

By **CAROLINE SCHULTZ**

laska has long been considered a land of economic opportunity for rugged people willing to take on risk and harsh conditions. Historically, men took advantage of

those opportunities far more frequently than women, largely due to social, legal, and economic barriers to women participating in nontraditional work.

Despite those limitations, many women made their mark on Alaska's history as prospectors, bush pilots, politicians, and in nearly every other profession in the last frontier.

Alaskans have far more career paths now than they did 100 years ago, and both men and women can be found doing nearly every kind of work. However, some fields are still dominated by one sex.

What's considered nontraditional

An occupation is considered nontraditional for a

Jobs in male-dominated occupations are more common in Alaska because of the outsize role of extractive industries in the economy. worker whose gender makes up 25 percent or less of that occupation's workers. Nearly a third of all workers held a nontraditional job in 2014, and men and women were equally likely to do so.

The types of jobs that are either male- or female-dominated probably aren't

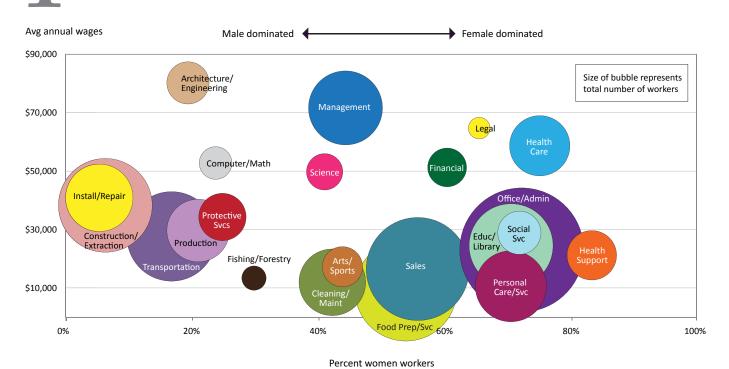
surprising. Male-dominated occupations tend to be in extraction, construction, and building trades and include most traditional "blue collar" work — an old expression that led to the newer phrase "pink collar," which colloquially refers to female-dominated service jobs.

Female-dominated occupations tend to be serviceand care-providing, which were the only types of work available to women in the not-so-distant past. (Exhibits 4 and 5 at the end of this article list femaleand male-dominated occupations.)

Male-dominated occupations

Jobs in male-dominated occupations are more common in Alaska because of the outsize role of extrac-

Occupation Groups by Earnings, Size, and Gender Makeup ALASKA, 2014



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

tive industries in the economy. One-third of men and 4 percent of women worked in a male-dominated occupation in 2014.

Average earnings for both men and women were higher in male-dominated occupations. On average, men in male-dominated occupations earned \$5,800 more than average in 2014, and women earned \$4,100 more. (See Exhibit 2.)

Over half of all male-dominated jobs were in four occupation categories. The largest was construction trades workers, where men held 94 percent of all jobs, followed by material moving workers; motor vehicle operators; and other installation, maintenance, and repair occupations. Women held 10 percent of jobs in these four categories combined. (See Exhibit 5.)

Women's average earnings were lower than men's in all male-dominated occupations, but the earnings gap wasn't any larger than for the entire working population. Women earned an average of \$27,200 in maledominated occupations while men earned \$40,600, amounting to a 67 percent earnings gap — the same as for all occupations combined.

Female-dominated occupations

Proportionally fewer women work in female-dominated occupations than men in male-dominated occupations.

Twenty-two percent of women and 4 percent of men worked in a female-dominated occupation in 2014. These women earned \$3,200 more than the average working woman, while the men earned \$2,700 less than the average working man.

The largest female-dominated occupation was information and record clerks, where women held 78 percent of jobs. There were relatively more men in the top female-dominated occupations than women in male-dominated occupations. Men made up 20 percent of the top four female-dominated occupations. (See Exhibit 4.)

The earnings gap was narrower and occasionally reversed in female-dominated occupations. Men still earned more than women in female-dominated jobs, but women made 82 percent of what men earned in these jobs: considerably more than the 67 cents on the dollar they earn for all work. Women earned an average of \$26,200 in female-dominated occupations while men made \$32,000.

