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by

Kirsten Hinsdale
Barbara Collier
J. David Johnson

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Kirsten Hinsdale
Barbara Collier
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Albion, Michigan 49224

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August 1978

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20. Abstract (Continue on reverse side if necessary and identify by block number) Special analyses of the VIA, Inc., applied research data-base on E-4 and E-5 women were conducted to isolate differences between Navy enlisted women in traditional and nontraditional jobs. It was found that the two groups of women evidence few differences in satisfaction, productivity, reenlistment intention, or attitudes toward women in the Navy. However, women in traditional jobs described themselves as more feminine than women in nontraditional jobs. It further was found that for the former group of		

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women many feminine traits are negatively related to satisfaction, productivity, and reenlistment intention, whereas for the latter, many masculine traits are positively related to these variables.

Differences also were found in the job values and reasons for reenlisting for the two groups of women. These findings are interpreted to reflect the more traditional orientation of women in traditional jobs.

Recommendations are made based on these findings for the development of screening procedures to guide the assignment of women to traditional and nontraditional jobs, as well as for additional research.

FOREWORD

This report represents the first step in researching Navy enlisted women in traditional and nontraditional jobs. It presents a series of special analyses of the VIA, Inc., applied research data base on E-4 and E-5 women. These data were collected in the course of a comprehensive training needs assessment on E-4 and E-5 women and subsequently were employed in the design of the NEW NAVY WOMAN SEMINAR: Self-Management and Career Advancement. The applied research and training were sponsored by Navy Personnel Research and Development Center, under the technical monitorship of Ms. Patricia Thomas; and the present study was supported by the Office of Naval Research, under the technical monitorship of Dr. Robert Hayles.

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Kirsten Hinsdale
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J. David Johnson

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The 1970 decision to end the draft made it necessary for the United States to face an unprecedented challenge: to staff a military force of over two million entirely with volunteers. Recognizing the possible shortages of male volunteers which might ensue, the Department of Defense in 1972 decided to increase the proportion of women in the military.¹ In the next few years, there followed a massive influx of women into all branches of the service. In 1972, about 1.9% (or 45,000) of all military personnel were women; by 1976, this figure had increased to over 5% (or 108,000).²

To facilitate this expansion, women were assigned a greater variety of jobs, and many military enlisted occupations formerly closed to women were opened. Between 1972 and 1976, the percentage of women in nontraditional occupational categories (e.g., electronic/mechanical equipment repairmen, craftsmen, service and supply handlers) increased from 9.4% to 40.2%.³ The military's continuing commitment to the increased use of women further was confirmed in 1975, when women gained admission to the military academies.

However, despite these trends, the military still faces an impending shortage of male personnel. Current manpower projections suggest that as the population of eligible male volunteers diminishes because of the decreased birthrates in the 1960's, the military may find it increasingly necessary to rely on female volunteers to maintain its current levels of staffing.⁴ Thus the integration of women into the military--far from being complete--minimally must continue at the pace established since 1972.

To investigate the pool of potential female volunteers, Dr. Jules I. Borack, under the auspices of the Navy Personnel Research and Development Center, recently conducted a market research study in which over 2,000 young civilian women participated.⁵ Borack's findings suggest that the interest of young civilian women in enlisting in the military is in step with the services' manpower needs and in fact parallels that of men. Fourteen percent of females age 18 to 25, as compared to 16 percent of males in the same age group, showed a positive propensity toward enlisting.

Unlike men, however, young women considering enlistment are faced with considerable uncertainty with respect to the conditions under which they might be employed by the military. Both the passage of the Equal Rights Amendment and the passage of Department of Defense legislative proposal DOD 95-75 to amend section 6015 of the United States Code would substantially alter the roles women play in the military in general and in the Navy in particular.

In view of these uncertainties, research into the conditions under which young women are most interested in enlisting takes on increased importance. In the above-mentioned market research survey, respondents were asked to specify their level of interest in joining the military under four alternative conditions, including:

- . Current Conditions (as perceived by survey respondents);
- . Option I, which emphasizes the opportunity to pursue nontraditional jobs, with the exception of service on ships, planes, or in combat;
- . Option II, which stresses expanded nontraditional roles which enhance career advancement opportunities and which would expose women to a slight chance of combat (in the Navy, involving service on support ships);
- . Option III, which removes all sex restrictions and offers women both opportunities and obligations equivalent to those of men (in the Navy, involving service on any ship, including aircraft carriers, destroyers, and submarines).

With the exception of the Marine Corps, where the highest percentages of women were interested in enlisting under current conditions and under Option III, respondents displayed a distinct preference for Option I. In the Navy, the percentage of women with a positive interest in enlistment was lowest under current conditions (7.9%), peaked under Option I (11.1%), and leveled off under Option II (8.5%) and Option III (8.5%).

