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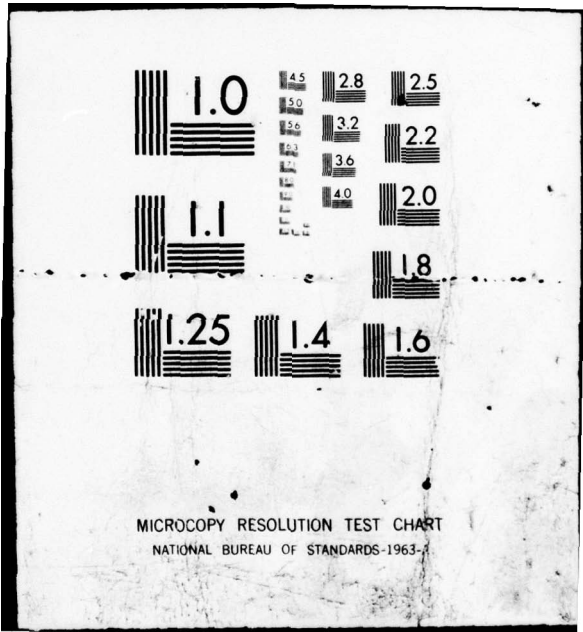
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**WORKING RELATIONSHIPS BETWEEN MEN AND WOMEN:
EFFECTS OF SEX AND HIERARCHICAL POSITION
ON PERCEPTIONS OF SELF AND OTHERS IN A WORK SETTING**

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Technical Report Number 6

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This research was sponsored by the Organizational Effectiveness
Research Program, Office of Naval Research (Code 452), under
Contract No. N00014-77-C-0565

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Technical Report No. 6	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Working Relationships Between Men and Women: Effects of Sex and Hierarchical Position on Perceptions of Self and Others in a Work Setting	5. TYPE OF REPORT & PERIOD COVERED	
	6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(S) Jerene Good, Faris R. Kirkland Grant R. Grissom	8. CONTRACT OR GRANT NUMBER(s) N00014-75-C-0618 N00014-77-C-0565	
9. PERFORMING ORGANIZATION NAME AND ADDRESS University City Science Center 3624 Science Center Philadelphia, Pennsylvania 19104	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 170-796	
11. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research Program Office of Naval Research (Code 452) Arlington, Virginia 22217	12. REPORT DATE June 1979	13. NUMBER OF PAGES 34
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) TR-6	15. SECURITY CLASS. (of this report)	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for Public Release; Distribution Unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) 9 Technical Repts		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Sex Roles Working Women Working Relationships Sexual Integration Self Description Affirmative Action Leadership		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The research reported investigated effects of sex and hierarchical position on workers' perceptions about themselves and the people with whom they worked in a sample of Bell Telephone Company of Pennsylvania employees. A modified version of the Bem Sex-Role Inventory, with additional work-related and personal interaction items, was administered to 44 first-line supervisors and 184 of their subordinates. Self-ratings, self versus		

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Same sex peer ratings, and ratings of four target persons - a male and a female supervisor and a male and a female subordinate - were compared for male and female respondents. Men and women rated themselves similarly on most self-descriptive items. Respondents described themselves as more nurturant than their same sex peers. Men ascribed higher ratings on masculine items to male targets and higher ratings on feminine items to female targets. Women ascribed higher ratings on masculine as well as feminine items to female targets.

Ratings of supervisor versus subordinate targets were also examined. Supervisor targets were rated higher than subordinate targets of the same sex on most masculine items, and subordinate targets were rated higher than supervisor targets of the same sex on most feminine-typed items. Factor analyses of attributions to male and female supervisor targets defined two common dimensions of Leadership, directiveness and Nurturance, and two individual variables, Has Leadership Abilities and Able to Get the Job Done, were consistently high and positive across groups of subordinates.

Effects of experience working with the opposite sex were explored by comparing ratings for respondents from mixed and single sex work groups. Men who worked with women rated them higher on a wide range of attributes than did men who did not work with women. Women who worked with men rated them higher on a small number of attributes than did women who did not work with men.

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INTRODUCTION

The Office of Naval Research has sponsored research by the University City Science Center into issues pertinent to the utilization of women in the Navy. The purpose of the research is to investigate, in a population similar to the enlisted force in the Navy, differences between men and women in perceptions and attitudes that could have an impact on their efficiency and satisfaction on the job. The research program has investigated:

- Sex differences in attributions of success and failure (Kipnis & Kidder, 1977)
- Multi-dimensional scaling (Tzeng & Landis, 1977)
- Psychological androgyny in a working population (Grissom et al., 1979)
- Working relationships between men and women
- Sex differences with respect to family and career values in a working population (Good & Kirkland, 1979a)
- Sex differences in attitudes toward job characteristics (Good & Kirkland, 1979b).

The research described in this report investigated sex differences and effects of hierarchical position on workers' perceptions of themselves and the people with whom they worked. The objectives of the research were:

- To identify factors influencing the degree to which men and women can work together harmoniously in a hierarchical setting.
- To identify characteristics of male and female leaders as perceived by male and female subordinates.

METHOD

The research design was to collect several sets of data from people who worked together, and from their first-line supervisors, so that a comprehensive analysis of relationships between demographic data; background information; job history; expectations for the future; and attitudes toward their jobs, co-workers, and supervisors (or subordinates in the case of supervisors) could be conducted. A self-administered survey instrument was developed and tested on populations of college students.

A modified and condensed instrument was then administered to 280 employees of the Bell Telephone Company of Pennsylvania including 55 first-line supervisors and 225 of their subordinates. The Bell Telephone Company allowed company time for respondents to complete the survey. Subjects received stamped envelopes addressed to the Science Center for returning the questionnaires anonymously. Completed questionnaires were received from 228 respondents.

Subjects

The sample included 124 women and 104 men, of whom 8 men and 27 women were black. The distribution of supervisors and non-supervisors, and the sexual composition of work groups, are shown in Table 1.

TABLE 1

DISTRIBUTION OF RESPONDENTS BY WORK GROUP TYPE

Sex of Supervisor	Male	Male	Male	Female	Female	Female	
Sex of Subordinates	Male	Mixed	Female	Male	Mixed	Female	Total
Supervisors	11	7	6	2	9	9	44
Male Subordinates	32	20	0	6	22	0	80
Female Subordinates	0	19	18	0	36	31	104
Total Respondents	43	46	24	8	67	40	228

Respondents ranged in age from 20 to 59, with a mean age of 34.5. They had worked at Bell Telephone from one to 37 years, with an average of 12.6 years. Two thirds of the sample held one or no jobs prior to joining Bell Telephone; 95% expected to be working for the same company five years hence. Nearly all (94%) grew up in Pennsylvania or the northeastern United States; 47% were raised in urban areas, 32% in suburban areas, and 21% in rural areas and small towns.

Men in the sample had slightly more education than women: 100% of the men and 94% of the women were high school graduates; 45% of the men and 31% of the women had attended or graduated from college.

Most respondents were married, including 84% of the men and 45% of the women. Forty men and 63 women had working spouses. A fifth of the women (21%) and 3% of the men were separated, divorced or widowed. The remaining 34% of the women and 14% of the men described themselves as single or engaged.

Perceived socioeconomic status of their families during the respondents' childhood differed somewhat for men and women (Chi-square =12.5, df=4, $p < .05$). The five response categories are listed below with the proportion of men and women selecting each category in parentheses.

1. Money was no concern; we had almost everything we wanted (1% of men; 7% of women).
2. We could easily afford all necessities and some luxuries (18% of men; 17% of women).
3. With careful budgeting, we could afford necessities and an occasional luxury (68% of men; 50% of women).

4. We had difficulty making ends meet for necessities (11% of men; 20% of women).
5. We often could not make ends meet, so that we were recipients of public or private assistance (2% of men; 6% of women).

Analysis

Respondents were grouped in four categories - male supervisors, female supervisors, male subordinates, and female subordinates. The data comprised five sets of ratings on a seven-point Likert-type scale. The first was a self-description set which included the 60 items of the Bem Sex-Role Inventory (BSRI) plus six job-related items (Table 2). The items in the columns labelled Masculine, Feminine, and Neutral comprise the BSRI (Bem, 1974). An abbreviated version of the self-description set with three additional personal interaction items (Asterisked Items on Table 2), was used to describe each of the four target persons.

