error in survey data. In the present study, the response choices were presented with the most positive choice to the left proceeding by degrees with the rightmost being the most negative choice. Response choices were not preceded by a number (e.g., “5” to “1”) as this has been found to have some influence on responses (Schaeffer & Presser, 2003) particularly where a positive to negative number scheme (e.g., “+2” to “0” to “-2”) has been used.

Data Analysis.

Difference scores. Finally, no discussion of diversity research is complete without mentioning difference scores. Organizational demography studies have frequently used difference scores to define the level of group demographic heterogeneity. Webber and Donahue (2001) in their meta-analysis of 45 studies found that the most frequently used statistic is Blau's (1970) index of heterogeneity. Edwards (1993) decries the common use of difference scores as predictors in congruence research for several reasons. First, difference scores have less reliability than either component measure separately although they are not intrinsically unreliable. Tisak and Smith (1994) counter that this decreased reliability needs to be balanced with the need to measure the conceptually distinct demographic difference construct. Further, if the component measures were simple demographic indicators that, in theory, have perfect reliability, then the difference score would not suffer any reliability degradation. Second, Edwards (1993) believes that the difference score represents a conceptually ambiguous variable and that this third variable does not clearly identify what contribution each underlying measure makes to the total score. However, others believe that difference scores represent a conceptually different concept from their component parts (Tisak & Smith, 1994). Therefore, the difference between the ethnicity of the supervisor and that of the subordinate is a valuable variable of study in its own right. Third, Edwards (1993) believed that the use of difference scores imposes a restrictive set of constraints on the predictive power of demography on the outcome. He feels that congruence research should proceed by analyzing data in three dimensions such that the outcome variable would be predicted by both elements of demographic congruence—the supervisor's ethnicity and the subordinate's ethnicity. The current study eschews the use of difference scores in favor of dissimilarity from managers and peers.

Summary. The preceding section builds on the hypotheses offered in the previous chapter. It detailed sample characteristics and data collection methods and reviewed items, scales and measurements including factor analysis and reliability statistics. The following sections reports on the analysis of the data collected through the scales.

The data analysis section will include a factor analytic test of common method variance and assess the potential related issue of multicollinearity. Hypothesis testing will employ mediation tests as outlined by Baron and Kenney (1986). They suggest that concluding mediation requires significant results on four tests. The tests first seek a relationship between the predictors and the outcome variables. The predictors must show a relationship to the mediating variables and then to the outcome variables. Finally the original relationship found in step one must be reduced when the mediating variables are controlled.

Chapter V: Results

In this section, statistical analysis tests the hypotheses discussed above using the methodology discussed in the previous section. It reviews the general statistics used to test the validity of the data as well as the testing of the hypotheses.

Preliminary Analysis.

The response choices on the survey did not include a numerical indicator (e.g. “5”) with the verbal response choice (e.g., “Very Satisfied”) when presented to the respondent. These were converted later with 5 representing most favorable and 1 least.

There are two reverse coded items: “*Q-21 Mediocre performance is tolerated in my workgroup*” and “*Q-14 I intend to start looking for another job outside of [Company Name] within the next six months*”. With these items, “1” indicated strong agreement and “5” strong disagreement. No out of range values were found.

Factor analysis. The initial data-related concern with organizational survey data is common method variance. Specifically, it is possible that items load or largely load on a single global factor (Spreitzer, 1996). Common method variance concerns do not extend to the independent variables because demographic variables are essentially independently measured from attitudinal variables.

To check for common method variance in the dyad data, an exploratory principal factor analysis, shown in Table 1, supported the presence of separate variables that load as predicted in the section above on item development. This lends credence to the grouping of items as proposed.

Table 1

Rotated Component Matrix from Exploratory Factor Analysis

Item	Component				
	Managerial Effective- ness	Satis- faction	Work- group Co- hesion	Oppor- tunities for skill enhanc e-ment	Commun- ication
Q04-I have the opportunity to do challenging work.	.16	.40	.23	.61	-.13
Q11-My job makes good use of my skills and abilities.	.16	.43	.29	.59	-.01
Q28-I have the authority to make decisions that improve the quality of my work.	.34	.35	.27	.45	.04
Q31-I have the opportunity to learn new technologies at work.	.13	.12	.10	.73	.22
Q32-I have sufficient training in the technology I use for my job.	.18	-.01	.08	.51	.34
Q51-How satisfied are you with your opportunity to develop additional skills?	.22	.31	.13	.69	.20
Q03-Everyone in my work group is treated with respect.	.54	.31	.41	.10	-.02
Q05-My manager promotes teamwork with other work groups.	.68	.07	.28	.18	.10
Q08-My manager encourages employees to bring concerns regarding questionable practices to his/her attention.	.67	.16	.18	.11	.12

Table 1 (continued)

Item	Component				
	Managerial Effective- ness	Satis- faction	Work- group Co- hesion	Oppor- tunities for skill enhanc e-ment	Commun- ication
Q15-My manager's actions match his/her words.	.76	.26	.19	.09	.08
Q17-My manager is considerate of my needs to balance work and personal life.	.66	.20	.05	.12	.10
Q35-My manager creates a work environment where diverse cultures, people and ideas are respected.	.74	.17	.26	.14	.08
Q41-My manager gives me feedback that helps me improve my performance.	.70	.16	.26	.22	.15
Q43-My manager promotes teamwork within my work group.	.69	.08	.38	.17	.12
Q44-Different opinions can be expressed without fear of negative consequences.	.58	.31	.26	.15	.07
Q47-Overall, how good a job do you feel is being done by your manager?	.77	.22	.24	.10	.12
Q12-Company Name is making the changes necessary to compete effectively.	.01	.32	.21	.12	.63
Q19-Management does a good job of communicating the reasons behind changes.	.41	.25	.19	.16	.50

Table 1 (Continued)

Item	Component				
	Managerial Effective- ness	Satis- faction	Work- group Co- hesion	Oppor- tunities for skill enhanc e-ment	Commun- ication
Q23-Company Name's vision of the future has been clearly communicated.	.03	.18	.13	.11	.73
Q24-Management lives up to its promises and commitments.	.34	.49	.16	.12	.49
Q54-How satisfied are you with the information you receive from management on what's going on at [Company Name]?	.25	.27	.16	.15	.64
Q01-Quality of service is my responsibility.	.25	.17	.62	.13	.12
Q06-My work group uses client feedback to improve the quality of our services.	.24	.10	.53	.21	.13
Q25-My workgroup adapts quickly when client needs change.	.16	.05	.69	.14	.19
Q34-The people I work with cooperate to get the job done.	.27	.13	.69	.04	.06
Q37-The Company Name Principles are reflected in the day-to-day operations of my work group.	.35	.30	.55	.15	.16
Q40-There is good communication within my work group.	.41	.18	.63	.12	.06

Table 1 (Continued)

Item	Component				
	Managerial Effective- ness	Satis- faction	Work- group Co- hesion	Oppor- tunities for skill enhanc e-ment	Commun- ication
Q45-Rate morale in your work group.	.43	.42	.44	.14	.19
Q10-The people who get ahead at [Company Name] are those who perform well on the job.	.20	.59	.20	.20	.24
Q14-I intend to start looking for another job outside of [Company Name] within the next six months.	.13	.63	.13	.21	.09
Q26-People here are paid fairly for the work they do.	.15	.68	.17	-.02	.22
Q29-I feel valued as an employee of [Company Name].	.33	.61	.24	.26	.21
Q46-How do you rate the amount of pay (salary and bonus) you get on the job?	.12	.72	.03	.01	.13
Q48-How satisfied are you with your opportunity to get a better job in [Company Name]?	.20	.58	.10	.40	.19
Q49-How satisfied are you with the recognition you receive for doing a good job?	.40	.59	.13	.23	.16
Q55-Considering everything how satisfied are you with your job?	.28	.68	.26	.33	.11

Testing for multicollinearity. Exploratory factor analysis suggests that separate scales exist in the data and that they operate as suggested in the item development section of the method section above. Although exploratory factor analysis demonstrates there are distinct factors at play within the data it cannot fully eliminate the possibility of multicollinearity. This occurs when variables are too highly correlated to be said to measure distinct concepts. Of course, some degree of conceptual overlap is inevitable both because the concepts being tested are highly similar and because the data collection method for the mediating and outcome variables, organizational survey data, brings some confounding of variables.

The literature commonly tests for multicollinearity through correlations using a .75 cut point above (Pelled & Xin, 2000; Pelled, Xin, & Weiss, 2001; Spreitzer, 1996; Tsui, et al., 2002). Although correlations between independent variables are strong, inter-correlations are below this suggested cutoff as displayed in Tables 2 to 4.

Table 2

Descriptives and Correlations - Mediating and Outcome Variables-Study 1

Variables	M	s.d.	α	1	2	3	4	5	6	7	8
1. Manager/Employee Gender Dissimilarity	.46	.50	na	--							
2. Manager/Employee Ethnic Dissimilarity	.25	.43	na	-.34	--						
3. Manager/Employee Tenure Dissimilarity	.85	.38	na	.35	-.14	--					
4. Manager/Employee Functional Dissimilarity	.51	.50	na	-.04	-.03	-.01	--				
5. Opportunities for Skill Enhancement	3.76	.72	.82	.00	.11	.01	-.07	--			
6. Managerial Effectiveness	3.78	.78	.92	-.04	.05	-.01	-.04	.57	--		
7. Communication	3.44	.78	.82	-.04	.00	-.01	.04	.53	.56	--	
8. Satisfaction	3.49	.80	.90	-.02	.10	-.03	-.02	.71	.64	.65	--

Notes: n=27,502. Correlations greater than absolute value of .02 significant at $p<.001$.

Table 3

Descriptives and Correlations of Mediating and Outcome Variables-Study 2

Variables	M	s.d.	α	1	2	3	4	5	6	7	8	9
1. Gender Heterogeneity	.31	.14	na	--								
2. Ethnic Heterogeneity	.17	.15	na	-.10	--							
3. Tenure Heterogeneity	.29	.15	na	.08	.06	--						
4. Functional Heterogeneity	.45	.14	na	.20	-.12	.17	--					
5. Opportunities for Skill Enhancement	3.77	.70	.82	.03	-.09	.00	.03	--				
6. Managerial Effectiveness	3.85	.78	.92	.02	-.01	.01	-.04	.58	--			
7. Communication	3.45	.76	.82	-.01	-.04	-.02	.04	.51	.49	--		
8. Workgroup Cohesion	3.77	.67	.86	.03	-.05	-.01	-.01	.59	.74	.55	--	
9. Satisfaction	3.48	.79	.90	.06	-.15	-.01	.07	.69	.61	.66	.63	--

Notes: n=4,194. Correlations greater than absolute value of .02 significant at $p < .001$.