Implicit in these findings is a willingness on the part of women interested in enlisting to serve either in limited capacities or in capacities equivalent to those of men on Navy ships (Options II and III, respectively). Sixty-one percent of the total number of women with a high propensity to enlist under current conditions or Option I continued to express interest under Options II and III. This presents a clear contrast to earlier studies which show conclusively that the majority of young civilian women respond unfavorably to the general idea of women's military service⁶; evidently, women interested in enlisting have in large part overcome reservations held by the general population in connection with women in nontraditional jobs and women in combat.

Also implicit in Borack's findings is a desire on the part of high propensity women to pursue nontraditional jobs. This is consistent with

current data on civilian populations, which show the growing interest and involvement of women in formerly male-dominated fields.⁷ It suggests that the aspirations of civilian women might dovetail with the Navy's emphasis on the expanded use of women in nontraditional occupations, and that the potential market might indeed be adequate to meet the Navy's anticipated need for women in these occupations.

However, several important questions should be addressed before any additional effort to recruit women for nontraditional jobs is initiated. For example, how well adapted are Navy women who currently hold nontraditional jobs as compared to their counterparts in traditional jobs? What demographic and personality characteristics differentiate these two groups of women, and which of them are positively related to job satisfaction, Navy satisfaction, productivity, and reenlistment intention? What are the job values of women in traditional and nontraditional jobs? What are their reasons for reenlisting and not reenlisting? And finally, what demographic and personality traits distinguish women who believe they should have the obligation to serve on Navy ships from women who don't?

Research into these and related questions will provide a wealth of information useful in the selection and retention of women in nontraditional jobs and in the selection of women willing to serve on Navy ships under the same conditions as men. The purpose of the present report is to provide a first step toward addressing them.

Methods

To investigate the research questions outlined above, special analyses were conducted on the interview and survey data gathered by VIA, Inc., in November, 1977, on Navy E-4 and E-5 women in San Diego, California; Norfolk, Virginia; and Orlando, Florida. These data were collected in the course of a comprehensive training needs assessment on E-4 and E-5 women and subsequently employed in the design of the "New Navy Woman Seminar."

A total of 133 women were interviewed, producing a data base descriptive of the job values, problems, aspirations, and demographic, personality, and attitudinal characteristics of E-4 and E-5 women in both traditional and nontraditional jobs. The interviews produced 133,000 items of information about E-4 and E-5 women.

While the primary intention of this data base was to serve as a foundation for training program design, its size, complexity, and exhaustiveness render it further useful in addressing many additional research questions. Because the sample was comprised of women who have spent several years in the Navy (median = 3 years, 3 months), it is particularly useful first, in comparing Broback's market research findings on the aspirations of civilian women to the realistic perceptions and expectations of actual enlisted women, and second, in compiling new information useful in the selection and retention of women in nontraditional occupations.

The analyses conducted in the preparation of the present report included descriptive statistics, tests for significant differences, and multiple regression analyses to investigate:

- 1) Differences in job satisfaction, Navy satisfaction, productivity, and reenlistment intention of women in traditional and nontraditional jobs.
- 2) Differences in the demographic and personality characteristics of women in traditional and nontraditional jobs.
- 3) The relationships between demographic and personality variables and job satisfaction, Navy satisfaction, productivity, and reenlistment intention of women in traditional as well as nontraditional jobs.
- 4) Differences in job values of women in traditional and nontraditional jobs.
- 5) Differences in the attitudes of women in nontraditional and traditional jobs toward nontraditional jobs, shipboard duty, and women's likelihood of success in the Navy.
- 6) Differences in the reasons for which women in traditional and nontraditional jobs plan to reenlist or not to reenlist.
- 7) Demographic and personality differences between women who do and do not believe women should have the opportunity and/or obligation to serve on Navy ships.

The results of these analyses are presented below.

Results and Discussion

66.7% of the women interviewed held traditional jobs like secretary, personnel clerk, supply clerk, or cook. 33.3% held nontraditional jobs such as Boatswain's Mate, Air Controller, or Aircraft Maintenance Captain. In addition, 22.5% (n = 29) of respondents aspired to leadership, supervisory, professional, or skilled labor positions in nontraditional fields. These figures parallel the general proportion of women in nontraditional jobs throughout the military (approximately 40.2%) as well as the desire of women in the general population to pursue nontraditional jobs.

A series of comparisons between respondents in traditional and non-traditional ratings follows.

Differences in Job Satisfaction, Navy Satisfaction, Productivity, and Reenlistment Intention. As shown in Table 1, enlisted women in traditional and nontraditional jobs report minimal differences in job satisfaction, Navy satisfaction, and productivity as measured by self-reported estimated time lost per week due to job- and Navy-related problems.