Questionnaires given to supervisors differed from those given to subordinates. Supervisors were asked to rate a male and a female "person at your same level of supervision", that is, supervisory peers. They were also asked to rate a male and a female subordinate. Subordinates were asked to rate a male and a female supervisor, and a male and a female co-worker, i.e., non-supervisory peers. In each case respondents were instructed to consider specific, composite, or imaginary persons thought to be typical of the category. The research design permitted examination of ratings of each target (including the self) discretely, as well as comparison of ratings of pairs of targets by selected groups of respondents. From these analyses it was possible to delineate the effects of sex and status (supervisor or subordinate) on perceptions of others in a work setting.

Five sets of analyses are included in this report: Self-Description, Self Versus Peer Ratings, Status Effects, Gender Effects on Subordinate or Non-supervisory Peer Ratings, and Leadership.

In the first section, Self-Description, sex differences in self-ratings by supervisors and subordinates on BSRI masculine and feminine items, job competence and personal interaction items are examined. Comparisons of the self-rating data indicate characteristics on which men and women in the sample rated themselves similarly, and those which differentiate the self-images of men and women.

The second section, Self Versus Peer Ratings, focuses on the relationships between self-ratings and attributions to same sex peers within each of the four respondent groups. Comparison of self-ratings with the target attribution data indicates how respondents perceive themselves with respect to their peers.

In the third section, Status Effects, the effect of target status (supervisor or subordinate) on attributions is evaluated. Ratings of supervisor and subordinate targets of the same sex are compared to determine how perceptions

TABLE 2

 ATTRIBUTION SET FOR SELF AND TARGET RATINGS*

MASCULINE ATTRIBUTES

- * Masculine
- Self-Reliant
- Analytical
- * Willing to Take a Stand
- * Defends Own Beliefs
- * Has Leadership Abilities
- * Aggressive
- * Independent
- * Willing to Take Risks
- * Does Not Act as a Leader
- * Athletic
- * Makes Decisions Easily
- Individualistic
- * Assertive
- Self-Sufficient
- * Competitive
- * Strong Personality
- * Dominant
- Ambitious
- Forceful

FEMININE ATTRIBUTES

- * Feminine
- * Warm
- Yielding
- Sympathetic
- * Tender
- Cheerful
- * Sensitive to the Needs of Others
- * Gullible
- Shy
- * Understanding
- * Childlike
- Affectionate
- * Compassionate
- * Does Not Use Harsh Language
- Flatterable
- * Eager to Soothe Hurt Feelings
- * Loves Children
- Loyal
- Soft-Spoken
- * Gentle

NEUTRAL ATTRIBUTES

- Reliable
- Solemn
- Helpful
- Jealous
- *Friendly
- Moody
- Truthful
- Inefficient
- Conscientious
- Secretive
- Adaptive
- Theatrical
- Sincere
- Unsystematic
- Happy
- Conceited
- Tactful
- Unpredictable
- Likable
- Conventional

JOB COMPETENCE ATTRIBUTES

- * Expert
- * Has Ability to Get the Job Done
- * Not Easily Distracted from Work

PERSONAL INTERACTION ATTRIBUTES

- * Easy to Meet and Talk With
- * Compatible Co-Worker
- * Works Well With Others
- ** Could Be a Friend of Mine
- ** Similar to Me
- ** Thinks Like Me

* Denotes items which are on both the self-description set and the set used for attribution to targets.

** Target attribution only (i.e., not in self-description set).

about supervisors differ from perceptions about subordinates when the sex of the targets is held constant.

The fourth section, Gender Effects for Subordinate and Non-supervisory Peer Ratings, includes several analyses of attributions to the non-supervisor targets. The effect of the gender of the subordinate target is examined by comparing attributions to the male and female subordinate targets (target status held constant) by each of the four respondent groups. Additional analyses compared attributions to opposite sex co-workers by subjects who do and do not work with members of the opposite sex. Perceptions of male (or female) co-workers are compared for men and women in mixed sex work groups and for men and women in single sex work groups.

The final section is devoted to issues relating to leadership. These include perceptions of male and female supervisors, the characteristics which male and female respondents believe to be related to leadership ability, and perceptions of female supervisors by men who do and by those who do not work for a female supervisor.

RESULTS

Self-Description

Self-ratings by men and women were compared for the total sample, and also for supervisors and non-supervisors separately. For the total sample, men's self-ratings were significantly higher than women's on four items while the reverse was true on nine items, as shown in Table 3.

TABLE 3

SELF-RATING: T-TEST BY SEX

Higher Self-Rating by Men (N=104)	Higher Self-Rating by Women (N=124)
Athletic***	Warm**
Competitive***	Sympathetic***
Masculine***	Tender***
Shy*	Understanding*
	Gentle**
	Yielding**
	Gullible*
	Feminine***
	Helpful*

*p < .05; **p < .01; ***p < .001 (two-tail)

Men and women rated themselves similarly on most masculine attributes. On only one masculine personality characteristic - Competitive - did men rate themselves higher than women rated themselves. On feminine attributes, women rated themselves higher than men rated themselves on six personality characteristics. They also rated themselves higher on one neutral item - Helpful. Shy and Gullible were rated below the scale mid-point of 4 by both men and women. Men rated themselves significantly lower than did women on Gullible; the reverse was true for Shy.

Male and female supervisors had essentially identical perceptions of themselves on feminine personality attributes; the only significant difference was that men saw themselves as more Soft-Spoken than women saw themselves. Men's self-ratings were also higher than women's on three masculine items - Willing to Take Risks, Athletic, and Competitive - and on one neutral personality attribute - Solemn (Table 4).

TABLE 4

SELF-RATING: T-TEST BY SEX FOR SUPERVISORS

Higher Self-Rating by Male Supervisors (N=24)	Higher Self-Rating by Female Supervisors (N=20)
Willing to Take Risks*	Feminine***
Athletic***	
Competitive*	
Masculine***	
Soft Spoken*	
Solemn*	

*p < .05; ***p < .001 (two-tail)

Male and female subordinates had essentially identical perceptions of themselves on masculine personality attributes; the only significant difference was that men saw themselves as more Competitive than women saw themselves (Table 5). On feminine attributes women's self-ratings were higher than men's on six personality characteristics. On Gullible, both men's and women's ratings were below the scale mid-point of 4, but men's self-ratings were significantly lower than women's.

The most important finding from comparisons of self-descriptions is the absence of differences in how men and women see themselves on masculine, job competence, and interpersonal attributes. Self-ratings differed chiefly on feminine items, and most of these differences resulted from higher self-ratings by female subordinates.

TABLE 5

SELF-RATING: T-TEST BY SEX FOR SUBORDINATES

Higher Self-Rating by Male Subordinates (N=80)	Higher Self-Rating by Female Subordinates (N=104)
Athletic**	Warm**
Competitive**	Sympathetic***
Masculine***	Tender***
	Understanding*
	Gentle**
	Yielding*
	Gullible**
	Feminine***

*p < .05; **p < .01; ***p < .001 (two-tail)

Self Versus Peer Ratings

In order to determine whether respondents' self-ratings were similar to their ratings of peers of the same sex, each respondent's self-ratings were compared to ratings assigned to his or her own sex peer target.

Female supervisors (N=20) rated themselves as significantly more Understanding (p < .05) and more Sensitive to the Needs of Others (p < .01) than the female supervisor target. The target was rated as significantly more Expert and more Competitive (p < .05 for both) than the average female supervisor rated herself.

The average male supervisor rated himself higher than his same sex peer target on seven feminine-typed nurturant characteristics, as shown in Table 6.

TABLE 6

SELF VERSUS PEER RATING: MALE SUPERVISORS (N=24)

Self Higher	Peer Higher
Understanding**	None
Sensitive to the Needs of Others**	
Compassionate*	
Tender*	
Eager to Soothe Hurt Feelings**	
Love Children***	
Gentle***	

*p < .05; **p < .01; ***p < .001 (two-tail)

Female subordinates rated themselves higher than their same sex peers on 20 attributes, including eight feminine-typed traits and seven masculine-typed traits, including both leadership items (Have Leadership Abilities, Act as a Leader). They also rated themselves as more Able to Get the Job Done and Less Easily Distracted (Table 7). They rated their peer target as more Expert and more Childlike. (Ratings on the latter characteristic were below the scale midpoint for self and target.)

