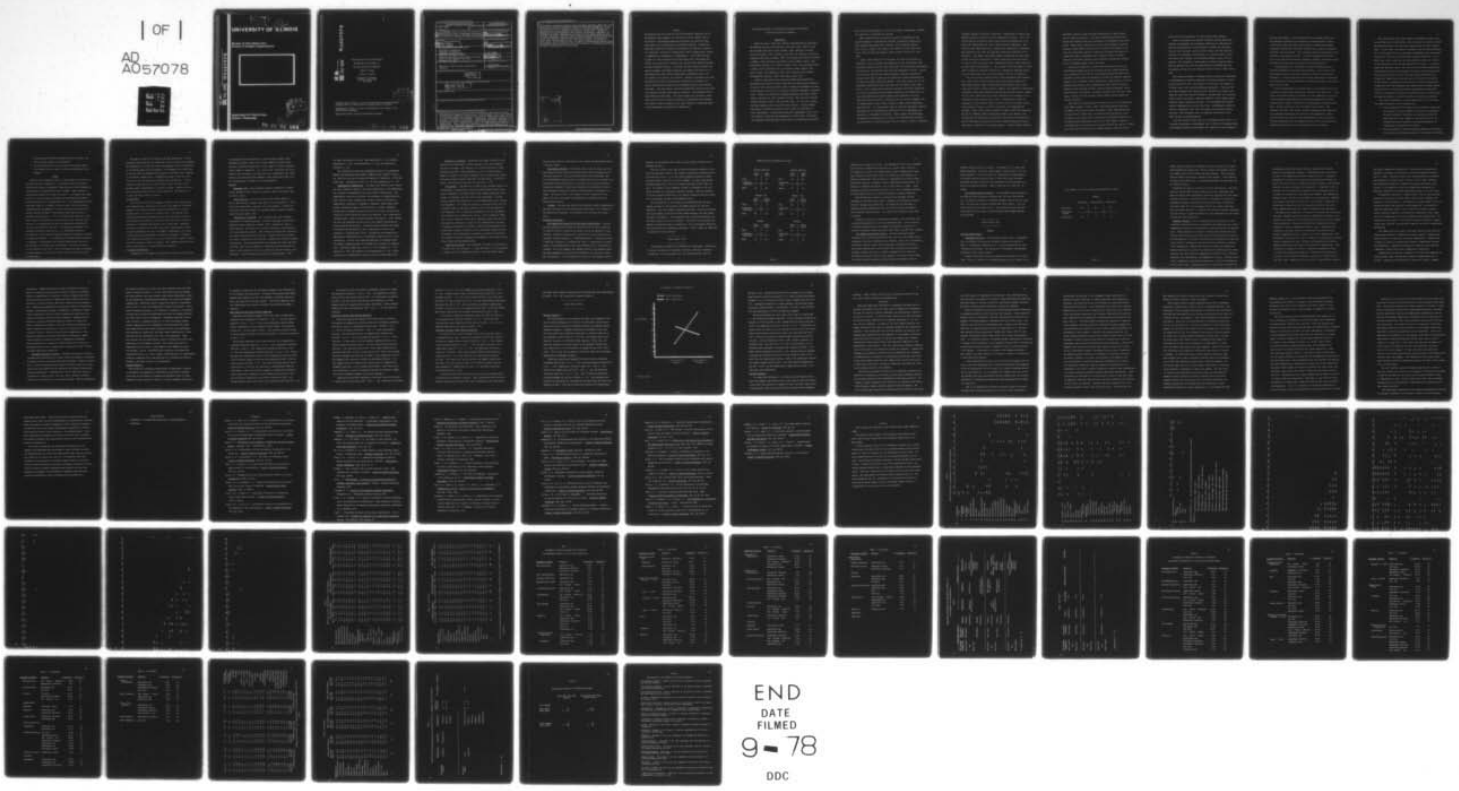
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A Multivariate Study of Subordinate Perceptions and Attitudes of Minority and Majority Managers

Edward F. Adams

Charles L. Hulin[1]

University of Illinois

Technical Report 78-3
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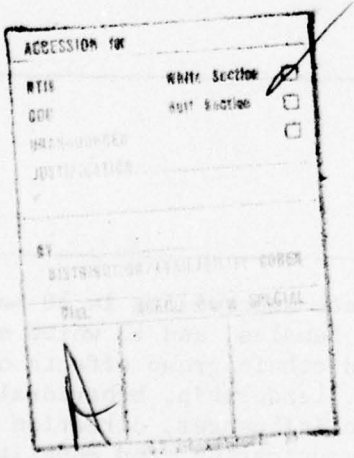
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Questionnaire data were collected from 582 subordinate supervisors in 30 merchandising units managed by 6 black males, 11 white females, and 13 white males to investigate manager and subordinate sex group and ethnic group effects on 10 attitudinal and perceptual groupings: satisfaction, leadership, behavioral intentions, job problems, job authority, communication influences, direction of communication, kind of communication, quality of communication, and modality of communication. These effects and subordinate job level differences were investigated after confounding demographic and organizational influences were

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statistically controlled through multiple regression analyses. Black males and white females differed from majority managers (leadership perceptions and communication direction) in supervising their units without dysfunctional consequences (such as in job problems, sale indices, and turnover). Systematic subordinate sex group differences were found on satisfaction, leadership, job problems, and several communication variable sets with females generally more favorable than males. Job level effects reflected organizational policies within this firm and were consistent with previous literature. Few subordinate ethnic group differences were found. The results suggest that sex group, ethnic group, and job level are useful variables for understanding job responses and should be used in conjunction with other variables to understand supervisory-subordinate relationships in organizations.



Abstract

Questionnaire data were collected from 582 subordinate supervisors in 30 merchandising units managed by 6 black males, 11 white females, and 13 white males to investigate manager and subordinate sex group and ethnic group effects on 10 attitudinal and perceptual groupings: satisfaction, leadership, behavioral intentions, job problems, job authority, communication influences, direction of communication, kind of communication, quality of communication, and modality of communication. These effects and subordinate job level differences were investigated after confounding demographic and organizational influences were statistically controlled through multiple regression analyses. Black males and white females differed from majority managers (leadership perceptions and communication direction) in supervising their units without dysfunctional consequences (such as in job problems, sale indices, and turnover). Systematic subordinate sex group differences were found on satisfaction, leadership, job problems, and several communication variable sets with females generally more favorable than males. Job level effects reflected organizational policies within this firm and were consistent with previous literature. Few subordinate ethnic group differences were found. The results suggest that sex group, ethnic group, and job level are useful variables for understanding job responses and should be used in conjunction with other variables to understand supervisory-subordinate relationships in organizations.

A Multivariate Study of Subordinate Perceptions and Attitudes of Minority and Majority Managers

Introduction

Within the last 15 years more research concerning minority applicants and employees has been conducted than at any other time. Areas of study have included intentions to work (Feldman, 1974), employers' selection criteria (Triandis, 1963), training, counseling, and retention of hard-core unemployed (Salipante & Goodman, 1976), peer ratings and evaluations (Schmidt & Johnson, 1973), supervisory performance criteria (Bass & Turner, 1973), differential validity (e.g., Hunter & Schmidt, 1974), sex stereotypes (Rosen & Jerdee, 1973), preferences for job attributes (Arvey & Mussio, 1974; Brief & Aldag, 1975; Champagne & King, 1967), and access and treatment discrimination (Terborg & Ilgen, 1975; Brown & Ford, 1977).

Recently investigators have explored attitudes and perceptions of employees having minority (usually black males and white females) managers, but much of this research has been based on laboratory experiments and simulations because there are still relatively few minority managers in organizations. Evidence of differential responses toward male and female leaders (Bartol & Butterfield, 1976; Jacobson & Effertz, 1974) and black and white leaders (Richards & Jaffee, 1972) has been found. It is unclear, however, how these findings relate to organizational settings. Usually students participate in laboratory studies for extra credit or fulfillment of course requirements. Although maintaining more experimental control than field studies, simulations and experiments are usually short in duration, lack competition among employees (participants) for organizational rewards

such as bonuses and promotions, and lack influences, contingencies, problems, and constraints of organizational systems.

When researchers have investigated responses of subordinates with minority managers in organizational settings, inconsistent findings have been reported among female (Day & Stogdill, 1972; Ginsburgh, Research Note 1; Goetz & Herman, 1976; Hansen, 1974; Osborn & Vicars, 1976; Petty & Lee, 1975) and black male manager studies (Parker, 1976; Ruhe & Allen, 1976).

Hansen (1974) surveyed 1235 individuals and found no differences in subordinate ratings of support (consideration) or goal facilitation (task orientation) between male and female supervisors but did find that subordinates of females were less satisfied with work than subordinates of males. Further study by Hansen revealed that female supervisors reported less autonomy than male supervisors, suggesting that superiors of female supervisors may be restricting female supervisory behavior. This could account for the low subordinate satisfaction (with work) under less influential female supervisors. Goetz & Herman (1976) found that employees with female supervisors in a retail organization reported higher satisfaction with supervision but lower satisfaction with pay and promotion than subordinates of males. Additional analyses revealed a confound between sex and job assignment with a disproportionate (lower) number of women in higher paying commissioned sales positions. In a longitudinal study of university employees, Ginsburgh (Reference Note 1) investigated the influence of sex of subordinate and supervisor on leadership effectiveness. Using reports from subordinates and superiors of supervisors, the "quality" of leadership was perceived to be more positive for male supervisors than for females in terms of leadership

attention, support, and personal sensitivity. Subordinates of females also reported less overall satisfaction than subordinates of males. Petty & Lee (1975) found the correlation between satisfaction and consideration to be greater for subordinates with female rather than male supervisors. They found that when female supervisors displayed low consideration, subordinate work satisfaction was lower than when male supervisors exhibited low consideration. This higher relationship between consideration and work satisfaction reported by subordinates of female supervisors gives some support to Schein's (1973) explanation that consideration may be a female stereotype and thus expected by subordinates. Day & Stogdill (1972) and Osborn & Vicars (1976) reported no consistent differences in subordinate leadership perceptions or satisfaction that could be attributed to the sex of supervisor.

Two recent studies concerning black leaders demonstrate mixed findings also. Ruhe & Allen (1976) found that when black military leaders were supervising cognitive (ship routing problem) and mechanical (knot tying) tasks, they failed to provide direction, support, and feedback for subordinates resulting in lower group performance than groups with white military leaders. In fact, black leaders were given lower frequencies on all measures of the Interaction Process Analysis (Bales, 1950). Explanations included low competence of black military leaders, specific nature of the tasks, unaccustomed stress for leaders in bi-racial situations, and instrumentation problems. Parker (1976), using the Bowers & Seashore (1966) four dimensional measure of leadership behavior (managerial support, goal emphasis, work facilitation, and interaction facilitation), found that black foremen were seen by subordinates as being more effective leaders (higher mean scores) than whites in terms of all leadership measures. This was without regard to

subordinate ethnicity except when white subordinates of white foremen were in a numerical minority. Then, white subordinates perceived their foreman more favorably than white subordinates in predominatly white work groups. Among Parker's explanations was that black foremen are superior to whites because higher qualifications are needed to be promoted to the first-line supervisory position. Parker also concluded that behavior of foremen perceived by subordinates was a complex function of foreman ethnicity, subordinate ethnicity, and the majority and minority numerical status of subgroups within a given work group.

Clearly both categories of field studies show inconsistencies and contradictions making conclusions concerning minority leaders impossible. This is especially true since the inconsistencies within male/female and black/white studies could be attributed to diverse and sometimes undefined samples, level of leaders, unique organizational characteristics, different measures and procedures, and confounding with other relevant variables. Samples for male and female studies included university employees, retail sales personnel, the military, government employees, and a national random sample. Studies of black and white leaders sampled factory workers and military personnel.

Most studies included standard instruments such as the Job Descriptive Index (Smith, Kendall, & Hulin, 1969), Supervisory Behavior Description (Fleishman, 1972), and the Bowers and Seashore (1966) leadership measure, but Ruhe and Allen (1976) used the Interaction Process Analysis, which according to the authors, may not sufficiently differentiate behavior and may mask important differences especially of black leaders. Related to instrumentation is the relevance of operations used by Ruhe and Allen (1976). Knot tying and ship routing may be standard research tasks for military

recruits but may not generalize to other organizational settings.