Table 1. Mean Satisfaction and Productivity Scores of Women in Traditional and Nontraditional Jobs

Item	Women in Nontraditional Jobs (\bar{x})	Women in Traditional Jobs (\bar{x})
Job satisfaction	2.22	2.08
Navy satisfaction	2.40	2.67
Average estimated time lost per week	13.20 hours	9.76 hours

Key: 1 = To a very great extent
2 = To a great extent
3 = To some extent
4 = To a little extent
5 = To a very little extent

t-tests showed that none of the differences in Table 1 were significant at the $p < .05$ level.

The reenlistment intention of both groups of women also was found to be similar. 30.8% of women in traditional jobs and 25.9% of women in nontraditional jobs plan to reenlist; 44.8% of women in traditional and 50.0% of women in nontraditional jobs plan not to reenlist, and 24.4% of women in traditional and 24.1% of women in nontraditional jobs are undecided.

These figures suggest that women in traditional jobs are slightly more likely to reenlist. However, the general absence of differences in satisfaction, productivity and reenlistment intention between the two groups implies that the desire on the part of young civilian women to pursue nontraditional jobs in the military (cf. above) is realistic in terms of their predicted adjustment.

Differences in Demographic and Personality Characteristics. A comparison of the demographic characteristics of the two groups of women (e.g., education, parental income, location, marital status) revealed only one meaningful difference; there is a greater proportion of whites in traditional than in nontraditional jobs.

t-tests to investigate differences in the self-reported personality characteristics of women in traditional and nontraditional jobs yielded somewhat more information. Using the mean scores of both groups of women on the 64 traits on the Bem Sex Role Inventory, or BSRI, these tests showed significant differences ($p < .05$) on five items, which are listed in Table 2.

Table 2. Differences in Self-Reported Personality Characteristics of Women in Traditional and Nontraditional Jobs

BSRI Item	Women in Nontraditional Jobs (\bar{x})	Women in Traditional Jobs (\bar{x})
Helpful	6.03	6.32
Feminine	5.74	6.16
Solemn	3.05	3.79
Gentle	5.51	5.95
Individualistic	6.38	5.96

Key: 1 = Never or almost never true
 2 = Usually not true
 3 = Sometimes but infrequently true
 4 = Occasionally true
 5 = Often true
 6 = Usually true
 7 = Always or almost always true

With the exception of "individualistic," all items in Table 2 are displayed significantly more frequently by women in traditional jobs. According to Bem's (1974) classification system, "feminine" and "gentle" are feminine

items and "individualistic" is a masculine item. This suggests that women in traditional jobs consider themselves to be slightly more feminine than those in nontraditional jobs. It may be a result of the significantly greater proportion of white women--who describe themselves as more feminine than nonwhites--in traditional occupations.⁸

Taken together, the above findings show that minimal differences exist in the satisfaction, productivity, reenlistment intention, and demographic and personality characteristics of women in traditional and nontraditional jobs. Logically, the next research question becomes, "What, if any, differences are there in the demographic and personality characteristics of women in traditional and nontraditional occupations which predict satisfaction, productivity, and reenlistment intention?" This question is addressed below.

Relationships Between Demographic and Personality Variables and Job Satisfaction, Navy Satisfaction, Productivity, and Reenlistment Intention. Multiple regression analyses were used to investigate the relationships between the independent demographic and personality variables and the dependent variables of job satisfaction, Navy satisfaction, productivity, and reenlistment intention. These are discussed below.

Among the demographic variables, three relationships were found, including one for women in traditional jobs and two for women in non-traditional jobs. For the former group of women, the data showed a relationship between race and productivity ($r = .55$). Further analysis indicated that nonwhites lose more time from the job than whites (25.2 v. 10.6 hours per week), although the small number of nonwhites in the traditional group ($n = 14$) precludes generalization of these findings. For the nontraditional group, the data revealed that there are strong predictive relationships between parental income and job satisfaction ($r = .65$) and parental income and estimated time lost per week ($r = .73$). This set of findings presents a seeming contradiction: women in non-traditional jobs with relatively high parental income at the time of enlistment are better satisfied with their jobs but at the same time less productive than women from lower socioeconomic strata.

One interpretation of these findings might be that more affluent women, having chosen the Navy to pursue vocational interests rather than out of pressing economic need, are happy to be given the nontraditional

opportunities the Navy affords, and are therefore more satisfied with their jobs than less affluent women who may not have experienced the same freedom of choice. At the same time, however, these affluent women, having actively selected the Navy as an employer, are less willing to put up with job- and Navy-related problems, tend to take them more seriously, and lose more time as a result of them.

As shown in Tables 3 and 4, a variety of personality traits were found to be related to the dependent variables for women in both traditional and nontraditional occupations. All correlations shown are significant at the $p < .05$ level.