Table 4

*Descriptives and Correlations of Mediating and Outcome Variables-Study 2-Alternative**Operationalization of Workgroup Heterogeneity*

Variables	M	s.d.	α	1	2	3	4	5	6	7	8	9
1. Percentage Female	.50	.24	na	--								
2. Percentage Minority	.19	.19	na	-.02	--							
3. Percentage Long Tenure	.47	.26	na	.09	.09	--						
4. Functional Heterogeneity	.45	.14	na	.12	-.11	-.05	--					
5. Opportunities for Skill Enhancement	3.77	.70	.82	-.06	-.10	-.02	.03	--				
6. Managerial Effectiveness	3.85	.78	.92	-.04	-.03	.01	-.04	.58	--			
7. Communication	3.45	.76	.82	.04	-.04	.01	.04	.51	.49	--		
					ns							
8. Workgroup Cohesion	3.77	.67	.86	-.05	-.05	.02	-.01	.59	.74	.55	--	
9. Satisfaction	3.48	.79	.90	-.04	-.04	-.05	.07	.69	.61	.66	.63	--

Notes: n=4,194. Correlations greater than absolute value of .04 significant at $p < .001$ unless stated otherwise.

Confirmatory Factor Analysis. Confirmatory factor analysis using structural equation modeling was conducted to test for common method variance. Jackson, Gillaspay and Purc-Stephenson (2009) reviewed 1,409 confirmatory factor analysis models in 194 studies and created a checklist to guide researchers in methodological reporting for this type of analysis. Following those recommendations, the structural equation modeling confirmatory factor analysis run here employed the following elements. The five-factor solution involved assigning

individual survey items to the mediating and satisfaction variables as described in Figure 3, the Methods section and the original exploratory factor analysis. LISREL maximum likelihood analysis with missing data replaced by averages was used to conduct the confirmatory factor analysis. Results as displayed in Tables 5 to 7.

The five-factor model demonstrated acceptable fit with RMSEA values of 0.066 below the commonly accepted threshold of 0.08 (Steiger, 2004) and nearly identical to the average RMSEA (0.064) reported in 357 published studies analyzed by Jackson, et al., (2009). In comparison, structural equation modeling shows that a model with all items loaded onto a single global factor structural does not produce acceptable model fit (RMSEA value = 0.119) (see Table 6). These results do not support the hypothesis that items excessively measure a single global factor. Jackson, et al., (2009) discuss the substantial disagreement in the literature as to the value of other fit indices and the lack of firm rules about which should be reported or considered. These concerns cover the indices shown in Tables 5, 6 and 7; however, the 5-factor solution does marginally better values on NFI, GFI and CFI in comparison to the 1-factor and other models discussed below.

To test the parsimony of the five-factor solution, models with four, three and two components were constructed and tested. Since workgroup cohesion and perceived managerial effectiveness have the highest inter-correlation ($r=.74$), these latent variables were combined to create a four-factor solution. This solution produced an acceptable but lower level of fit versus the 5-factor solution with an RMSEA of 0.078 as shown in Table 7. Four-factor Chi Square results ($X^2=112767.16$) are significantly higher than the five factor model ($X^2=78952.89$ -Table 5). As Opportunities for Skill Enhancement and Satisfaction produced the next highest correlation ($r=.71$), these were combined leaving a three factor solution for testing. Structural

equation modeling on this combination also produced a lower but marginally acceptable fit with an RMSEA of 0.082 as shown in Table 7. Finally, communication and satisfaction produced the next highest inter-correlation ($r=.65$) and these were combined to leave a two-factor model for testing. The RMSEA measurement here of 0.089 exceeds the bound of acceptable fit (Steiger, 2004) (see Table 7). In summary, the declining levels of model fit as each factor fell away from the 5-factor solution does not suggest it violates the principle of parsimony.

Table 5

Structural Equation Modeling Results – Five Factor Model

<i>Variable</i>	<i>Loading</i>	<i>R²</i>
Q04-I have the opportunity to do challenging work.	.70	.52
Q11-My job makes good use of my skills and abilities.	.76	.58
Q28-I have the authority to make decisions that improve the quality of my work.	.64	.42
Q31-I have the opportunity to learn new technologies at work.	.59	.39
Q32-I have sufficient training in the technology I use for my job.	.40	.16
Q51-How satisfied are you with your opportunity to develop additional skills?	.73	.57
Q03-Everyone in my work group is treated with respect.	.72	.44
Q05-My manager promotes teamwork with other work groups.	.74	.53
Q08-My manager encourages employees to bring concerns regarding questionable practices to his/her attention.	.66	.48
Q15-My manager's actions match his/her words.	.85	.64
Q17-My manager is considerate of my needs to balance work and personal life.	.63	.42
Q35-My manager creates a work environment where diverse cultures, people and ideas are respected.	.69	.59
Q41-My manager gives me feedback that helps me improve my performance.	.78	.57
Q43-My manager promotes teamwork within my work group.	.73	.60
Q44-Different opinions can be expressed without fear of negative consequences.	.75	.48
Q47-Overall, how good a job do you feel is being done by your manager?	.82	.69

Table 5 (Continued)

<i>Variable</i>	<i>Loading</i>	<i>R²</i>
Q12-Company Name is making the changes necessary to compete effectively.	.58	.34
Q19-Management does a good job of communicating the reasons behind important changes.	.82	.56
Q23-Company Name's vision of the future has been clearly communicated.	.55	.32
Q24-Management lives up to its promises and commitments.	.79	.64
Q54-How satisfied are you with the information you receive from management on what's going on at [Company Name]?	.70	.49
Q01-Quality of service is my responsibility.	.56	.40
Q06-My work group uses client feedback to improve the quality of our services.	.52	.32
Q25-My workgroup adapts quickly when client needs change.	.48	.32
Q34-The people I work with cooperate to get the job done.	.53	.39
Q37-The Company Name Principles are reflected in the day-to-day operations of my work group.	.67	.54
Q40-There is good communication within my work group.	.73	.54
Q42-There is good communication across work groups.	.66	.43
Q45-Rate morale in your work group.	.84	.59
Q10-The people who get ahead at [Company Name] are those who perform well on the job.	.74	.46
Q14-I intend to start looking for another job outside of [Company Name] within the next six months.	.70	.42
Q12-Company Name is making the changes necessary to compete effectively.	.58	.34

Table 5 (Continued)

<i>Variable</i>	<i>Loading</i>	<i>R²</i>
Q26-People here are paid fairly for the work they do.	.67	.34
Q29-I feel valued as an employee of [Company Name].	.84	.62
Q46-How do you rate the amount of pay (salary and bonus) you get on the job?	.61	.34
Q48-How satisfied are you with your opportunity to get a better job in [Company Name]?	.74	.52
Q49-How satisfied are you with the recognition you receive for doing a good job?	.79	.55
Q55-Considering everything how satisfied are you with your job?	.82	.73
Q56-Considering everything, how would you rate your overall satisfaction with [Company Name] at the present time?	.79	.69
Q26-People here are paid fairly for the work they do.	.67	.34
Q29-I feel valued as an employee of [Company Name].	.84	.62
Q46-How do you rate the amount of pay (salary and bonus) you get on the job?	.61	.34
Q48-How satisfied are you with your opportunity to get a better job in [Company Name]?	.74	.52
Q49-How satisfied are you with the recognition you receive for doing a good job?	.79	.55
Q55-Considering everything how satisfied are you with your job?	.82	.73
Q56-Considering everything, how would you rate your overall satisfaction with [Company Name] at the present time?	.79	.69
Q26-People here are paid fairly for the work they do.	.67	.34
Q29-I feel valued as an employee of [Company Name].	.84	.62

Table 5 (Continued)

Chi-square (df; p)	78952.89 (655; .000)
NFI; GFI; CFI	0.98; 0.87; 0.98
RMSEA (CI)	0.066 (0.065, 0.0066)

Table 6

Structural Equation Modeling Results – One Factor Model

<i>Fit Indices</i>	<i>Value</i>
Chi-square (df; p)	248942.42 (629; .000)
NFI; GFI; CFI	0.95; 0.67; 0.95
RMSEA (CI)	0.119 (0.0, 0.0)

Table 7

Structural Equation Modeling Results – Four, Three and Two Factor Models

Model	Chi-square (df; p)	NFI; GFI; CFI	RMSEA (CI)
Four	112767.16 (659; 0.0)	0.97; 0.82; 0.97	0.078 (0.0, 0.0)
Three	124268.41 (662; 0.0)	0.97; 0.81; 0.97	0.082 (0.0, 0.0)
Two	145016.70 (664; 0.0)	0.96; 0.78; 0.96	0.089 (0.0, 0.0)

Voluntary Turnover. Turnover rate by department was obtained using the following formula:

$$\text{Turnover} = \frac{\Sigma(\text{Voluntary Terms})^{\text{department}}}{\Sigma(\text{Employees})^{\text{department}}}$$

The numerator consists of only employees actively employed at the time of the survey who left voluntarily in the two years after the survey - - generally for other employment. This excludes those who left due to retirements, those who failed to return from leaves or deaths. The denominator includes active employees at the time of the survey. A second formulation, which removed involuntary leavers from the denominator, was tested. It produced a near-perfect correlation ($r=.999$, $p<.000$) with the first formulation and thus the principle of parsimony supported the use of only the first calculation.

Hypothesis Testing – Dyad Condition

Hypothesis 1: Employees demographically dissimilar from their manager (on gender, ethnicity, tenure or function) will report lesser satisfaction than those demographically similar.

The first hypothesis suggests that there is a relationship between employee dissimilarity from manager and satisfaction. To test this hypothesis, coding of demographic dissimilarity variables (gender, ethnicity, tenure or function) labeled a match coded as “0” and a mismatch as “1”. Each variable match was done separately meaning that an employee might be coded as a match on some (e.g., gender and tenure) variables but coded as a mismatch on others (e.g., ethnicity and tenure).

Correlation or ANOVA statistical tests both provide valid potential means of testing Hypothesis 1. The choice of correlation arises from the need later on to test mediation by partialling out the effects of each of the mediating variables (opportunities for skill enhancement,

communication and managerial effectiveness) from any correlations found between demographic similarities (gender, ethnicity, tenure or function) and satisfaction.

Employee dissimilarity on gender from the manager produced a slight, negative significant correlation ($r=-.07, p<.01$) with satisfaction supporting the first hypothesis. Ethnicity dissimilarity with the manager yielded a slightly higher negative, significant correlation ($r=-.11, p<.000$). Conversely, employee dissimilarity on tenure failed to produce a significant ($r=.01, p>.05$) association to satisfaction. Finally, functional dissimilarity yielded a positive correlation ($r=.02, p<.000$) with satisfaction contradicting the first hypothesis.