Finally, researchers have reported differences between subordinate responses of male/female and black/white supervisors on leadership perceptions and satisfaction, but have generally assumed that everything else (job level, position, education level, tenure, and other variables related to job attitudes and perceptions; e.g., Herman, Dunham, & Hulin, 1975; Hulin, Hom, & Herman, 1976; Katerberg, Herman, & Hulin, 1977) is constant. This assumption is questionable in minority research because minority employees have had fewer opportunities and probably different job experiences than white male employees (Dreger & Miller, 1968; O'Leary, 1974).

This study was designed to minimize previous problems and confoundings in investigations of minority supervisors by studying responses of subordinates having white male, white female, and black male unit managers in 30 retail units of one large merchandising organization. Black male and white female managed units (minority units) and white male managed units (majority units) were selected according to organizational unit similarity (size, location, and annual volume) and similarity of unit manager characteristics (tenure, education, and age). All unit managers have similar position responsibilities in each retail unit. Subordinates included two levels of supervisors, first level and second level supervisors within each unit. Each subordinate level is comparable across units in job tasks, duties, and responsibilities.

The first purpose of this study is to investigate whether effects in attitudes, perceptions, and performance can be found for unit managers when units managed by minority group members are compared with units managed by

majority group members. Previous researchers have assessed satisfaction and leadership responses from subordinates of minority/majority leaders. In this study several attitudinal and perceptual domains were assessed: subordinate satisfaction, leadership, communication, authority, behavioral intentions, and job problems. The performance indices included yearly sales and profits, and employee turnover. If minority managers are different from or less qualified than majority managers, systematic differences should be found across these sets of perceptual and objective measures.

A second purpose is to investigate potential subordinate sex and ethnicity differences in attitudes and perceptions. Lee & Alvares (1977) have reported that males and females describe identical leader behavior differently. Previous researchers have reported differences in preferences for job outcomes for blacks and whites also (Slocum & Strawsen, 1971; Smith, Smith, & Rollo, 1974).

Usually investigators have focused either on one subordinate job level or have not differentiated subordinates according to job level at all. This raises the potential question of whether job level differences in job attitudes are present among subordinates of minority managers and if these differences are similar to those found with subordinates of majority managers. Previous research on job level (Adams, Laker, & Hulin, 1977; Cummings & El Salmi, 1970; Porter, 1962) has demonstrated that higher job level employees having more task complexity and responsibility report greater satisfaction with their work than employees at lower job levels. Job level differences will be examined across all sets of attitudinal and perceptual measures after sex and ethnicity effects are removed.

When investigators have studied leader and subordinate effects along sex and ethnic group classifications, they have failed to consider confounding variables related to sex and ethnic group (except for Goetz & Herman, 1976). In this study, unit manager, subordinate, and job level differences will be investigated after the influences of demographic and organizational variables are statistically removed from subordinate responses. In this manner, age, tenure, education, and other variables found to be related to sex and ethnicity will not confound the effects of interest. It could be argued that education, tenure, and others are the variables through which discrimination operates and inseparable from ethnic and sex group effects. One can conversely argue that sex and ethnic group differences may be present even though tenure, education, and other variables are removed. We have chosen to investigate sex and ethnicity effects of managers and subordinates with these demographic and organizational influences removed with the intent to identify statistically unconfounded sex and ethnic effects on attitudinal and perceptual variables and also to assess whether sex group and ethnicity are useful variables to explain job responses.

This study is exploratory. Specific hypotheses will not be stated. The research questions to be investigated are:

1. If white females and black males are each compared to white male unit managers, are there systematic differences in subordinate attitudes, behavioral intentions, and perceptions related to characteristics of unit managers or sex and ethnicity of subordinates when other potentially confounding demographic and organizational variables are controlled?
2. Are there systematic differences among subordinates in different job levels in job attitudes, perceptions, and behavioral intentions

under minority and majority managers when sex, ethnicity, and other relevant variables are controlled?

3. Are there differences in units, profits, and turnover among units managed by white female, black male, and white male unit managers?

Method

These data were obtained as part of a large study of 34 units of an international retail organization. Data from 30 units in continental United States matched on demographic characteristics of unit managers and organizational unit characteristics were included. Eight trained researchers participated in the data collection.[2] A two person team always racially or sexually mixed, interviewed each unit manager and administered questionnaires to the subordinate staff. The heterogeneous research teams were formed to 1) minimize racial and sexual influences between interviewers and unit managers 2) increase data reliability and protect against potential biasing by interviewers who may have had implicit hypotheses about the data. In all, the research team consisted of three white females, two black males, and three white males. National headquarters of the organization and each unit manager gave permission to carry out the research in each unit. Unit managers participated in an extensive interview in their offices. All subordinates completed questionnaires in unit training rooms with research team members available to answer any questions. All respondents were assured complete anonymity of responses. Questionnaires and interview schedules were sealed and mailed directly to the principal investigators. The overall response rate was 89% for the 30 units. The 11% non-response includes two packages of questionnaires lost by the U.S. Postal Service as well as some true non-respondents.

The sample includes 30 unit managers and 582 subordinates. Of this subordinate group there are 156 subordinates of six black male unit managers, 152 subordinates of eleven white female unit managers, and 274 subordinates of the thirteen white male unit managers. Unit managers have a median age of 36 years, 90% have graduated from college or vocational school, and have 14 years median company tenure. Subordinates consist of 466 first level (lower level) and 116 second level (higher level) supervisors. Of these subordinate supervisors, 67% are male, 87% are white, 8% black, and 5% Spanish surname, Asian-American, or failed to respond. Ninety-two percent are vocational training school or college graduates. The median age is 35 years and median tenure is 6 years.

Unit Selection

The 30 units were selected a priori according to their similarity on three organizational characteristics (a) unit size (number of subordinate managers), (b) location (in major metropolitan, medium city, or small downtown areas), (c) annual unit volume in sales. The thirteen units supervised by white males (comparison units) were selected according to their proximity and similarity to minority supervised (focal) units and similarity of comparison supervisors to focal supervisors. Comparison units were located near focal units (same state or geographical region) and were approximately the same size (number of departments, unit square footage, and had similar numbers of supervisory personnel). Comparison unit supervisors were matched to focal unit supervisors in terms of tenure, education, and age as closely as possible. Each comparison supervisor also had the same superior as the paired minority supervisor.

Interviewer Observations

Organizational and community characteristics data were collected from

unit managers and from observations of the two person research teams. Information included: annual store volume, commercial setting characteristics (located in enclosed mall or not, number of stores in shopping center, number of competitors, etc.), age of unit, nationality and social status of unit patronage, area population, local unemployment rate, major employer and occupation within community, ethnic groups and income level of surrounding area, in addition to other information.

Measures

Demographic data. Each respondent supplied information on company tenure, managerial level, ethnicity, sex group, level of education, age, and marital status.

Job satisfaction. The Job Descriptive Index (Smith, Kendall, & Hulin, 1969) was used to measure four aspects of job satisfaction: satisfaction with supervision, coworkers, work, and promotion. Satisfaction with career and future security was assessed using the Index of Organizational Reactions (Smith, 1976).

Perceptions of leadership. Two instruments were used to measure perceptions of leadership behavior. The first instrument, Perceptions of Supervisor (Graen, Dansereau, & Minami, 1972), assessed four areas of leader behavior: work sensitivity, personal sensitivity, self-determination, and negotiating latitude. Work sensitivity measures work assistance and concern received from the supervisor. Personal sensitivity measures the extent a supervisor is concerned with a subordinate's personal problems and potential. The self-determination scale measures the extent employees can define their jobs for themselves. Negotiating latitude measures the degree to which employees feel they can negotiate with and influence their supervisor. Internal consistency coefficient alphas (Nunnally, 1967)

for these scales were as follows: work sensitivity (r = .70), personal sensitivity (r = .81), self-determination (r = .65), and negotiating latitude (r = .70).

The initiating structure and consideration scales of the Leadership Behavior and Description Questionnaire (LBDQ Form XII; Stogdill, Goode, & Day, 1962) were also used to measure perceptions of leadership. Coefficient alphas were: initiating structure (r = .81) and consideration (r = .70).

Organizational communication. The Roberts and O'Reilly (1974) measure was used to assess 14 aspects of perceived communication in the organization and 3 aspects of interpersonal relations related to communication. The communication scales are as follows: directionality of communication (up, down, lateral, other), communication accuracy, desire for interaction, summarization, underload of information, expansion, amount passed, gatekeeping, information change, received accuracy, overload, redundancy, satisfaction, and modality (written, face to face, phone, or other); descriptions of these indices are found in the Appendix. The 3 communication influences were: trust, perceived influence, and mobility. Trust assesses the trust and confidence one has in his or her superior concerning job related problems and decisions. Perceived influence measures the amount of influence the supervisor has over a subordinate in terms of pay, promotions, or organizational career. The mobility scale measures the importance of upward mobility to the individual either in or out of this organization. A fourth scale measuring importance of promotion within the specific organization was also included as an influence of communication. Coefficient alphas were: trust (r = .57), influence (r = .76), mobility (r = .90), and promotion in the organization (r = .67). Reliabilities for the communication scales can be found in Muchinsky (1977).

Perception of authority. Respondents were asked to identify which position in the organization (hourly employees, first level managers, second level managers, unit managers, etc.) had the authority to make particular decisions. Each responded to a list of 19 items such as: amount of overtime to be worked, methods of how to perform a job, hiring decisions, buying decisions, promotions, and advertising, in addition to others. The coefficient alpha for this scale was r = .90.

Job problems. A 30 item list of potential job problems ranging from interpersonal to organizational structure problems (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, Role Tension Index, 1964; Cashman, Dansereau, Graen, & Haga, Job Problems, 1975) was given to each participant. A factor analysis reduced the 30 items to an 11 item unidimensional scale labeled unit management.[3] The items were scored on a four point scale with "not a problem" scored 1, and "major problem" scored 4 and were summed for each respondent. The 11 items that contributed to the unit management factor having factor loadings above .50 are: lack of managerial competence, lack of consensus of unit staff, inadequate staff to get the job done properly, resistance to change in unit's administration, strains in working relations with unit manager, crises-oriented management that lacks advance planning, uncertainty of unit supervisor expectations and perceptions, lack of agreement among superiors, inability to influence unit manager's decisions, communication breakdowns, and too many organizational layers stifling communications.

Behavioral Intentions. Each respondent was asked the likelihood on a 7 point scale (low likelihood = 1; high likelihood = 7) of transferring to another part of the organization within 1 year and within 3 years.

They were also asked the likelihood of their leaving the organization within 1 year and 3 years.

Unit Sales and Profits. Total gross sales, total net sales, and total gross profit data were collected from each unit 6 months following the initial data collection. Total gross sales includes cash, installment, and C.O.D. merchandise carried in units or shipped directly to the customer from distribution centers and factories. Total net sales is gross sales minus returns and allowances. Returns and allowances include refunds for defective merchandise returned and trade-in allowances made to individual customers. Total gross profit is the amount of profit on sales after one deducts the cost of the goods sold (determined by standard retail cost method) from net sales.

Turnover. Unit part-time and full time employee turnover (terminations) data were collected for the following three time periods: (T_1) during the attitudinal data collection, (T_2) one month later, and (T_3) four months later.

Procedure and Analyses

Unit manager and Subordinate Sex and Ethnic Group Effects. A stepwise multiple regression was performed on the data from first level supervisors to identify potential confounding variables with sex and ethnicity of subordinates. Regression equations were constructed for each attitudinal and perceptual dependent measures: 6 leadership measures, 5 satisfaction scales, 4 behavioral intentions, 14 communication scales, 4 communication influence scales, a job problems measure, and a job authority scale. The predictors included: sex of unit manager, unit manager ethnicity, unit manager tenure, unit size, geographical territory, and subordinate sex, ethnicity, tenure, age, and education. All six variables in addition to unit manager and sub-

ordinate sex and ethnicity were found to reduce residual variance of the dependent measures.