Table 3. Positive Relationships between BSRI Personality Traits and Dependent Variables

<u>Dependent Variable</u>	<u>Women in Nontraditional Jobs</u>		<u>Women in Traditional Jobs</u>	
	<u>Trait</u>	<u>r =</u>	<u>Trait</u>	<u>r =</u>
Job Satisfaction	Helpful	.59	None	
	Competitive	.57		
	Individualistic	.39		
	Assertive	.35		
	Athletic	.25		
	Understanding	.25		
	Happy	.21		
Navy Satisfaction	Acts as a leader	.46	Self-reliant	.36
	Assertive	.40	Aggressive	.25
	Competitive	.39	Conscientious	.25
	Forceful	.31	Ambitious	.24
	Aggressive	.29	Self-sufficient	.22
			Acts as a leader	.22
Productivity*	Truthful	.41	None	
	Willing to take risks	.27		
	Sensitive to the needs of others	.21		
Reenlistment Intention	Independent	.31	Helpful	.33
	Individualistic	.29	Assertive	.22
	Acts as a leader	.28		
	Makes decisions easily	.24		
	Reliable	.22		
	Defends own beliefs	.22		

*A positive correlation between productivity and a given BSRI trait means that a high score on the trait is associated with a low number of hours lost per week because of job- and Navy-related problems.

Table 4. Negative Relationships between BSRI Personality Traits and Dependent Variables

<u>Dependent Variable</u>	<u>Women in Nontraditional Jobs Trait</u>	<u>r =</u>	<u>Women in Traditional Jobs Trait</u>	<u>r =</u>
Job Satisfaction	None		Understanding	-.29
			Sensitive to the needs of others	-.36
			Yielding	-.25
			Loves children	-.31
Navy Satisfaction	Theatrical	-.23	Shy	-.31
			Yielding	-.23
			Tactful	-.23
			Understanding	-.20
Productivity	Conceited	-.50	Tactful	-.33
	Unpredictable	-.40	Secretive	-.33
	Athletic	-.32	Conceited	-.28
	Theatrical	-.30	Individualistic	-.24
	Unsystematic	-.30	Understanding	-.23
			Likeable	-.22
			Solemn	-.22
			Shy	-.21
Reenlistment	Jealous	-.39	Adaptable	-.21
	Flatterable	-.32		
	Childlike	-.28		
	Gullible	-.27		
	Yielding	-.27		
	Moody	-.23		

Several noteworthy trends are evident in Tables 3 and 4. On Table 3, women in nontraditional jobs generally show many more traits positively correlated to the dependent variables, suggesting that personality differences are of greater consequence for these women in terms of their possible positive effects. For both groups of women, and especially those in nontraditional jobs, the traits predictive of the dependent variables

are primarily masculine. For women in traditional jobs, four masculine traits, including "self-reliant," "aggressive," "self-sufficient," and "acts as a leader" are positively related to Navy satisfaction, and one masculine trait, "assertive," is positively related to reenlistment intention. No feminine traits are positively related to the dependent variables for these women. Women in nontraditional jobs tend to follow the same pattern, although two feminine traits appear in Table 3 for these women: "understanding" is positively related to job satisfaction, and "sensitive to the needs of others" is positively related to productivity. Beyond this, however, most of the traits predictive of the dependent variables are masculine. Under job satisfaction, "competitive," "individualistic," "assertive," and "athletic" are masculine; under Navy satisfaction, "acts as a leader," "assertive," "competitive," "forceful," and "aggressive" are masculine; under productivity, "willing to take risks" is masculine; and under reenlistment intention, "independent," "individualistic," "acts as a leader," "makes decisions easily," and "defends own beliefs" are masculine. Taken together, these findings suggest that for both groups of women, and particularly for women in non-traditional jobs, possessing masculine traits is important to satisfaction, productivity, and reenlistment intention. Some of the most important characteristics in Table 3 are "aggressive," "acts as a leader," "assertive," and "helpful," which are positively related to dependent variables for both sets of women, and "assertive," "competitive," and "individualistic," each of which is positively related to two of the dependent variables for women in nontraditional jobs.

In Table 4, women in traditional jobs generally show many more traits negatively correlated to the dependent variables, suggesting that personality differences are of greater consequence for these women in terms of their potential negative effects. This presents a clear contrast to women in nontraditional jobs, for whom, as mentioned, personality differences are of greater consequence in terms of their potential positive effects (cf. Table 3).

For both women in traditional and nontraditional jobs, the traits shown on Table 4 are primarily feminine. Thus, they present the logical opposite to those in Table 3, which shows that masculine traits are positively related to the dependent variables. Specifically, Table 3

indicates that for women in traditional jobs, four feminine traits are negatively related to job satisfaction, including "understanding," "sensitive to the needs of others," "yielding," and "loves children;" two feminine traits are negatively related to Navy satisfaction, including "yielding" and "understanding;" and one feminine trait, "understanding," is negatively related to productivity. Similarly, for women in nontraditional jobs, four feminine traits, including "flatterable," "childlike," "gullible," and "yielding" are negatively related to reenlistment intention. The only two masculine traits appearing on Table 4 are "individualistic," which for women in traditional jobs negatively affects productivity, and "athletic," which for women in nontraditional jobs negatively affects productivity. In short, these findings indicate that for both groups of women, and particularly women in traditional jobs, possessing feminine traits detracts from satisfaction, productivity, and reenlistment intention. Particularly damaging characteristics are "tactful," "shy," and "understanding," which are related to two of the dependent variables for women in traditional jobs; "yielding," which appears several times for both groups of women; and "theatrical," which is related to two of the dependent variables for women in nontraditional jobs.

