

Occupational Segregation: Comparing the Civilian and Military Work Force

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If the labor force were completely integrated by sex, the percentage of men and women in each occupation would equal their representation in the labor force. As one sex increased or decreased in proportion in the labor force relative to the other, percentages of that sex in a given occupation would increase or decrease proportionately. Sex segregation exists when men and women are not representatively distributed across occupations.

This article compares the differential location of women and men across occupations in the civilian labor force to the distribution of women and men in military occupations. The data reported suggest that segregation of occupations by sex remains in both the civilian and military work force.

Occupational Segregation

In spite of dramatic increases of women into the labor market during this century, differences in the occupational distribution of men and women remain. Women are disproportionately overrepresented in clerical and

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service jobs, while men are much more likely to be in management, executive, and blue-collar (especially skilled production), positions.¹ Some recent works suggest that the extent of the segregation of men and women in different occupations is declining, although, overall, the occupational structure in the United States remains highly segregated.² A.H. Beller describes a decline in occupational segregation during the 1970s, reporting that three out of five workers of one sex would have to change occupations to make the sex distribution of most jobs comparable.³ The decline noted appears concentrated in male professional and managerial jobs and among younger cohorts of women.⁴

Occupational segregation is not confined to broad occupational classifications, but continues within each occupational category. For example, among professional and technical workers, women are more likely to be elementary school teachers and nurses, while men are more likely to be physicians and lawyers.⁵ Furthermore, vertical segregation exists within similar classifications. The distribution of full-time university faculties, where women comprise about 50 percent of non-tenure-track positions (lecturers and instructors), 36 percent of assistant professors, 21 percent of associate professors, and only about 10 percent of full professors, provides a good illustration.⁶

Considerable controversy exists concerning whether the causes of occupational segregation are voluntary choices of individuals or result from discrimination within the labor market. For example, neoclassical human capital theorists argue that women generally anticipate shorter and less continuous employment than do men, and therefore their best interest is served by "choosing" occupations that presumably require less human capital investments (education, on-the-job training, geographical mobility, etc.) and have lower wage penalties for discontinuous participation, part-time or more flexible work schedules.⁷ Most research does not support this contention. Conclusions drawn from recent empirical tests of this hypothesis indicate that women's earnings do not show lower rates of depreciation or appreciation in female than in male occupations.⁸ Rather, females earned less in female jobs at all levels of experience, suggesting that women cannot maximize lifetime earnings by choosing female occupations.⁹

Support for structural discrimination within the labor market also exists. Analyses report that as the percentage of female workers in an occupation increases, all else being equal, earnings decrease.¹⁰ F.D. Blau reports that 76 percent of the unexplained pay gap between men and women in the United States was due to sex differences in distribution

among occupational categories within a firm.¹¹ Women are also more likely than men to be concentrated in smaller, peripheral organizations and less stable industrial sectors.¹²

Women in the U.S. Military

In contrast to civilian jobs, where sex-based occupational segregation is the rule, women in the military perform the same overall duties as men and compete for jobs and ranks within the military as soldiers rather than women. A key difference between the roles of women in civilian organizations and those in the military exists: military roles are decreed by federal statute and military policies. Thus, the same laws that increase the number of women in the military can also be used to define their roles within its structure. At present, the only jobs closed to women based on those constraints are direct combat roles, and a few direct combat-support roles. Furthermore, all service branches currently use the "risk rule" based on likelihood of geographical jeopardy during war regardless of the mission (combat or not) of the job.

The establishment of the All-Volunteer Force (AVF) was an important factor in dramatically increasing the numbers of women in the U.S. military and expanding their roles in unprecedented ways. Women comprise approximately 11 percent of the active-duty Department of Defense forces and 12 percent of the reserve forces, for an 11 percent proportion of the total force (although this varies by service), and it seems unlikely that participation will return to earlier force levels (previous to AVF) of 2 percent or less. Women have, of course, served in the military in the past, although for the most part this was in response to the exigencies of war: women were needed to fill traditionally female-typed jobs (secretary, typist, clerk, etc.) and thus release men for battle. Women who join the AVF, on the other hand, are responding to decisions about employment. The types of jobs women perform have also expanded to include such traditionally male domains as combat-support positions. A few women even hold combat occupational specialty codes as instructors in combat skill areas.