These six variables were used in multiple regression equations to predict each dependent variable. The residuals (deviations of observed scores from predicted scores: $Y_i - \hat{Y}$) were used as dependent measures in subsequent multivariate analyses of variance (MANOVA). An exact least-squares analysis program (Finn, 1976) by the method described by Bock (1963) was used. The residual of each dependent variable is orthogonal to the predictor variables in the multiple regression analyses. Thus the influence of the six variables identified in the stepwise regression would be removed from all dependent variables before MANOVA analyses.

Sex and ethnicity of unit managers and subordinates were the independent variables in the testing in the MANOVA analyses for the first hypothesis. Three unit manager comparisons were made: black male and white male unit managers, black male and white female managers, and white female and white male managers. The subordinates were classified according to sex and ethnic groups of first level managers. There were too few second level managers to make these specific comparisons. The 3 unit manager comparisons were crossed with the 2 subordinate groupings. Figure 1 shows the comparisons in testing the first hypothesis.

Insert Figure 1 Here

The dependent variables were clustered into 10 groupings: satisfaction (5 scales), perceptions of leadership (6 scales), behavioral intentions (4 questions), the job problems scale, the authority measure, and the

Comparisons and Subordinate Cell Sizes

	Manager Ethnicity	
Subordinate Ethnicity	Black Male	White Male
Black	17	22
White	96	189

	Manager Ethnicity	
Subordinate Sex	Black Male	White Male
Male	67	127
Female	46	84

	Manager Sex	
Subordinate Ethnicity	White Male	White Female
Black	22	8
White	189	120

	Manager Sex	
Subordinate Sex	White Male	White Female
Male	127	73
Female	84	55

	Manager	
Subordinate Ethnicity	Black Male	White Female
Black	17	8
White	96	120

	Manager	
Subordinate Sex	Black Male	White Female
Male	67	73
Female	46	55

Figure 1

communication influences (4 scales). The communication scales were subdivided into direction of communication (direction up, lateral, down, others not in organization, accuracy, and summarization), kind of communication (underload, expansion, amount passed, desire for interaction, gate-keeping, and change in information), kind and quality of communication (received accuracy from others, overload, redundancy, overall communication satisfaction), and modality of communication (written, face to face, phone, or other). These groupings were used to maintain the ratio of cell size to dependent variables and also because each set of variables represents a separate hypothesis.

After multivariate analyses of variance of the dependent variable groupings to test overall mean vectors, stepdown F tests identified specific sources of between group differences. The design was non-orthogonal so secondary analyses reversing the order of main effects were performed to protect against spurious results. All results were consistent across order of testing.

Univariate analyses of variance were performed on the job problem scale and perceived authority scale for each subordinate group. Also an analysis of variance was performed on unit manager's perceptions of authority to assess any differences among black male, white female, and white male managers.

Unit Manager and Job Level Effects. Previous regression analyses (stepwise) and correlations demonstrated that unit size, unit manager tenure, geographical territory, subordinate age, education, tenure, sex, and ethnicity consistently reduced variance among attitudinal and perceptual measures. These eight variables were used to predict each attitudinal and perceptual dependent variable and obtain a residual independent of the predictors. Multivariate analyses of variance were applied tc test overall vector means of multiple variable groupings and then followed by stepdown F tests to

identify specific sources of variance. The design is 3 x 2 (three unit manager groupings: black male, white female, and white male) X (two job level groupings: first and second level supervisors) and nonorthogonal so secondary analyses reversing order of main effects were performed. Univariate analyses of variance were performed on the job problems scale and the job authority measure. Figure 2 shows the cell sizes and 3 X 2 design.

Unit Turnover and Sales Effects. One way MANOVA's were performed on part-time and full-time employee turnover data for three time periods (T_1, T_2, and T_3) resulting in 6 dependent variables, and on the unit sales data. The sales data grouping included three sales indices: total net sales, gross sales, and gross profit. The turnover and sales data were each predicted by unit size to obtain residuals before MANOVA analyses were performed.

Insert Figure 2 Here

Results

Bivariate Relationships

Independent variables. The correlation matrix of the 11 independent and 41 attitudinal and perceptual dependent variables is presented in Table 1. Correlations significant at $p < .05$ are interpreted, near zero correlations are omitted. The codings for the independent and dependent variables are also given in Table 1.

Several correlations reflect the sampling and selection of the retail units. That is, a majority of the female managed units are located in the

Unit Manager - Job Level Design and Subordinate Cell Sizes

	Manager		
	Black Male	White Female	White Male
First Level	127	128	211
Subordinate Levels			
Second Level	29	24	63

Figure 2

Midwest and West whereas black managers selected are located in the East. Black managers head larger units relative to white unit managers and have less company tenure on the average than white managers. Female managers supervise smaller retail units compared to male managers. These sampling influences were removed prior to investigating manager and subordinate sex and ethnicity effects.

Subordinate sex group is related to job level and education. The interpretation is that there are fewer female second level supervisors than males but females across subordinate supervisory groupings have more formal education than males. Subordinate tenure is negatively correlated with subordinate education and positively correlated with age. Supervisors with short tenure hold college degrees whereas long tenured supervisors have less formal education. In addition the correlation between subordinate education and age is negative meaning that young supervisors are more highly educated than older supervisors.

Dependent variables. All six leadership scales are positively intercorrelated, positively related to satisfaction with supervision and overall communication satisfaction, and negatively correlated with the job problems scale. Work sensitivity is positively correlated with satisfaction with work and career security, and communication influences trust and influence. Self-determination is positively correlated with satisfaction with work and career security, communication influences trust and influence, promotion in the organization, communication accuracy and desire for interaction. Personal sensitivity is positively correlated with satisfaction with work, promotion, and career security, communication influences trust, influence, promotion in the organization, and communication accuracy. Personal sensitivity is negatively correlated with intentions to leave the organization within 1 and 3 years. Negotiating latitude is positively correlated with

satisfaction with work and career security, communication influence, trust, and organizational promotion. Initiating structure is positively related to the communication influence variable of trust. Leadership consideration is positively correlated with satisfaction with work, promotion, and career security, communication trust, influence, organizational promotion, accuracy, and desire for interaction. In addition to the job problems scale being negatively related to the six leadership scales, it is negatively related to all the satisfaction measures, and communication influences trust, influence, and promotion in the organization, communication accuracy, and overall satisfaction. Job problems is positively correlated with intentions to leave the organization within 1 year and 3 years, communication underload, change in information, and redundancy.

Satisfaction with supervision is positively correlated with satisfaction with work, promotion, and career security, communication influences trust, influence, and promotion in the organization, accuracy, and overall communication satisfaction. Supervision satisfaction is negatively related to intention to leave the organization within 3 years. Satisfaction with coworkers is positively related to satisfaction with work and career security, communication trust, accuracy, and overall communication. Work satisfaction is positively related to satisfaction with promotion and career security, communication trust, influence, and organizational promotion, communication accuracy and overall satisfaction with communication. Work satisfaction is negatively related to leaving the organization within 1 or 3 years and communication underload. Satisfaction with promotion is related to career security satisfaction, intentions to transfer within 1 year and 3 years, communication trust, influence, organizational promotion,

and overall communication satisfaction. Satisfaction with promotion is negatively correlated with intentions to leave the organization within a year or 3 years. Satisfaction with career security positively correlates with intentions to transfer within 1 year or 3 years, trust, influence, and organizational promotion, communication accuracy and overall satisfaction. It is negatively related with communication redundancy and behavioral intentions to leave the organization within 1 year and 3 years.

The behavioral intention to transfer within 1 year is also positively related to the intent to transfer within 3 years, trust, influence, and promotion in the organization. The intention to transfer within 3 years is related to mobility and promotion in the organization. The intention to leave the organization within 1 year is positively related to leaving within 3 years and negatively correlated with communication trust, promotion in the organization and overall satisfaction with communication. The intention to leave within a 3 year period is negatively related to communication trust, influence, organizational promotion, and overall communication satisfaction.

The communication trust measure correlates positively with influence, organizational promotion, communication accuracy, amount of communication passed, desire for interaction, and overall communication. Communication influence is related to organizational promotion, communication accuracy and satisfaction. Communication promotion is positively correlated with communication mobility and overall communication satisfaction.

Communication direction-up is negatively correlated with communication direction down, other, and positively related to communication that is written. Communication direction-down is negatively related to communi-

cation-other. Communication direction-other is positively related to desire for interaction and negatively related to change in information. Accuracy of communication is negatively related to communication underload and positively related to communication amount passed, desire for interaction, received accuracy, and overall satisfaction with communication. Communication summarization is positively related to communication expansion, gatekeeping and change in information. Underload in communication is negatively related to overall communication satisfaction but positively correlated with overload and redundancy. Communication expansion is correlated with amount passed and desire for interaction. Amount of communication passed is positively related to gatekeeping and overall communication satisfaction. Desire for interaction is also positively related to overall satisfaction with communication. Gatekeeping is negatively correlated with change in information, communication overload is positively related to communication redundancy, written communication is negatively correlated with face to face communication and face to face communication is negatively related to phone and other communication modalities.

Independent-dependent variables. Subordinate sex group is positively correlated with satisfaction with career security and negatively correlated with general mobility and communication direction-down. Looking at means in Table 2, female subordinates report higher satisfaction with their career security but lower upward mobility aspirations and downward communication than male subordinates. Subordinate job level is negatively related to intentions to transfer within 1 year and 3 years, influence, mobility, promotion in the organization and communication-down. When the subordinates

are grouped according to job level, low level supervisors have less likelihood to transfer, within 1 or 3 years, report that their unit managers have less influence over their careers, lower mobility aspirations, attribute less importance to organizational promotion, and report less downward communication. Subordinate tenure is negatively related to transferring within a year or 3 years and communication influence and mobility. Highly tenured subordinates perceive a low likelihood to transfer in the organization and report low mobility aspirations and little unit manager influence over their careers, pay, and promotions. Subordinate education is positively related to transferring within 1 or 3 years and general upward mobility suggesting with the independent intercorrelations that second level supervisors are more highly educated than first level supervisors, have high mobility aspirations, and report higher probabilities of transferring within the organization than lower level supervisors. These data coincide with the organization's policy of training most second level supervisors for unit manager positions. These supervisors enter the organization with at least a college degree and are immediately placed into managerial tracks. Subordinate age is negatively correlated with transferring within 1 or 3 years, general upward mobility, and organizational promotion, suggesting that young supervisors are concerned with mobility, promotion, and expect to move in the organization.

Research Question 1

When potentially confounding organizational and demographic variables of subordinates and managers are statistically controlled (6 variables other than sex and ethnicity of manager and subordinate found to reduce dependent variable variance in Table 3), are there systematic differences

in attitudes, perceptions, and intentions according to sex and ethnicity of unit managers and subordinates. To address this question white female managers were compared with white male managers, black males with white males, and black males with white females. Within each comparison first level subordinates were grouped according to sex and then according to ethnicity.

White Female and White Male Manager Comparison

Significant multivariate manager effects were found on communication variables across subordinate sex ($F(6,318) = 2.05$, $p < .05$) and ethnicity ($F(6,319) = 2.05$, $p < .05$). In both cases subordinates reported higher lateral communication in units managed by white females. The univariate F ratios ($p < .05$) are shown in Table 4. The univariate F ratios for sex of the unit manager effects are across sex $F(1,323) = 5.30$; across ethnicity $F(1,324) = 5.31$.

Multivariate subordinate effects were found for sex of subordinate on leadership perceptions ($F(6,341) = 2.17$, $p < .05$), satisfaction variables ($F(5,342) = 5.06$, $p < .05$), communication influences ($F(4,331) = 6.83$, $p < .05$), and communication variables ($F(6,325) = 3.42$, $p < .05$). Females perceived more consideration from their unit managers than males $F(1.346) = 4.62$ and reported higher satisfaction with promotion $F(1,346) = 8.20$ and career security $F(1,346) = 11.70$. Males reported higher mobility aspirations $F(1,334) = 16.92$ and less importance to organizational promotion than females. When sex groups were compared on communication variables, males reported more redundancy in their communications $F(1,330) = 6.03$ and less written communication than females reported $F(1,330) = 6.55$. Females reported significantly fewer job problems than males $F(1,346) = 5.94$.