These near-zero correlations suggest that satisfaction lacks connection to demographic dissimilarity. This lack of strong impact by demographic variables is consistent with some literature. The large sample size is also an issue here as they may appreciably account for the significance levels (Steiger, 2004). These minimal correlations are, nevertheless, significant which allows for further exploration of mediating variables.

Hypothesis 2: Opportunities for skill enhancement, managerial effectiveness, and communication will mediate the relationship between dyadic dissimilarity and dissatisfaction found in the first hypothesis.

The second hypothesis proposes a mediating relationship. Baron and Kenny (1986) list the second step of testing mediation as determining if there is a relationship between the potential mediator and the predictor. Thus, partial support for this hypothesis would come from finding a relationship between manager/employee demographic heterogeneity and opportunities for skill enhancement, managerial effectiveness and communication.

Table 8 details the correlations between the predictors, demographic dissimilarity of four different types, with the three dyad-appropriate mediators. Negative correlations indicate that

dissimilarity on demographic variables (similarity coded as “0”, dissimilarity coded as “1”) yielded less satisfaction on the variable (most satisfied =5, least = 1) as hypothesized.

Being different from the manager on gender did not produce meaningful results. Opportunities for skill enhancement shows a negative, significant relationship to gender dissimilarity ($r=-.09, p<.000$). Managerial effectiveness performed in a similar fashion ($r=-.04, p<.000$). Interestingly, communication ($r=.03, p<.000$) has a significant positive relationship with the predictor contrary to the expected direction despite what several communication style studies would predict (Carli, 1990; Carli, et al., 1995; Dovidio, et al., 1988; Preisler, 1986).

Being different on ethnicity from the manager shows very small but negative, significant correlations with opportunities for skill enhancement ($r=-.11, p<.000$) and managerial effectiveness ($r=-.05, p<.000$) (Table 8) agreeing with Kraiger and Ford (1985), Landy and Farr (1980) and Schmitt and Lippin (1980) both in the hypothesized, negative, direction. Unlike with gender dissimilarity, communication did not produce a significant result ($r=.00, p>.05$, Table 8).

Similar to the results on both gender and ethnicity, tenure dissimilarity tends to be associated with lower managerial effectiveness ($r=-.04, p<.000$). However, unlike gender and ethnicity, employee tenure dissimilarity shows a significant but positive relationship with opportunities for skill enhancement ($r=.03, p<.000$). Communication did not show a significant relationship to tenure dissimilarity reflecting the case with ethnicity dissimilarity and this variable ($r=.00, p>.05$) (Table 8).

Finally manager/employee function dissimilarity correlates positively and significantly with opportunities for skill enhancement ($r=.07, p<.000$) and managerial effectiveness ($r=.04, p<.000$) both counter to hypothesis. The correlation between functional dissimilarity and communication ($r=-.04, p<.000$) (Table 8) is in the hypothesized direction.

Table 8

Pearson Correlations of Manager /Employee Demographic Similarity and Mediating Variables

Predictor Variables	Opportunities for skill enhancement	Managerial Effectiveness	Communication
Manager/Employee Gender Dissimilarity	-.09	-.04	.03
Manager/Employee Ethnic Dissimilarity	-.11	-.05	.00
Manager/Employee Tenure Dissimilarity	.03	-.04	.00
Manager/Employee Function Dissimilarity	.07	.04	-.04

Notes: n=26,245 individuals. Correlations above .02 are significant at $p < .001$

The correlations between manager/employee demographic dissimilarity and the mediating variables (opportunities for skill enhancement, managerial effectiveness and communication) are significant in several cases. This suggests the mediation analysis should continue to the next step - testing the mediating variables job satisfaction link.

The next step in mediation testing is to test the linkage between mediating and dependent variables (Baron & Kenny, 1986). Pearson correlations of satisfaction against mediating variables suggest satisfaction is strongly, positively and significantly associated with all: opportunities for skill enhancement- $(r=.71, p < .000)$, managerial effectiveness- $(r=.64, p < .000)$ and communication- $(r=.64, p < .000)$. To some degree, these very high correlations reflect overpowered tests due to the high n sizes, common method variance and a lack of construct independence.

The analyses to this point suggest that it is possible to perform the final test of mediation that would ultimately test hypothesis 2. Again, according to Baron and Kenny (1986) if a

reduction in the relationship between predictor and outcome is found when controlling for the mediator then mediation is suggested. In the current study this test involves running a partial correlation between each of the demography heterogeneity conditions (gender, ethnicity, tenure and function) with satisfaction while controlling for the effects of each of the mediating variable (opportunities for skill enhancement, communication, and managerial effectiveness) in turn (12 partial correlations in total).

Gender heterogeneity had a significant correlation ($r=-.07, p<.01$) to satisfaction. This correlation falls nearly to insignificance with opportunities for skill enhancement controlled ($r=-.01, p<.05$) suggesting it mediates the relationship. However, given the small absolute pre-mediation correlation coupled with the very large n sizes, mediation cannot be said to have occurred. Steiger (2004) urges the consideration of the practical, as opposed to just statistical, significance of small correlations based on large n sizes. Controlling for managerial effectiveness, however, does not reduce the correlation ($r=-.07, p<.000$). Controlling for communication has no effect on the relationship ($r=-.12, p<.000$) and thus does not play a mediating role.

Ethnic employee dissimilarity from manager correlated with satisfaction ($r=-.11, p<.000$). With opportunities for skill enhancement controlled, employee dissimilarity from the manager's correlation to satisfaction declined slightly ($r=-.04, p<.000$). Again, the large n size provides a caution against concluding mediation (Steiger, 2004). With managerial effectiveness controlled, ethnic employee manager dissimilarity's correlation to satisfaction declined very slightly ($r=-.09, p<.000$). Communication also showed no meditative effects ($r=-.13, p<.000$).

The correlation of employee tenure dissimilarity from manager with satisfaction failed to produce a significant association ($r=.01, p>.05$) and thus mediation tests do not appear in this

section. Similarly, functional employee dissimilarity showed a slight, positive correlation to satisfaction ($r=.02, p<.000$). Controlling for opportunities for skill enhancement does not push the dissimilarity/satisfaction correlation to non-significance but does reverse the sign ($r=-.03, p<.000$). Controlling for managerial effectiveness does push the functional dissimilarity/satisfaction correlation to non-significance ($r=.00, p>.05$). Controlling for communication had the effect of raising the magnitude of association ($r=.06, p<.000$).

In summary, Hypothesis 2, which suggested opportunities for skill enhancement, managerial effectiveness, and communication will mediate the relationship between demographic dissimilarity and satisfaction, was not support. Employees generally did not feel an influence on their satisfaction stemming from demographic differences with their managers. The very high correlations between the mediators and satisfaction suggests that employees did feel that getting ahead through skill enhancement, the quality of management and leadership communication had an influence on satisfaction although the correlations are inflated due to the high sample size.

Post Hoc Analysis. Following up on the concern that the dichotomization of gender, ethnicity and tenure obscures significant relationship variance between different configurations, a post hoc analysis was completed. For each of these three demographic variances a comparison of mean differences by different manager / employee configurations was completed. As shown below they generally demonstrate that minimal average satisfaction differences exist between configurations.

Although ANOVA results (Table 9) suggest a significant difference exists ($p<.000$) between average satisfaction depending on the manager/employee gender dissimilarity configuration, actual mean differences did not rise to the point of practical significance. When

the employee's gender differed from the manager's gender in either dissimilar configuration, the average satisfaction is nearly identical ($\bar{x} = 3.4$). Males working for males had the highest mean satisfaction ($\bar{x} = 3.6$) while females working for females had the lowest mean satisfaction ($\bar{x} = 3.4$). The results of comparing different configurations of managers and employees on the ethnicity variable also do not report evidence that dissimilarity has a strong effect on satisfaction (see Table 10). Non-minorities working for non-minorities report a stronger average satisfaction ($\bar{x} = 3.5$) compared to the other configurations, which largely report the same level of satisfaction. The results of comparing different configurations of tenure, while resulting in a significant ANOVA mean comparison, resulted in only slightly different satisfaction means ($\bar{x} = 3.5$). The tenure of the manager did not appear to have an effect on satisfaction (see Table 11).

Table 9

ANOVA comparing manager/employee gender configurations against satisfaction

		Male Employee			
Male Manager		3.6			
Female Manager		3.4			
Variance	SS	df	MS	F	p
Between Groups	189.409	3	47.352	75.799	.000
Within Groups	16599.000	26,450	.628		
Total	16788.410	26,454			

Table 10

ANOVA comparing manager/employee ethnicity configurations against satisfaction

		Non-minority Employee			
Non-minority Manager		3.5			
Minority Manager		3.4			
Variance	SS	df	MS	F	p
Between Groups	208.001	3	69.334	109.06	.000
Within Groups	17363.334	27,445	.633		
Total	17571.334	27,448			

Table 11

ANOVA comparing manager/employee tenure configurations against satisfaction

	Long-Tenured Employee		Short-Tenured Employee		
Long-Tenured Manager	3.4		3.5		
Short-Tenured Manager	3.5		3.5		
Variance	SS	df	MS	F	p
Between Groups	16.318	3	5.27	8.30	.000
Within Groups	14516.720	22,857	.635		
Total	14533.038	22,860			

Hypothesis Testing – Workgroup Condition

Hypothesis 3: With workgroup size taken into account, more heterogeneous workgroups will report lesser workgroup satisfaction and greater voluntary turnover than more homogeneous workgroups.

Controlling for workgroup size, workgroup gender heterogeneity shows a very slight although significant positive correlation with workgroup satisfaction ($r=.06, p<.000$) (see Table 12) contrary to the hypothesized direction. There is also a smaller but significant negative correlation with turnover ($r=-.03, p<.05$) in the hypothesized direction. With workgroup size controlled, workgroup ethnic heterogeneity produced a small correlation ($r=-.14, p<.000$) (see Table 12) with workgroup satisfaction and no connection to voluntary turnover.

Unlike workgroup gender or ethnicity heterogeneity, tenure heterogeneity was not significantly related to workgroup satisfaction ($r=-.01, p>.05$) or with turnover ($r=.01, p>.05$).

Functional workgroup heterogeneity is significantly and positively correlated with workgroup satisfaction ($r=.10, p<.000$) but not correlated with turnover ($r=.03, p>.05$) (see Table 12).

The alternative operationalization of the workgroup heterogeneity variables produces a very similar set of results. Controlling for workgroup size, the extent to which female members numerically dominate the workgroup has similarly slight, but now negative, association with workgroup satisfaction ($r=-.05, p<.000$). As with the workgroup heterogeneity operationalization, no correlation between percentage female and turnover was noted (see Table 13).