Another observation which can be made about Table 4 is that it highlights differences in the constellations of traits which are negatively related to the dependent variables for women in both groups. While it is largely socially desirable traits (e.g., tactful, understanding) which negatively affect the dependent variables for women in traditional jobs, it is largely socially undesirable traits (e.g. unpredictable, unsystematic, jealous, moody) which negatively affect that of women in nontraditional jobs. This is consistent with Table 3, which shows the inverse: while few socially desirable traits are positively related to the dependent variables for women in traditional jobs, many are for women in nontraditional jobs. This suggests that a kind of deficiency model operates for women in traditional jobs--that they are happiest, most productive, and most likely to reenlist when they strongly display a few masculine traits and avoid displaying the feminine traits negatively related to the dependent variables--perhaps because they are more likely than nontraditional women to be stereotyped for displaying these traits. Women in nontraditional jobs, on the other hand, are happiest, most productive, and most likely

to reenlist when they strongly display masculine and avoid socially undesirable traits.

Another interesting contrast between Tables 3 and 4 is seen on one particular trait: "individualistic" is positively related to the job satisfaction and reenlistment intention of women in nontraditional jobs, but negatively related to the productivity of women in traditional jobs. This is the only one of the 64 traits on the BSRI which is apparently useful to women in nontraditional jobs but harmful to women in traditional jobs.

In sum, it is apparent in Tables 3 and 4 that women who display a few masculine traits and avoid displaying feminine traits--i.e., fairly conservative, undifferentiated personalities--tend to experience most the highest levels of job satisfaction, productivity, and reenlistment intention in traditional jobs. On the other hand, strong, nonconformist females who perceive themselves as highly masculine (e.g., forceful, independent, aggressive, and willing to take risks), and who avoid socially undesirable qualities (e.g., moodiness, jealousy, and conceit) experience the highest levels of job satisfaction, productivity, and reenlistment intention in nontraditional jobs. These findings may be most succinctly stated as follows: for women in nontraditional jobs many masculine traits are assets, while some socially undesirable traits are liabilities, and for women in traditional jobs a few masculine traits are assets, while many feminine traits are liabilities.

The clearcut, consistent, and complementary results for traditional and nontraditional women in this substudy indicate that an instrument such as the BSRI would be useful in the recruitment, selection, and assignment of women for traditional and nontraditional occupations.

Differences in Job Values. Table 5 shows the differences in responses given by women in traditional and nontraditional jobs to an open-ended item eliciting job values (i.e., "What do you like most about your job?").

Table 5. Rank Order of Job Values for Women
in Nontraditional and Traditional Jobs

Job Value	Women in Nontraditional Jobs	Women in Traditional Jobs
Variety and interest in job tasks	1	2
Coworkers and subordinates	2	1
Job responsibility	3	8
Job challenge	4	11
Job experience	5	9
Job autonomy and discretion	6	4
Making a contribution to the Navy	7	6
Working conditions	8	5
Job security	9	14
Praise and recognition from superiors	10	16
Equal treatment of men and women	11	17
Personal growth and development	12	12
Helping others	13	7
Advancement opportunities	14	13
Clientele (patients, transiwnts, etc.)	15	3
Job competence	16	15
Male superior(s)	18	18

It is clear in Table 5 that women in both groups value variety and interest in their job tasks as well as their coworkers and subordinates. However, while women in nontraditional jobs also value job responsibility, job challenge, and job experience, these fall relatively low in the value structure of women in traditional jobs, who instead tend to value their clientele, job autonomy, and working conditions. Other interesting differences are found in the relative values placed by the two groups of women on helping others and on male superiors which women in traditional jobs value more highly, and on equal treatment of men and women, praise and recognition from superiors, and job security, which women in non-traditional jobs value more highly.

Generally speaking, the comparative job values which emerge from Table 5 are what might be expected for both groups of women. Those for the traditional group reflect a greater concern with daily interpersonal interactions (i.e., clientele, male superiors, helping others), and physical comfort (i.e., working conditions). Those for the nontraditional group, while less cohesive, reflect the importance placed on work group acceptance (e.g., equal treatment, recognition from superiors) and a serious commitment to their nontraditional work (e.g., job responsibility, challenge, experience). In other words, women in traditional jobs appear to be more people-oriented and to value the short-range, pleasurable features of their jobs, whereas women in nontraditional jobs appear to be more task-oriented and to value the long-range potential their jobs hold for career advancement. Thus, historically feminine values are associated with traditional jobs and historically masculine values with nontraditional jobs.⁹

These findings, like those in preceding sections, might be useful in the selection, recruitment, and assignment of women to different occupations; e.g., they might be employed to construct a questionnaire to match the values of job applicants with those expressed by actual incumbents in traditional and nontraditional fields.