A multivariate effect was found for subordinate ethnicity on leadership perceptions ($F(6,341) = 2.26$, $p < .05$). The significant univariate effects were on work sensitivity $F(1,346) = 5.19$ and personal sensitivity $F(1,346) = 6.67$ with blacks reporting more work sensitivity in their managers and whites reporting more personal sensitivity. Blacks reported significantly more job problems $F(1,346) = 3.00$, $p < .05$ than white subordinates.

Black Male and White Male Manager Comparison

Significant multivariate manager effects were found on leadership perceptions and communication variables across both subordinate groupings. Multivariate effects on leadership variables were: $F(6,314) = 3.04$, $p < .05$ for sex groups and $F(6,314) = 3.01$, $p < .05$ for the ethnicity grouping. The multivariate effects on communication variables were: $F(6,297) = 2.12$, $p < .05$ for sex groups and $F(6,297) = 2.10$, $p < .05$ for ethnicity. In both cases of the multivariate leadership effects, univariate residual mean differences $p < .05$ were found on work sensitivity /$F(1,319) = 8.40$, sex group and $F(1,319) = 8.48$, ethnic group/ and consideration /$F(1,319) = 8.96$, sex group and $F(1,319) = 8.69$, ethnic group/. White male managers were perceived as higher on work sensitivity and black male managers were perceived as higher on consideration behavior. The unit manager effects for communication variables were on communication redundancy ($F(1,302) = 4.47$, sex group and $F(1,302) = 4.45$) ethnic group with subordinates of white male managers reporting more redundant communication than subordinate managers of black unit managers.

Significant multivariate subordinate effects were found for sex group on satisfaction variables ($F(5,316) = 4.62$, $p < .05$), communication influences

($F(4,307) = 4.71$, $p < .05$), and communication variables ($F(6,297) = 4.65$, $p < .05$). Females reported higher satisfaction with work $F(1,320) = 8.18$, promotion $F(1,320) = 4.75$, and career security $F(1,320) = 8.18$, more trust $F(1,310) = 3.93$ and influence $F(1,310) = 3.53$, and lower mobility aspirations than males $F(1,310) = 10.77$. Males reported more redundant communication $F(1,302) = 6.46$ and face to face communication $F(1,302) = 10.89$ than females. Again males reported more job problems than females $F(1,320) = 10.66$.

A multivariate significant subordinate effect was found for ethnicity on the communication variables ($F(6,288) = 2.07$, $p < .05$) with blacks reporting more upward communication than whites $F(1,293) = 4.57$, and less downward communication than whites $F(1,293) = 5.29$.

Black Male and White Female Manager Comparison

No significant multivariate manager effects were found when reports of subordinates were used. Significant subordinate effects were found for sex group on communication influences ($F(4,241) = 3.91$, $p < .05$), communication direction ($F(6,230) = 2.59$, $p < .05$), and quality and modality of communication ($F(6,231) = 2.45$, $p < .05$). The significant univariate F ratios are as follows: males reported higher mobility aspirations than females $F(1,244) = 7.47$, lower importance to organizational promotion $F(1,244) = 5.01$ (Table 23); females reported less downward communication $F(1,235) = 5.76$ and accuracy $F(1,235) = 3.97$ than males; males reported more redundancy of communication $F(1,236) = 4.77$ and more job problems than females $F(1,248) = 3.40$.

A significant univariate interaction effect was on job problems when subordinates were grouped by ethnicity. White subordinates with black male managers reported more problems than black subordinates; black subordinates

with white female managers reported more job problems than white subordinates $F(1,248) = 7.59$. This interaction is shown in Figure 3.

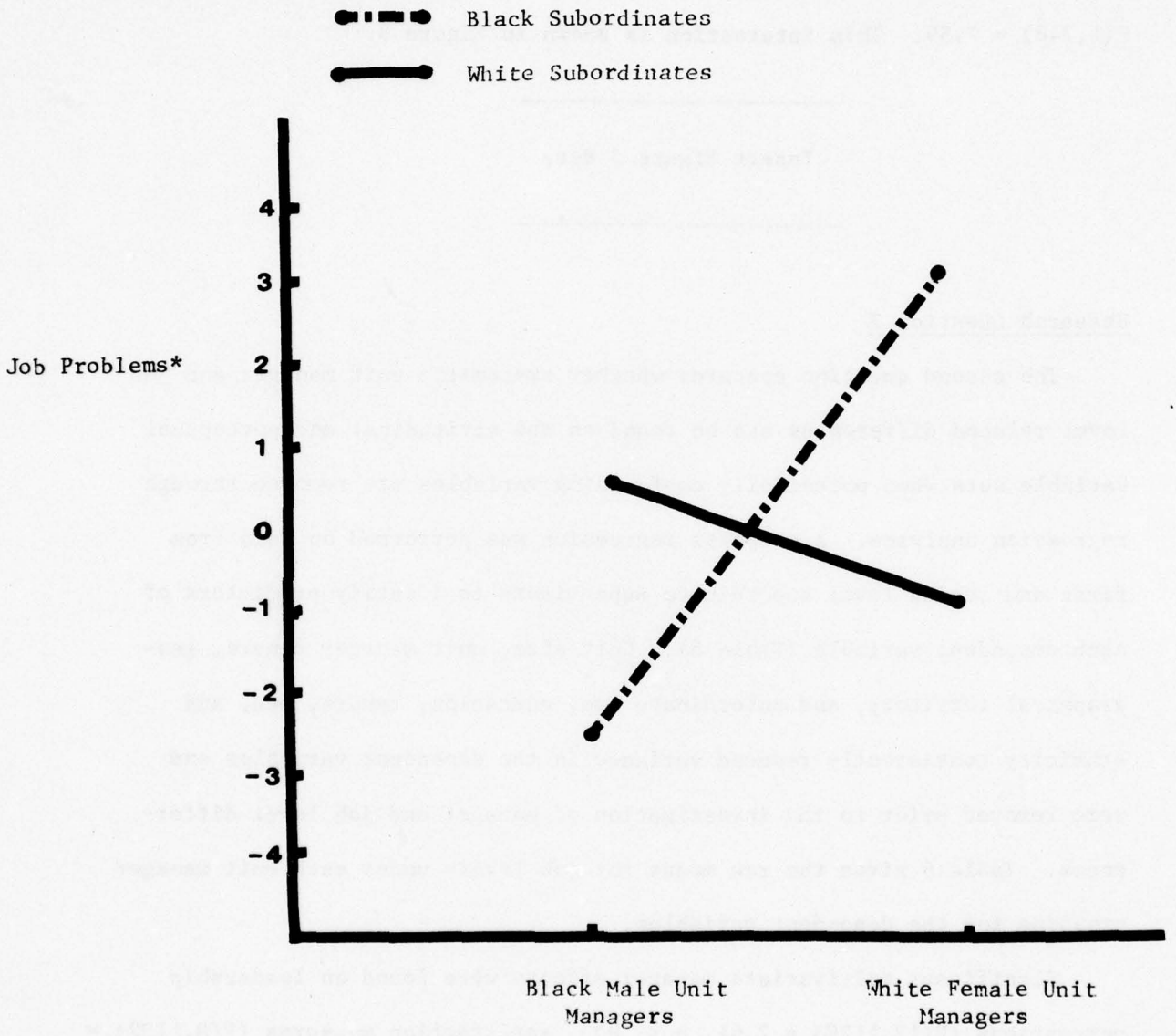
Insert Figure 3 Here

Research Question 2

The second question concerns whether systematic unit manager and job level related differences can be found on the attitudinal and perceptual variable sets when potentially confounding variables are removed through regression analyses. A stepwise regression was performed on data from first and second level subordinate supervisors to identify predictors of each dependent variable (Table 5). Unit size, unit manager tenure, geographical territory, and subordinate age, education, tenure, sex, and ethnicity consistently reduced variance in the dependent variables and were removed prior to the investigation of manager and job level differences. Table 6 gives the raw means for job levels under each unit manager grouping for the dependent variables.

Significant multivariate manager effects were found on leadership perceptions ($F(12,1128) = 2.61$, $p < .05$), satisfaction measures ($F(8,1132) = 3.47$, $p < .05$), communication influences ($F(8,1132) = 3.30$, $p < .05$), direction of communication ($F(12,434) = 2.06$, $p < .05$), and behavioral intentions ($F(8,1132) = 2.29$, $p < .05$). Table 7 shows the significant univariate manager and job level effects, $p < .05$. Black managers were perceived as exhibiting more consideration than white male and female unit managers $F(2,569) = 10.48$ and as having less influence over subordinates

Unit Manager X Subordinate Ethnicity



*Residual means

Figure 3

$F(2,569) = 5.30$. Subordinates with black unit managers had the lowest upward mobility aspirations $F(2,569) = 6.13$, lowest coworker satisfaction $F(2,569) = 3.71$, and reported the lowest lateral communication $F(2,222) = 7.12$. Subordinate supervisors of female managers reported higher probabilities to transfer within 1 year $F(2,569) = 3.52$ and 3 years $F(2,569) = 3.48$ than subordinates of black and white male managers.

Several multivariate job level effects were found, all significant $p < .05$; satisfaction measures ($F(5,565) = 3.53$), behavioral intentions to transfer or leave ($F(4,566) = 9.34$), communication influences ($F(4,566) = 10.19$), and communication direction ($F(6,217) = 3.70$). A significant univariate effect was found on the job problems scale with first level supervisors reporting more problems than second level supervisors $F(1,569) = 3.40$. Second level supervisors reported higher satisfaction with work $F(1,569) = 4.26$ and promotion $F(1,569) = 8.64$; a higher probability to transfer within 1 year $F(1,569) = 15.17$ and 3 years $F(1,569) = 21.42$; attributed more importance to organizational promotion $F(1,569) = 6.09$, higher mobility aspirations $F(1,569) = 5.64$, and perceived unit managers as having more influence over their jobs and careers $F(1,569) = 28.48$ than first level supervisors reported. Second level supervisors reported less upward communication $F(1,222) = 4.09$, more downward communication $F(1,222) = 10.06$, and more summarization communication $F(1,222) = 6.65$ than first level supervisors.

Research Question 3

No significant differences $p < .05$ were found when minority units were each compared with majority units on part-time or full-time turnover at the three time periods or on indices of sales (net sales, gross sales, or gross profit) when unit size effects were removed from the dependent

variables. Table 8 shows F ratios for unit turnover and sales for black male, white female, and white male managed units.

Discussion

These data demonstrate differences in subordinate attitudes and perceptions attributable to sex and ethnic group of managers and subordinates even when the effects of several demographic and organizational characteristics are controlled. It should be noted, however, that these differences are relatively small (multiple R's in stepwise regressions all are less than .60) yet consistent. In regard to the first research question, unit manager differences were found on leadership perceptions and communication variables. These differences were found when minority unit managers were compared with comparison white male managers; no unit manager differences were found when the two groups of minority unit managers were compared. Subordinates of white males reported less horizontal communication than subordinates of white females. They also reported more redundant communication in their units than subordinates of black unit managers. Communication redundancy was positively correlated with job problems in unit management and administration and negatively correlated with satisfaction with supervision (unit manager) suggesting more communication and unit difficulties in white male retail units, although no significant differences were found on job problems related to unit managers.

The second unit manager difference was on leadership perceptions and showed that subordinates of black males reported more considerate behavior and less work sensitivity than subordinates of white males reported. The finding of higher consideration for black males is consistent with Parker's (1976) finding of higher supervisor support from black managers. The fact that black males were seen as less work sensitive should not be viewed

as a lower quality of leadership for black males. Both leadership perceptions are highly correlated with "positive" leader perceptions and conditions (self-determination, personal sensitivity, negotiating latitude, initiating structure, satisfaction with supervision, and few job problems).

Several explanations can account for subordinates perceiving differences in leadership behaviors of white and black male managers. First considerate behavior could be instrumental, effective, and expected for black males as managers in handling managerial responsibilities within their units. This behavior could have been an interpersonal skill already in the individual's repertoire of behaviors before entering the organization or it could have been developed during organizational assimilation (Graen, 1976) or interpersonal rolesending processes (Kahn, Wolfe, Quinn, Snoek, and Rosenthal, 1964). If considerate behavior is developed through organizational influences, it suggests that assimilation and role-sending processes result in differential organizational behaviors leading to comparable levels of success (becoming a unit manager). Unfortunately no ratings of unit manager performance were assessed from their superiors to evaluate the effects of consideration or work sensitivity behavior.