Percentage minority performs almost exactly as workgroup heterogeneity ($r=.14, p<.000$) but with no connection to turnover. Conversely, allowing the tenure variable to vary along the full range from 0% to 100%, produces noticeably different results from the tenure heterogeneity variable. Percentage long tenure has a significant relationship with satisfaction ($r=-.05, p<.000$) and a correlation with turnover ($r=-.40, p<.001$) much larger than other correlations observed in this paper. The relatively high correlation with turnover results from a statistical artifact – the greater the concentration of longer tenured employees in a group, the lower the turnover (see Table 13).

Table 12

*Partial Correlations of Group Heterogeneity with Workgroup Satisfaction and Turnover
Controlling for Workgroup Size*

Predictor Variables	Satisfaction	Turnover
Gender Heterogeneity	.06***	-.03*
Ethnic Heterogeneity	-.14***	.00
Tenure Heterogeneity	-.01	.01
Functional Heterogeneity	.10***	.03

Notes: n=4,914 individuals.

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

Table 13

*Partial Correlations of Group Heterogeneity with Workgroup Satisfaction and Turnover**Controlling for Workgroup Size – Alternative Operationalization of Workgroup Heterogeneity*

Predictor Variables	Satisfaction	Turnover
Percentage Female	-.05***	-.01
Percentage Minority	-.14***	.01
Percentage Long Tenure	-.05**	.40***
Functional Heterogeneity	.10***	.03

Notes: n=4,914 individuals.

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

In summary, little support for hypothesis 3 exists in these analyses. Correlations between the independent and dependent variables were statistically significant in some cases but not practically so. Ethnic heterogeneity calculated either as workgroup mix or as percentage minority followed the hypothesized direction. Tenure heterogeneity did not show a connection to workgroup satisfaction when operationalized as workgroup heterogeneity but did show the connection in the hypothesized direction when operationalized as percentage long tenured. Functional heterogeneity produced a positive correlation with workgroup satisfaction contrary to Hypothesis 3. Finally, actual turnover showed no connection to workgroup demographic heterogeneity except for a spurious connection with long-tenure. After establishing a significant correlation between independent and the dependent variable, the next step is to test the independent/mediating variable relationship (Baron and Kenny, 1986).

Hypothesis 4: Workgroup skill enhancement, workgroup managerial effectiveness, workgroup communication and workgroup cohesion will mediate the relationships of workgroup heterogeneity with satisfaction and voluntary turnover found in the third hypothesis.

Workgroup gender heterogeneity had a significant, positive relationship to satisfaction. It also has a significant and positive relationship to workgroup skill enhancement ($r=.04, p<.05$) and workgroup cohesion ($r=.04, p<.05$) (see Table 14). Percentage female produced negative, significant correlations with workgroup skill enhancement ($r=-.07, p<.000$), workgroup managerial effectiveness ($r=-.05, p<.001$) and workgroup cohesiveness ($r=-.06, p<.000$). Workgroup communication again does not produce a significant correlation (see Table 15)

Workgroup ethnic heterogeneity correlates significantly and negatively with workgroup skill enhancement ($r=-.08, p<.000$), communication ($r=-.03, p<.05$) and workgroup cohesiveness ($r=-.04, p<.01$) controlling for workgroup size (see Table 14). Operationalizing as percentage minority resulted in a similar state of affairs. Small, negative but significant correlations exist with all four variables: workgroup skill enhancement ($r=-.10, p<.000$), workgroup managerial effectiveness ($r=-.03, p<.05$), workgroup communication ($r=-.03, p<.05$) and workgroup cohesion ($r=-.03, p<.05$). The negative correlations on these variables are consistent with the hypotheses. However, the correlations are practically zero (see Table 15).

Tenure heterogeneity and percentage tenure both failed to predict all four mediating variables. None of the eight partial correlations approached significance.

Finally, workgroup functional heterogeneity significantly and positively correlated to workgroup skill enhancement ($r=.04, p<.01$) and workgroup communication ($r=.07, p<.000$). The positive correlations run counter to Hypothesis 4. However, workgroup managerial effectiveness's partial correlation to functional heterogeneity did run in the same, significant

direction ($r=-.04, p<.05$) as hypothesized. Workgroup cohesiveness and functional heterogeneity did not result in a significant correlation (see Table 14).

Table 14

Partial Correlations of Workgroup Heterogeneity and Mediating Variables Controlling for Workgroup Size

Predictor Variables	Workgroup skill enhancement	Workgroup Management Effectiveness	Workgroup Communication	Workgroup Cohesiveness
Workgroup Gender Heterogeneity	.04*	.03	.01	.04*
Workgroup Ethnic Heterogeneity	-.08***	-.01	-.03*	-.04**
Workgroup Tenure Heterogeneity	-.01	-.02	.00	-.01
Workgroup Function Heterogeneity	.04**	-.04*	.07***	.00

Notes: n=4,182 individuals.

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

Table 15

Partial Correlations of Workgroup Heterogeneity and Mediating Variables Controlling for Workgroup Size – Alternative Operationalization.

Predictor Variables	Workgroup skill enhancement	Workgroup Management Effectiveness	Workgroup Communication	Workgroup Cohesiveness
Percentage Female	-.07***	-.05**	.03	-.06***
Percentage Minority	-.10***	-.03*	-.03*	-.03*
Percentage Tenure	-.02	.02	.01	.02

Notes: n=4,182 individuals.

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

In summary, this step in mediation testing provides no support for hypothesis 4.

Workgroup gender heterogeneity's positive correlation to opportunities for skill enhancement ran counter to the hypothesis but the magnitude size was essentially zero. Percentage gender negatively correlated with opportunities for skill enhancement but again at a minimal magnitude. Ethnic workgroup heterogeneity and percentage minority's influence on opportunities for skill enhancement followed the hypothesized direction but at correlation sizes too small to be practically meaningful given the overpowered tests.

Workgroup managerial effectiveness correlated positively with gender heterogeneity but negatively with percentage female; however, neither effect size was practically meaningful. Percentage minority had a minimal negative correlation with workgroup managerial effectiveness while ethnic heterogeneity did not produce a significant correlation with it.

Functional heterogeneity produced a significant, negative correlation with workgroup managerial effectiveness but again the correlations were very small.

Like opportunities for workgroup skill enhancement, workgroup communication negatively correlated with ethnic heterogeneity/percentage minority as hypothesized while the correlation was positive with functional diversity. Finally, workgroup cohesiveness significantly negatively correlated with percentage female, but not workgroup gender heterogeneity, and negative with workgroup minority heterogeneity / percentage minority.

The third step in mediation testing is a comparison of mediating variables to outcome variables (Baron & Kenny, 1986). There is a strong significant relationship between workgroup skill enhancement ($r=.69, p<.000$), workgroup managerial effectiveness ($r=.62, p<.000$), workgroup communication ($r=.65, p<.000$) and workgroup cohesion ($r=.63, p<.000$) with satisfaction. Also as expected, turnover correlates negatively with workgroup skill enhancement ($r=-.06, p<.000$), workgroup managerial effectiveness ($r=-.09, p<.000$) workgroup communication ($r=-.067, p<.000$) and workgroup cohesiveness ($r=-.08, p<.000$).

The final step in mediation analysis (Baron & Kenny, 1986) is to rerun the original correlations between the workgroup demography variables and the dependent variables with the mediating variables controlled. Evidence of mediation exists where significant correlations drop or fall to insignificance.

Workgroup gender heterogeneity demonstrated a mild, positive ($r=.06, p<.000$) partial correlation with workgroup satisfaction (see Table 12). Controlling for each of the mediating variables in turn did not lower or move to non-significance the workgroup gender heterogeneity/workgroup satisfaction correlation. Controlling for workgroup skill enhancement and, separately, workgroup management effectiveness both produced an ($r=.07, p<.000$)

correlation. Controlling for workgroup communication raised the correlation to ($r=.09, p<.000$) and controlling for workgroup cohesion left it unchanged ($r=.06, p<.000$). This suggests that none of the proposed mediators was active in the workgroup gender heterogeneity/satisfaction relationship and that other, untested, variable may account for it.

Workgroup ethnic heterogeneity shows a stronger but negative connection to workgroup satisfaction ($r=-.14, p<.000$) compared to workgroup gender heterogeneity (see Table 12). Controlling for each of the mediating variables in turn shows no reduction in correlation or any movement towards non-significance. Controlling for workgroup skill enhancement and, separately, workgroup cohesion produces identical correlations ($r=-.15, p<.000$). Controlling for workgroup managerial effectiveness strengthens the correlation ($r=-.17, p<.000$) as does workgroup communication ($r=-.16, p<.000$). This suggests that these variables do not act as mediators in the peer diversity/satisfaction relationship.

Tenure heterogeneity did not show a significant association with workgroup satisfaction. With workgroup size and workgroup skill enhancement controlled and separately workgroup communication and workgroup cohesion controlled, tenure heterogeneity produces non-significant correlations with workgroup satisfaction in all cases. Controlling for workgroup management effectiveness produces a similar non-significant correlation with workgroup satisfaction

Functional workgroup heterogeneity did show a significant relationship to workgroup satisfaction ($r=.10, p<.000$) (see Table 12). Controlling for workgroup skill enhancement produced the same correlation ($r=.10, p<.000$) while controlling for workgroup managerial effectiveness ($r=.15, p<.000$) and workgroup cohesion ($r=.12, p<.000$) raised the magnitude of association. Only workgroup communication lowered the strength of association ($r=.07,$

$p < .000$). This suggests that the positive effect that functional diversity had on workgroup satisfaction may be influenced by workgroup communication but not the other suggested variables.

Workgroup percentage female produced a negative ($r = -.05, p < .000$) partial correlation with workgroup satisfaction (see Table 13). Controlling for workgroup skill enhancement, managerial effectiveness and workgroup cohesion separately moved the correlations to non-significance ($r = -.01, p > .05, r = -.02, p > .05$ and $r = -.01, p > .05$ respectively). Controlling for workgroup communication raised the correlation to ($r = -.09, p < .000$) and controlling for workgroup cohesion left it unchanged ($r = .06, p < .000$).

Very similar to workgroup ethnic heterogeneity, workgroup percentage minority also produced a negative connection to workgroup satisfaction ($r = -.14, p < .000$) (see f). Controlling for each of the mediating variables in turn also shows no reduction in correlation or any movement towards non-significance. Controlling for workgroup opportunities for skill enhancement and, separately, workgroup cohesion produces identical correlations ($r = -.10, p < .000$). Controlling for workgroup managerial effectiveness strengthens the correlation ($r = -.16, p < .000$) as does workgroup communication ($r = -.16, p < .000$) and workgroup cohesion ($r = -.15, p < .000$).

Percentage long-tenure also produced a negative, significant correlation with workgroup satisfaction ($r = -.05, p < .01$) (see Table 13). Controlling for workgroup skill enhancement did not reduce the correlation ($r = -.03, p < .05$) noticeably, a similar result when controlling for workgroup communication and workgroup cohesion ($r = -.06, p < .001$).

