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AUTHOR Bruno, Rosalind R.
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ABSTRACT

Data gathered in 1993 by the Census Bureau as part of the Survey of Income and Program Participation were analyzed to determine the relationship between level and field of training and economic status as of 1993. More than 27% of adults had obtained a degree of some type beyond high school, and the proportion of the adult population without a high school diploma decreased to 19%. Individuals with a degree beyond high school earned substantially more than individuals with either a high school diploma or some college and no degree. Approximately 55% of professional/doctorate degrees were in law and medicine/dentistry, and 28% of all master's degrees were in education. Degrees in law and medicine/dentistry were associated with the highest average monthly earnings, whereas degrees in home economics were associated with the lowest monthly earnings. At the bachelor's degree level, monthly earnings averaged $2,269 and ranged from $1,669 for education majors to $3,189 for engineering majors. At the advanced degree level, monthly earnings averaged $3,331 and ranged from $2,145 for liberal arts majors to $6,125 for medicine/dentistry. Within each degree type, there were fields of study that were highly concentrated in certain occupation categories, and within each field, type of occupation varied across degrees. (MN)

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Current Population Reports
Household Economic Studies

What's It Worth?
Field of Training and Economic Status: 1993

By Rosalind R. Bruno

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Degree Attainment Increases

By 1993, more than 1 out of 4 adults, 18 years old and over (27 percent), had obtained a degree of some type beyond high school, a substantial increase over the 21 percent reported in 1984. The proportion of the adult population without a high school diploma decreased to less than 1 in 5 (19 percent in 1993 and 26 percent in 1984).

More than one-half of the adult population reported a high school diploma as their highest degree in 1993 (54 percent). Of these, slightly more than one-third had also attended, but had not received a degree from a post-secondary institution.

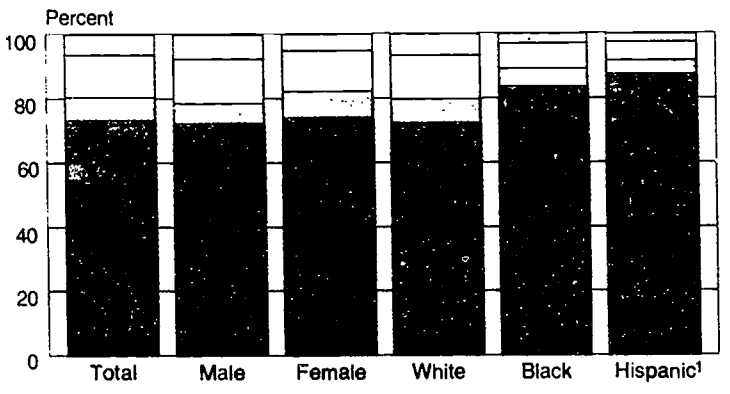
How we differ.....

In 1993, 28 percent of men and 26 percent of women held degrees above the high school level. Women were less likely than men to have an advanced degree, but more likely to have an associate or vocational degree.

Educational attainment differences among Whites, Blacks, and persons of Hispanic origin were substantial: 28 percent of Whites held degrees beyond high school, compared with 16 percent of Blacks and 13 percent of the Hispanic origin population[1] (see figure 1). In addition, the proportion of Hispanics without a high school diploma (40 percent) was much greater than the proportion of Whites (18 percent) or Blacks (27 percent).

[1] Persons of Hispanic origin may be of any race.

Figure 1.
Highest Degree Earned, by Sex, Race, and Hispanic Origin: Spring 1993



[1]Persons of Hispanic origin may be of any race.

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The Economic Rewards for Higher Education

Independent of the personal enrichment and intrinsic value derived from additional schooling, there is a positive economic return to higher education.

For each level of highest post-secondary degree, the mean monthly earnings[2] differ substantially from all others. Of all persons with degrees beyond high school, the mean monthly earnings ranged from $1,375 for persons with vocational certificates to $5,067 for persons with professional degrees.

Except for the comparison between doctorate and professional degrees, most degrees beyond high school had significantly higher earnings than the next lower degree. Persons with a degree beyond high school had average monthly earnings that were substantially larger than those of persons with either a high school diploma only or some college and no degree ($2,339 vs. $1,080 and $1,303, respectively). For persons who did not complete high school, mean monthly earnings were $508.

[2] "Mean monthly earnings" is computed as the total of all earnings over the 4-month period divided by the number of months in which earnings were actually received. Earnings refer to wages and/or salary, including earnings from self-employment.

Field of Degree

Business degree was most popular.