TABLE 7

SELF VERSUS PEER RATING: FEMALE SUBORDINATES (N=104)

<u>Self Higher</u>	<u>Peer Higher</u>
<u>Masculine Items</u>	
Willing to Take a Stand**	
Defend Own Beliefs***	
Have Leadership Abilities**	
Aggressive*	
Independent***	
Willing to Take Risks***	
Act as a Leader***	
<u>Feminine Items</u>	
Understanding***	Childlike**
Sensitive to the Needs of Others***	
Compassionate***	
Tender***	
Eager to Soothe Hurt Feelings***	
Love Children***	
Gentle**	
Feminine*	
<u>Personal Interaction Items</u>	
Compatible Co-Worker**	
Work Well ith Others**	
<u>Job Competence Items</u>	
Able to Get the Job Done***	Expert*
Not Easily Distracted*	
<u>Neutral Item</u>	
Friendly**	

*p < .05; **p < .01; ***p < .001 (two-tail)

Male subordinates rated themselves higher than their peers on 14 attributes, including seven feminine-typed, four masculine-typed, one personal interaction and two job competence items (Table 8).

TABLE 8

SELF VERSUS PEER RATING: MALE SUBORDINATES (N=80)

<u>Self Higher</u>	<u>Peer Higher</u>
<u>Masculine Items</u>	
Willing to Take a Stand*	
Have Leadership Abilities**	
Willing to Take Risks*	
Act as a Leader**	
<u>Feminine Items</u>	
Understanding***	
Sensitive to the Needs of Others***	
Compassionate***	
Tender***	
Eager to Soothe Hurt Feelings***	
Love Children***	
Gentle*	
<u>Personal Interaction Items</u>	
Work Well With Others*	
<u>Job Competence Items</u>	
Able to Get the Job Done**	Expert*
Not Easily Distracted*	

*p < .05; **p < .01; ***p < .001 (two-tail)

Mean self-ratings for all four respondent groups on Expert were lower than ratings assigned to peers. Mean self-ratings were higher than ratings of peers on Understanding and Sensitive to the Needs of Others for all four respondent groups. In addition, male supervisors' and male and female subordinates' mean self-ratings were higher than their ratings of peers on the same five additional nurturant characteristics on the BSRI femininity scale. This consensus across respondent groups suggests that nurturant feelings are widely shared but infrequently revealed in the work setting, leading employees to conclude that their co-workers are less understanding, sensitive, etc. than they are themselves. If this interpretation is accurate, it suggests that reinforcement of supportive behaviors might substantially enhance the cohesiveness and performance of work groups.

Supervisors rated themselves and their peers essentially equally on masculine-typed attributes relating to leadership, assertiveness and risk taking, and on task oriented items (e.g., Ability to Get the Job Done, and Compatibility as Co-Workers). Subordinates, on the other hand, saw themselves as more nurturant and affiliative, more leadership oriented, and more Able to Get the Job Done. It appears that while supervisors regard other supervisors as basically competent, subordinates regard themselves as more capable than their peers.

Status Effects: Supervisor Versus Subordinate Targets

Attributions may vary as a function of both the sex and job status of the target as well as with the sex and status of the respondent. In order to examine the effects of the status of the target, the sex of the target was held constant and attributions to supervisor targets were compared with attributions to subordinate targets using correlated t-tests. Four hypotheses were tested on this set of analyses:

- Has Leadership Ability, Acts as a Leader, Dominant, and similar masculine-typed attributes would be ascribed to supervisors more strongly than to subordinates, irrespective of sex.
- Yielding, Soft Spoken, Shy and similar feminine-typed attributes would be ascribed to subordinates more strongly than to supervisors, irrespective of sex.
- Job competence attributes would be ascribed more strongly to supervisors than to subordinates, irrespective of sex.
- Personal interaction attributes would be ascribed more strongly to the target having the same status as the respondent, irrespective of sex.

Two sets of correlated t-tests were analyzed to explore status effects. In the first set, the paired ratings of three respondent groups - male supervisors, male subordinates and all female respondents - were compared for the male supervisor versus the male subordinate target. Substantial agreement was expected among women (whether supervisors or subordinates) in describing male targets, therefore, all women were grouped together. Similarly, for the second set of t-tests, the paired ratings of the female supervisor versus the female subordinate target were compared for female supervisors, female subordinates and all male respondents.

Male Targets - Ratings of male targets, shown in Table 9, supported the hypothesis of higher ratings for the supervisor target on masculine items and of higher ratings for the subordinate target on feminine items. The pattern of differences in ratings was fairly consistent though more significant differences were perceived by women (19) and by male subordinates (17) than by male supervisors (5). Women, but neither group of male respondents, rated supervisors higher on the three job competence items. Male subordinates rated subordinates higher on all six interpersonal items. Male supervisors rated supervisors higher on Easy to Meet; women rated subordinates higher on Could Be a Friend of Mine.

TABLE 9

ATTRIBUTION TO MALE TARGETS: CORRELATED T-TESTS

Attributes	Respondent Group		
	Male Supervisors Gave Higher Rating To	Male Subordinates Gave Higher Rating To	Females Gave Higher Rating To
<u>Masculine Items</u>			
Willing to Take a Stand	Supervisor **		Supervisor **
Has Leadership Abilities	Supervisor **		Supervisor ***
Aggressive	Supervisor ***		Supervisor **
Independent		Subordinate *	
Willing to Take Risks		Subordinate **	Supervisor *
Acts as a Leader		Supervisor ***	Supervisor ***
Athletic			Subordinate *
Makes Decisions Easily			Supervisor **
Assertive			Supervisor **
Competitive			Supervisor **
Strong Personality			Supervisor **
Dominant	Supervisor **	Supervisor **	Supervisor ***
<u>Feminine Items</u>			
Feminine		Subordinate *	
Warm		Subordinate *	
Tender			Subordinate *
Childlike			Subordinate *
Compassionate		Subordinate **	
Does Not Use Harsh Language		Supervisor ***	
Loves Children			Supervisor **
Gentle		Subordinate **	Subordinate *
<u>Neutral Items</u>			
Friendly		Subordinate *	
<u>Job Competence Items</u>			
Expert			Supervisor ***
Able to Get Job Done			Supervisor *
Not Easily Distracted		Supervisor **	Supervisor ***
<u>Personal Interaction Items</u>			
Easy to Meet and Talk With	Supervisor *	Subordinate **	
Compatible Co-Worker		Subordinate ***	
Works Well With Me		Subordinate ***	
Could be a Friend of Mine		Subordinate ***	Subordinate *
Similar to Me		Subordinate ***	
Thinks Like Me		Subordinate ***	

* $p < .05$ ** $p < .01$ *** $p < .001$ (one-tail)

On masculine-typed attributes, all three respondent groups rated male supervisors higher on Has Leadership Abilities and Dominant. Male supervisors also described male supervisor targets as more Aggressive and Willing to Take a Stand, while male subordinates perceived in male subordinate targets greater Independence and Willingness to Take Risks. The reason for the latter result may be that a large group (31) of the male subordinates were outside craft workers who perceived their jobs as having the most danger, freedom, and mobility of the five categories of jobs held by members of the sample. (See Technical Report No. 3 Job Characteristics - in this series.)

Women perceived much sharper differences between male supervisors and subordinates than did men. Women rated male supervisors significantly higher than male subordinates on ten masculine-typed personality attributes and on all three job competence attributes. They rated subordinates higher on Athletic.

On feminine-typed attributes, male supervisors perceived no differences between supervisors and subordinates. Male subordinates saw supervisors as less likely to Use Harsh Language, and saw subordinates as more Gentle, Compassionate, Warm, and Feminine. (The latter attribute was rated very low for both supervisors and subordinates, but significantly less low for subordinates.) Women saw male subordinates as significantly more Gentle, Tender, and Childlike than male supervisors.

Female Targets - Ratings of female supervisor and subordinate targets were paired for three respondent groups, as shown in Table 10. The pattern of ratings is consistent across groups and supports the hypothesis of higher ratings for the supervisor target on masculine-typed and job competence items, and higher ratings for the subordinate target on feminine-typed items. Men and female subordinates rated female supervisors higher than subordinates on two of the job competence items. Subordinate women rated their peers higher than supervisors on all six personal interaction attributes. Female supervisors rated their peers higher only on Easy to Meet - the same attribute on which male supervisors rated their peers higher. Men rated female subordinates higher than supervisors as Compatible Co-Workers.

Summary - All four of the a priori hypotheses were confirmed.