A second explanation related to the first and also consistent with the data is that this organization may be selecting black males with managerial skills and interpersonal skills included in the general leadership behavior called "consideration." It is reasonable that organizations select black unit managers with high consideration behavior assuming that the potential probability of interpersonal problems with other employees would be higher for black males.

Most of the subordinate differences found were related to sex group although ethnic group differences were also found. Males consistently

reported more job problems in unit management, higher career mobility aspirations, higher importance to company promotions, more communication redundancy, and lower satisfaction with promotion and career and security opportunities than females. Other differences were found on the individual communication scales but these significant sex effects were less consistent across unit manager comparisons, but in general females were more positive about communication and communication influences with their superiors than males (Table 2). The higher mobility aspirations, importance of organizational promotion, and more reported job complaints of males accompanied by low satisfaction with promotion and career security describe systematic sex differences in job attributes. Mobility, job problems, promotion, and career security differences coincide with O'Leary's (1974), Shuler's (1975), and Bartol's (1976) conclusions that males are concerned with career and advancement issues and with influencing job related decisions. Lenney (1977) suggests that situational variables (such as special ability area, availability of performance feedback, and emphasis placed on social comparison) may moderate sex-self-confidence relationships in achievement situations and explain findings of low female self-confidence, and perhaps in the case of these data, low mobility aspirations and importance for females. The satisfaction differences might be explained in that white males are responding to the influx of minority supervisors especially when organizations are actively seeking and promoting minority supervisors and managers. These perceptions can contribute to low satisfaction in areas of their work (such as promotion, career and future security, and work in general) and contribute to more overall job problems. Consistent with this interpretation is the finding by Terborg, Peters, Ilgen, and Smith (1977). They found that for

male employees the variable "months since last promotion" was negatively related to positive reports of women as managers.

Ethnic group differences among subordinates were found on leadership perceptions, communication variables, and the job problems measures. When subordinates of white managers were grouped by ethnicity, black subordinates perceived more work sensitivity and less personal sensitivity than white subordinates in their unit managers. Also, blacks reported more job problems than whites. Blacks may be experiencing more job problems in these units but the fact that there are so few black subordinates in the eleven female managed units (8 blacks) and thirteen white male managed units (22 blacks) as compared with the six units managed by black males (17 blacks) suggests that blacks are in severe numerical minorities in these units. The mean for blacks under white females on the job problems is the highest for a subordinate group under any unit manager and is high relative to white, male, and female subgroupings under female managers. Parker (1976) found that subordinate group composition (black-white) was critical in reports of managers. He found that blacks in severe numerical minorities under white managers would report unfavorable conditions about white management more so than black subordinates would report under black managers. Unfortunately these data fail to reveal whether subordinates are reporting actual problems or responding to a white unit manager. The interaction for black and white subordinates with white female and black male unit managers similarly demonstrates Parker's finding; blacks with female managers reported more problems than whites and whites with black unit managers reported more job problems than black subordinates. White subordinates reported less upward communication to unit managers and more

downward communication to sales personnel than black subordinates when male managers were compared. Although no other black-white subordinate differences were found in this comparison, the trend of means for black and white subordinates of white female managers is suggestive of several job concerns.

The second research question addressed whether unit manager and job level differences of subordinates could be found when several demographic and organizational variables were controlled. Black unit managers were perceived by first and second level supervisors as exhibiting more considerate behavior and having less influence over their subordinates. Subordinates of black managers had the lowest upward mobility aspirations, the lowest amount of lateral communication, and the lowest behavioral intentions to transfer in the organization within 1 or 3 years. Black managed units were located in large metropolitan areas in the midwestern and eastern half of the United States and had a larger proportion of large units than white managers (Table 1). The urban location of these units and low coworker satisfaction can explain the low communication subordinates have with their peers. These subordinates were less concerned with mobility, have low probabilities of transferring to another unit of the organization, and perceive their manager as having less influence over their careers and promotions, maybe because they intend to remain in their present positions and units. Subordinates of white female managers had the highest intentions to transfer within the organization. From Table 1 it was found that these subordinates are usually young, highly educated, and have recently entered the organization. Still, it is difficult to explain why subordinates of women as opposed to white male managers have such high intentions to transfer.

Systematic job level effects were found between first and second level supervisors accurately reflecting the structure and procedures within these units. Second level supervisors had higher intentions to transfer to other units, attributed more importance to organizational promotion, had higher mobility aspirations, reported more summarization communication, less upward and more downward communication, experienced less job problems, and were more satisfied with their work and promotion opportunities than first level supervisors. The pyramidal structure of these retail units going from highest authority to lowest authority is unit manager, second level supervisors, first level supervisors, and sales personnel. Second level supervisors are predominantly in unit manager career positions necessitating upward mobility through transferring from one retail unit to another (usually to a larger unit). They closely work with the unit manager and oversee many of the operations of first level supervisors and report directly to the unit manager. In many cases first level supervisors report to second level supervisors and contribute less to unit administration decisions (more job problems). Unit managers directly evaluate second level supervisors and hold considerable influence over their careers, promotions, and work duties.

The third research question addressed whether objective indices of sales and turnover were related to unit managers; no differences were found. It might be mentioned that the thirty retail units were chosen in terms of comparability of size, location, gross sales in 1975, and unit manager characteristics so any differences in these objective variables may have been already controlled.

This investigation demonstrates unit manager and subordinate differences in attitudes, perceptions, and intentions related to sex and ethnicity

using subordinate reports. These differences were found even when subordinate reports were controlled by demographic and organizational influences. These data suggest that minority managers do differ from majority managers in supervising their units without dysfunctional consequences, although an interaction was found for ethnic groups on a job problems measure. Systematic subordinate male-female and job level effects were found consistent with previous literature and reflecting work practices and responsibilities within this organization.

The intent to investigate sex and ethnicity differences of unit managers and subordinates when unconfounded by other variables was shown, but researchers must use these controlled variables (age, education, tenure, sex, ethnicity, job level, unit size, etc.) in conjunction with other variables such as the amount of training, length of time in a particular position, career objectives, perceptions of promotion policies and criteria, ratio of minority to majority employees being promoted, and other work experiences of managers and subordinates to understand supervisory-subordinate relationships of minority employees within organizations.

Reference Note

1. Ginsburgh, S. An unpublished manuscript on sex differences of supervisors.

References

Adams, E. F., Laker, D. R., & Hulin, C. L. An investigation of the influence of job level and functional specialty on job attitudes and perceptions. Journal of Applied Psychology, 1977, 62, 335-343.

Arvey, R. D., & Mussio, S. J. Job expectations and valences of job rewards for culturally disadvantaged and advantaged clerical employees. Journal of Applied Psychology,1974, 59, 230-232.

Bales, R. F. Interaction process analysis: A method for the study of small groups. Cambridge, Mass.: Addison-Wesley, 1950.

Bartol, K. M. Relationship of sex and professional training area to job orientation. Journal of Applied Psychology, 1976, 61, 368-370.

Bartol, K. M., & Butterfield, D. A. Sex effects in evaluating leaders. Journal of Applied Psychology, 1976, 61, 446-454.

Bass, A. R., & Turner, J. N. Ethnic group differences in relationships among criteria of job performance. Journal of Applied Psychology, 1973, 57, 101-109.

Bock, R. D. Programming univariate and multivariate analysis of variance. Technometrics, 1963, 5, 95-117.

Bowers, D. G., & Seashore, S. E. Predicting organizational effectiveness with a four-factor theory of leadership. Administrative Science Quarterly, 1966, 2, 238-263.

Brief, A. P., & Aldag, R. J. Male-female differences in occupational values within majority groups. Journal of Vocational Behavior, 1975, 6, 305-314.

Brown, H. A., & Ford, D. L. An exploratory analysis of discrimination in the employment of black MBA graduates. Journal of Applied Psychology, 1977, 62, 50-56.

Cashman, J., Dansereau, F., Graen, G., & Haga, W. J. Organizational understructure and leadership: A longitudinal investigation of the managerial role-making process. Organizational Behavior and Human Performance, 1975, 13, 46-78.

Champagne, J. E., & King, D. C. Job satisfaction among underprivileged workers. Personnel and Guidance Journal, 1967, 45, 429-434.

Cummings, L. L., & El Salmi, A. M. The impact of role diversity, job level, and organizational size on managerial satisfaction. Administrative Science Quarterly, 1970, 15, 1-10.

Day, D. R., & Stogdill, R. M. Leader behavior of male and female supervisors: A comparative study. Personnel Psychology, 1972, 25, 353-360.

Dreger, R. M., & Miller, K. S. Comparative psychological studies of Negroes and whites in the United States: 1959-1965. Psychological Bulletin Monographs, 1968, 70 (3, Pt. 2).

Feldman, J. Race, economic class, and the intention to work: Some normative and attitudinal correlates. Journal of Applied Psychology, 1974, 59, 179-186.

Finn, J. D. Multivariance: Univariate and multivariate analysis of variance, covariance, and regression. Chicago: National Educational Resources, 1976.

Fleishman, E. A. Manual for the supervisory behavior description. Washington, D.C.: Management Research Institute, 1972.

Goetz, T. E., & Herman, J. B. Effects of supervisor's sex and subordinate sex on job satisfaction and productivity. Paper presented at the 84th Annual Convention of the American Psychological Association, Washington, D.C., September, 1976.

Graen, G. Role-making processes within complex organizations. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology. Chicago: Rand McNally, 1976, Chapter 28.

Graen, G., Dansereau, F., & Minami, T. Dysfunctional leadership styles. Organizational Behavior and Human Performance, 1972, 7, 216-236.

Hansen, P. Sex differences and supervision. Paper presented at the meeting of the American Psychological Association, New Orleans, September, 1974.

Herman, J. B., Dunham, R. B., & Hulin, C. L. Organizational structure, demographic characteristics, and employee responses. Organizational Behavior and Human Performance, 1975, 13, 206-232.

Hulin, C. L., Hom, P. W., & Herman, J. B. Individual differences, structural characteristics of organizational positions and plant effects on responses (Tech. Rep. 76-3). Champaign: University of Illinois, Department of Psychology, 1976.

Hunter, J. E., & Schmidt, F. L. A critical analysis of the statistical and ethical implications of five definitions of test fairness. Psychological Bulletin, 1974, 83, 1053-1071.

Jacobson, M. G., & Effertz, J. Sex roles and leadership: Perceptions of the leaders and the led. Organizational Behavior and Human Performance, 1974, 12, 383-396.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. Organizational stress: Studies in role conflict and ambiguity. New York: Wiley, 1964.

Katerberg, R., Herman, J. B., & Hulin, C. L. Organizational and individual characteristics, organizational climate, and job attitudes: A multivariate investigation of responses at individual and group levels of analysis (Tech. Rep. 77-1). Champaign: University of Illinois, Department of Psychology, 1977.

Lee, D. M., & Alvares, K. M. Effects of sex on descriptions and evaluations of supervisory behavior in a simulated industrial setting. Journal of Applied Psychology, 1977, 62, 405-410.

Lenney, E. L. Women's self-confidence in achievement settings. Psychological Bulletin, 1977, 84, 1-13.

Muchinsky, P. M. An intraorganizational analysis of the Roberts and O'Reilly Organizational Communication Questionnaire. Journal of Applied Psychology, 1977, 62, 184-188.

Nunnally, J. C. Psychometric theory. New York: McGraw-Hill, 1967.

O'Leary, V. E. Some attitudinal barriers to occupational aspirations in women. Psychological Bulletin, 1974, 81, 809-826.

Osborn, R. N., & Vicars, W. M. Sex stereotypes: An artifact in leader behavior and subordinate satisfaction analysis. Academy of Management Journal, 1976, 19, 439-449.

Parker, W. S. Black-white differences in leader behavior related to subordinates' reactions. Journal of Applied Psychology, 1976, 61 140-147.

Petty, M. M., & Lee, G. K. Moderating effects of sex of supervisor and subordinate on relationships between supervisor behavior and subordinate satisfaction. Journal of Applied Psychology, 1975, 60, 624-628.