Women earned more than men in five female-dominated occupations. In the female-dominated occupations where men earned more, the gap was narrower than the statewide average for all but one: health diagnosing and treating practitioners, which was also the top-earning female-dominated occupation. In that occupation, women earned 59 percent of what men earned.

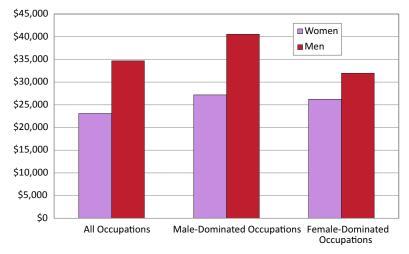
Imbalance beyond the extremes

Nontraditional jobs represent the extremes, but almost all occupations have some gender imbalance. Exhibit 1 shows the major occupation groups, where the bubble size represents the total number of workers in each group.

Average annual earnings are shown vertically and the percentage of workers who are women are along the horizontal axis. Men are heavily concentrated in the occupation groups on the left side of the chart, and women are more concentrated on the right.

Men Earn More in All Categories

ALASKA, 2014



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

This graph illustrates one of the main reasons for the earnings gap in Alaska, which is that traditionally male-dominated occupations are common and highpaying, and female-dominated occupations tend to pay considerably less. The concentration of men in male-dominated jobs also tends to be much higher.

Women's Participation Didn't Change Much in 10 Years

ALASKA, 2004 vs. 2014

		2004		2014	Difference		Growth
	2004	Percent	2014	Percent	in Female	Total	in Women
Occupation Group	Total	Women	Total	Women	Participation	Growth	Workers
Life, Physical, and Social Science	6,134	37%	6,477	41%	4%	6%	18%
Personal Care and Service	21,563	67%	24,663	71%	4%	14%	21%
Fishing, Farming, and Forestry	3,748	27%	2,897	30%	3%	-23%	-13%
Architecture and Engineering	8,047	17%	8,718	20%	2%	8%	22%
Transportation and Material Moving	41,321	15%	39,177	17%	2%	-5%	6%
Community and Social Service	7,944	71%	9,149	72%	1%	15%	18%
Legal Occupations	2,212	65%	2,300	66%	1%	4%	6%
Health Care Practitioners and Technical	15,273	74%	17,784	75%	1%	16%	18%
Health Care Support	12,257	83%	11,973	83%	1%	-2%	-2%
Education, Training and Library	35,964	70%	34,528	71%	1%	-4%	-3%
Construction and Extraction	46,239	6%	43,043	7%	0%	-7%	-2%
Food Preparation and Serving Related	48,453	55%	50,799	54%	-1%	5%	3%
Office and Administrative Support	78,736	74%	75,297	72%	-2%	-4%	-6%
Management	24,136	46%	26,739	45%	-2%	11%	7%
Installation, Maintenance, and Repair	23,121	7%	22,273	6%	-2%	-4%	-26%
Business and Financial	10,212	63%	12,144	61%	-2%	19%	15%
Sales and Related	51,074	58%	51,885	56%	-2%	2%	-2%
Protective Service	9,933	27%	10,961	25%	-2%	10%	1%
Computer and Mathematical	4,447	27%	5,214	24%	-3%	17%	4%
Building and Grounds Cleaning and Maintenance	20,423	46%	21,774	42%	-4%	7%	-2%
Production	19,395	26%	19,200	21%	-5%	-1%	-19%
Arts, Design, Entertainment, Sports, and Media	5,808	50%	7,945	44%	-6%	37%	20%

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

The chart shows three fairly distinct groupings of larger, lower-earning occupations at the bottom, with some disconnected higher-earning occupations floating toward the top.

The seven occupation groups where workers earn close to \$50,000 or more on average made up 16 percent of all workers. Jobs in these groups were split evenly between men and women, although men still earned more on average.