Differences in Attitudes. Surprisingly, very few differences in attitudes toward women in the Navy were found among traditional and non-traditional jobholders. The responses of both groups to five items measuring attitudes are shown in Table 6.

Table 6. Attitudinal Differences Between
Women in Nontraditional and Traditional Jobs

Item	Women in Nontraditional Jobs (% yes)	Women in Traditional Jobs (% yes)
Do you think:		
women who advance in the Navy must sacrifice their femininity?	13.1	9.0
women in nontraditional jobs must sacrifice their femininity?	34.2	32.8
women should have the opportunity to serve on Navy ships?	74.3	78.4
women should have the obligation to serve on Navy ships?	43.7	42.4
men are more likely to succeed in the Navy than women?	60.5	63.6

The data in Table 6 are remarkably similar for women in traditional and nontraditional jobs. However, several differences are noteworthy. One seemingly counterintuitive finding is that women in nontraditional jobs, more than their traditional counterparts, believe women must sacrifice their femininity to advance or to hold nontraditional jobs in the Navy. This may be in part a function of their perception that men perceive them as less feminine than their traditional counterparts; some substantiative evidence to the effect that women's self-perceptions are altered by men's perceptions of them is available in the research literature.⁹ Moreover, this dynamic might be expected to operate especially strongly among women in nontraditional jobs, who may have crossed cultural boundaries for appropriate sex roles. Another noteworthy finding is that while fewer women in nontraditional jobs believe that women should have the opportunity to serve on Navy ships, they are slightly more likely to believe that women should have the obligation to serve on Navy ships. In other words, women in nontraditional jobs, though less inclined to

favor equal opportunity, also are less inclined to favor the preferential treatment of women. Finally, it is encouraging to note that somewhat fewer women in nontraditional jobs believe that men are more likely to succeed in the Navy. This suggests that these women, more than traditional women, expect equal responsibility to result in equal opportunity.

The most cogent conclusion which can be drawn from these data is that, since the attitudes of women in traditional and nontraditional jobs are essentially the same, the expansion of women in nontraditional ratings will not necessarily lay the groundwork for their deployment on Navy ships. Nevertheless, the fact that the majority of women in both groups believe that women should have the opportunity to serve on Navy ships suggests that the foundation for gradual change is in place. One might expect that, as the collective experience of Navy women on ships accumulates, their opinions on both the opportunity and obligation issues will change to reflect increasing acceptance of equal opportunity and responsibility.

Differences in Reasons for Reenlisting and Not Reenlisting. Though overall reenlistment intention is similar for all women (see above), there are some differences in the reasons for which women in traditional and nontraditional jobs plan to reenlist or not to reenlist, as shown in Tables 6 and 7.

Table 6. Rank Order of Reasons for Reenlisting of Women in Nontraditional and Traditional Jobs

Reasons	Women in Nontraditional Jobs	Women in Traditional Jobs
General job/Navy satisfaction	1	1
Career opportunities	2	2
Job security	3	5
Travel	4	3
Pay/financial security	5	4
Educational opportunities	6	7
Benefits	7	6
Challenge	8	8

Table 7. Rank Order of Reasons for Not Reenlisting of Women in Nontraditional and Traditional Jobs

Reasons	Women in Nontraditional Jobs	Women in Traditional Jobs
General dissatisfaction with the Navy	1	16
Lack of advancement opportunities	2	7
Unsatisfactory pay	3	-
Interferes with marriage, family, home	4	2
Lack of support, encouragement from Navy personnel	5	11
Separation from spouse	6	1
Lack of personal freedom; regimentation	7	4
Lack of educational opportunities	8	5
Interest in trying civilian life	9	9
Lack of individuality	-	10
Sexual harassment	-	12
Inconsistent leadership; favoritism	-	13
Living in barracks	-	14
Time required for advancement	-	15
Uncertainty regarding future assignments	-	17
Cutbacks/poor benefits	-	3

Table 6 reveals that, as might be expected, general job and Navy satisfaction, along with career opportunities, are the major reasons for reenlistment for both groups of women. However, consistent with their respective job values, women in nontraditional jobs more frequently mentioned job security and educational opportunities as reasons for reenlisting, (23.5% v. 16.9% of total responses for nontraditional v. traditional women) while women in traditional jobs more frequently mentioned travel, pay/financial security, and benefits (33.9% v. 23.5%). Again, these findings may be construed to imply the emphasis placed on

short-range, personal reinforcers by traditional women (i.e., pay, travel, benefits), and the emphasis placed on long-range reinforcers by women in nontraditional jobs (i.e., job security, educational opportunities).