Two other conditions impact the distribution of women in military occupational categories relative to their civilian counterparts. First, because pay in the military is based on rank and tenure rather than occupation or individual characteristics (i.e., race, sex), women receive equal pay to that of men of comparable rank. Minor exceptions exist, but for the most part, a male master sergeant supply custodian and a female master sergeant

computer specialist draw the same pay if they have equal years of service. Second, women are very nearly comparably represented across officer and enlisted categories,¹³ unlike their underrepresentation in management and executive categories in the civilian work force.

In spite of these recent changes, evidence persists that the institutional role of soldier remains stereotyped as male, and that the utilization of women in the military remains largely based on the conventional definition of women's work in American society.¹⁴

Data Sources

The military data were compiled from all active-duty military member records collected and stored at the Defense Manpower Data Management Center (DMDC) on a quarterly basis. DMDC organized the data to reflect the occupational category of all active-duty personnel by sex and ethnicity and provided the results to the Defense Equal Opportunity Management Institute for analysis. Figures provided represent the entire active-duty enlisted and officer population of the Army, Navy, Marine Corps, and Air Force as of March 1989.

The civilian data are taken from a representative sample of individuals from the 1988 General Social Survey. Data from only the 1988 sample were used, although this limited the total civilian sample size ($N = 249$), because structural differences in the labor force of previous years could cause their inclusion to render the civilian sample incomparable with the cross-sectional military data. Each survey is an independently drawn sample of noninstitutionalized, English-speaking persons 18 years of age or over. For purposes of this analysis, only respondents employed full-time are included. Data used in the analysis were weighted to correct for oversampling of minorities.¹⁵

Methods

The differential location of women and men in the labor market can be typically referred to as occupational segregation, and is measured by an index developed by O.D. Duncan and B. Duncan.¹⁶ The occupational segregation index indicates the percentage of women, or men, who would have to change jobs in order to duplicate the distribution of the other group. The index would be equal to zero if the proportion of men and women in an occupation were representative of their distribution in the

labor force as a whole, and would equal 100 if the occupation were completely segregated.

The index is calculated by the following formula:

$$s = 1/2 \sum |m_i - f_i|$$

where m_i = the percentage of the male labor force employed in occupation i and f_i = the percentage of the female labor force employed in occupation i . Occupational segregation indices are calculated across civilian and military occupations, and comparable groups are contrasted. Initial calculation of the occupational segregation index for the civilian sample uses the U.S. Census Bureau Industrial Classification Codes.¹⁷

Occupations for the civilian sample were then reclassified using the U.S. Census Bureau three-digit number code. The *Occupational Conversion Manual – Enlisted/Officer/Civilian*¹⁸ was used to create comparable categories for the civilian sample and the military population.¹⁹ The military classification system was used as the base and civilian job classifications were recoded to match the military categories. Only officer DoD Occupation Codes 1 (General Officers and Executives) and 3 (Intelligence Officers) did not have comparable civilian census job codes. All categories were used to create the segregation index across occupations, because all military categories are considered full-time military employees. Specific comparisons were not affected as individuals in either of the above categories were not compared.

In addition, structural differences between enlisted and officer cohorts in the military render each analytically distinct, therefore each cohort must be analyzed separately. The primary basis for this distinction is level of education: enlisted personnel are not required to have completed a baccalaureate degree (B.A.) or equivalent, while officers generally must have at least a baccalaureate degree or equivalent. Therefore, the civilian sample was divided into two groups based on education level. The civilian subsample with less than a B.A. is compared to the enlisted cohort, and those with at least a B.A. are compared to the officer cohort.