The group of bubbles in the lower left corner of the graph represents 47 percent of jobs held by male workers. Average annual earnings in these groups were \$36,900, and they include installation, maintenance, and repair; construction and extraction; protective service; production; and transportation and material moving occupations.

On the lower right-hand side of the chart, a similar cluster of bubbles represents just under half of all jobs held by women. These occupation groups include office and administrative support; personal care and service; community and social service; education, training, and library; and health care support occupations. Average annual earnings were \$21,600.

The middle cluster has the most gender parity — and lowest earnings — and includes arts, design, entertainment, sports, and media; building and grounds cleaning and maintenance; food preparation and serving; and sales and related occupations. These kinds of occupations are frequently seasonal and part-time, and average annual earnings were just \$13,000. Fiftytwo percent of workers in these occupations were women.

Little overall change in 10 years

Workplaces have gradually become more egalitarian, and both genders are advancing in nontraditional careers. But even though legal access to all kinds of work is virtually identical, economic and cultural institutions coupled with biological realities such as childbearing make change happen slowly. Occupation selection is sticky, or resistant to change, which partially explains why the earnings gap between women and men is shrinking so slowly.

About the data

This analysis only included workers covered by Alaska unemployment insurance who recently applied for a Permanent Fund Dividend and specified their gender. This analysis excludes federal civilian and military employees, the self-employed, nonresidents, and workers whose gender isn't known.

For total worker counts for men and women, we counted workers just once and rolled their wages together regardless of how many jobs each worker held in the year. For individual occupations, however, workers who held multiple jobs in a year were reported in each occupation they worked, which means some workers could be counted more than once.

We calculated average annual earnings by dividing total earnings in a specific occupation by the number of workers. This does not account for seasonality, whether a worker was full-time or part-time, or whether a worker started or left a job mid-year.

Between 2004 and 2014, there was essentially no change in the proportions of women and men in non-traditional occupations. (See Exhibit 3.)

In occupations identified as male-dominated in 2014, 88 percent of workers in 2004 were men, versus 89 percent in 2014. In occupations identified as female-dominated in 2014, women made up 80 percent of workers in both years.

These negligible differences mask some changes within specific occupations, but these changes were generally small and tended to cancel each other out because they occurred in both directions.

Exhibit 3 shows women's participation in all major occupation groups in both 2004 and 2014. It didn't dramatically change in any group, and while some groups became more diverse, others became more homogenous.

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Female-Dominated Occupations

Alaska, 2014

							\$ Ratio,
		Total	Female	Male	Percent	Average	Women's
Occupation Group	Occupation Title	Workers	Workers	Workers	Men	Earnings	to Men's
Office and Administrative Support	Information and Record Clerks	18,482	14,499	3,983	22%	\$20,101	91%
Personal Care and Service Occs	Other Personal Care and Service Workers	16,598	12,495	4,103	25%	\$11,525	94%
Office and Administrative Support	Financial Clerks	12,383	9,890	2,493	20%	\$26,227	103%
Office and Administrative Support	Secretaries and Administrative Assistants	10,720	9,373	1,347	13%	\$26,371	109%
Health Care Practitioners and Tech	Health Diagnosing and Treating Practitioners	10,630	8,394	2,236	21%	\$71,754	59%
Health Care Support	Other Health Care Support Occupations	6,640	5,784	856	13%	\$22,773	98%
Health Care Support	Nursing, Psychiatric, and Home Health Aides	5,117	4,040	1,077	21%	\$19,009	104%
Office and Administrative Support	Supervisors of Office and Admin Support Workers	2,497	1,874	623	25%	\$40,380	84%
Personal Care and Service Occs	Personal Appearance Workers	1,251	1,150	101	8%	\$17,315	84%
Legal Occupations	Legal Support Workers	1,019	833	186	18%	\$41,493	92%
Education, Training, and Library	Librarians, Curators, and Archivists	734	600	134	18%	\$31,985	107%
Personal Care and Service Occs	Animal Care and Service Workers	605	467	138	23%	\$9,866	98%
Personal Care and Service Occs	Supervisors of Personal Care and Service Workers	320	242	78	24%	\$20,528	83%
Health Care Support	Occ Therapy and Phys Therapist Assistants/Aides	216	168	48	22%	\$24,848	122%