Table 7 shows that the reasons of women in traditional and non-traditional jobs for not reenlisting are considerably more varied than their reasons for reenlisting. Women in nontraditional jobs more often mentioned general dissatisfaction with the Navy as a reasons for not reenlisting (23.1% of total responses), while women in traditional jobs more often mentioned separation from spouse and interference with marriage, family, and home (27.8% v. 17.9%). Like earlier findings, these data point to the more traditionally feminine orientation of women in traditional jobs. Also corroborating earlier findings is the more frequent reference made by traditional women to such reasons for not reenlisting as cutbacks in benefits (11.1% v. 0%), and a lack of individuality and personal freedom (11.1% v. 5.1%), each of which is suggestive of the previously noted preoccupation of these women with short-range reinforcers. In addition, the lack of support/encouragement listed by nontraditional women as a reason for not reenlisting (7.7% v. 1.8%) also supports prior findings; it points to the value they place on peer group acceptance of their nontraditional roles.

On a more general level, data in Table 7 have certain implications for the retention of women in nontraditional jobs. While more research needs to be done on exactly what constitutes "general dissatisfaction with the Navy," beyond this it is clear that women in nontraditional jobs will be more likely to reenlist if they are provided advancement opportunities and pay equivalent to those civilian life offers. Lack of advancement opportunities was mentioned as a reason for not reenlisting more often by women in traditional than in nontraditional jobs (17.1% v. 7.4%), as was unsatisfactory pay (12.8% v. 0%).

Demographic and Personality Differences between Women Who Do and Do Not Believe Women Should Have the Opportunity and/or the Obligation to Serve on Navy Ships. As mentioned, the purpose of this substudy was to investigate demographic and personality differences in women who are and are not willing to work under the same conditions as men, regardless of their traditional or nontraditional occupational status. Analysis of these differences proceeded in two stages. The first compared women

who believe women should have the opportunity to serve on Navy ships (n = 96) to all others (n = 37); the second set compared women who believe women should have the obligation to serve on Navy ships (n = 7) to all others (n = 126). These two opinions are roughly equivalent to Options I and II, as defined by Jules I. Borack (cf. above).

In the first stage of the analysis, no meaningful differences were found in the demographic characteristics of women who do and do not believe women should have the opportunity to serve on Navy ships. However, several significant differences ($p < .05$) were evident in self-reported personality traits of the two groups of women as measured on the BSRI. These are shown in Table 8.

Table 8. Personality Differences Between Women Who Do and Do Not Believe Women Should Have the Opportunity to Serve on Navy Ships

BSRI Trait	Women Should Have the Opportunity	Women Should Not Have the Opportunity
Independent	6.46	6.03
Sincere	6.30	5.89
Acts as a leader	5.13	4.62
Adaptable	6.20	5.82
Individualistic	6.16	5.55
Ambitious	6.26	5.83
Gullible	3.15	4.00

Key: 1 = To a very great extent
 2 = To a great extent
 3 = To some extent
 4 = To a little extent
 5 = To a very little extent

All the traits in Table 8, with the exception of "gullible," are more frequently characteristic of women who believe women should have the opportunity to serve on Navy ships. Four of these traits are masculine, including "independent," "acts as a leader," "individualistic," and "ambitious," and the other two, "sincere" and "adaptable," are neutral. From these data, in conjunction with previous findings, it is apparent that more masculine women not only fare better in nontraditional jobs, but also are more likely to believe that women should have the opportunity

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to serve on Navy ships. This information should prove useful in recruiting women with this belief, although additional study is warranted.

Interestingly, no significant differences were found in the second stage of the analysis in the demographic or personality characteristics of women who believe women should have the obligation to serve on Navy ships v. all others. This probably was due to the small number of women who responded affirmatively to this item ($n = 7$), although it is possible that the critical decision point occurs in relation to the opportunity issue rather than obligation issue.

Summary of Findings. Immediately following is a summary of the findings presented in preceding sections.

1. Women in traditional and nontraditional jobs evidence no significant differences in job satisfaction, Navy satisfaction, productivity, and reenlistment intention.
2. There is a greater proportion of whites in traditional jobs than in nontraditional jobs.
3. Women in traditional jobs describe themselves as more feminine than women in nontraditional jobs.
4. For women in traditional jobs, race was found to be related to productivity. However, because of the small number of nonwhites in traditional jobs, this finding is open to question.
5. For women in nontraditional jobs, parental income is positively related both to job satisfaction and estimated time lost per week.
6. For women in nontraditional jobs, many masculine traits are positively related to satisfaction, productivity, and reenlistment intention, while some socially undesirable traits are negatively related to these dependent variables.
7. For women in traditional jobs, a few masculine traits are positively related to the dependent variables, while many feminine traits are negatively related to the dependent variables.
8. Differences in the job values of women in traditional and nontraditional jobs suggest that the latter group value aspects of their jobs which facilitate career advancement (e.g., responsibility, challenge experience, recognition), while the former value aspects which satisfy their day-to-day needs for rewarding interpersonal contacts, job autonomy, and good working conditions.
9. There are only minimal differences in the attitudes of the two groups of women. However, women in nontraditional jobs are slightly more inclined to believe that women should have the obligation to serve on Navy ships and slightly less inclined to believe that men are more likely to succeed in the Navy.