Findings

Table 1 indicates that for the civilian sample with at least a B.A. or equivalent, 58 percent of either men or women workers would have to change occupations to achieve an equitable distribution of men and women across occupations, and 50 percent of those with less than a B.A. degree or the equivalent would have to change occupations. Furthermore, data reported in Table 1 suggest that 47 percent of the DoD officer corps and

Table 1

Occupational Distributions of Civilian and Military Labor Forces

Occupational Category	Civilian						Military					
	Degree			No Degree			Officer			Enlisted		
	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference
0	-	-	-	-	-	-	-	-	-	18.6	3.9	14.7
1	24.2	20.0	4.2	7.4	3.6	3.8	0.6	0.1	0.5	10.5	5.8	4.7
2	45.5	6.7	38.8	14.8	3.6	11.2	46.0	8.0	38.0	9.4	10.9	1.5
3	12.1	6.7	5.4	-	-	-	4.0	6.0	2.0	4.7	13.4	8.7
4	6.1	40.0	33.9	0.0	14.3	14.3	14.0	11.0	3.0	2.4	2.3	0.1
5	3.0	6.7	3.7	7.4	10.7	3.3	5.0	4.0	1.0	13.1	35.6	22.5
6	0.0	20.0	20.0	3.7	32.1	28.4	11.0	42.0	31.0	21.9	8.4	13.5
7	6.1	0.0	6.1	29.6	7.1	22.5	6.0	19.0	13.0	4.3	1.9	2.4
8	-	-	-	3.7	0.0	3.7	10.0	8.0	2.0	9.0	9.6	0.6
9	-	-	-	-	-	-	5.0	1.0	4.0	6.1	8.1	2.0
10	-	-	-	3.7	0.0	3.7	-	-	-	-	-	-
11	-	-	-	22.2	25.2	3.0	-	-	-	-	-	-
12	3.0	0.0	3.0	7.4	3.6	3.8	-	-	-	-	-	-
Totals	100.0	100.1	115.1	99.9	100.2	97.7	101.6	99.1	94.5	100.0	99.9	70.7
s^a	115.1 / 2 = 57.5			97.7 / 2 = 48.85			94.5 / 2 = 47.25			70.7 / 2 = 35.35		

Note. Dashes in cells indicate that the given occupational category is not an option for that group of individuals.

^a s = Occupational Segregation Index

Table 2

Occupational Distributions of Army Personnel

Occupational Category	Officer			Enlisted		
	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference
0	—	—	—	30.80	2.60	28.20
1	0.04	0.00	0.04	4.60	2.90	1.70
2	48.00	7.00	41.00	12.40	12.30	0.10
3	6.00	7.00	1.00	5.40	15.90	10.50
4	13.00	12.00	1.00	2.70	2.30	0.40
5	5.00	2.00	3.00	12.50	38.00	25.50
6	14.00	44.00	30.00	15.30	6.90	8.40
7	6.00	13.00	7.00	2.00	0.80	1.20
8	9.00	14.00	5.00	12.20	12.80	0.60
9	0.02	0.00	0.02	2.30	5.30	3.00
Totals	101.06	99.00	88.06	100.20	99.80	79.60
S^a		88.06 / 2 = 44.03		79.60 / 2 = 39.80		

Note: Dashes in cells indicate that the given occupational category is not an option for that group of individuals.

S^a = Occupational Segregation Index

35 percent of the DoD enlisted force would have to change occupations for the distribution of men and women to approach equality. Put simply, this means that 47 percent of male officers in the DoD would have to change occupations for the distribution of males across occupations to match that of females, or vice versa. This suggests that, while military occupational categories are still segregated based on sex, the distribution of men and women across categories is more equitable than that in the civilian work force.

When the results are compared across services, differences emerge among the various branches. Overall differences are not large; however, they present interesting patterns. The occupational segregation index for Army officers is 44.03 and for Army enlisted personnel, 39.8 (see Table 2); for Navy officers the index is 63.69 and for Navy enlisted, 28.45 (see Table 3); for Marine officers the index is 49 and for Marine enlisted, 37.1 (see Table 4); for Air Force officers the index is 39.29 and for Air Force enlisted, 35.45 (see Table 5). This reflects both the fact that women are excluded from most combat occupational categories by a combination of federal law and service policies and that they are still concentrated in the medical categories for officers in all services. Because combat jobs are

Table 3

Occupational Distributions of Navy Personnel

Occupational Category	Officer			Enlisted		
	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference
0	—	—	—	9.60	8.90	0.70
1	0.40	0.03	0.37	16.70	9.60	7.10
2	44.00	4.00	40.00	9.50	13.60	4.10
3	3.00	3.00	0.00	5.30	12.00	6.70
4	12.00	3.00	9.00	0.80	1.60	0.80
5	3.00	4.00	1.00	8.60	23.20	14.70
6	13.00	44.00	31.00	28.50	10.40	18.10
7	3.00	35.00	32.00	6.00	3.40	2.60
8	7.00	4.00	3.00	5.20	5.20	0.00
9	14.00	3.00	11.00	10.00	12.10	2.10
Totals	99.40	100.03	127.37	100.2	100.10	56.90
s^a		127.37 / 2 = 63.69		56.90 / 2 = 28.45		

Note: Dashes in cells indicate that the given occupational category is not an option for that group of individuals.