Post-secondary degrees are granted in a wide variety of fields[3]. About one-half of all highest degrees were obtained in only four

[3]Survey respondents reported the field of training in which their highest degree was earned in 20 general categories.

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fields. Nearly 1 out of 5 individuals reporting post-secondary degrees (19 percent) had a degree in the field of business/management. Education was next at 13 percent, followed by nursing/pharmacy/technical health with 9 percent, and engineering with 8 percent.

Some degrees were dominated by a few fields.

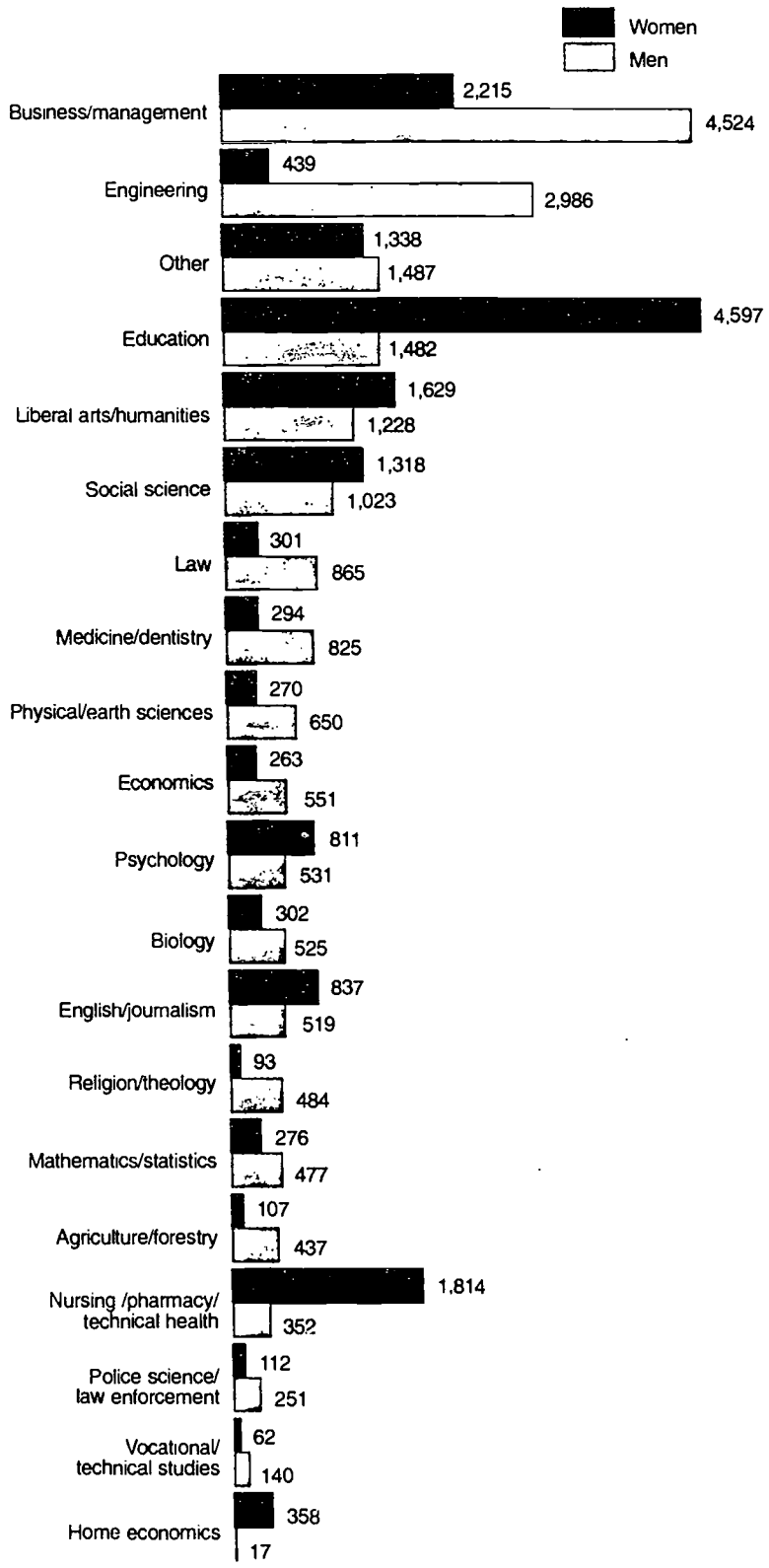
About 55 percent of all professional/doctorate degrees were in law and medicine/dentistry. About 28 percent of all master's degrees were in education, with an additional 17 percent in business/management; these same two fields represent a large proportion of those with bachelor's degrees (36 percent), with engineering adding another 10 percent. Business/management paired with nursing/pharmacy/technical health make up about 39 percent of all associate degrees, and the majority of all vocational degrees were in nursing/pharmacy/technical health (24 percent) and vocational/technical studies (39 percent).