- Supervisors were rated higher by their peers and subordinates of the same sex, and by members of the opposite sex, on masculine-typed items. However, supervisors of both sexes perceived fewer than half as many differences between their peers and their subordinates as did subordinates of the same sex and members of the opposite sex.
- Subordinates were rated higher on feminine-typed items by their peers of the same sex and and by members of the opposite sex, but not by supervisors of the same sex.
- Supervisors were rated higher on at least one job competence item by each of the six respondent groups except male supervisors.
- Supervisors rated their same sex peers higher on Easy to Meet. Subordinates rated their same sex peers higher on all six interaction attributes.

TABLE 10

ATTRIBUTION TO FEMALE TARGETS: CORRELATED T-TESTS

Attributes	Respondent Group		
	Female Supervisors Gave Higher Rating To	Female Subordinates Gave Higher Rating To	Males Gave Higher Rating To
<u>Masculine Items</u>			
Willing to Take a Stand		Supervisor **	Supervisor *
Has Leadership Abilities	Supervisor *	Supervisor ***	Supervisor ***
Aggressive		Supervisor *	Supervisor **
Independent		Supervisor **	Supervisor *
Willing to Take Risks	Supervisor *		
Acts as a Leader	Supervisor *	Supervisor ***	Supervisor ***
Athletic		Subordinate *	Subordinate **
Makes Decisions Easily		Supervisor **	Supervisor **
Assertive		Supervisor ***	Supervisor ***
Competitive	Supervisor **	Supervisor ***	Supervisor ***
Strong Personality	Supervisor *		
Dominant		Supervisor ***	Supervisor ***
<u>Feminine Items</u>			
Feminine	Supervisor *	Subordinate **	
Warm		Subordinate **	
Tender		Subordinate **	Subordinate **
Sensitive to the Needs of Others		Subordinate **	
Gullible		Subordinate ***	Subordinate ***
Understanding		Subordinate *	
Compassionate		Subordinate **	
Does Not Use Harsh Language			Supervisor **
Eager to Soothe Hurt Feelings		Subordinate ***	
Loves Children		Subordinate *	Subordinate *
Gentle		Subordinate ***	Subordinate *
<u>Neutral Items</u>			
Friendly		Subordinate *	
<u>Job Competence Items</u>			
Expert		Supervisor **	Supervisor *
Not Easily Distracted		Supervisor *	Supervisor ***
<u>Personal Interaction Items</u>			
Easy to Meet and Talk With	Supervisor *	Subordinate **	
Compatible Co-Worker		Subordinate **	Subordinate **
Works Well With Me		Subordinate **	
Could Be a Friend of Mine		Subordinate ***	
Similar to Me		Subordinate ***	
Thinks Like Me		Subordinate ***	

* $p < .05$; ** $p < .01$; *** $p < .001$ (one-tail)

The small number of significant differences perceived by supervisors is partially a function of the small number of supervisors in the sample. The differences in the ratings they assigned to supervisor and subordinate targets were usually in the same direction and of approximately the same magnitude as those assigned by subordinates, but more extreme differences are required to establish statistical significance for small samples.

The expectation that the status of the target would influence perceptions of competence and possibilities for personal interaction was validated. The findings also served as a contrasted groups validation of the attribution scale: on numerous items supervisory and subordinate targets were differentiated. There was a remarkable consensus among men and women on the characteristics on which supervisors and subordinates differ.

Gender Effects: Male Subordinate Versus Female Subordinate Targets

Ratings assigned to male subordinate targets were compared with those assigned to female subordinate targets using paired t-tests (one-tail). Four hypotheses were tested:

- Male targets would be rated higher on masculine-typed attributes by both men and women.
- Female targets would be rated higher on feminine-typed attributes by both men and women.
- Targets of the same sex as the rater would be rated higher on job competence attributes.
- Targets of the same sex as the rater would be rated higher on personal interaction attributes.

Ratings by male and female supervisors are shown in Table 11. Male supervisors rated the male subordinate target higher on seven masculine-typed items and the female subordinate target higher on eight feminine-typed items. Male supervisors also rated the male subordinate target higher on Expert, as predicted by the third hypothesis, but they rated the two targets similarly on the other job competence items (Able to Get the Job Done and Not Easily Distracted from Work). On personal interaction items, men rated both targets the same except that the female subordinate target was rated higher than the male subordinate on Easy to Meet and Talk With; this is opposite of the hypothesized relationship.

Female supervisors' ratings of the two subordinate targets disconfirmed the first two hypotheses, confirmed the third, and were equivocal on the fourth. The female subordinate target was rated more Feminine by female supervisors. Men were rated higher on the feminine-typed attribute Does Not Use Harsh Language. Ratings of male and female subordinates were similar on all other feminine-typed items. Females supervisors assigned higher ratings to female subordinates on ten masculine-typed items. Only Athletic and Masculine among the masculine-typed items were rated in the expected direction. Female supervisors rated female subordinates higher on two of three job competence attributes - Able to Get the Job Done and Expert - and on one personal interaction item.

TABLE 11

ATTRIBUTION TO SUBORDINATE TARGETS BY
MALE AND FEMALE SUPERVISORS: CORRELATED T-TESTS

Attributes	Respondent Group	
	Male Supervisors Gave Higher Rating To	Female Supervisors Gave Higher Rating To
<u>Masculine Items</u>		
Masculine	M ***	M ***
Defends Own Beliefs		F *
Has Leadership Abilities		F *
Aggressive		F ***
Independent	M **	
Willing to Take Risks		F *
Acts as a Leader		F *
Athletic	M ***	M ***
Makes Decisions Easily	M *	F *
Assertive	M **	F *
Competitive		F **
Strong Personality		F *
Dominant	M **	F *
<u>Feminine Items</u>		
Feminine	F ***	F ***
Warm	F *	
Tender	F ***	
Sensitive to the Needs of Others	F *	
Gullible	F **	
Compassionate	F *	
Does Not Use Harsh Language		M *
Eager to Soothe Hurt Feelings	F **	
Gentle	F **	
<u>Job Competence Items</u>		
Expert	M **	F *
Able to Get Job Done		F *
<u>Personal Interaction Items</u>		
Easy to Meet and Talk With	F *	
Works Well With Me		F **

* $p < .05$; ** $p < .01$; *** $p < .001$ (one-tail)

Supervisors tended to rate same sex subordinates higher than opposite sex subordinates on masculine-typed items. Male supervisors found subordinates of both sexes competent and compatible, while female supervisors' higher ratings on Expert, Able to Get the Job Done and Works Well With Me for the female target suggest a preference on their part for female subordinates.

Analysis of subordinate target ratings by subordinate respondents are shown in Table 12. Ratings by male subordinates provided support for all four hypotheses. Male subordinates rated the male subordinate target higher than the female subordinate target on 13 of 14 masculine-typed items (all except Acts as a Leader); they also assigned the female target higher ratings on eight feminine-typed items, and assigned the male target higher ratings on two of three job competence items and five personal interaction items. The latter suggest a preference for male co-workers among male subordinates.

Female subordinates' ratings supported only the portion of the second hypothesis pertaining to feminine-typed items. Females rated the female subordinate target higher on one masculine typed-item (Strong Personality) and the male target higher on only two masculine typed items, neither substantive (Masculine and Athletic). They rated the female target higher on seven feminine-typed items and two personal interaction items. Male and female targets were rated similarly by female subordinates on the three job competence items and on most of the personal interaction items. These findings suggest that female subordinates do not share the preference shown by male subordinates for co-workers of their own sex.

Effects of Experience Working with the Opposite Sex - Additional analyses of subordinate target ratings were conducted to determine whether ratings assigned by respondents who worked with (or supervised) subordinates of both sexes differed from those assigned by respondents from single sex work groups. Ratings of the female subordinate target were compared for two groups of male supervisors: 13 who supervised women (either all women or both men and women) and 11 who supervised only men. Ten items, shown in Table 13, had significant differences in mean ratings for the two groups. Men who supervised women rated the female subordinate target higher than did men who did not supervise women on four masculine-typed items, on all three job competence items, and on three personal interaction items. Both groups of male supervisors rated female subordinates similarly on the entire set of feminine-typed items. While causality cannot be imputed on the basis of these data, they do suggest that direct contact with female subordinates may enhance male supervisors' opinions of the leadership, competence and personal interaction skills of women.

Ratings of the male subordinate target were compared for two groups of female supervisors: 11 who supervised men (all men or both men and women) versus nine who supervised only women. Women who supervised men assigned higher ratings than did women who did not supervise men on three items, Defends Own Beliefs, Works Well With Me ($p < .05$ for both), and Able to Get the Job Done ($p < .01$).