10. Differences between the two groups in reasons for reenlisting and not reenlisting reflect their comparative job values (cf. #8). It appears that women in traditional jobs more often plan to reenlist to pursue short-range payoffs such as pay, travel, and benefits, while those in nontraditional jobs more often plan to reenlist because of long-range payoffs like job security and educational opportunities. Similarly, the data suggest a tendency for women in traditional jobs more often to plan not to reenlist because of short-range frustrations such as separation from spouse and a lack of personal freedom and individuality, while women in nontraditional jobs more often plan to leave the Navy because of general dissatisfaction, perceived long-range lack of advancement opportunities and/or unsatisfactory pay.
11. Women who believe that women should have the opportunity to serve on Navy ships differ from other women in that they are more independent, sincere, adaptable, individualistic, and ambitious, as well as more likely to act as leaders. Interestingly, they also are less gullible.

Recommendations

In view of these findings, the following recommendations are made:

1. Screening procedures should be developed to guide the recruitment and assignment of women to traditional and nontraditional occupations. As appropriate, these procedures might incorporate interview questions and personality measures similar to those employed in the preparation of the present report. From these measures, weighted scores predictive of job satisfaction, Navy satisfaction, productivity, and reenlistment intention for both traditional and nontraditional fields should be devised. Such scores would prove useful as one factor in making personnel decisions; however, to prevent psychological discrimination, they should not be overvalued in these decisions, and their actual predictive validity should be investigated prior to widespread use.
2. Ideally, preceding the development of screening procedures as in #1 above, additional research should occur. Subsequent studies should incorporate a larger, stratified sample of enlisted women at all paygrades. They further should be expanded in scope to investigate the influence of additional pre- and post-enlistment socialization factors on the dependent variables. Specification of these factors would be useful not only in recruitment and assignment decisions, but also in the development of career paths designed to promote the satisfaction, productivity, and reenlistment of women in traditional and nontraditional jobs.
3. Additional research also should occur on the pre- and post-enlistment socialization factors which affect women's willingness to serve on Navy ships under Options II and III. Studies in this area would be useful in recruiting women most likely to favor the opportunity and/or obligation to serve on Navy ships.

4. The reasons for which women in nontraditional jobs fail to reenlist also should be investigated in greater detail. Why, for example, do many non-reenlistees show general dissatisfaction with the Navy? And in what ratings do the lack of advancement and educational opportunities and adequate pay most often discourage reenlistment?

Implementation of these recommendations will help ensure that women with the greatest probabilities of success in nontraditional and traditional occupations are both recruited and cultivated by the Navy. In this manner, the continuing integration of women into the Navy can be engineered to promote the optimum use of female personnel, and in so doing, to offset the predicted shortages of qualified male personnel.

Footnotes

¹Central All-Volunteer Force Task Force. Utilization of military women. Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs, December, 1972, p. 1.

²Binkin, Martin, and Bach, Shirley. Women and the Military. Washington, D. C.: The Brookings Institution, 1977, p. 14.

³Ibid., p. 19.

⁴Ibid., pp. 55-56.

⁵Borack, Jules I. National survey of women's (18-25 years old) intentions to join the military. Briefing prepared for the Navy Personnel Research and Development Center, San Diego, California, 1978.

⁶For example, see N. W. Ayer and Son, Inc., A Study of attitudes toward enlistment in the Women's Army Corps. March, 1972. Cited in Binkin and Bach, op. cit., p. 39.

⁷1975 Handbook of Women Workers. U. S. Department of Labor, Employment Standards Administration, Women's Bureau, Bulletin 297. 1975, pp. 92-94.

⁸See, for example, Kipnis, Dorothy, and Kidder, Louise. Practice, performance and sex: sex-role appropriateness, success, and failure as determinants of men's and women's task learning capability. Technical Report No. 1, Office of Naval Research, May, 1977.

⁹See, for example, Zellman, Gail. The role of structural factors in limiting women's institutional participation. In Ruble, D., Frieze, I., and Parsons, J., eds. Journal of Social Issues. Vol. 32, No. 3, 1976, pp. 33-46.

¹⁰See, for example, Gordon, F., and Hall, D. Self-image and stereotypes of femininity: their relationship to women's role conflicts and coping. Journal of Applied Psychology, Vol. 59, No. 2, 1974, pp. 241-243.

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