Students complete degrees at different levels, with different goals.

Within many fields of study, such as nursing/pharmacy/ technical health, business/management, and education, students earned degrees at several different degree levels. In education, for example, 55 percent reported the highest level as a bachelor's degree, and 38 percent reported advanced degrees. In business/management, 55 percent completed at the bachelor's degree level, compared with only 15 percent at the advanced degree level, but 30 percent completed with a post-secondary degree below a bachelor's degree. In the nursing/pharmacy/technical health area, 34 percent held bachelor's degrees and 54 percent held associate or vocational degrees.

In contrast, other fields are concentrated at one degree level. Three-fourths of those reporting

Figure 2.
Field of Highest Degree, by Sex: Spring 1993
(Persons with bachelor's degree or higher; numbers in thousands)



fields of law or medicine/dentistry had doctorate or professional degrees. Ninety-four percent of those with degrees in the vocational/technical field had vocational certificates or associate degrees.

There were vast gender differences.

The proportions of men and women with degrees in some fields differed substantially (see figure 2). While 15 percent of the highest earned degrees held by men were in the field of engineering, only 2 percent of highest degrees held by women were in this field. Conversely, while 19 percent of women reported their highest degree in education, only 6 percent of men reported that same field. Also about 16 percent of women received their highest degree in the nursing and technical health field, compared with 3 percent of men.

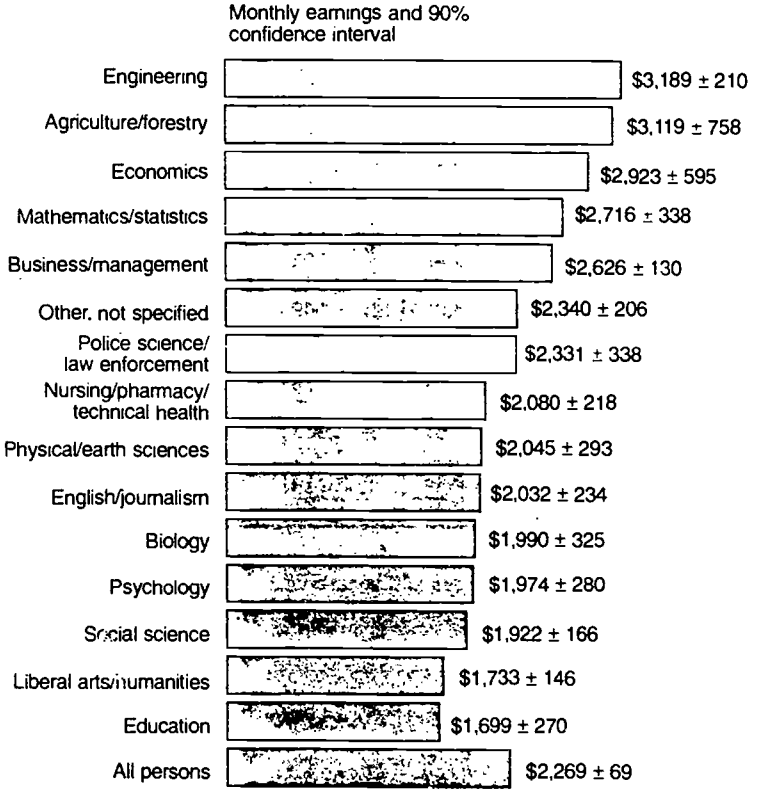
The proportions of men and women holding degrees in some fields were not very different. For example, 22 percent of men with degrees held them in business/management, compared with 16 percent of women. However, the distribution by type of degree differed. For women nearly one-half of those degrees were at the associate and vocational levels, compared with 1 in 5 for men. Men were more likely than women to have bachelor's and master's degrees.

There were small race and ethnic differences.

Differences in field of study by race and ethnicity were not large. Compared with White degree holders, Black degree holders were more likely to have earned their highest degrees in business/management (24 percent for Blacks and 19 percent for Whites). Yet, for Blacks, a much larger proportion of those business/management degrees were at the associate/vocational level than for Whites, 46 percent compared with 28 percent. Conversely, a significantly smaller proportion of Black business degree holders than White business degree holders held master's degrees (5 percent and 16 percent, respectively). Blacks were more likely than Whites to have earned their highest degrees in the social sciences and less likely to have earned that degree in engineering or the liberal arts/humanities.