In summary, the organizational demography variables tested evidenced no meaningful connection to workgroup satisfaction and no relationship to turnover. The proposed mediating variables did not function as hypothesized. Given the small magnitude effect sizes there was

little room for any mediation.

Chapter VI: Discussion

To review, social identity theory and homophily theory suggest that relational and organizational demography should have a connection to attitudinal outcome variables such that dissimilarity and heterogeneity are associated with lesser satisfaction. While no unambiguous results exist, the supposition has garnered some research support (Baugher, et al., 2000; Mayhew, et al., 1995; Rothgerber, 1997; Rothgerber & Worchel, 1997). The present study tested this idea. Specifically, it examined whether being demographically dissimilar from the manager or from peers results in lesser satisfaction and greater turnover. It also proposed potential mediating variables and tested whether opportunities for skill development, managerial effectiveness, and communication and, in the workgroup condition, workgroup cohesion help to explain this relationship if evidence of a relationship was found.

Empirical Conclusions – Dyad Condition

Relational demography. None of the connections between the demographic dissimilarity variables and dependent variables rose to the point of robustness. Gender and ethnic dissimilarity produced expected significant negative correlations with satisfaction but the effect size was too small to be of practical significance and may be a statistical artifact of the large sample size. This result was similar to Tsui and O'Reilly (1989) who found no connection between manager/employee ethnic differences and commitment, attendance and intention to stay. David, et al. (2010) also did not find a correlation between ethnicity dissimilarity and continuance commitment. Sacco, et al., (2003), Sackett and DuBois (1991) and Mount, et al., (1997) all did not find a straightforward connection between manager/employee demographic similarity and ratings bias.

Tenure dissimilarity produced a non-significant relationship with satisfaction while functional dissimilarity produced a correlation that was significant but nearly zero. These findings neither agree nor disagree with the published literature as tenure and functional demography research has generally looked at their effects on workgroups rather than the manager / employee dyad (Cummings, 2004; Wagner, 1984). Perry, et al., (1999) did analyze age differences in the manager / employee dyad but while tenure is often a proxy for age it is a fundamentally different concept. Operationalization limitations may have played a part in the failure to reject the null hypothesis on these two variables. The definition of short-tenure and long-tenure left the possibility that only two years of length of service separated employees in the dichotomy. A similar lack of variance on function may also have played a part as most manager / employee dyads share a function.

Beyond methodological issues, this lack of rejection of the null hypothesis may indicate a lack of potency for surface-level dissimilarity variables. LMX (Bedi, 2000; Dienesch & Linden, 1986) and social exchange theories (Hollander, 1980) propose that individual relationships in the supervisory relationship develop asymmetrically over time. It may be that surface-level demographic variables carry some meaning early in the relationship (respondents needed to have four months tenure to be included in the survey) and this declines to the point of being immeasurable with the growth of the relationship. Ammeter (2001) found saliency declines in demographic variables during the length of a brief project. Potentially, the effects of each manager's personal relationship with each employee overwhelm any residual impact of demographic dissimilarity on satisfaction.

Proposed Mediating Variables. As with the connection of demographic dissimilarity variables and the dependent variable there was effectively no relationship between the

independent variables and the mediating variables. Manager / employee gender and ethnic dissimilarity produced significant, negative correlations, as hypothesized, with opportunities for skill enhancement and managerial effectiveness but the magnitudes of these were practically insignificant. Demographic dissimilarity's connection to communication were slightly positive (gender) or non-significant (ethnicity). The lack of connection to career development (opportunities for skill enhancement) is not unique in the literature; Sacco, et., al. (2003) could not find the demographic similarity / ratings leniency effect found in studies such as Kraiger and Ford (1985). The lack of connection to managerial effectiveness runs perhaps most counter to homophily (Baugher, et al., 2000; Mayhew, et al., 1995; Rothgerber, 1997; Rothgerber & Worchel, 1997). It may suggest employees either form opinions less affected by interpersonal rapport than the theory suggests or that rapport is more strongly tied to other types of connections (shared interests, shared family situations, etc.) as compared to demography (Cunningham, 2007). Communication fared least well relative to hypotheses. Construct definition may have played a part here when comparing this finding to research that does find a dissimilarity/communication connection such as Carli (1990). Communication here focused on downward communication generally rather than the specific interaction with the manager. It may be that communication channels in this organization were effective, egalitarian and relatively independent of the manager.

Similar to the pattern seen in the connections between dependent variables and satisfaction, tenure and functional dissimilarity had even less connection with the proposed mediating variables as compared to gender and ethnicity dissimilarity. Tenure and functional dissimilarity had positive rather than negative relationships with opportunities for skill enhancement although, again, the correlations were too small to be of practical import. While

this runs counter to the hypotheses, it does make logical sense that working for someone longer tenured or with a different functional background could have a positive effect on career advancement (none of the data here supports this conjecture). Tenure dissimilarity produced a significant, negative correlation with managerial effectiveness consistent with hypotheses but too slight to be of importance. Tenure demography research has looked at its effects on groups particularly top management teams (McCain, et al., 1983; O'Reilly, et al., 1993; Pfeffer & O'Reilly, 1987; Wagner, et al., 1984; Wiersema & Bird, 1993) so this finding does not contrast with the research. It may point to a construct issue in that perhaps only managers of extremely limited tenure are evaluated lower but once they have some organizational experience, little variance by tenure is observable (no results here support this idea). Similarly, tenure dissimilarity's non-significant correlation to communication does not contradict research as it has tended to examine tenure heterogeneity in groups rather than manager/employee dyads (Zenger and Lawrence, 1989). It may be that managers of more or less experience pass along information in a similar fashion. Functional dissimilarity countered the hypotheses and had a positive and significant correlation with managerial effectiveness although it was very small. This lack of finding may point to a similarity in managerial approaches across functional backgrounds. There may also have been a similarity in what they communicate across functional backgrounds as the negative and significant correlation between functional dissimilarity and communication was miniscule.

In terms of predictors of satisfaction, all mediating variables were highly predictive of satisfaction. Employees in this sample reported a very strong connection between their ability to get ahead, the performance of their manager, and communication from management with satisfaction. This is consistent with the available research on managerial effectiveness and

satisfaction (Acquavita, et al., 2009; Alexander, et al., 1989, Cheung, et al., 2009), and communication and satisfaction (Biggs, et al., 1975; Frone & Major, 1988; Goris, et al., 2002; Mayfield & Mayfield, 2002; Muchinsky, 1977; O'Reilly, 1978; Orpen, 1995; Ward, 1997).

Given the lack of connection between the independent variables and mediating and outcome variables, the likelihood of finding mediating effects was slim and consequently little was found. Slight declines in the gender and ethnicity dissimilarity correlations with satisfaction occurred when controlling for opportunities for skill enhancement. Essentially no decline was seen in the gender and ethnicity dissimilarity / satisfaction correlation when controlling for managerial effectiveness. Communication showed no meditative effects at all. Tenure dissimilarity showed no correlation with satisfaction so no mediation testing was necessary. No changes in the essentially non-existent connection between functional dissimilarity and satisfaction was observed across any of the proposed mediating variable.

Consistent with Pfeffer (1983)'s congruence assumption, little research has examined the reasons how demography might affect attitudinal outcome variables - - if indeed they do. Thus, the lack of findings here largely does not contrast with the published research. It is possible that some combination of construct validity problems both on the independent and mediating variables help to explain the lack of results as well as a lack of efficacy of the mediating variables proposed. It may be that demographic dissimilarity itself has little effect on satisfaction and thus the question of how such an effect would occur is moot.

Summary. Empirical results do not reject the null hypothesis. Across four types of demographic dissimilarity variable, three mediating variable and job satisfaction, effectively no connections were found. Construct problems and other methodological issues may be partially responsible for the acceptance of the null hypothesis. No data appearing here support this

conjecture but it may be that any impact initially associated with surface level differences fades as individual relationships develop over time as supported by Ammeter (2001). It is may also be possible that preference for like others on surface-level variables supported in studies such as Baugher, et., al., (2000), Mayhew, et., al., (1995) and Mehra, et., al., (1998) does not strongly relate to a more satisfying working relationships. However, the acceptance of the null hypothesis does not mean no effect exists only that none was found in this particular study.

Empirical Conclusions – Workgroup Condition

Workgroup Heterogeneity. In general, similar to the results found for demographic dissimilarity, workgroup demographic heterogeneity produced no meaningful results. Although some correlations between heterogeneity demographic variables and satisfaction were significant and in the hypothesized (negative) direction, none of the correlations were practically meaningful - - particularly given the large sample size. This lack of unambiguous support for the hypotheses is similar to some of the results such as Chattopadhyay (1999) who found a connection between ethnic diversity within groups on altruism but not for all ethnicities.

Organizational demography. Gender and ethnicity heterogeneity produced near zero but significant correlations with satisfaction and mostly non-significant correlations with turnover using both operationalization methodologies. This lack of effect does not contradict some of the research such as Fields and Blum (1997) who reported that mixed gender workgroups and all female workgroups showed little satisfaction difference. Wharton and Baron (1987) found that women did not differ on the outcome variable related to workgroup gender composition. Construct issues may have played a part in the lack of effect particularly on the ethnic heterogeneity variables that collapsed potentially widely differing ethnic identities into a non-minority/minority dichotomy even beyond the broad variance in identification collapsed into

the EEO category item itself. External validity may have also contributed to the failure to reject the null. Potentially the advanced human resources practices of the organization may have played a part in the non-effects of these variables. Tsui, et al., (1992) found a connection between demography and outcome variables but only for some companies studied which tended to suggest that managerial effectiveness has an influence on the impact of demography.

Tenure workgroup heterogeneity had no association with workgroup satisfaction or turnover. It may be that variance in the length of time peers have been with the firm simply has little impact on whether it is enjoyable to work in the firm. Operationalization may have also played a part in the support of the null hypothesis. Those considered long tenured in some cases differed from short-tenured employees by just two years, which may not be a practically meaningful difference. Functional heterogeneity also had no effect consistent with some of the research such as Randel and Jaussi (2003) who found little effect. The conclusions run counter to the conclusions of several studies including Carroll and Harrison (1998), Cohen and Bailey (1997), McCain, et., al., (1983), O'Reilly, Snyder and Boothe (1993), Pfeffer and O'Reilly (1987), Sorenson (2000), Wagner, et., al., (1984) and Wiersema and Bird (1993). However, these studies largely employed smaller more contiguous samples - in many cases members of top management teams and university cohorts-as opposed to substantial and wide-ranging sample used.