^a s = Occupational Segregation Index

almost exclusively held by men, those services where combat assignments are a high priority should reflect more occupational segregation.

The Army and Marines have the highest levels of occupational segregation by sex among the enlisted force. This reflects the high proportion of combat-related jobs in these services, as well as the fact that the Marines have no individuals in medical/dental occupational categories, as Navy medical facilities and personnel are used by the Marine Corps. The latter is also reflective of the low proportion of women in the Marine Corps, especially among officers. Women comprise only 5 percent of Marine enlisted and 3.4 percent of Marine officers.²⁰ The Navy and the Air Force have the least occupational segregation with respect to the enlisted force. The Army and the Air Force have the highest proportion of women of all services. The proportion of Army enlisted who are women is 11.1 percent and of Army officers who are women is 11.1 percent, while the proportions for the Air Force are 13.4 percent and 12.5 percent respectively. These findings are consistent with the traditional military roles (especially combat roles) associated with the Army and Marine Corps, and the more highly technical occupational structures of the Navy and the Air Force.

Table 4

Occupational Distributions of Marine Corps Personnel

Occupational Category	Officer			Enlisted		
	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference
0	—	—	—	27.30	0.00	27.30
1	4.00	2.00	2.00	6.20	4.50	1.70
2	51.00	4.00	47.00	7.20	10.10	2.90
3	3.00	6.00	3.00	—	—	—
4	10.00	10.00	0.00	2.10	2.70	0.60
5	3.00	5.00	2.00	13.80	42.40	28.60
6	—	—	—	17.00	9.50	7.50
7	7.00	39.00	32.00	2.60	2.00	0.60
8	12.00	21.00	9.00	13.90	15.70	1.80
9	10.00	13.00	3.00	9.90	13.10	3.20
Totals	100.00	100.00	98.00	100.00	100.00	74.20
s^a	98.00 / 2 = 49.00			74.20 / 2 = 37.10		

Note: Dashes in cells indicate that the given occupational category is not an option for that group of individuals.

^a s = Occupational Segregation Index

The Air Force is also unique in that most of its combat positions are held by officers rather than enlisted personnel. This is reflected in the relatively high occupational segregation index for Air Force officers compared to that for enlisted members. The relatively high segregation for Navy officers may reflect the importance of combat ship duty for career advancement.

The relatively equitable distribution of men and women across Army occupations, in spite of high proportions of combat jobs, may manifest the high proportion of African-American women in the Army compared to the population in general. African-American women comprise 42.5 percent of all active-duty Army women,²¹ while they are only about 11.9 percent of women in the United States.²² African-American women are more likely than White women to hold nontraditional jobs in the civilian labor force.²³ If this holds true for the military, occupational segregation should be lower for those services with higher proportions of African-American women. Data from Table 6 seem to support this contention, as the distribution of African-Americans in DoD by sex, across occupational categories, is more equitable than that of the total DoD population. As shown in Table 7, the distribution across occupations of African-Ameri-

Table 5

Occupational Distributions of Air Force Personnel

Occu- pational Category	Officer			Enlisted		
	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference
0	-	-	-	8.00	2.20	5.80
1	0.40	0.02	0.38	13.60	6.60	7.00
2	43.00	10.00	33.00	5.90	7.40	1.50
3	4.00	6.00	2.00	4.70	13.40	8.70
4	17.00	15.00	2.00	3.80	2.70	1.10
5	7.00	5.00	2.00	18.70	41.30	22.60
6	10.00	41.00	31.0	26.10	8.70	17.40
7	8.00	14.00	6.00	5.80	2.10	3.70
8	8.00	8.00	0.00	8.70	8.40	0.30
9	3.0	0.80	2.20	4.60	7.40	2.80
Totals	100.40	99.82	78.58	99.90	100.20	70.90
s^2	78.58 / 2 = 39.29			70.90 / 2 = 35.45		

Note: Dashes in cells indicate that the given occupational category is not an option for that group of individuals.

s^2 = Occupational Segregation Index

cans in the Army is also more equitable than that of the total Army force.