For degree holders among persons of Hispanic origin, the distribution by field of study was not substantially different from that of the general population. The Hispanic origin population was less likely than average to have earned their highest degree in education; in most other fields, they were not significantly different.

Figure 3.
Average Monthly Earnings, by Level and Field of Degree: Spring 1993
(Highest degree: Bachelor's)



Economic Reward and Field of Degree

The choice of a major is one of the most difficult decisions for college students. Economic reward may be one of the motivating factors.

Degrees in the fields of law and medicine/dentistry are associated with the highest average monthly earnings ($4,353 and $5,049, respectively, and are not statistically significantly different from each other), while those in home economics are associated with the lowest ($1,165). Earnings are associated with level of training and relative demand. Clearly, there are differences in levels of training between these fields.

There were substantial variations in earnings within degree type (see figure 3). Persons with a bachelor's degree reported average monthly earnings of $2,269. (Variation by field for those with a bachelor's degree ranged from

$1,669 for education majors to $3,189 for engineering majors.)

At the advanced degree level, monthly earnings averaged $3,331 and ranged from $2,145 for liberal arts majors to $6,125 for medicine/dentistry. Persons in the areas of business, engineering, and law earned more than those in the academic fields of liberal arts and the social sciences.

Degrees, Fields, and Occupations

Students chose a field of study in college with at least some anticipation of the type of job they will seek after graduation. The majority of advanced degree holders held either an executive or administrative position (22.0 percent) or a professional specialty occupation (62.5 percent). Holders of bachelor's degrees also had sizable proportions in executive, administrative, or managerial positions and professional specialty occupations (58.1 percent combined). Associate and vocational degree holders were less likely to be in executive and professional occupations (27.8 percent) and more likely to be in administrative support and other occupations.

Within each degree type, there are fields of study that are highly concentrated in certain occupation categories. Among advanced degree holders, 85 percent of persons with degrees in law and medicine/dentistry were employed in a professional specialty occupation, and 54 percent of persons with degrees in business/management were in executive/ administrative jobs.

Within each field, the type of occupation varies across degrees. The same field at different educational levels produces skills and training for different types of jobs. In the business/ management area, for example, workers who received master's degrees and Ph.D.'s were most likely to be in executive, administrative, and managerial occupations (54 percent). For those with a bachelor's degree, 43 percent were executives and managers, and 23 percent were in sales. Only 19 percent of those with an associate or vocational degree were in executive and management positions. One-half occupied sales or administrative support positions.

Source of the Data

This report presents data from the Survey of Income and Program Participation (SIPP), second wave interview of the 1993 panel on the educational attainment and associated social, economic, and demographic characteristics of the population of the United States. These data were gathered in the 4-month period from June through September 1993. Educational attainment is based on formal degrees received and years of school completed. Table 1 shows numbers of persons by their highest attained degree and the field of the degree, by sex, race, and Hispanic origin. Table 2 shows mean monthly earnings by degree level and field.

More Information:

Detailed data discussed in the brief are available from Population Division on paper ($10), floppy disk ($20), or the Internet (www.census.gov). Tables may be transferred from the Census Bureau FTP area. The data are consistent with those reported in three Current Population Reports of the same title for 1984, 1987 and 1990 in this series (P70-11, P70-21, and P70-32). Additional tables on time spent earning a bachelor's degree and persons with work-related training are included.

Contact:

Rosalind R. Bruno
301-457-2464
rbruno@census.gov

The statistics is this report are subject to sampling variability, as well as survey design flaws, respondent classification errors, and data processing mistakes. The Census Bureau has taken steps to minimize errors, and analytical statements have been tested and meet statistical standards. However, because of methodological differences, use caution when comparing these data with data from other sources. The standard errors in the tables estimate the magnitude of the SIPP sampling error. We do not provide estimates of total error, which includes nonsampling error. For information on the source of the data and the accuracy of estimates, including the use and computation of standard errors, see the "Source and Accuracy Statement" that accompanies the tabulation package.