In summary, while some significant correlations between independent and dependent variables were observed, there was no support for the hypotheses which were suggested by the literature review. Potentially, this may reflect a lack of potency of the organizational demographic variables chosen and / or construct and external validity limitations.

Proposed Mediating Variables. Workgroup gender heterogeneity produced correlations as hypothesized with workgroup skill enhancement, workgroup managerial effectiveness and workgroup cohesion, but only in the second operationalization and of an exceedingly small magnitude. Workgroup communication was not significantly related to gender heterogeneity in either operationalization. Ethnic heterogeneity produced significant correlations in the hypothesized direction with most variables using the first operationalization and in all using the second. Again, however, the magnitude of relationship was vanishingly small and potentially a statistical artifact of effect size. The lack of effect may be related to a lack of potency of the independent variables. Stewart and Garcia-Prieto (2008) found an influence of demographic heterogeneity in newly formed student groups only where participants identified strongly with their self-reported ethnicity. It may be that in long-standing workgroups engaged in actual paid employment with common goals and risks the effects of surface-level differences are overwhelmed by other considerations. Construct validity issues may have also played a part in the lack of effects. Communication was defined as quality of top-down information flow rather than intra-group communication, a concept that may have prompted different responses. Workgroup cohesion potentially could have been defined as the variance in the variable by workgroups rather than mean with lesser variance taken to identify greater workgroup cohesion. It may also be an organizational effect, perhaps the fairness of opportunities and the quality of management are both fairly strong and consistent.

Tenure heterogeneity showed no relationship to any of the proposed mediating variables in either operationalization. Although workgroup skill enhancement and workgroup managerial effectiveness have little published empirical support as variables, a connection to communication and workgroup cohesion has been found in some studies. Zenger and Lawrence (1989) found a

significant connection between communication and tenure heterogeneity but communication was defined as the quantity of technical communication, a concept much different from the one studied in the present paper. The lack of effect of functional heterogeneity on the proposed mediating variables agrees with Wagner, et al. (1984) who also did not find a connection to the functional background in a study of top management teams.

Summary. There are a number of possible reasons organizational relational demography does not work in the manner theory would suggest. It may be that homophily's impact is limited and expressed only under certain conditions in work settings. It may also diminish with time as found by Ammeter (2001) who concluded that the ethnic similarity and trust connection faded during a semester. It may be that as collegiality with managers or peers develops, initial discomfort fades and thus must be more severe to be detectable. The present sample included employees who worked together on common tasks supporting shared overarching goals and incurring comparable risks. These shared burdens and experiences may have far more to do with the work experience than surface-level variables.

Across the dyad and workgroup condition there was a lack of support for the effects of demography and the hypotheses. The proposed mediating variables did not act as such in either condition. Although this is speculation, it is possible the surface-level demographic variables studied do not pack the hypothesized salience. Construct validity problems with the independent and mediating variables likely also hampered the detection of potential effects of demography. Idiosyncrasies of the organization may have also diminished the ability to reject the null hypothesis. The responses of the sample, drawn from a progressive, cosmopolitan organization based in the U.S.'s largest cities, may differ in attitudes toward diversity from those employed in less sophisticated environments.

Practical Implications

Manager/employee demographic differences do not appear to play a strong part in either the promotion or degradation of satisfaction. Certainly individual cases of discrimination exist and likely systematic biases live on particularly in performance management systems (Kraiger and Ford, 1985; Lefkowitz and Battista, 1995; Schmitt and Lippin, 1980). However, this research fails to support any advantage or disadvantage of pairing demographically alike manager and employee dyads (Lefkowitz, 1994b).

Lack of support for application of demography. Similarly, study results suggest that organizational leaders concerned with engendering satisfaction need not try to construct teams or make assignments so as to maximize demographic uniformity. This suggests that organizations should also guard against ethnic drift within workgroups of all sizes (Lefkowitz, 1994b). Large organizations should use data mining techniques to uncover excessively homogeneous departments or functions. Surveys or focus groups should be employed to understand what obstacles exist against integration. Beyond the profit motive, there is a superior social good in reducing occupational segregation, for which there is much evidence (Bayard, et al., 1999), and its accompanying career limitations. There is also growing evidence that diversity of people, ideas and opinions relates to solid business outcomes, particularly in environments that demand creativity and innovation. It is likely that creativity and innovation will continue to drive revenue growth as a means of competitive differentiation.

Support for value of effective management. Capturing these positive business outcomes of diversity and avoiding any downsides requires robust diversity management that encompasses but extends beyond affirmative action and EEO efforts (Pitts, 2009). These efforts strive for better managerial interactions and team cultures and building a better appreciation for

competing views and diverse experiences. Foldy, et al., (2009) argue that the focus of diversity organizational change efforts must be on building respect for demographic-related differences rather than sublimating them to the prevailing culture because that culture is not gender or ethnicity neutral and likely is embedded with power differences found in the larger society.

Emerging research supports the utility of diversity management. Pitts (2009) investigated the value of diversity management employing 2006 Federal Human Capital Survey data ($n \sim 140,000$). The research suggests a link between diversity management and perceived performance and that people of color feel this link more strongly. A baseline White versus non-White perceptual performance differential emerged from the data. After the researcher controlled for three items measuring diversity management the disparity between demographic groups on perceived workgroup performance declined by more than half although it remained. These results reveal tangible effects on perceived performance from intelligent diversity management. Gonzalez and Denisi (2009) explored how diversity climate, as they called it, moderated the impact of gender and ethnic dissimilarity on affective organizational commitment and intention to leave. By working with a restaurant chain, they found a naturally occurring set of 26 groups which varied on demographic composition and offered a useful ($n=271$) overall sample size. Although results did not support across the board conclusions, the data suggested diversity climate moderated likelihood to quit among the Hispanic portion of the sample and affective commitment among the African-American participants.

Some of the elements of effective diversity management appear here including opportunities for skill enhancement, managerial effectiveness, communication and workgroup cohesion. All of these demonstrated very close ties to satisfaction.

The elements of career opportunities for skill enhancement through the improvement of skills proved to be a major driver of satisfaction so managers should be conscious of fairness in the distribution of valuable assignments, promotions, and in evaluating performance. This problem emerges in various studies such as Lefkowitz and Battista (1995).

The performance of management also had a strong influence on satisfaction (Acquavita, et al., 2009; Cheung, et al., 2009). This suggests that organizational leaders or organizational development specialists should focus on perceptions of rank-and-file employee base. Through communication channels and by maintaining visibility they must demonstrate openness to diversity, foresight and avoidance of stereotypic thinking. Employees need convincing on the idea that organizational leaders have a clear strategy based on realistic forecasting of the industry and the business environment it is operating in. The performance of managers including the degree to which they demonstrate good performance coaching across employee categories, and general managerial competencies such as controlling work and assigning resources is also important. Managers set a tone and an example to employees thus it is important that they approach their work with professionalism, industriousness, foresight and even-handedness. They must carefully maintain an ongoing social exchange with employees (Hollander, 1980; Homans, 1961) treating the employee as an individual (Bedi, 2000; Dienesch & Linden, 1986) without reliance on stereotypic thinking. The study results may also give evidence to the possibility that demographic differences may be more salient earlier on in the employment of individuals or in newly formed workgroups. Managers of such employees or Greenfield groups might be wise to be more sensitive to miscommunication or conflict until natural small group processes or interpersonal rapport is established.

Communication predicted satisfaction consistent with studies such as Kim (2002) which found that managerial communication predicted employee satisfaction. Organizational leaders need to have a clear and comprehensive communication strategy that flows consistently from its highest offices through all levels of managerial hierarchy. While content is important, the simple act of relating strategy, interpretation of business events and intentions for the future can promote employee happiness by making them feel well informed. Providing understandable and relevant communication content helps to promote further satisfaction by reinforcing organizational culture and norms and to create a shared reality of how the enterprise views the world and its internal reactions. A smooth-running organization where employees can anticipate the likely reactions of managers to decisions leads to improved morale and satisfaction. It is also important that communication channels be consistently open and available to all rather than limited to certain informal or even formal networks. Parceling out information can breed the type of in-group versus out-group conflict described in studies of communication networks such as Ayoko, et al., (2002).

Workgroup cohesion showed a relationship to satisfaction similar to the results of studies such as Chatman and Flynn (2001) and Marquis, et al., (1951). These findings suggest that managers should attempt to foster a sense of team among the workgroup through the active establishment and maintenance of clear lines of communication among workgroup members. In addition, responsibilities and workflow must be clear to all group members to ensure timely and accurate completion of tasks. Strong satisfaction can be derived from being part of a highly functioning team that effectively deals with its challenges. However, the emotional life of the group needs attention to as well. Conflict, which naturally arises due to time and resources pressures, needs addressing by the manager. Jealousies, jockeying for position and office

politics require monitoring to avoid harming group functioning and thus lowering employee satisfaction. Managers should also be conscious of fault-line formation where workgroups divide into competing factions.

Limitations and Suggestions for Future Research

Limitations. Although the use of one organization can have the effect of improving internal validity by controlling policies, work type and other factors, it does impose some limitations. A single organization precludes generalizations. It is possible the lack of effect here may be diluted relative to a less cosmopolitan, global and diverse organization such as a manufacturing setting or among people employed in more difficult work circumstances (e.g., mining). Further, organizations less concerned with advanced human resources management practices (e.g., employee surveys, management of culture and the importance of diversity initiatives) may more likely experience diversity-related problems. It would be interesting to conduct a similar study in an environment with recent difficulties between subgroups in its workforce or in a less progressive setting to see if organizational and relational demography shows more impact.

Cross-sectional data. A second limitation is the use of cross-sectional data. Similar to a limitation acknowledged in Pitts (2009), most of the variables emanate from the same individuals filling out the same instrument in the same time period prompting concerns about common method variance and response bias. It is commonly acceptable that demographic independent variables, like those employed here, are generally not subject common method variance of response bias; however, the mediating and outcome variables arise from the same source. To some degree, a satisfied employee feels more positive on other variables including organizational management, culture, community, etc. and thus the survey measures a common underlying

degree of contentment. Confirmatory factor analysis tended to suggest common method variance did not completely account for the high correlations between mediating variables and satisfaction but to some degree the issue remains. Further, it is conceivable that organizational survey results are biased to the positive as some employees may temper their candor due to individual (although unfounded) concerns about confidentiality.

The use of cross-sectional data also means the research can only hint at how the dynamics studied may change over time. There is some discussion and disagreement in the literature over whether exposure to dissimilar others breeds acceptance. Some would argue that differences in worldviews only calcify over extended exposure. It would be interesting to track attitudes towards dissimilar others as a team grows from newly formed to experienced.