The extent of sex segregation in the work place can be seen in greater detail by examining the employment of women and men in specific occupation categories. Table 9 summarizes recent employment data available for selected military occupations. The occupations are classified in this table as male-intensive, female-intensive, or neutral according to a conservative 20-point spread around the female (or male) proportion of the work force.²⁴ This allows room for individual choice in entering occupations, while allowing a comparison of the proportion of men and women in a given occupation. In March 1989, approximately 56 percent of all women were in the civilian labor force.²⁵ Therefore, a male-intensive occupation is one in which 36 percent or less of the work force is female. Female-intensive occupations are defined as those in which 76 percent or more of the work force is female. Those occupations in which 37 percent to 75 percent of the workers are female are classified as sex neutral.

Because women are such a small percentage of the active-duty military force (10.7%), using the same 20-point spread would mean that all jobs were at least sex-neutral, even if no women worked in them. Keeping in mind that the military as an occupational category is highly male-

Table 6

Occupational Distributions of Black DoD Personnel

Occu- pational Category	Officer			Enlisted		
	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference
0	—	—	—	17.8	3.7	14.1
1	0.0	0.0	0.0	5.4	3.2	2.2
2	35.3	5.6	29.7	10.0	9.9	0.1
3	3.4	3.7	0.3	6.6	12.6	6.0
4	19.3	14.0	5.3	2.1	1.6	0.5
5	3.6	2.4	1.2	23.2	45.0	21.8
6	8.3	34.1	25.8	14.8	6.0	8.8
7	11.1	23.0	12.1	2.9	1.3	1.6
8	15.2	16.5	1.3	11.7	10.9	0.8
9	3.3	0.6	2.7	5.5	6.2	0.7
Totals	99.5	99.9	78.4	100.0	100.4	56.6
s ^a		78.4 / 2 = 39.2			56.6 / 2 = 28.3	

Note: Dashes in cells indicate that the given occupational category is not an option for that group of individuals.

^a s = Occupational Segregation Index

intensive, the proportional representation of women is used as a conservative basis for differentiation between male-intensive and sex-neutral jobs. In other words, jobs with less than a proportional representation of women (10.7%) are classified as male-intensive, those with 30.7 percent or more women are female-intensive, and those with between 10.7 percent and 30.6 percent are sex-neutral. Both groups are classified based on the representation of women and men, thus results can be compared, although statistical significance of the differences cannot be assessed.

Results presented in Table 8 indicate that for the civilian subsample with less than a B.A. degree, over half (55%) of all women were working in female-intensive occupational categories, while only 2.9 percent worked in male-intensive classifications. Almost half (46.9%) of the female work force in this group worked in functional support occupations, and another 8.2 percent worked in medical/dental service or support jobs. Only 11.6 percent of men in this group were employed in functional support jobs, and only 1.2 percent in medical/dental service or support occupations. Over one third (36.6%) of the men in this group worked in precision production-, craft-, and repair-oriented categories, while only 11.9 percent of the women workers were employed in these job classifications.

Table 7

Occupational Distributions of Black Army Personnel

Occupational Category	Officer			Enlisted		
	% of Males	% of Females	Absolute Difference	% of Males	% of Females	Absolute Difference
0	—	—	—	27.7	2.3	25.4
1	0.3	0.1	0.2	4.0	2.2	1.8
2	40.0	5.8	34.2	11.9	8.9	3.0
3	4.0	4.3	0.3	6.0	13.6	7.7
4	19.0	15.3	3.7	2.5	1.8	0.7
5	2.3	1.2	1.1	19.0	47.6	28.6
6	9.3	31.6	22.3	12.8	5.9	6.9
7	9.0	18.0	9.0	2.0	0.9	1.1
8	16.1	22.7	6.6	12.3	12.9	0.6
9	0.0	0.0	0.0	2.3	3.6	1.3
Totals	100.0	99.0	77.4	100.5	99.7	77.1
s^a		$77.4 / 2 = 38.7$			$77.1 / 2 = 38.5$	

Note: Dashes in cells indicate that the given occupational category is not an option for that group of individuals.