TABLE 12

ATTRIBUTION TO SUBORDINATE TARGETS BY
MALE AND FEMALE SUBORDINATES: CORRELATED T-TESTS

Attributes	Respondent Group	
	Male Subordinates Gave Higher Rating To	Female Subordinates Gave Higher Rating To
<u>Masculine Items</u>		
Masculine	M ***	M ***
Willing to Take a Stand	M **	
Defends Own Beliefs	M *	
Has Leadership Abilities	M **	
Aggressive	M ***	
Independent	M **	
Willing to Take Risks	M **	
Athletic	M ***	M ***
Makes Decisions Easily	M ***	
Assertive	M ***	
Competitive	M ***	M *
Strong Personality	M *	F *
Dominant	M **	
<u>Feminine Items</u>		
Feminine	F ***	F ***
Tender	F ***	F **
Sensitive to the Needs of Others	F *	F ***
Gullible	F ***	F ***
Compassionate	F *	
Does Not Use Harsh Language	F *	
Eager to Soothe Hurt Feelings	F *	F **
Loves Children		F *
Gentle	F ***	F *
<u>Job Competence Items</u>		
Expert	M ***	
Able to Get Job Done	M **	
<u>Personal Interaction Items</u>		
Compatible Co-Worker	M ***	
Works Well With Me	M ***	
Could Be a Friend of Mine	M ***	
Similar to Me	M ***	F *
Thinks Like Me	M ***	F ***

* $p < .05$; ** $p < .01$; *** $p < .01$ (one-tail)

TABLE 13

**FEMALE SUBORDINATE RATINGS BY MALE SUPERVISORS:
ITEMS RATED HIGHER BY 13 MEN WHO SUPERVISED
WOMEN THAN BY 11 MEN WHO SUPERVISED MEN ONLY**

Has Leadership Abilities*
Assertive*
Willing to Take Risks*
Athletic**
Expert*
Able to Get the Job Done*
Not Easily Distracted from Work*
Thinks Like Me*
Easy to Meet and Talk With*
Compatible Co-Worker*

* $p < .05$; ** $p < .01$ (two-tail)

Subordinates' ratings of their co-workers were compared in a similar fashion. Two groups of women, 55 who worked in mixed sex work groups and 49 who worked in all female work groups, assigned statistically similar ratings to the male co-worker (subordinate) target on the entire set of items. Men in mixed sex work groups (N=42) rated the female co-worker target significantly higher on two masculine-typed items - Defends Own Beliefs ($p < .001$) and Strong Personality ($p < .05$) - than did men in all male work groups (N=38). Their ratings were similar on all other items.

Men in mixed sex work groups assigned to the male co-worker target significantly higher ratings than did women in mixed sex work groups on five of six personal interaction items. Women in mixed sex work groups rated the female co-worker target as more Similar to Me ($p < .05$) than did men in mixed sex work groups. Men and women who worked together agreed in their ratings of co-worker targets on all masculine-typed, feminine-typed and job competence items. In the absence of any selection factor accounting for these data, this finding suggests that daily interaction and interdependence foster convergence of men's and women's perceptions concerning the characteristics of both same and opposite sex co-workers. It should be noted that this does not imply that members of mixed sex work groups perceive no differences between their male and female co-workers, but rather that they agree as to the differences they perceive.

Men in single sex work groups rated the male co-worker target higher than did women in single sex work groups on one item, Similar to Me ($p < .05$). Women in single sex work groups rated the male co-worker target as more Tender ($p < .05$) than did men in single sex work groups. On all other items men and women in single sex work groups shared a common image of male subordinates.

Women in single sex work groups rated the female co-worker target higher than did men in single sex work groups on four masculine-typed items: Independent ($p < .01$), Strong Personality, Defends Own Beliefs, and Willing to Take Risks ($p < .05$ for each). They also described the female co-worker target as more Understanding, Warm, and Sensitive to the Needs of Others ($p < .05$ for each) among

the feminine-typed items. Finally, women in single sex work groups rated the female co-worker target higher than did men in single sex work groups on five personal interaction items - Easy to Meet and Talk With, Thinks Like Me ($p < .05$ for each), Works Well With Me, Could Be a Friend of Mine and Compatible Co-Worker ($p < .01$ for each). Women in single sex work groups have a more positive image of female co-workers than men in single sex work groups have of them.

The pattern of differences in ratings by subordinates of their co-worker targets has several aspects. First, men generally agree in their ratings of female co-workers and women generally agree in their ratings of male co-workers, regardless of the sexual composition of the respondent's work group. Second, men and women in mixed sex work groups generally agree in their ratings of both male and female co-workers except in the area of personal interaction. Third, men and women in single sex work groups generally agree in their ratings of male co-workers but generally disagree in their ratings of female co-workers with women rating female co-workers higher on masculine-typed, feminine-typed and personal interaction items. Finally, the job competence of co-workers, as reflected in ratings on Ability to Get the Job Done, Expert and Not Easily Distracted from Work, is perceived similarly by men and women in mixed sex and single sex work groups.

Findings from the analyses of the sexual composition of work groups can be summarized as follows:

- Supervisors of mixed sex work groups reported more favorable perceptions of opposite sex subordinates than supervisors of single sex work groups. The difference is most pronounced regarding male supervisors' perceptions of female subordinates.
- Subordinates' perceptions of opposite sex co-workers were similar for respondents in mixed and single sex groups.
- There were fewer differences between the ratings assigned to co-workers by men and by women in mixed sex work groups than there were between the ratings assigned to co-workers by men and by women in single sex work groups.

Leadership

Three sets of analyses were conducted to explore perceptions of leaders and of leadership. First, ratings of supervisor targets by all supervisors and by all subordinates were compared. Second, factor analyses were performed on selected items to determine whether leadership and job competence are perceived similarly in male and female supervisors by male and female respondents. Finally, ratings of the female supervisor target by subordinates who had male supervisors were compared with ratings by those who had female supervisors.

Comparison of Ratings of Supervisors - Two general hypotheses were examined. The first was that respondents would rate male supervisors higher than female supervisors on the masculine-typed items and female supervisors higher on the feminine-typed items. The second was that respondents would rate targets of their own sex higher than opposite sex targets on the six personal interaction items and the three job competence items.

The initial set of analyses explored the relationship between attributions to male and female supervisor targets. Supervisors' and subordinates' responses were analyzed separately in order to explore perceptions of leaders held by supervisors and by those supervised. Comparisons of ratings by male and female supervisor respondents are presented in Table 14; those by male and female subordinates are in Table 15.

TABLE 14

ATTRIBUTION TO SUPERVISOR TARGETS BY
MALE AND FEMALE SUPERVISORS: CORRELATED T-TESTS

Attributes	Respondent Group	
	Male Supervisors Gave Higher Rating To	Female Supervisors Gave Higher Rating To
<u>Masculine Items</u>		
Masculine	M ***	M ***
Defends Own Beliefs	M **	
Has Leadership Abilities	M **	
Aggressive	M ***	
Independent	M ***	
Willing to Take Risks	M **	
Athletic	M ***	M ***
Makes Decisions Easily	M **	
Strong Personality	M ***	
Dominant	M **	
<u>Feminine Items</u>		
Feminine	F ***	F ***
Tender	F *	F **
Gullible	F **	
Eager to Soothe Hurt Feelings	F *	F *
Loves Children		F *
Gentle	F **	
<u>Job Competence Items</u>		
Expert	M *	
Able to Get Job Done	M **	
<u>Personal Interaction Items</u>		
Easy to Meet and Talk With	M *	
Compatible Co-Worker	M *	
Works Well With Me	M *	
Similar to Me	M *	
Thinks Like Me	M *	

* $p < .05$; ** $p < .01$; *** $p < .001$ (one-tail)

All differences shown in Table 14 are consistent with the hypotheses. Female supervisors rated the two supervisor targets differently on six items, the male supervisor target higher on two masculine-typed items and the female target higher on four feminine-typed items. Female supervisor ratings were similar on the job competence and personal interaction items for both targets. Male supervisors rated the two supervisor targets differently on fourteen sex-typed items, two job competence items, and five personal interaction items.