Porter, L. W. Job attitudes in management: I. Perceived deficiencies in need fulfillment as a function of job level. Journal of Applied Psychology, 1962, 46, 375-384.

Richards, S. A., & Jaffee, C. L. Blacks supervising whites: A study of interracial difficulties in working together in a simulated organization. Journal of Applied Psychology, 1972, 56, 234-240.

Roberts, K. H., & O'Reilly, C. A. Measuring organizational communication. Journal of Applied Psychology, 1974, 59, 321-326.

Rosen, B., & Jerdee, T. H. The influence of sex-role stereotypes on evaluations of male and female supervisory behavior. Journal of Applied Psychology, 1973, 57, 44-48.

Ruhe, J. A., & Allen, W. R. Differences in task behavior and attitudes in two organizational settings by race (Tech. Rep. 76-1, N00014-75-C-0900). Washington, D.C.: U.S. Office of Naval Research, 1976.

Salipante, P.,& Goodman, P. Training, counseling, and retention of the hard-core unemployed. Journal of Applied Psychology, 1976, 61, 1-11.

Schein, V. E. The relationship between sex role stereotypes and requisite management characteristics. Journal of Applied Psychology, 1973, 57, 95-100.

Schmidt, F. L., & Johnson, R. H. Effect of race on peer ratings in an industrial situation. Journal of Applied Psychology, 1973, 57, 237-241.

Shuler, R. S. Sex, organizational level, and outcome importance: Where the differences are. Personnel Psychology, 1975, 28, 365-376.

Slocum, J. W., & Strawsen, R. H. Racial differences in job attitudes. Experimental Publication System, June, 1971, 12, Ms. No. 471-12.

Smith, F. J. The Index of Organizational Reactions (IOR). JSAS Catalog of Selected Documents in Psychology, 1976, 6, Ms. No. 1265.

Smith, P. C., Kendall, L. M., & Hulin, C. L. The measurement of satisfaction in work and retirement. Chicago: Rand McNally, 1969.

Smith, P. C., Smith, O. W., & Rollo, J. Factor structure for blacks and whites of the Job Descriptive Index and its discrimination of job satisfaction. Journal of Applied Psychology, 1974, 59, 99-100.

Stogdill, R. M., Goode, O. S., & Day, D. R. The leader behavior description subscale. Journal of Psychology, 1962, 56, 3-8.

Terborg, J. R., & Ilgen, D. R. A theoretical approach to sex discrimination in traditionally masculine occupations. Organizational Behavior and Human Performance, 1975, 13, 352-376.

Terborg, J. R., Peters, L. H., Ilgen, D. R., & Smith, F. Organizational and personal correlates of attitudes toward women as managers. Academy of Management Journal, 1977, 20, 89-99.

Triandis, H. C. Factors affecting employee selection in two cultures. Journal of Applied Psychology, 1963, 47, 89-96.

Footnotes

[1]This research was supported in part by ONR contract number N00014-75-C-0904.

[2]The research team included: Karlene Roberts, Mary Zalesny, Carol Arian, James Terborg, Charles Hulin, William Moore, Kenneth Scott, and Edward Adams.

[3]A factor analysis using h^2 as the communality estimate and a varimax rotation were performed on the 30 item job problems measure using different numbers of factors as estimates of the dimensionality of the scales. One factor seemed sufficient to account for the intercorrelations of the 30 items. This decision concerning the number of factors was made using several criteria. Absolute and relative sizes of the eigenvalues as well as differences between adjacent pairs of eigenvalues suggested only one meaningful factor. There was a large drop of 6.71 between the first and second eigenvalues. The drop between the second and third eigenvalues was .21. The second eigenvalue was .66. Examination of the rotated factor matrix of more than one factor showed no pattern approaching simple structure so interpretation of more than one factor was impossible.

Table 1

Correlation Matrix of Independent and Dependent Variables

		1[a]	2[b]	3[c]	4[d]	5[e]	6[f]	7[g]	8[h]	9[i]	10[j]	11	12	13
1.	Unit Manager Sex	1.00												
2.	Unit Manager Ethnicity	-37*												
3.	Unit Manager Tenure	15	-45*											
4.	Subordinate Sex													
5.	Subordinate Ethnicity		-11											
6.	Job Level				28*									
7.	Tenure	13				-16								
8.	Subordinate Education	-11			-21*	+13	-18	-33*						
9.	Subordinate Age	11			17	-13		67*	-40*					
10.	Unit Size	-24*	20*			-13								
11.	Territory	-28*	27*	12							24*			
12.	Work Sensitivity							11		14				
13.	Self-Determination												31*	
14.	Personal Security									13			63*	49*
15.	Negotiating Latitude							11		11			51*	35*
16.	Initiating Structure							11		15			50*	31*
17.	Consideration		-16	12	11								52*	40*
18.	Job Problems				-18					-16			-38*	-42*
19.	Authority			11				-11		-10				
20.	Satisfaction with Supervision		-10	12									43*	37*
21.	Coworkers									11		12	15	
22.	Work				10				-13	14			28*	31*
23.	Promotion				12		-11	-18		-10			17	14
24.	Career Security				23*						10		26*	29*

		1[a]	2[b]	3[c]	4[d]	5[e]	6[f]	7[g]	8[h]	9[i]	10[j]	11	12	13
25.	Transfer < 1 year	-11	11			13	-20*	-28*	28*	-33*		15		13
26.	Leave < 1 year				-10			13	17	-15			-12	-19
27.	Transfer < 3 years	-12	10		-15	12	-30*	-36*	38	-46*		10		10
28.	Leave < 3 years								13		12		-13	-17
29.	Trust							11		19			34*	38*
30.	Influence		11				-23*						21*	24*
31.	Mobility	-12			-26*	10	-25*	-32*	33*	-46*		11		
32.	Promotion in Organization	-11	10			13	-21*	-18	16	-20*			15	21*
33.	Communication Direction-Up						11						11	
34.	Direction-Lateral	-17								-17				
35.	Direction-Down				-23*		-23*	-12	19	-15				
36.	Direction-Other												-15	-12
37.	Accuracy						-12	13		18			18	21*
38.	Summarization						-16		13					
39.	Underload												-10	-14
40.	Expansion							-11		-10				10
41.	Amount Passed							14	-14	18			19	15
42.	Desire for Interaction								18				14	23*
43.	Gatekeeping													
44.	Change in Information				-11			-15	12	-19			-12	
45.	Received Accuracy							12		12			11	12
46.	Overload													
47.	Redundancy				-17					-13				

		1[a]	2[b]	3[c]	4[d]	5[e]	6[f]	7[g]	8[h]	9[i]	10[j]	11	12	13
48.	Overall Satisfaction				14				-11	14			29*	29*
49.	Modality													
	Written		10	-11										12
50.	Face to Face				-13									-11
51.	Phone								13					
52.	Other													

*Indicates significant at $p < .05$; near zero correlations are omitted; decimal points are removed

Coding for:

[a] Unit Manager Sex: Female=1, Male=2

[b] Unit Manager Ethnicity: Black=1, White=2

[c] Unit Manager Tenure: Low tenure=5, High tenure=1

[d] Subordinate Sex: Male=1, Female=2

[e] Subordinate Ethnicity: White=1, Black=2

[f] Job Level: Second level=1, First level=2

[g] Unit Size: Large units=1, Medium units=2, Small units=3

[h] Geographical Territory: East=1, West=5

[i] High score indicates more perceived job problems

[j] High score indicates more perceived authority

	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
5.	55*																		
6.	46*	41*																	
7.	65*	54*	52*																
8.	-54*	-40*	-30*	-61*															
9.				13	-13														
0.	56*	45*	31*	65*	-56*														
1.	18	13	10	18	-35*		17												
2.	33*	23*	18	32*	-48*		27*	37*											
3.	24*	18	11	28*	-41*	10	21*	19	31*										
4.	40*	25*	18	42*	-57*		34*	23*	51*	54*									

	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
5.	12			10	-11	12	14		12	32*	27*								
6.	-24*	-16	-10	-24*	35*		-19	-17	-33*	-22*	-38*								
7.							10			33*	22*	69*							
8.	-29*	-17		-27*	35*		-21*	-14	-33*	-29*	-45*	-12	73*	-12					
9.	52*	38*	26*	53*	-58*		48*	24*	35*	23*	39*		-27*		-26*				
0.	31*	20*	18	26*	-28*	10	21*	17	31*	36*	44*	23*	-16	17	-20*	38*			
1.					13							35*		48*			11		
2.	28*	22*	10	25	8	-32*		23*	16	27*	56*	49*	42*	-24*	46*	-28*	27*	43*	
3.		13	14	13												19		-10	
4.	-10															-16			
5.										-10	-11			15				15	
6.	-12	-13	-16	-16					-10										
7.	29*	17	16	27*	-39*		22*	29*	25*	13	23*		-14		-11	45*	29*		15
8.	10						10					11		10	13	13	16		15
9.	-19			-15	32*		-10	-17	-21*	-11	-19		17		14	-15			
0.	10		12													13	11	14	11
1.	19	11	12	19	18	12	10	11	17	10	12		-13						
															-12	20*	14		
2.	15	18	19	22*	-14		19	14		13				13		25*	13		16
3.		10						11											
4.	-13			-15	23*		-12	-11	-14			11		13		-17		16	
5.	11			11	-16		12	15	14		10		-12		-10	15			
6.	-13				-18	17		-11	-10	-10	-15		11						
7.				-10	23	8			-14	-10	-20*		14		13				

	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
48.	38*	30*	22*	40*	-51*	13	34*	28*	33*	24*	41*		-28*		-26*	45*	24		22
49.																			
50.																			
51.																		10	10
52										11									10

33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
-33*	-25*																		
-24*	-14	-10																	
	17		15																
				-24*															
					27*														
10		-21*	-19	25*	16		34*												
			21*	28*			31*	29*											
				18	23*	-11	11	12	18										
	13		-26*	-11	20*					-22*									
				40*				15	10		-17								
			14	-11		27*		-11											
						21*	17		11		11		23*						

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
8.		-15			32*		-23*	11	22*	20*		-11	18	-11	-12					
9.	21*	16	-10											14	15					
0.																	-33*			
1.		13															11	-43*		
2.											-11							-24*		

Table 2

Means for 1st Level Subordinates of Unit Managers

	Black Male Managers				White Female Managers				White Male Managers			
	White	Black	Male	Female	White	Black	Male	Female	White	Black	Male	Female
Work Sensitivity	6.3	6.8	6.3	6.4	6.4	6.0	6.3	6.5	6.5	7.0	6.6	6.5
Self-Determination	10.1	10.7	10.1	10.5	10.4	9.5	10.2	10.6	10.1	10.5	10.1	10.3
Personal Sensitivity	8.9	9.6	8.8	9.2	9.4	8.5	9.3	9.4	9.1	8.7	9.1	9.1
Negotiating Latitude	12.5	13.2	12.6	12.5	12.2	11.1	12.3	11.9	12.3	11.2	12.2	12.2
Initiating Structure	39.4	41.6	39.6	39.7	40.2	38.6	39.3	41.1	40.1	40.5	40.2	40.1
Consideration	39.5	43.3	39.4	40.9	38.0	34.2	37.0	38.8	36.2	37.5	35.7	37.3
Job Problems	21.5	16.5	23.7	16.1	20.6	32.8	23.5	18.6	22.3	24.2	24.7	18.2
Authority	4.7	4.1	3.7	6.3	3.0	4.0	2.6	3.6	3.5	7.6	3.6	43.0
Satisfaction with Supervision	41.6	43.4	42.4	40.8	39.8	39.3	38.2	41.4	38.9	38.5	38.8	38.9
Coworkers	40.6	39.6	38.9	43.1	42.0	34.6	40.0	44.0	43.0	41.0	42.8	43.0
Work	34.3	38.9	33.5	37.2	37.1	33.1	35.4	38.6	36.7	37.4	35.4	38.9
Promotion	25.8	15.7	24.3	27.8	27.2	15.0	23.8	31.2	12.6	30.8	22.4	31.6
Career Security	2.1	2.0	1.9	2.4	2.3	2.1	1.8	2.8	21.5	2.0	1.8	2.7
Transfer < 1 year	2.0	3.1	2.2	2.0	2.7	4.5	2.7	2.9	2.3	2.9	2.3	2.4
Leave < 1 year	2.0	2.2	2.2	1.9	2.3	3.5	2.6	2.0	2.1	2.6	2.2	1.9
Transfer < 3 years	2.6	4.7	3.1	2.5	3.6	3.8	3.9	3.3	3.1	4.1	3.2	3.0
Leave < 3 years	2.5	3.1	2.5	2.8	2.7	3.0	2.9	2.5	2.6	3.4	2.9	2.2
Trust	16.4	16.8	16.0	17.4	16.4	12.8	16.0	16.4	16.4	16.4	16.0	17.0
Influence	9.2	10.6	9.1	9.8	10.5	9.1	10.0	11.0	10.2	10.2	9.5	11.3
Mobility	9.8	12.8	10.8	9.1	11.4	12.6	12.4	10.4	10.4	11.6	11.1	9.4
Promotion in Organization	3.9	5.7	4.1	4.2	4.8	6.0	4.6	5.2	4.4	5.2	4.4	4.7
Communication Direction-Up	70.1	74.5	70.1	71.4	77.3	89.3	71.2	89.4	70.8	80.0	72.0	74.7
Direction-Lateral	50.3	51.7	52.4	47.2	69.4	44.1	69.1	66.6	52.8	45.0	52.1	52.3