^a s = Occupational Segregation Index

All occupations examined for the subsample with at least a B.A. degree were sex-neutral with the exception of engineering, which was male-intensive. Only 1.3 percent of the female workers in this group were classified as engineers, while 18.8 percent of male workers were included in this category. Administrative management, medical, and scientist/professional classifications are gender-neutral in composition. Of course, these broad categories do not give a complete picture. Women managers are employed to a far greater extent at the lower managerial levels than they are in top management positions.²⁶ In other words, while the lower levels of management and administrative ranks have become sex-neutral, the upper levels often remain male-intensive.²⁷

Data from Table 9 indicate that 36.1 percent of the female active-duty enlisted personnel work in the four sex-neutral occupational categories (communications, medical, functional support and service/supply). The remaining 63.9 percent work in male-intensive categories. Over two-thirds of military men (69.5%) work in sex-neutral job categories, while 30.5 percent work in male-intensive categories.

Among the categories examined for the officer corp. one (medical) was classified as female-intensive in composition, while two (engineering

Table 8

Concentration of Men and Women In Civilian Occupational Categories

A. Less Than B.A. Degree				
Occupation	% of Male Labor Force	% of Female Labor Force	% Female Workers	Type
Electrical/repair	5.0	0.0	0	M
Communications/intelligence	2.1	.5	16	M
Medical/dental	1.2	8.1	85	F
Technical/allied	2.5	1.4	33	M
Functional support	11.6	46.9	77	F
Electrical/mechanical	7.5	.5	5	M
Crafts	7.1	1.9	19	M
Service/supply	14.1	7.6	32	
B. At Least a B.A. Degree				
Engineering/maintenance	18.8	1.3	5	M
Scientist/professional	13.9	15.4	46	
Medical/dental	6.9	10.3	53	
Administration	39.6	29.5	37	
Support/procurement	7.9	7.7	43	

and scientists) were classified as male-intensive. About 2 out of 5 female officers (41.8%) work in the female-intensive medical occupational category, while only about 1 out of 10 men (11.1%) are in this category. Looking at the two sex-neutral categories, we find that 28.7 percent of male officers and 14.4 percent of female officers work in these areas.

Comparing the data from Tables 8 and 9 demonstrates that the two female-intensive categories for the civilian subsample without B.A. degrees (medical/dental and functional support) are sex-neutral for the enlisted military members. Service/supply jobs were classified as sex-neutral for both the civilian and military groups. Overall, more individuals work in sex-neutral occupational categories in the enlisted military force than in the comparable civilian labor force.

In contrast, the civilian group with at least a B.A. degree are more likely than military officers to work in sex-neutral occupational categories. None of the civilian job categories for this group was classified as female-intensive, while the medical/dental job category was classified as female-intensive for military officers. Interestingly, although it is classified as male-intensive for both the military and civilian groups, women officers comprise a much higher proportion of individuals in the military's engineering/maintenance category than for the comparable civilian group.

Table 9

Concentration of Men and Women In Military Occupational Categories

A. Enlisted

Occupation	% of Male Labor Force	% of Female Labor Force	% Female Workers	Type
Electrical/repair	5.9	10.5	6.3	M
Communications/intelligence	10.9	9.4	12.2	
Medical/dental	13.4	4.6	25.6	
Technical/allied	2.3	2.4	10.3	M
Functional support	35.6	13.1	24.7	
Electrical/mechanical	8.4	21.9	4.4	M
Crafts	1.9	4.3	5.1	M
Service/supply	9.6	9.0	11.2	
B. Officers				
Engineering/maintenance	8.8	13.9	8.8	M
Scientist/professional	3.6	4.6	8.7	M
Medical/dental	11.1	41.8	31.5	F
Administration	19.0	6.2	27.0	
Support/procurement	9.7	8.2	12.6	

The categories of engineering (officer/civilian with at least a B.A.) and technical/allied skills (enlisted/civilian with less than a B.A.) are particularly interesting because military affirmative action programs currently focus in these areas (see Tables 8 and 9). The military has instituted programs to increase access to these traditionally white male occupational areas for women and racial minorities for two important reasons. First, more complex military technology requires increasing numbers of engineers and other technical specialists. Second, the military has been unable to compete with civilian salaries for white men in these occupations. Thus, affirmative action and equal economic opportunity programs to increase representation of women (and minorities) in engineering and technical skills benefit both the military and the workers.