TABLE 15

ATTRIBUTION TO SUPERVISOR TARGETS BY
MALE AND FEMALE SUBORDINATES: CORRELATED T-TESTS

Attributes	Respondent Group	
	Male Subordinates Gave Higher Rating To	Female Subordinates Gave Higher Rating To
<u>Masculine Items</u>		
Masculine	M ***	M ***
Independent		F **
Acts as a Leader		F **
Athletic	M ***	M ***
Assertive		F *
Strong Personality		F *
<u>Feminine Items</u>		
Feminine	F ***	F ***
Warm	F **	
Tender	F ***	
Sensitive to the Needs of Others	F *	
Compassionate	F **	
Does Not Use Harsh Language	F **	
Eager to Soothe Hurt Feelings	F *	
Loves Children		M **
Gentle	F ***	
<u>Job Competence Items</u>		
Expert	M *	
<u>Personal Interaction Items</u>		
Similar to Me	M *	

* $p < .05$; ** $p < .01$; *** $p < .001$ (one-tail)

Subordinates' ratings of the two supervisor targets are shown in Table 15. Male subordinates' ratings provide weak confirmation of the hypotheses. Male subordinates assigned higher scores to the female supervisor target on eight feminine-typed items and higher scores to the male supervisor target on two masculine-typed items, one job competence and one personal interaction item.

Female subordinates' ratings were at variance with all four hypotheses. They rated the two targets similarly on the job competence and personal interaction items. They rated the male supervisor target higher on Loves Children, a feminine-typed item, and the female supervisor target higher on four masculine-typed items: Independent, Acts as a Leader, Assertive and Strong Personality. The salient differences between male and female supervisors as perceived by female subordinates are largely in masculine-typed traits whereas the salient differences seen by male subordinates are in feminine-typed nurturant traits.

Dimensions of Leadership - In the second set of analyses, factor analysis was employed to examine dimensions of leadership. Attributions to each supervisor target were factored separately for male and for female respondents (4 analyses) to determine whether leadership is perceived similarly by both sexes. Principal components factoring without iteration was used to derive factors which were rotated using varimax (orthogonal) rotation. In the preceding section differences in perceptions of male and female leaders were examined; the present section focuses upon perceptions of leadership held by men and women.

Two clusters of traits which appeared in all four factor analyses suggest first, that leadership has two prominent aspects, and second, that gender is not strongly associated with leadership. The first cluster of attributes included all of the personal interaction items and seven feminine-typed items. This cluster represents a Nurturant factor. The second group which included eight masculine-typed items represents a Directive factor. The variables included in these factors (Factor loading $\geq .50$) are listed below. (Loadings vary over the four analyses; see Appendix A.)

Nurturant Factor

Compassionate
Eager to Soothe Hurt Feelings
Gentle
Sensitive to the Needs of Others
Tender
Understanding
Warm
Friendly
Easy to Meet and Talk With
Could Be a Friend of Mine
Works Well With Me
Compatible Co-Worker
Similar to Me
Thinks Like Me

Directive Factor

Aggressive
Assertive
Competitive
Defends Own Beliefs
Dominant
Independent
Makes Decisions Easily
Strong Personality

Neither of the two gender attributes - Masculine and Feminine - loaded saliently on either the Nurturant or the Directive factor. These attributes constituted a distinct factor with opposite signs on Feminine and Masculine in three of four analyses. In the fourth - analysis of men's attributions to male supervisors - Masculine and Feminine loaded on separate factors. This finding is consistent with that of Berzins et al. (1978), that maleness and femaleness rather than the psychological concepts of masculinity and femininity are tapped by these items.

Two attributes of particular interest for this research, Able to Get the Job Done and Has Leadership Abilities, had approximately equal (and salient) loadings on both the Nurturant and Directive factors for male and female respondents, suggesting that effective leadership is perceived to depend equally upon Nurturant and Directive dimensions.

The two factors were examined in detail. Factor scores were generated for each respondent for Nurturance attributed to a male and to a female supervisor, and for Directiveness attributed to each target. Pearson product-moment correlations were then computed between each factor score and each of the two key variables - Has Leadership Abilities and Able to Get the Job Done. The correlations between the two factor scores and the two key variables were consistently very high for both male subordinates' and female subordinates' attributions to supervisors ($p < .0001$ for all; $.45 \leq r \leq .75$) as shown in Tables 16 and 17. Correlations were computed for subordinates only, to focus on leadership perceptions among those supervised. No coefficient is reported for the correlation between the two factor scores (i.e., Directiveness and Nurturance) since the factor analysis yielded orthogonal (uncorrelated) factors by design.

As shown in Table 16, in the perception of both male and female subordinates, Directiveness and Nurturance each account for roughly half the variation in the leadership ability of male supervisors. All four pertinent coefficients are in the range $.71 \leq r \leq .73$, indicating that men and women agree closely about the strength of the relationship.

TABLE 16

MALE SUPERVISOR DESCRIPTION CORRELATIONS: FACTOR SCORES WITH
LEADERSHIP ABILITY AND ABILITY TO GET THE JOB DONE

All Subordinates***				
	<u>Directiveness</u>	<u>Nurturance</u>	<u>Leadership</u>	<u>Get Job Done</u>
Directiveness	----	----	.73	.60
Nurturance	----	----	.71	.49
Leadership	.73	.72	----	.61
Get Job Done	.62	.72	.74	----

*** $p < .0001$ for all coefficients; Females (N = 104) above diagonal;
Males (N = 80) below diagonal.

Fisher's transformation was used to test for the significance of the differences between corresponding correlation coefficients for men and women shown in Table 16. Coefficients for men's ratings were not significantly different from those derived from women's ratings except for the pair involving Nurturance and Able to Get the Job Done. Female subordinates felt that male supervisors' Nurturance was less strongly related to their ability to get the job done than did male subordinates ($r = .49$ vs. $r = .72$; Fisher's transformation yields a normal deviate of 2.46, $p < .05$). There were no significant differences between coefficients based upon men's and women's ratings for the other pairs of variables shown in Table 16. Thus, with the single exception noted above, male and female subordinates shared similar perceptions of the interrelationships between male supervisors' Directiveness, Nurturance, Leadership Ability, and Ability to Get the Job Done.

Findings reflecting attributions to female supervisors, presented in Table 17, are similar to those for male supervisors in that there were no significant differences between the coefficients based upon male subordinates' ratings and those by female subordinates. As noted above, the Directiveness and Nurturance of female supervisors were perceived to be equally strongly related to their leadership skills.

TABLE 17

FEMALE SUPERVISOR DESCRIPTION CORRELATIONS: FACTOR SCORES WITH
LEADERSHIP ABILITY AND ABILITY TO GET THE JOB DONE

All Subordinates***				
	<u>Directiveness</u>	<u>Nurturance</u>	<u>Leadership</u>	<u>Get Job Done</u>
Directiveness	----	----	.64	.52
Nurturance	----	----	.73	.60
Leadership	.60	.58	----	.74
Get Job Done	.55	.54	.71	----

*** $p < .0001$ for all coefficients; Females (N = 104) above diagonal; Males (N = 80) below diagonal.

Subordinates were further broken down according to whether they worked with male or female supervisors. Correlations were computed between Directiveness, Nurturance and the two leadership items for the four groups defined by the sex of their supervisors as shown in Tables 18 to 21. For the two largest groups of subordinates, men with male supervisors (N = 52) and women with female supervisors (N = 67), the correlations were again very high for the entire set ($p < .0001$ for all, $.50 \leq r \leq .87$). Correlations for men with female supervisors (N = 28) and women with male supervisors (N = 37) followed the same pattern, but with some reduction in the significance level and value of r .

Tables 18 to 21 reflect virtual unanimity between men and women in the various respondent groups. Only two pairs of coefficients were significantly different, both in Table 18. Men who work for male supervisors report a stronger relationship between male supervisors' Nurturance and Ability to Get the Job Done ($r = .73$), and between Leadership Ability and Ability to Get the Job Done ($r = .87$) than women who work for male supervisors ($r = .30$ and $r = .49$ respectively, $p < .01$ in both cases). With these two exceptions, the paired male and female respondent groups agree as to the interrelationships of the four measures.