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

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Male-Dominated Occupations

ALASKA, 2014

							\$ Ratio,
		Total	Male	Female	Percent	Average	Women's
Occupation Group	Occupation Title	Workers	Workers	Workers	Women	Earnings	to Men's
Construction and Extraction Occs	Construction Trades Workers	29,021	27,204	1,817	6%	\$35,406	57%
Transportation and Material Moving	Material Moving Workers	16,099	13,946	2,153	13%	\$18,646	50%
Installation, Maintenance, and Repair	Other Installation, Maint, and Repair Occs	11,667	10,922	745	6%	\$37,897	60%
Transportation and Material Moving	Motor Vehicle Operators	12,113	10,181	1,932	16%	\$26,549	53%
Installation, Maintenance and Repair	Vehicle/Mobile Equip Mechanics, Install, Repair	7,700	7,421	279	4%	\$38,139	48%
Construction and Extraction Occs	Extraction Workers	5,558	5,283	275	5%	\$60,695	74%
Building/Grounds Cleaning and Maint	Grounds Maintenance Workers	4,762	3,993	769	16%	\$10,235	64%
Architecture and Engineering	Engineers	4,868	3,975	893	18%	\$99,483	78%
Computer and Mathematical	Computer Occupations	4,971	3,835	1,136	23%	\$52,704	86%
Construction and Extraction Occs	Other Construction and Related Workers	3,641	3,284	357	10%	\$30,810	58%
Construction and Extraction Occs	Helpers, Construction Trades	3,512	3,190	322	9%	\$17,367	89%
Production	Other Production Occupations	3,432	2,948	484	14%	\$37,517	64%
Production	Plant and System Operators	2,921	2,785	136	5%	\$59,087	55%
Protective Service	Law Enforcement Workers	3,411	2,746	665	19%	\$50,082	70%
Architecture and Engineering	Drafters, Engineering Techs, and Mapping Techs	3,005	2,348	657	22%	\$55,734	78%
Transportation and Material Moving	Air Transportation Workers	2,539	1,952	587	23%	\$70,297	47%
Installation, Maintenance, and Repair	Electrical/Electronic Equip Mech, Install, Repair	2,114	1,939	175	8%	\$57,425	85%
Production	Metal Workers and Plastic Workers	1,961	1,891	70	4%	\$41,158	55%
Transportation and Material Moving	Water Transportation Workers	2,046	1,793	253	12%	\$41,298	46%
Construction and Extraction Occs	Supervisors of Construction and Extraction Wkrs	1,311	1,264	47	4%	\$84,428	51%
Protective Service	Fire Fighting and Prevention Workers	1,554	1,228	326	21%	\$37,493	25%
Transportation and Material Moving	Supervisors of Transp and Material Moving Wkrs	1,119	905	214	19%	\$37,165	41%
Installation, Maintenance, and Repair	Supervisors of Installation, Maint, Repair Wkrs	792	749	43	5%	\$66,931	57%
Architecture and Engineering	Architects, Surveyors, and Cartographers	845	686	159	19%	\$56,038	78%
Production	Assemblers and Fabricators	682	599	83	12%	\$18,967	66%
Protective Service	Supervisors of Protective Service Workers	680	581	99	15%	\$71,125	70%
Production	Supervisors of Production Workers	643	568	75	12%	\$63,782	62%
Personal Care and Service Occs	Baggage Porters, Bellhops, and Concierges	473	359	114	24%	\$15,136	67%
Fishing, Farming, and Forestry	Forest, Conservation, and Logging Workers	331	310	21	6%	\$24,960	59%
Production	Woodworkers	236	216	20	8%	\$21,399	38%
Transportation and Material Moving	Rail Transportation Workers	205	188	17	8%	\$62,518	67%
Fishing, Farming, and Forestry	Supervisors of Farming, Fishing, Forestry Wkrs	144	112	32	22%	\$41,755	36%

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section