Once again, as in the civilian group, looking at broad classification categories can obfuscate existing occupational segregation by sex. Tables 10.A and 10.B report data for specific occupations. For example, 10.3 percent of women officers and only 6.9 percent of male officers are classified in the medical/dental category. Closer inspection of data reported in Table 10.B reveals, first, that 11.8 percent of women in this classification are physicians, while 38 percent of men in this classification are physicians and second, that 69.4 percent of women in this classification

distribution of enlisted men and women is far more representative than that of the officer corps. The selection of civilian jobs compared to those of the officer corps shows a similar distribution of men and women also. For both groups, nurses are classified as female-intensive, while engineers, physicians, and pilots are male-intensive.

Conclusion

A comparison of the distribution of full-time workers across occupations in a representative sample of the 1988 civilian labor force to that of individuals on active duty in all branches of the armed forces as of March 1989 reveals that although the military as a whole is extremely male-intensive, the proportionate distribution of women and men in the military, across occupational categories, is more representative than the distribution of women and men across civilian occupational categories. This holds true, across services, even for the Army and Marine Corps, which have a high proportion of combat jobs that are closed to women by a combination of U.S. statute and service policies. Of course, an important caveat should be introduced. Suggesting that the military has a more equitable distribution of men and women across occupational categories *compared to the civilian labor force* may be faint praise: the civilian labor force has shown remarkably stable occupational segregation through the past 30 years.²⁸ Furthermore, overall, the military remains a male-intensive occupation.

In the case of the Marine Corps, the equitable distribution may result from the fact that no jobs in the medical/dental categories are available, as Marines use Navy medical/dental facilities. Overall, a high proportion of individuals classified in this category is female, especially among officers. For the Army, this may result from an overrepresentation of African-American women, who appear more likely to enter nontraditional occupations than white women, compared to the population in general.

The distribution of officers across occupations is less representative than that of enlisted personnel, but still more equitable than comparably situated civilian workers. Women officers are few, especially in the higher grades (O4 and above),²⁹ and tend to be disproportionately located among military nurses.

The higher representation of women among military engineers and technical specialists may be indicative of the emphasis on equal opportunity programs and an example of the changes in the work force necessitated by future occupational demands and changing demographics. Technologi-

cal change and international competitive pressures will create the need for an increasing number of technical specialists in the civilian work force in the twenty-first century. Women will be called upon to provide much of this highly trained work force.

Of course, comparing numbers of individuals in various occupational groups is only part of the picture. As mentioned earlier, anecdotal accounts abound documenting that the qualitative experiences of women are distinct from those of men.³⁰ Women's small representation in the military as a whole reinforces these differences. As J.H. Steihm notes:

If promotion or uniform boards are selected without regard to sex, men can count on having a majority (and possibly a monopoly) on those bodies. Women cannot count on automatic representation. They must expect always to operate as a minority and sometimes to be wholly unrepresented.³¹

Implications for Policy

Overall, this analysis suggests that if we use the proportion of men and women in the service as a base, the military is attempting to create a representative distribution of men and women across occupations. The data also suggest the necessity for increasing recruitment of women and for promoting women into high-level noncommissioned officer and officer ranks. If assignments continue to be based, in part, on the sex distribution of members, increasing numbers of women should create a more representative distribution of women and men across occupations. This effect is highlighted by the more equitable distribution of African-American women, who are overrepresented among military women, especially those in the Army, compared to military women in general.

Finally, the higher segregation of women in ranks and services with high proportions of combat-related jobs suggests the importance of combat exclusion policies and utilization of the "risk rule" when determining available positions for women. Excluding women from jobs related to the primary mission of the military seems to reinforce their segregation among the military male majority.

Notes

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