TABLE 18

MALE SUPERVISOR DESCRIPTION CORRELATIONS: FACTOR SCORES WITH
LEADERSHIP ABILITY AND ABILITY TO GET THE JOB DONE

Subordinates with Male Supervisors ^a				
	<u>Directiveness</u>	<u>Nurturance</u>	<u>Leadership</u>	<u>Get Job Done</u>
Directiveness	----	----	.69 ***	.44 *
Nurturance	----	----	.60 **	.30
Leadership	.68 ***	.73 ***	----	.49 *
Get Job Done	.60 ***	.73 ***	.87 ***	----

^a Females (N = 37) above diagonal; Males (N = 52) below diagonal
* $p < .01$; ** $p < .001$; *** $p < .0001$

TABLE 19

FEMALE SUPERVISOR DESCRIPTION CORRELATIONS: FACTOR SCORES WITH
LEADERSHIP ABILITY AND ABILITY TO GET THE JOB DONE

Subordinates with Male Supervisors ^a				
	<u>Directiveness</u>	<u>Nurturance</u>	<u>Leadership</u>	<u>Get Job Done</u>
Directiveness	----	----	.66 ***	.56 **
Nurturance	----	----	.76 ***	.56 **
Leadership	.53 ***	.55 ***	----	.70 ***
Get Job Done	.59 ***	.60 ***	.75 ***	----

^a Females (N = 37) above diagonal; Males (N = 52) below diagonal
** $p < .001$; *** $p < .0001$

TABLE 20

MALE SUPERVISOR DESCRIPTION CORRELATIONS: FACTOR SCORES WITH
LEADERSHIP ABILITY AND ABILITY TO GET THE JOB DONE

Subordinates with Female Supervisors ^a				
	<u>Directiveness</u>	<u>Nurturance</u>	<u>Leadership</u>	<u>Get Job Done</u>
Directiveness	----	----	.76 ***	.71 ***
Nurturance	----	----	.76 ***	.60 ***
Leadership	.83 ***	.71 ***	----	.68 ***
Get Job Done	.55 *	.70 ***	.54 *	----

a Females (N = 67) above diagonal; Males (N = 28) below diagonal

* $p < .01$; *** $p < .0001$

TABLE 21

FEMALE SUPERVISOR DESCRIPTION CORRELATIONS: FACTORS SCORES WITH
LEADERSHIP ABILITY AND ABILITY TO GET THE JOB DONE

Subordinates with Female Supervisors ^a				
	<u>Directiveness</u>	<u>Nurturance</u>	<u>Leadership</u>	<u>Get Job Done</u>
Directiveness	----	----	.63 ***	.50 ***
Nurturance	----	----	.73 ***	.65 ***
Leadership	.72 ***	.57 **	----	.76 ***
Get Job Done	.45 *	.36	.57 **	----

a Females (N = 67) above diagonal; Males (N = 28) below diagonal

* $p < .05$; ** $p < .001$; *** $p < .0001$

The general pattern of correlations reveals that the Directiveness factor score and the Nurturance factor score are equally strongly associated with leadership ability. This suggests that in the perceptions of subordinates of both sexes, effective leadership involves both Nuturant and Directive dimensions, and that both dimensions are important qualities of both male and female supervisors. These findings support an androgynous role model for leaders, embodying both feminine-typed and masculine-typed traits.

Female Supervisors - A third set of analyses explored perceptions of female leadership by examining attributions to female supervisors. The initial question was whether men and women who worked for female supervisors had similar views of their supervisors. The second issue was whether experience in working directly with female leaders affected the views of men toward female supervisors.

We expected that few differences in ratings would appear when the ratings of the female supervisor target were compared for 28 men and 67 women in work groups with female supervisors. A two-tail test of significance was used to test the hypothesis of equal mean ratings by men and women. The results supported the hypothesis. Only two items were rated significantly differently; men with female supervisors rated the female supervisor target as more Understanding and more Sensitive to the Needs of Others than did women ($p < .05$ for each). On the sets of masculine-typed, job competence and personal interaction items, the two groups rated female supervisors similarly.

We expected to find more differences when, in the second analysis, the ratings of female supervisors by 28 men who work for female supervisors were compared with ratings by 52 men who have male supervisors. One-tail tests of significance were used to test the hypothesis that men who are supervised by women would rate the female supervisor target more favorably than would men who are supervised by men. The hypothesis was supported by the results shown in Table 22. Men who were supervised by women described female supervisors more positively in each of the four categories of attributes. They described female supervisors as more Dominant and as having more Leadership Abilities (masculine-typed); more Understanding (feminine-typed), more Able to Get the Job Done (job competence) and more Compatible as Co-Workers (personal interaction). It is possible that negative attitudes held by men concerning women as leaders may be replaced by favorable attitudes as a result of their working together with women in an interdependent unit.

TABLE 22

FEMALE SUPERVISOR RATING: ITEMS RATED SIGNIFICANTLY HIGHER
BY MEN WITH FEMALE (VERSUS MALE) SUPERVISORS

<u>Masculine Items</u>	<u>Feminine Items</u>
Independent *	Gentle **
Dominant *	Understanding **
Has Leadership Abilities **	Compassionate **
Defends Own Beliefs ***	Warm *
Competitive *	Eager to Soothe Hurt Feelings *
Aggressive *	Sensitive to the Needs of Others *
Makes Decisions Easily **	
Willing to Take a Stand **	
	<u>Personal Interaction Items</u>
	Thinks Like Me *
	Friendly *
	Works Well with Me ***
	Could Be a Friend of Mine **
	Easy to Meet and Talk With *
	Compatible Co-Worker ***
<u>Job Competence Items</u>	
Expert *	
Able to Get the Job Done **	
Not Easily Distracted from Work **	

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tail)

Summary of Results

Self-Description - Male and female respondents rated themselves similarly on most self-descriptive items. Higher self-ratings by male supervisors on Competitive and Takes Risks, and by female subordinates on nurturant attributes, accounted for most significant differences. All job-related items and nearly all neutral and masculine-typed items were assigned similar self-ratings by men and women.

Self Versus Peer Rating - Members of all four respondent groups described themselves as more nurturant than their same sex peers. Male and female subordinates also assigned higher ratings to themselves than to same sex peers on instrumental/directive (masculine) characteristics, job competence, and personal interaction attributes.

Status Effects: Supervisor Versus Subordinate Targets - Supervisor targets were rated higher than subordinate targets of the same sex on nearly all masculine-typed items. Subordinate targets were rated higher than supervisor targets on nearly all feminine-typed items. Supervisor targets received higher ratings on job competence items than subordinate targets. Peer targets were rated higher on personal interaction attributes than non-peer targets.

Gender Effects: Subordinate Target Ratings - Fewer significant differences appeared among male and female supervisors' paired ratings of the two subordinate targets than among male and female subordinates' paired ratings. Male supervisors' ratings were sex-typed with higher ratings on masculine items for the male target and higher ratings on feminine items for the female target. There was no apparent preference for subordinates of either sex. Female supervisors rated the two subordinate targets similarly on feminine items and the female subordinate target generally higher on instrumental/directive (masculine) items. Female supervisors showed some preference for same sex subordinates.

Male subordinates rated the two targets differently on 28 of 36 items; the male target was rated higher on masculine items and the female target higher on feminine items. Male subordinates showed a strong preference for same sex co-workers. Female subordinates rated the two targets similarly on most masculine items and the female target higher on feminine items. They showed a slight preference for same sex co-workers.

Effects of Experience Working With the Opposite Sex - Women who supervised men rated the male subordinate target higher, on three items, than did women who supervised only female subordinates, suggesting that experience with opposite sex subordinates has a slight, positive effect on the attitudes of female supervisors toward male subordinates.

Men who supervised women rated the female subordinate target higher than did men who supervised only men on several masculine items, all three job competence items and three personal interaction items. Experience with opposite sex subordinates has a definite positive effect on the attitudes of male supervisors toward female subordinates.

Men in both mixed and single sex work groups rated the female subordinate target similarly on all but two items. Women in mixed and single sex work groups rated the male subordinate target similarly on all items. Men and women who

worked together in mixed sex work groups assigned significantly different ratings to the two co-worker targets only on personal interaction items. Men and women who did not work together assigned significantly different ratings to the male co-worker target on two items, and to the female co-worker target on 12 items. Women from single sex work groups rated the female co-worker target substantially higher on all categories of attributes than did men who did not work with women.

Leadership - Male supervisors perceived the largest number of significant differences between male and female supervisors. They assigned higher ratings on masculine, job competence and personal interaction items to the male supervisor target, and higher ratings on feminine items to the female supervisor target. Female supervisors rated the two targets similarly on nearly all items.