Table 2 (continued)

	Black Male Managers				White Female Managers				White Male Managers			
	White	Black	Male	Female	White	Black	Male	Female	White	Black	Male	Female
Communication												
Direction-Down	11.8	9.7	12.6	9.8	10.8	9.7	11.9	9.0	11.7	8.6	12.2	10.0
Direction-Other	36.0	35.8	38.0	32.7	29.3	35.6	23.2	37.5	34.7	32.8	33.8	35.3
Accuracy	15.5	15.9	15.3	16.1	16.1	13.6	16.1	15.7	16.0	16.6	15.9	16.5
Summarization	16.8	15.6	16.8	17.2	16.0	17.6	16.6	16.0	16.7	16.3	16.3	15.8
Underload	11.6	11.6	12.2	10.7	11.4	12.6	11.1	12.1	11.3	11.6	11.2	11.4
Expansion	14.9	14.8	15.0	14.6	15.3	13.5	15.5	14.9	14.8	15.2	14.7	14.9
Amount Passed	14.6	14.1	14.3	15.0	14.6	14.0	14.6	14.5	14.4	15.8	14.2	15.1
Desire Interaction	16.6	16.5	16.9	16.2	16.7	13.8	16.8	16.1	15.5	15.9	15.5	15.7
Gatekeeping	16.3	14.6	16.0	16.4	16.2	16.1	16.4	15.9	16.7	16.1	16.7	16.6
Change Information	8.7	10.0	8.7	9.2	9.0	8.3	9.6	8.1	9.1	7.8	9.6	8.0
Received Accuracy	4.5	4.5	4.5	4.5	4.5	3.5	4.4	4.3	4.5	4.7	4.4	4.7
Overload	3.7	3.5	3.8	3.5	3.6	5.1	3.8	3.4	3.5	4.1	3.6	3.5
Redundancy	4.5	5.0	4.9	4.0	4.9	5.1	5.2	4.5	4.8	5.3	5.0	4.4
Satisfaction	5.0	5.0	4.8	5.3	5.0	4.0	4.8	5.1	5.2	4.9	5.0	5.6
Modality Written	7.1	5.4	6.7	7.2	9.5	17.5	7.0	13.6	10.0	8.5	9.4	10.6
Face to Face	65.9	55.0	69.2	56.9	63.4	39.1	63.5	60.8	67.8	65.5	70.6	61.5
Phone	15.4	16.7	17.8	11.8	16.9	20.0	17.6	16.2	13.6	17.0	12.5	16.0
Other	2.8	6.3	3.7	2.3	3.6	6.6	3.8	3.6	3.5	1.3	2.8	4.3
* N	96	17	67	46	120	8	73	55	189	22	127	84

* N sizes include black and white, male and female respondent whose data were complete on the 41 dependent variables.

Table 3

Preliminary Stepwise Regression of Predictors

and Dependent Variables for 1st Level Supervisors

Dependent Variable	Predictor	F Statistic	Multiple R
Work Sensitivity	Subordinate age	10.04	.15
	Subordinate ethnicity	6.94	.18
	Subordinate education	5.52	.20
Self-Determination	Subordinate age	4.95	.11
Personal Sensitivity	Subordinate age	7.96	.14
Negotiating Latitude	Subordinate age	5.52	.11
	Unit Manager tenure	4.67	.15
Initiating Structure	Subordinate age	7.20	.13
	Unit Manager tenure	5.17	.15
Consideration	Unit Manager ethnicity	11.38	.16
	Subordinate sex	8.92	.20
	Unit size	8.34	.24
Job Problems	Subordinate sex	19.13	.20
	Subordinate age	13.75	.24
	Unit Manager tenure	10.38	.26
	Territory	8.81	.28
Authority	Unit Manager tenure	6.17	.12
	Subordinate age	6.13	.17
	Subordinate education	6.50	.21
	Territory	5.76	.23
	Unit size	5.49	.25
	Subordinate sex	5.15	.26
Satisfaction with Supervision	Unit Manager ethnicity	7.25	.13
	Subordinate age	5.12	.15
Coworkers	Subordinate age	6.33	.12
	Territory	5.90	.16

Table 3 (continued)

Dependent Variable	Predictor	F Statistic	Multiple R
Satisfaction with Work	Subordinate education	12.80	.17
Promotion	Subordinate tenure	16.17	.19
Career Security	Subordinate sex	33.92	.27
	Unit size	21.04	.30
	Subordinate tenure	15.44	.31
	Subordinate education	12.88	.33
Behavioral Intentions Transfer < 1 year	Subordinate age	52.09	.33
	Subordinate tenure	30.62	.35
	Territory	23.12	.37
	Subordinate education	18.86	.39
Leave < 1 year	Subordinate education	17.70	.19
	Subordinate age	11.16	.22
Transfer < 3 years	Subordinate age	104.17	.44
	Subordinate education	64.29	.48
	Subordinate tenure	45.59	.49
	Unit Manager tenure	35.17	.50
Leave < 3 years	Subordinate education	13.10	.17
	Unit size	8.91	.20
Trust	Subordinate age	18.57	.20
	Territory	11.41	.22
	Unit size	9.20	.24
	Subordinate sex	7.62	.26
Influence	Subordinate sex	13.98	.17
	Unit Manager ethnicity	9.71	.21
Mobility	Subordinate age	129.56	.48
	Subordinate sex	71.00	.50
	Subordinate education	50.42	.51
	Unit Manager sex	39.42	.52

Table 3 (continued)

Dependent Variable	Predictor	F Statistic	Multiple R
Promotion in Organization	Subordinate tenure	27.83	.25
	Subordinate ethnicity	17.08	.27
	Unit Manager ethnicity	13.29	.29
	Subordinate sex	10.67	.30
	Subordinate tenure	32.44	.53
Communication Direction-Up	Subordinate education	3.79	.09
	Subordinate tenure	3.38	.13
Direction-Lateral	Unit Manager sex	12.21	.17
	Subordinate age	11.11	.22
	Subordinate tenure	8.31	.23
Direction-Down	Subordinate sex	20.29	.21
	Subordinate tenure	16.74	.27
	Subordinate education	12.65	.29
	Subordinate ethnicity	10.66	.30
	Unit Manager sex	9.34	.32
Direction-Other			
Accuracy	Subordinate age	15.03	.18
	Unit Manager ethnicity	9.16	.20
	Unit Manager tenure	7.95	.23
Summarization	Subordinate education	8.48	.14
	Unit Manager sex	6.78	.18
Underload			
Expansion	Subordinate tenure	8.67	.14
Amount Passed	Subordinate age	15.36	.18
	Subordinate education	9.09	.20
Desire Interaction	Subordinate education	8.49	.14
	Unit Manager ethnicity	5.83	.16
	Unit Manager sex	5.43	.19
	Subordinate age	4.78	.21

Table 3 (continued)

Dependent Variable	Predictor	F Statistic	Multiple R
Communication Gatekeeping			
Change Information	Subordinate age	17.37	.19
Received Accuracy	Subordinate tenure	7.61	.13
	Subordinate education	5.19	.15
Overload			
Redundancy	Subordinate sex	18.65	.21
	Subordinate age	12.22	.23
	Territory	9.59	.25
Overall Satisfaction	Subordinate sex	11.81	.16
	Subordinate age	9.91	.21
	Size	7.86	.23
	Territory	7.13	.25
Mode-Written	Unit Manager tenure	6.68	.12
	Subordinate sex	5.25	.15
	Subordinate age	5.23	.19
	Unit size	4.91	.21
Mode-Face	Subordinate sex	8.77	.14
Mode-Phone			
Mode-Other			

Significant Univariate Sex and Ethnicity Effects for Unit Managers and Subordinates *

Table 4

Independent Variables			Dependent Variables		
Unit Manager Comparison	Subordinate Grouping	Effects	Satisfaction	Leadership	Communication
White Female and White Male	Male-Female	Manager			D-Lateral
		Subordinate	Promotion Career Security	Consideration	Mobility Promotion in Organization Redundancy Written
	Black-White	Manager			D-Lateral
		Subordinate		Work Sensitivity Personal Sensitivity	
Black Male and White Male	Male-Female	Manager		Work Sensitivity Consideration	Redundancy
		Subordinate	Work Promotion Career Security		Trust Influence Redundancy Face to face Mobility
	Black-White	Manager		Work Sensitivity Consideration	Redundancy
		Subordinate			D-Upward D-Downward
Black Male and White Female	Male-Female	Subordinate			Mobility Promotion in Organization D-Downward Accuracy Redundancy

* significant $p < .05$

Table 4 continued *

Unit Manager Comparison	Subordinate Grouping	Effects	Job Problems	Behavioral Intentions	Authority
White Female and White Male	Male-Female	Subordinate	5.94		
	Black-White	Subordinate	3.00		
Black Male and White Male	Male-Female	Subordinate	10.66		
Black Male and White Female	Black-White	Interaction	7.59		

* significant $p < .05$

Table 5

Stepdowns in Regression Analyses of Predictors

and Dependent Variables for 1st and 2nd Level Supervisors

Dependent Variable	Predictor	F Statistic	Multiple R
Work Sensitivity	Subordinate age	10.04	.13
	Subordinate ethnicity	8.11	.17
	Unit size	6.32	.19
Self-Determination	Subordinate age	4.25	.09
Personal Sensitivity	Subordinate age	8.35	.13
	Unit manager sex	5.77	.15
Negotiating Latitude	Subordinate tenure	6.80	.11
	Unit manager tenure	5.06	.14
Initiating Structure	Subordinate age	11.22	.15
	Unit manager tenure	7.64	.17
	Subordinate ethnicity	6.05	.18
	Job level	5.30	.20
Consideration	Unit manager ethnicity	14.39	.16
	Unit size	10.89	.20
	Subordinate sex	9.72	.23
	Unit manager sex	8.18	.24
	Subordinate ethnicity	7.18	.25
Job Problems	Subordinate sex	17.55	.18
	Subordinate age	13.59	.22
	Job level	10.27	.23
	Unit manager tenure	8.42	.25
Authority	Unit manager tenure	6.46	.11
	Subordinate age	5.93	.15
	Subordinate education	6.65	.19
	Geographical territory	6.02	.21
	Unit size	5.64	.22
	Subordinate sex	5.26	.24

Table 5 (continued)