Confidentiality. A third set of limitations results from the need to guard the confidentiality of those in the survey samples. Asking people to relate their emotions about their employer and job is delicate work and the promise of confidentiality produces better data and protects respondents. However, this meant that some interesting analyses such as comparing the responses of managers to their staff were impossible. A related limitation was the inability to remove specific workgroup and dyad managers from the data although a workaround (removing all employees at the manager's level) helped to ameliorate the problem. This may have potentially resulted in the over-culling of non-minority and male responses given that they tend to be overrepresented in managerial ranks. It would have also been interesting to examine the responses of those who departed the organization in the two years following the survey but a lack of personal identifiers makes this impossible.

Culturally acceptable items. A fourth set of limitations flowed from the need to limit items to acceptable and organizationally relevant questions. This did have the positive effect of

ensuring that items were meaningful and understandable for all respondents; however, it would have been interesting to add other types of questions such as demographic preferences for managers and colleagues. Further, the number, length and complexity of items presented to a field audience are necessarily limited by what the organization will tolerate thus losing some construct validity and precision of meaning.

Construct validity. A fifth set of limitations includes problems with the construct validity of most of the relational and organizational demography variables. Ethnicity, tenure and function in both the dyad and workgroup conditions collapse a very wide set of further differences into broad categories. It is possible the acceptance of the null hypothesis found by the current conceptualizations of these variables will not have been the outcome were they further expanded (e.g., if a broader set of functions were examined) or categorized differently (e.g., if long versus short tenure were defined with different categories).

Further, the construct validity of workgroup cohesion was problematic. It is possible that within-group opinion differences about the level of cohesion will exist masked by the group average. Thus, two apparently identical departments may have significantly different standard deviations. An eta-square analysis, which resulted in a value of .28 ($p < .001$), was higher than the commonly accepted cutoff of .20 which gave some evidence that group differences existed. Workgroup cohesion could have been analyzed using the group variance rather than the mean with less variance suggesting better cohesion and more variance suggesting poorer cohesion.

Future studies. The general dearth of organizational and relational demography studies and their limited and conflicting conclusions leave many opportunities for empiricists to bolster the current research threads. Common relational and organizational demography research frameworks could extend to other facets of human differences including personality type,

education, geographic origin, marital status, parental status, sexual orientation and common avocation. Additionally, ample open intellectual ground exists for the exploration of larger and more basic questions about diversity - such as those offered below.

Temporal shifting of attitudes. The cross-sectional nature of the data did not allow for the tracking of attitudinal changes over time. The lack of meaningful findings here may be related to a diminishment of the potency of demographic differences as relationships develop. A test of this could be conducted with organizational cohorts. If newly hired employees were found to be more sensitive to dissimilarity from managers or peers, it could be tested if that positive relationship persists as they gain experience with the manager, peers or organization. The longitudinal data could then look at the next set of relative new hire in the next dataset to see if the pattern persists.

Dollar value of effective diversity management. Can research put a dollar or other objective measurement value on good diversity management in business organizations? Research tends to cover the influence of diversity on the performance of students on group class assignments. This gives a basic understanding but offers only limited generalizability to organizational performance. Richard, Murthi and Ismail (2007) exemplified excellence in this thread by examining diversity's effect on six years of aggregate organizational performance. Over the long term, they found a linear relationship between diversity and performance as measured by Tobin's q (firm's market value divided by replacement value of assets). A practical study along these lines would be to compare the heterogeneity of various sales groups (stores, shifts, trading desks, branch offices, etc.) to their aggregate sales to determine if a link exists.

Culturally expected power differentials. To what extent does the violation of culturally expected power differences either account for or exacerbate negative outcomes of diversity? The argument here hypothesizes that dissimilarity in managerial employee relations negatively affects outcomes variables either only where the dissimilarity violates cultural norms or that such violations aggravate the outcomes. For example, female managers may see less satisfaction or effort among their male employees in a culture that expects males as managers while these dissimilarity effects do not manifest themselves in a culture without such an expectation. Lau, Lam and Salamon (2008) compared relational norms versus similarity theory on managerial trust. Their analysis of data taken from a sample of 206 matched manager/employee pairs with propensity to trust controlled for suggested employees found better-educated managers more trustworthy. These findings gave evidence to the idea that consistency with societal norms trumps similarity, and thus relational demography tenants, in the prediction of positive affective outcomes. In a related study, Collins, Hair and Rocco (2009) compared manager/employee matches in conditions where older supervisors managed younger workers (norm consistent) and the reverse. The authors dichotomized older and younger categories in much the same way the present study separated longer and shorter tenure by establishing a upper bound for younger, a lower bound for older and a significant gap between these two where if respondents fell their data were not analyzed. In dyads that violated age norms, younger supervisors received lower ratings on lower expectations.

Studies on diversity and cultural norms ultimately could support the notion that tensions related to dissimilarity may be more a reflection of societal effects than being actually inherent in individuals. A society broadly without stereotypical beliefs about acceptable assumed power differences between groups of people might lack a need for organizational diversity management

as such interpersonal differences would not have much meaning. If researchers found that cultural norms play a major part in the effects of diversity, it would signal that managing diversity requires a deep understanding of such norms.

Deep-level differences. To what degree do deeper-level dissimilarities play a role in interpersonal interactions? It is assumed demographic variables act as proxy for underlying distinctions such as values, personality characteristics, lifestyle, outside interests or other factors; however these have been infrequently tested.

Conclusions.

Increased interdependence between dissimilar individuals will be a key dynamic of future working environments and are being propelled by a number of forces. Global trade, expectations of 24/7 productivity, the international movement of capital and labor are stretching the definition of work team or workforce. Technologies such as social networking websites, email, and instant messaging are enabling instant contact with geographically far-flung individuals. Knowledge work is increasingly complicated requiring increasing multi-disciplinary staffing. Diminished support mechanisms for older workers such as the rapid disappearance of pensions, lessening government support programs and slower appreciation in the value of retirement vehicles is lengthening careers. All of these forces are acting to increase the interaction of dissimilar others in the workplace as well as the value of research into these changes.

Figure 1:

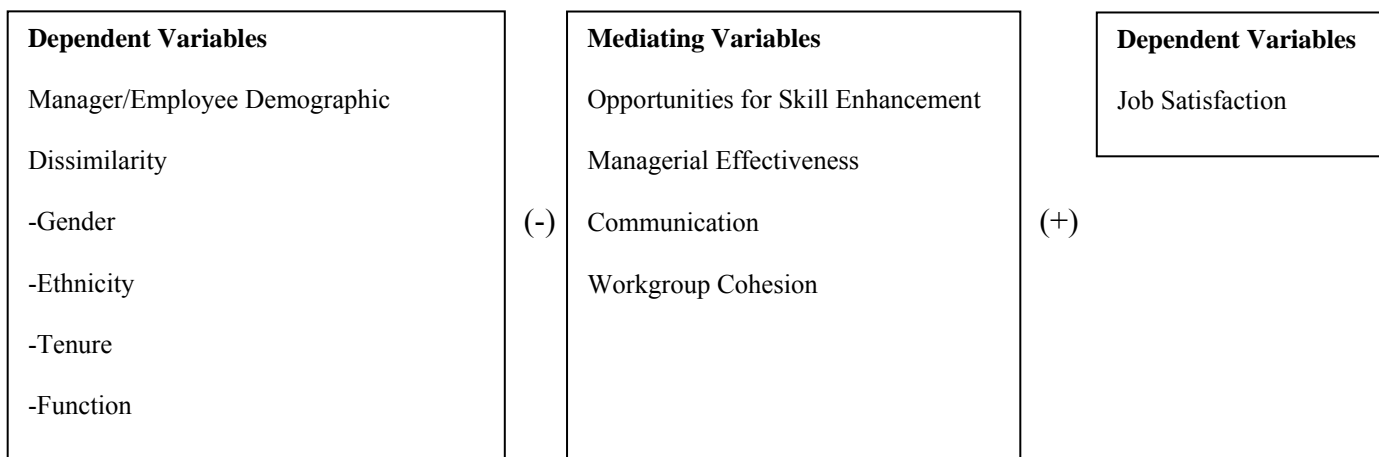
Visual representation of dyad condition variables.

Figure 2:

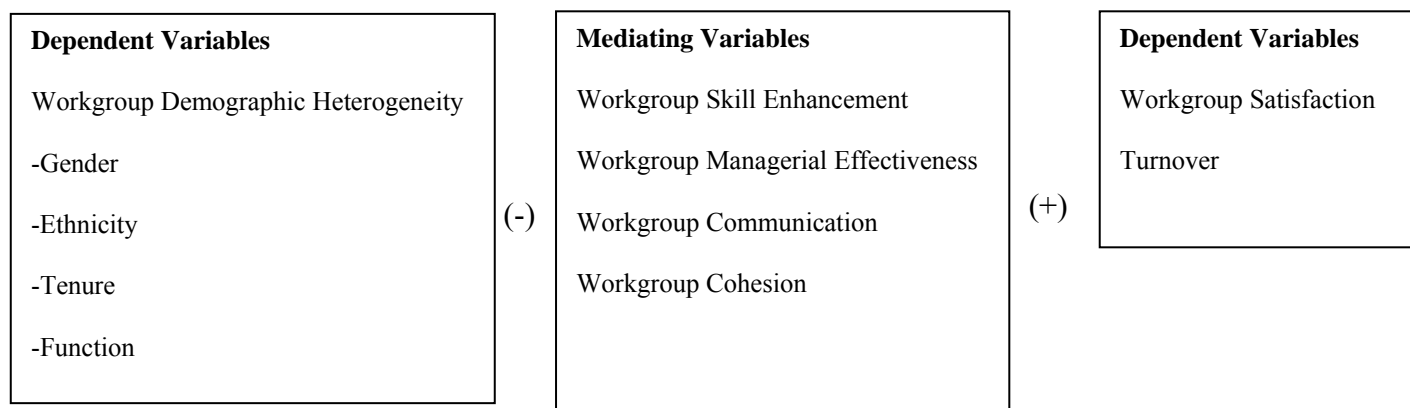
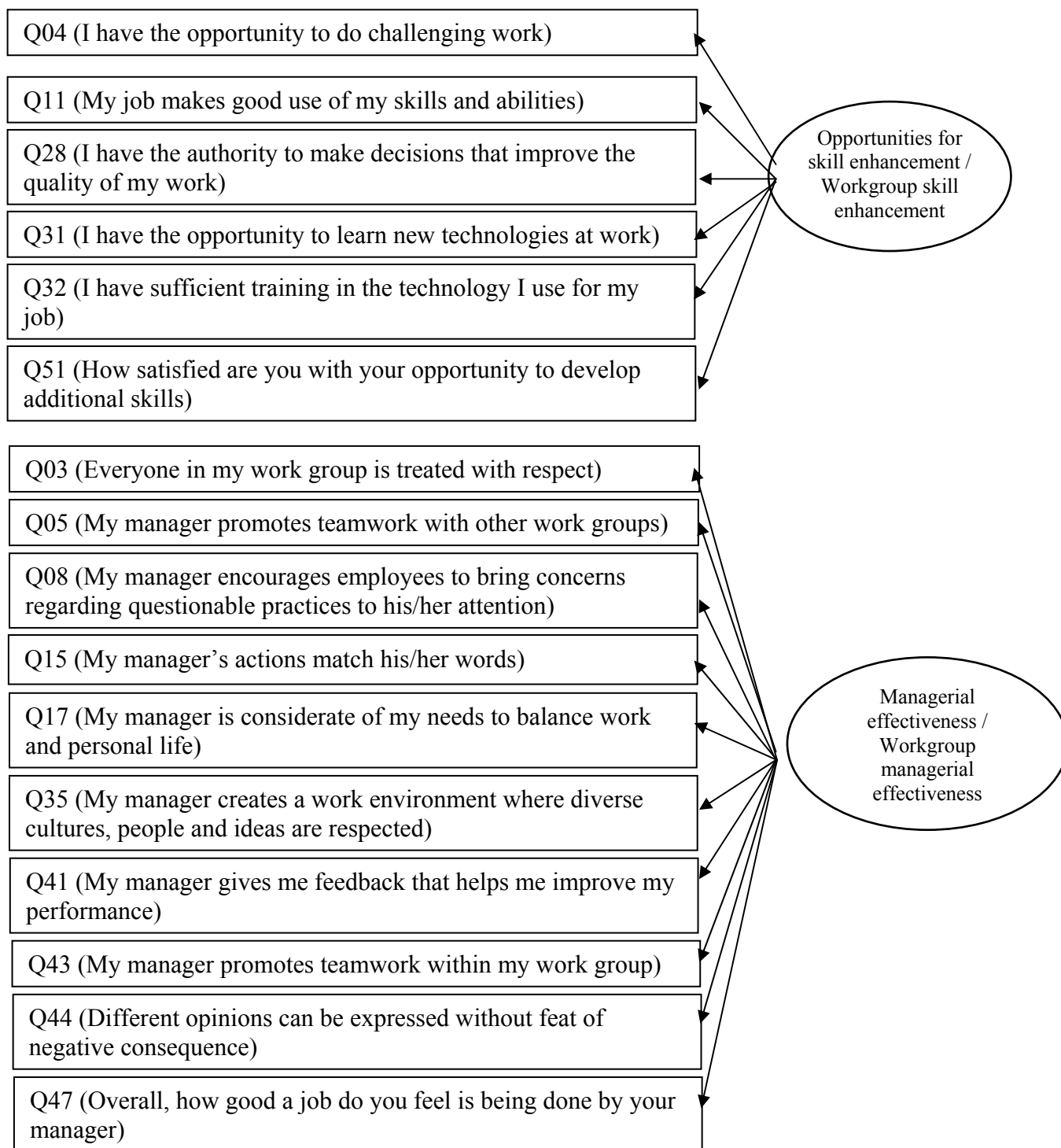
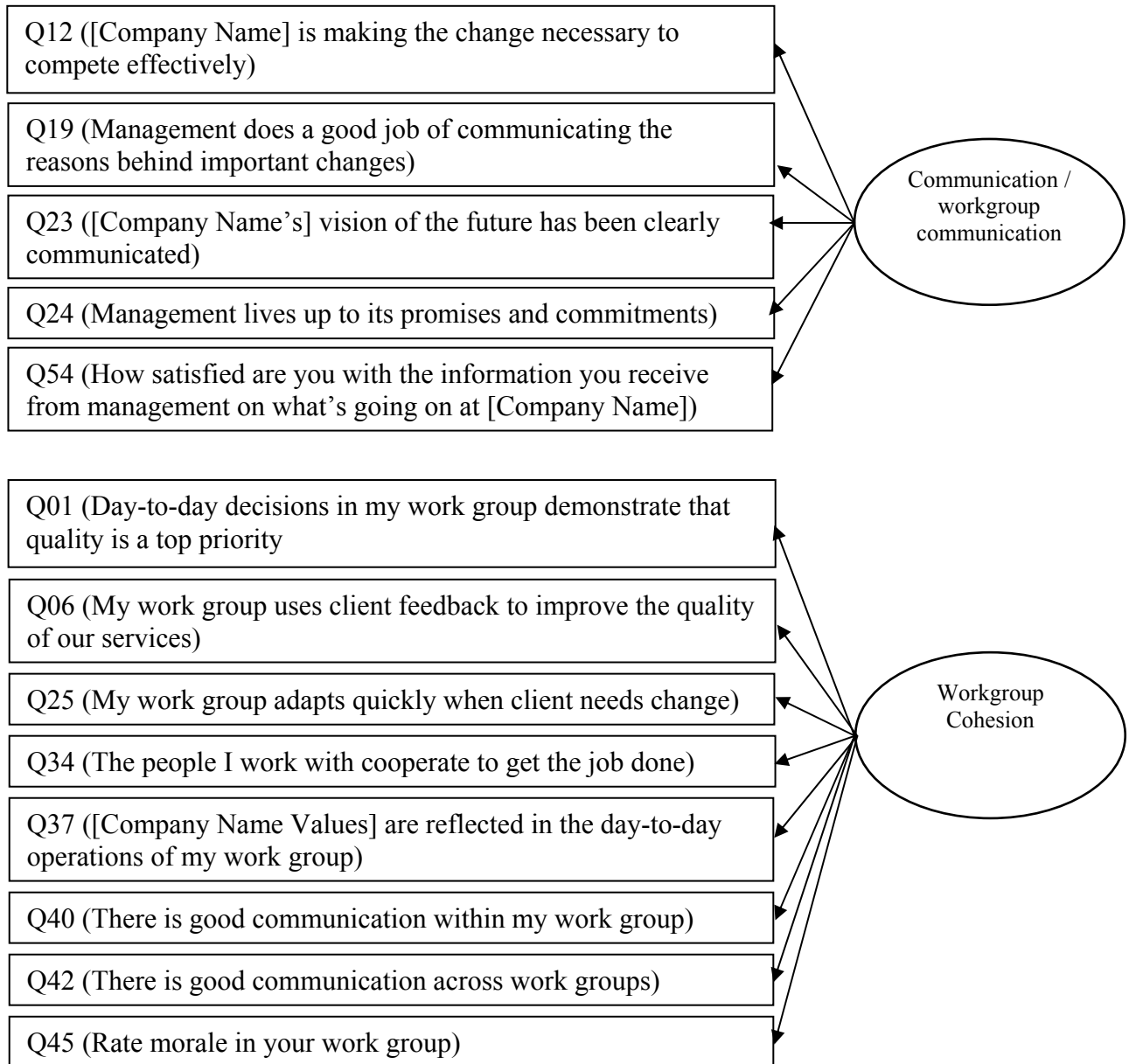
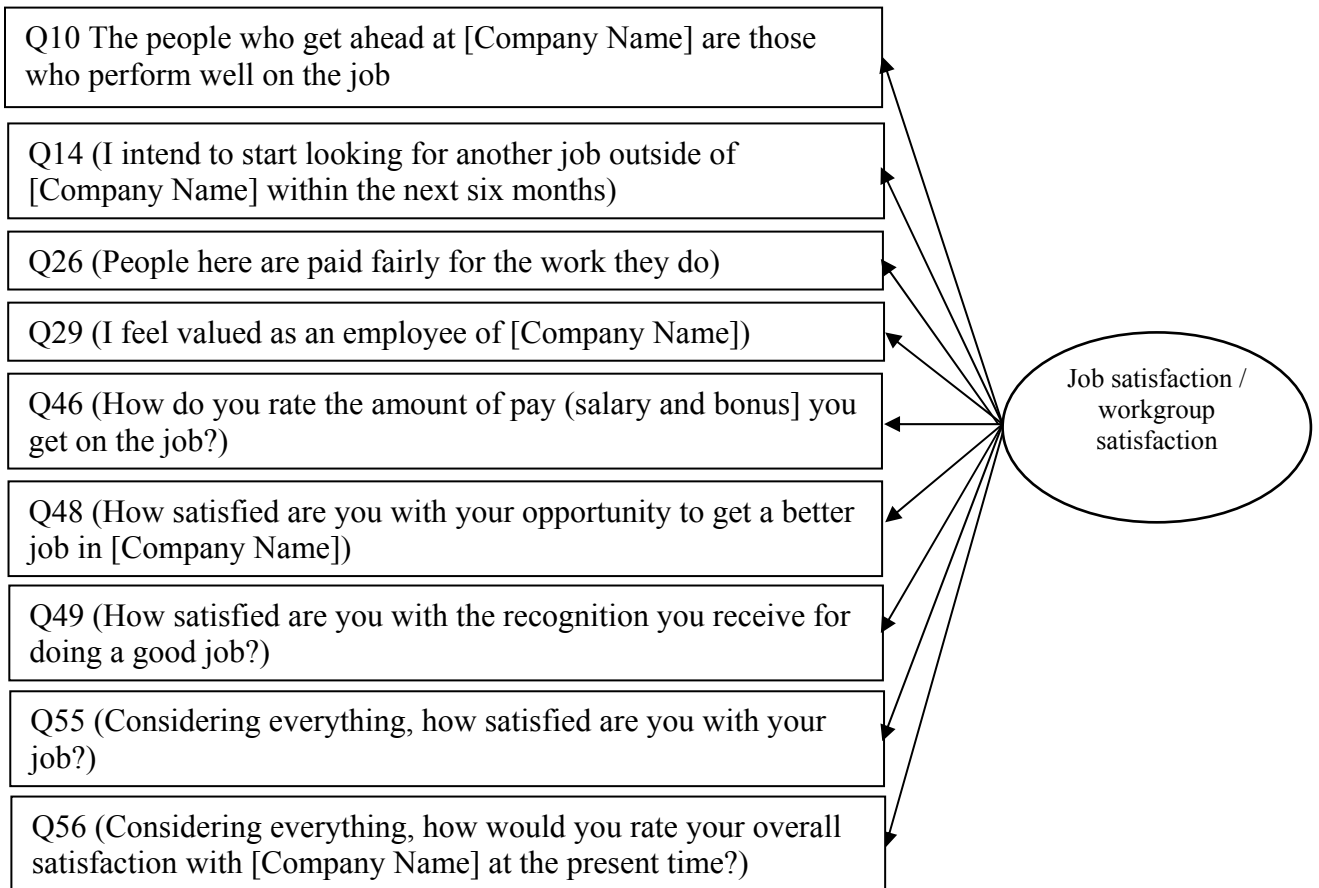
Visual representation of workgroup condition variables.

Figure 3:

Visual representation of survey item mapping to latent variables.







Chapter VII: References

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