Male subordinates rated the two supervisor targets similarly on instrumental/directive (masculine) items, and the female supervisor target higher on nurturant/affiliative (feminine) items. Female subordinates rated the two targets similarly on nurturant (feminine) items and the female supervisor target higher on instrumental/directive (masculine) items. There was no apparent preference for sex of supervisor among subordinates.

Factor analyses of attributions to male and to female supervisor targets defined two common dimensions of leadership - Directiveness and Nurturance - for both male and female supervisors as perceived by both male and female respondents. Correlations between factor scores for Directiveness and Nurturance and two individual variables, Has Leadership Abilities and Has Ability to Get Job Done, were consistently high and positive across groups of subordinates.

Men and women with female supervisors rated the female supervisor target similarly on all but two items. Men with female supervisors rated the female supervisor target higher than did men with male supervisors on 23 items, including all three job competence and five of six personal interaction items.

DISCUSSION

The data generated by this research provide information in four fields relevant to the utilization of women in the Navy:

- Perceptions of men and women by men and women.
- Attitudes toward members of the opposite sex within the work group.
- Relationships between sex-typed characteristics, status, and leadership.
- Sex differences in stress among supervisors.

Perceptions of Men and Women by Men and Women

Men ascribed higher ratings on masculine items to men and higher ratings on feminine items to women. Women ascribed higher ratings on feminine items to women in 13 cases and to men in 2 cases. Women ascribed higher ratings on masculine personality attributes to women in 15 of 24 instances. Men differentiated between men and women on the basis of sex-typed characteristics more

frequently and consistently (60 sex-typed differences) than did women (22 sex-typed and 17 cross-typed differences).

Of the masculine items, Masculine and Athletic discriminated between male and female targets in all analyses; no other items discriminated in more than half the analyses. Of the feminine items, Feminine, Tender, Eager to Soothe Hurt Feelings, Gentle, Sensitive to the Needs of Others, and Gullible distinguished between male and female targets in at least half of the analyses. Only one item, Feminine, distinguished between male and female targets in all analyses.

Feminine items were perceived as more descriptive of female than of male targets, but masculine items were descriptive of both male and female targets. The behavioral and personality traits valued in the work setting were more often masculine-typed. Feminine-typed traits were not perceived in men in the work setting. However, there was evidence of an implied desire for more nurturant, affiliative characteristics in the pervasive perception by all four respondent groups that their peers were deficient in nurturant and supportive characteristics.

The implications for policy of these patterns are that:

- Men who have not worked with women are likely to perceive women initially in stereotypically sex-typed ways.
- Women perceive both men and women as having masculine and feminine characteristics, and differentiate between the sexes less sharply than men do. They accept men as co-workers, supervisors and subordinates from the start.

Attitudes Toward Members of the Opposite Sex Within the Work Group

In work groups, the only strong patterns of preference by sex were by men for co-workers of the same sex. Both male supervisors and male subordinates rated peers of the same sex higher than female peers on two of three job competence items and five of six personal interaction items.

While male supervisors as a group showed no preference for either male or female subordinates, when the group was divided into those who supervised women and those who did not, those who supervised women rated them significantly higher on all three job competence attributes on three personal interaction attributes. Male subordinates' ratings of supervisors showed a preference for men on only one job competence and one personal interaction item. But when the group was divided and ratings of female supervisors by men who had female supervisors were compared with those by men who were supervised by men, there were significant differences on all of the job competence and all of the personal interaction attributes except Similar to Me. Men who worked for women rated female supervisors higher than did men who did not work for women.

These findings indicate that men who have not worked with women as co-workers, subordinates, or supervisors will probably prefer men in these positions. Men who have worked with women will have much more favorable opinions of them in any of the three work relationships.

Women did not show any strong patterns of preference by sex for either co-workers, subordinates, or supervisors. Women who worked with men had somewhat more favorable attitudes toward them than did women who did not work with men.

The implications for policy are that:

- Resistance on the part of men is to be expected when women are introduced into a previously all male group.
- Experience working with women can enable men to perceive women as co-workers/subordinates/supervisors independent of their identity as women.
- Management should minimize pressure on work units during sexual integration so that anxieties can be dissipated and rigidification of resistance can be avoided.
- Integration of members of the opposite sex into single sex work groups can be facilitated by providing opportunities for professional collaboration between men and women during training and other temporary associations.

Relationships Between Sex-Typed Characteristics, Status, and Leadership

Supervisors were generally rated higher on masculine characteristics (except Athletic); subordinates were generally rated higher on feminine characteristics (except Does Not Use Harsh Language). Six masculine items (Has Leadership Ability, Acts as a Leader, Dominant, Aggressive, Competitive, Willing to Take a Stand) distinguished supervisor from subordinate targets in more than half the analyses. One feminine item - Gentle - distinguished subordinate from supervisor targets in more than half the analyses.

Masculine attributes are somewhat more descriptive of supervisors than of subordinates. Feminine attributes are almost equally descriptive of supervisors and subordinates.

Factor analysis demonstrated that both masculine (directive) and feminine (nurturant) factors are strongly correlated with Leadership Ability and Ability to Get the Job Done.

The policy implications for findings with respect to leadership are:

- While supervision requires masculine traits, feminine characteristics - nurturance and supportiveness - are also perceived as descriptive of leaders by both leaders and followers. The quality of leadership will be enhanced if the leader is endowed with both sets of characteristics, and will be deficient if the leader is impoverished in either masculine or feminine qualities.
- Subordinates are perceived as possessing masculine characteristics to a lesser degree. Their dissatisfaction with this condition is demonstrated in their rating themselves higher than their peers on masculine items. The appropriate policy objective is to create an atmosphere in which feminine characteristics are valued so that subordinates' self-esteem and efficiency are not eroded by unfavorable comparisons with leaders.

Sex Differences in Stress Among Supervisors

There were three patterns discernible in the data on supervisors. Mean self-ratings of male and female supervisors suggest that they had almost identical views of themselves. On the other hand, male and female supervisors rated themselves higher than subordinates rated themselves on all of the twelve masculine-typed personality attributes (Men - highest on 7, second on 2; women - highest on 5, second on 5). Male supervisors perceived themselves as being in more risky, competitive situations than did female supervisors; they saw themselves as much more nurturant compared to their peers; and they defined themselves, compared to subordinates, using confrontational attributes while women distinguished themselves from subordinates in terms of leadership and strength of personality. Together, these subtle differences suggest that men experience more uncertainty and expect more conflict in supervisory roles than women do.

The implications for policy are:

- Female supervisors are less likely to be anxious than male supervisors.
- Anxious leaders are more likely to be rigid, unwilling to innovate, and insensitive to subordinates' needs. Efficiency would probably be enhanced if efforts were made to alleviate anxiety among supervisors - especially among male supervisors.

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APPENDIX A
FACTOR LOADINGS

Nurturance Factor	Attribution To Male Supervisor		Attribution To Female Supervisor	
	By Men	By Women	By Men	By Women
Tender	.72	.87	.82	.88
Gentle	.76	.81	.77	.79
Understanding	.81	.79	.82	.84
Compassionate	.85	.77	.88	.88
Sensitive to Others	.86	.78	.89	.82
Warm	.83	.85	.86	.88
Eager to Soothe Hurt Feelings	.84	.81	.78	.79
Friendly	.79	.77	.85	.87
Thinks Like Me	.68	.74	.66	.68
Similar to Me	.74	.80	.70	.68
Could Be a Friend	.68	.79	.82	.78
Easy to Meet	.77	.82	.83	.84
Comparable Co-Worker	.73	.79	.84	.85
Works Well With Me	.75	.73	.87	.80
<u>Directiveness Factor</u>				
Assertive	.71	.67	.73	.65
Independent	.68	.74	.66	.66
Strong Personality	.71	.67	.70	.69
Dominant	.74	.65	.81	.74
Defends Own Beliefs	.69	.77	.67	.66
Aggressive	.76	.56	.79	.81
Competitive	.61	.74	.72	.66
Makes Decisions Easily	.63	.68	.62	.57

	Attribution To Male Supervisor			
	Loading On Nurturance Factor		Loading On Directiveness Factor	
	By Men	By Women	By Men	By Women
Has Leadership Abilities	.59	.56	.63	.68
Able to Get the Job Done	.58	.46	.56	.70

	Attribution To Female Supervisor			
	Loading On Nurturance Factor		Loading On Directiveness Factor	
	By Men	By Women	By Men	By Women
Has Leadership Abilities	.60	.62	.60	.53
Able to Get the Job Done	.62	.52	.61	.52

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