Dependent Variable	Predictor	F Statistic	Multiple R
Satisfaction with Supervision	Unit manager tenure	7.20	.12
	Subordinate tenure	5.50	.14
Coworkers	Geographical territory	8.11	.12
	Subordinate age	7.81	.17
Work	Subordinate age	10.13	.14
	Job level	7.35	.16
	Subordinate sex	7.03	.19
	Subordinate education	6.46	.21
	Unit manager ethnicity	5.71	.23
Promotion	Subordinate tenure	19.15	.19
	Job level	14.20	.23
	Subordinate sex	14.49	.28
	Unit size	11.81	.29
Future Security	Subordinate sex	29.19	.23
	Job level	18.12	.25
	Unit size	14.79	.28
	Subordinate tenure	11.92	.29
Behavioral Intentions Transfer < 1 year	Subordinate age	64.22	.33
	Job level	45.34	.38
	Subordinate education	33.76	.40
	Geographical territory	27.84	.42
	Subordinate tenure	23.78	.43
	Unit manager ethnicity	20.56	.44
	Subordinate ethnicity	18.18	.45
	Subordinate sex	16.31	.46
Leave < 1 year	Subordinate education	16.33	.17
	Subordinate age	10.55	.20

Table 5 (continued)

Dependent Variable	Predictor	F Statistic	Multiple R
Transfer < 3 years	Subordinate age	141.40	.46
	Job level	112.80	.54
	Subordinate education	84.93	.57
	Subordinate tenure	66.14	.58
	Unit manager ethnicity	54.92	.59
Leave < 3 years	Subordinate education	8.29	.13
	Unit size	7.89	.17
Communication Trust	Subordinate age	20.48	.19
	Unit size	11.65	.20
	Geographical territory	9.05	.22
Influence	Job level	29.33	.23
	Subordinate sex	22.15	.28
	Unit manager ethnicity	17.00	.30
	Subordinate tenure	13.66	.31
	Unit size	11.58	.32
Mobility	Subordinate age	141.29	.46
	Job level	98.40	.52
	Subordinate sex	70.50	.53
	Subordinate education	55.11	.54
	Unit manager sex	45.52	.55
Promotion in the Organization	Job level	6.23	.11
Direction-Up	Subordinate age	15.83	.17
	Unit manager sex	14.36	.23
Direction-Lateral	Subordinate sex	28.50	.23
	Job level	22.72	.28
	Subordinate tenure	19.21	.31
	Subordinate education	15.40	.33
	Subordinate ethnicity	13.21	.34
	Unit manager sex	11.87	.35

Table 5 (continued)

Dependent Variable	Predictor	F Statistic	Multiple R
Direction-Down	Unit manager ethnicity	3.09	.08
	Geographical territory	3.10	.11
Direction-Other	Subordinate age	16.77	.18
	Job level	12.51	.21
Accuracy	Job level	14.32	.16
	Subordinate education	10.23	.19
	Unit manager sex	8.12	.22
Summarization			
Underload	Subordinate tenure	6.53	.11
Expansion	Subordinate age	17.68	.18
	Subordinate education	10.57	.20
Amount Passed	Subordinate education	16.72	.18
	Subordinate age	10.31	.20
Desire Interaction			
Gatekeeping	Subordinate age	19.45	.18
	Subordinate sex	11.32	.20
Change Information	Job level	24.48	.21
	Subordinate tenure	24.51	.29
	Unit manager sex	18.48	.31
	Subordinate ethnicity	15.42	.33
	Subordinate sex	13.24	.34
	Subordinate age	12.09	.35
	Subordinate tenure	14.06	.35
Received Accuracy	Subordinate tenure	8.03	.12
Overload			
Redundancy	Subordinate sex	16.22	.17
	Subordinate age	18.87	.20
	Geographical territory	8.34	.21

Table 5 (continued)

Dependent Variable	Predictor	F Statistic	Multiple R
Overall Satisfaction	Subordinate sex	10.93	.14
	Subordinate age	9.09	.18
	Geographical territory	7.01	.20
	Unit size	6.12	.21
Written Modality	Unit manager tenure	6.62	.11
	Subordinate age	5.55	.14
	Subordinate sex	5.66	.18
Face to Face Modality	Subordinate sex	9.62	.13
	Subordinate tenure	6.14	.15
	Subordinate ethnicity	5.03	.16
	Unit manager sex	4.49	.18
Phone Modality	Subordinate education	8.13	.12
Other Modalities	Job level	3.59	.08

Table 6

Means and Standard Deviations for Subordinate Job Levels of Unit Managers

	Black Male Managers				White Female Managers				White Male Managers			
	2nd Level		1st Level		2nd Level		1st Level		2nd Level		1st Level	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Work Sensitivity	6.2	1.9	6.4	1.6	6.8	1.2	6.4	1.3	6.3	1.5	6.6	1.3
Self-Determination	10.2	2.6	10.2	1.7	10.7	1.7	10.4	1.6	10.3	1.8	10.1	2.1
Personal Sensitivity	9.3	2.7	9.0	2.4	9.2	1.3	9.3	1.9	8.8	2.1	9.1	2.0
Negotiating Latitude	12.3	4.1	12.6	2.9	14.0	2.2	12.1	3.2	12.0	3.5	12.2	2.5
Initiating Structure	37.4	9.4	40.0	6.7	40.2	4.5	40.1	4.7	39.1	5.1	40.2	6.4
Consideration	37.5	9.5	40.0	7.2	39.1	6.0	37.8	6.8	35.4	7.0	36.3	7.8
Job Problems	21.0	12.9	20.9	14.6	17.5	10.8	21.3	14.5	21.6	12.0	22.3	14.8
Authority	3.0	6.4	4.7	8.3	2.7	5.6	3.0	6.2	2.8	5.3	3.9	7.7
Satisfaction with Supervision	39.7	9.6	41.9	7.1	42.0	6.3	39.6	8.4	38.8	13.4	38.8	9.8
Coworkers	41.6	17.7	40.5	14.4	44.0	10.1	41.7	12.4	43.8	10.0	42.8	12.5
Work	37.5	9.5	34.9	11.5	40.6	6.8	36.8	12.0	38.5	13.2	36.7	9.8
Promotion	31.7	10.7	25.5	11.9	37.4	8.2	27.0	8.8	30.0	9.4	25.8	11.0
Career Security	2.5	1.6	2.1	1.5	2.6	1.6	2.3	1.5	2.1	1.5	2.1	1.5
Transfer < 1 year	2.9	1.9	2.1	1.7	3.9	2.1	2.8	2.0	3.4	2.1	2.3	1.8
Leave < 1 year	2.6	2.0	2.1	1.7	2.1	1.1	2.3	1.8	2.0	1.6	2.1	1.7
Transfer < 3 years	4.6	2.1	2.8	2.2	6.3	1.0	3.6	2.4	4.7	2.3	3.1	2.2
Leave < 3 years	2.7	2.1	2.6	2.1	2.6	1.6	2.7	2.0	2.7	2.2	2.6	2.0
Trust	17.1	3.1	16.5	3.8	17.1	3.1	16.2	4.4	16.0	4.5	16.4	4.0
Influence	11.8	1.8	9.4	3.4	12.1	2.7	10.5	3.3	11.9	2.4	10.2	3.4
Mobility	12.8	1.7	10.2	4.1	13.9	2.1	11.5	3.5	12.9	2.3	10.5	3.9
Promotion in Organization	5.7	1.5	4.1	1.9	6.1	1.1	4.9	1.8	5.2	2.0	4.5	1.9
Communication Direction-Up	47.1	29.7	70.6	47.3	68.7	32.7	79.1	5.4	63.8	47.0	73.0	48.5

Table 6 (continued)

	Black Male Managers				White Female Managers				White Male Managers			
	2nd Level		1st Level		2nd Level		1st Level		2nd Level		1st Level	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Communication												
Direction-Lateral	53.6	40.8	50.5	38.1	61.5	22.9	68.0	47.3	51.2	32.2	52.2	39.2
Direction-Down	14.3	5.5	11.6	5.6	14.0	3.9	10.6	5.8	15.0	5.4	11.4	6.3
Direction-Other	49.9	46.9	36.0	41.7	29.0	42.1	29.5	34.1	30.2	30.0	34.4	34.7
Accuracy	17.2	1.9	15.6	2.6	16.5	1.8	15.9	2.6	16.5	2.3	16.1	2.5
Summarization	17.5	1.9	16.6	2.6	17.8	2.9	17.2	3.2	18.1	2.7	16.1	3.7
Underload	10.7	2.4	11.6	3.1	12.4	2.5	11.5	3.3	10.9	3.2	11.3	2.8
Expansion	14.9	3.4	14.9	3.3	16.0	2.8	15.3	3.1	15.0	3.6	14.8	3.5
Amount Passed	14.4	3.0	14.5	3.4	14.2	2.3	14.5	3.3	14.5	3.4	14.5	3.7
Desire Interaction	17.3	3.1	16.6	2.8	17.9	3.0	16.5	3.2	16.4	3.7	15.6	4.0
Gatekeeping	16.4	2.9	16.1	4.3	17.1	2.7	16.2	4.7	16.8	5.0	16.7	4.1
Change Information	8.3	4.2	8.9	4.6	9.6	3.8	8.9	4.8	9.2	4.5	9.0	4.6
Received Accuracy	4.8	.9	4.5	1.4	4.5	1.7	4.4	1.4	4.6	1.2	4.5	1.5
Overload	3.8	1.7	3.7	1.9	3.6	2.0	3.7	1.9	3.6	1.9	3.5	2.0
Redundancy	4.9	1.5	4.6	1.6	4.8	1.8	4.9	1.8	4.8	1.5	4.8	1.7
Satisfaction	5.1	1.0	5.0	1.3	5.7	.8	5.0	1.6	4.8	1.8	5.2	1.3
Modality Written	8.1	5.7	6.9	8.9	8.7	6.1	9.9	14.7	10.1	12.4	9.9	12.2
Face to Face	72.1	15.3	64.6	29.1	67.7	15.3	62.2	30.2	68.0	23.3	67.3	25.2
Phone	17.1	10.8	15.6	17.4	22.4	14.2	17.0	17.7	17.5	15.1	13.8	13.7
Other	2.4	4.3	3.2	7.6	1.0	2.5	3.7	8.3	2.1	3.5	3.4	7.5
N	29		127		24		128		63		211	

Table 7

Significant Univariate Manager and Job Level Effects on Dependent Variable Groups*

	Satisfaction	Leadership	Communication	Behavioral Intentions	Job Problems	Authority
Unit Manager Effects	Coworkers	Consideration	Influence	Tr < 1 yr		
			Mobility	Tr < 3 yr		
			D-Lateral			
Job Level Effects	Work		Promotion in Org.	Tr < 1 yr	3.40	
	Promotion		Mobility	Tr < 1 yr		
			Influence			
			D-Upward			
			D-Downward			
			Summarization			

*significant $p < .05$

Table 8

Multivariate F Ratios for Turnover and Sales

	Part-time, Full-time Turnover	Gross Sales, Net Sales, Gross Profits
Unit Manager		
Black Males White Males	.71 $p < .65$	1.54 $p < .23$
White Females White Males	.41 $p < .86$	.57 $p < .64$

Appendix

Description of the Communication Indices Assessed

Directionality-Upward. General indicator of the amount of contact respondent has with his superior.

Directionality-Downward. General indicator of the amount of contact respondent has with his subordinates.

Directionality-Lateral. General indicator of the amount of contact respondent has with others at his job level.

Accuracy. Respondent's estimate of how accurate he perceives the information he receives to be.

Desire for Interaction. General indicator of the degree to which the respondent desires to interact with others in the organization.

Summarization. Estimate of how often information is summarized by emphasizing the important and minimizing the unimportant before being passed.

Amount of Information Passed. Estimate of how much information a respondent receives he actually passes on.

Gatekeeping. Estimate of how often the respondent deliberately withholds from others information thought to be useful.

Change. Indicator of the extent to which a respondent changes the nature of information.

Underload. Estimate of the amount of time the respondent would like more information than he has.

Expansion. Estimate of how often information is expanded and discussed in greater detail.

Modality-Written. Percentage of the time respondent uses this modality for passing information at work.

Modality-Face-to-Face. Percentage of the time respondent uses this modality for passing information at work.

Modality-Telephone. Percentage of the time respondent uses this modality for passing information at work.

Modality-Other. Percentage of the time respondent uses this modality for passing information at work.

Redundancy. Estimate of how often the respondent receives the same information more than once.

Overload. Estimate of how often the respondent receives more information than he can efficiently use.

Communication Satisfaction. Indicator of how satisfied the respondent is with communication in general at work.