Table 1. **Highest Degree and Field of Study, by Sex, Race, and Hispanic Origin for Persons With Post-Secondary Degrees: Spring 1993**

(Numbers in thousands)

Field of degree	All races							White						
	Total number	Percent	Doctorate/ professional	Master's	Bachelor's	Associate	Vocational	Total number	Percent	Doctorate/ professional	Master's	Bachelor's	Associate	Vocational
All fields	50,452	100.0	3,488	8,355	24,943	8,301	5,364	44,267	100.0	3,062	7,454	21,764	7,236	4,752
Percent	100.0	(X)	6.9	16.6	49.4	16.5	10.6	100.0	(X)	6.9	16.8	49.2	16.3	10.7
Agriculture/forestry	635	1.3	39	109	395	65	28	609	1.4	39	104	374	65	28
Biology	898	1.8	71	132	624	57	14	735	1.7	65	108	501	46	14
Business/management	9,594	19.0	40	1,417	5,282	1,997	859	8,275	18.7	35	1,308	4,604	1,609	718
Economics	835	1.7	25	130	660	20	-	707	1.6	25	125	545	12	-
Education	6,530	12.9	115	2,350	3,613	328	124	5,902	13.3	97	2,107	3,289	298	112
Engineering	4,205	8.3	154	694	2,577	619	161	3,568	8.1	111	546	2,217	549	145
English/journalism	1,456	2.9	33	186	1,137	83	16	1,226	2.8	33	175	955	58	5
Home economics	435	0.9	-	38	337	51	10	370	0.8	-	32	297	36	5
Law	1,314	2.6	977	45	145	104	43	1,193	2.7	914	40	91	104	43
Liberal arts/humanities	3,948	7.8	93	574	2,188	975	117	3,599	8.1	84	528	1,958	919	111
Mathematics/statistics	893	1.8	37	150	567	108	31	750	1.7	32	123	482	88	25
Medicine/dentistry	1,275	2.5	954	23	142	81	75	1,030	2.3	782	23	95	68	62
Nursing/pharmacy/technical health	4,732	9.4	162	378	1,626	1,261	1,306	4,160	9.4	157	339	1,349	1,140	1,175
Physical/earth sciences	1,117	2.2	149	155	614	193	5	1,029	2.3	108	155	574	187	5
Police science/law enforcement	641	1.3	5	32	326	220	57	541	1.2	5	29	275	175	57
Psychology	1,435	2.8	186	341	815	77	16	1,295	2.9	167	316	733	62	16
Religion/theology	634	1.3	195	244	138	34	22	582	1.3	191	215	119	34	22
Social science	2,556	5.1	79	502	1,760	201	15	2,207	5.0	70	421	1,527	169	10
Vocational/technical studies	3,191	6.3	4	17	181	903	2,086	2,858	6.5	4	12	149	810	1,882
Other	4,130	8.2	171	838	1,816	926	379	3,631	8.2	143	746	1,618	808	317

Field of degree	Black							Hispanic[1]						
	Total number	Percent	Doctorate/ professional	Master's	Bachelor's	Associate	Vocational	Total number	Percent	Doctorate/ professional	Master's	Bachelor's	Associate	Vocational
All fields	3,514	100.0	108	523	1,683	759	440	2,097	100.0	125	294	948	488	242
Percent	100.0	(X)	3.1	14.9	47.9	21.6	12.5	100.0	(X)	6.0	14.0	45.2	23.3	11.5
Agriculture/forestry	11	0.3	-	-	11	-	-	17	0.8	-	-	10	-	7
Biology	67	1.9	-	10	49	8	-	36	1.7	-	6	30	-	-
Business/management	843	24.0	-	39	419	284	101	394	18.8	-	32	228	103	31
Economics	50	1.4	-	-	42	8	-	5	0.2	-	-	5	-	-
Education	440	12.5	13	182	214	25	6	205	9.8	-	75	100	30	-
Engineering	219	6.2	-	60	104	40	16	177	8.4	21	25	82	39	10
English/journalism	109	3.1	-	6	91	5	6	66	3.1	-	5	35	21	5
Home economics	27	0.8	-	6	21	-	-	24	1.1	-	-	24	-	-
Law	53	1.5	34	-	19	-	-	49	2.3	31	-	7	11	-
Liberal arts/humanities	175	5.0	5	32	95	37	6	185	8.8	11	39	77	57	5
Mathematics/statistics	106	3.0	-	6	74	20	7	56	2.7	4	-	25	17	10
Medicine/dentistry	49	1.4	21	-	6	8	13	53	2.5	20	7	10	16	-
Nursing/pharmacy/technical health	330	9.4	-	10	127	97	95	162	7.7	13	10	60	31	48
Physical/earth sciences	37	1.1	16	-	15	7	-	31	1.5	-	13	7	11	-
Police science/law enforcement	70	2.0	-	3	27	40	-	59	2.8	-	-	24	29	5
Psychology	78	2.2	5	9	49	15	-	85	4.1	5	30	40	4	7
Religion/theology	48	1.4	-	29	19	-	-	29	1.4	20	-	6	-	-
Social science	259	7.4	9	70	153	27	-	120	5.7	-	32	89	-	-
Vocational/technical studies	215	6.1	-	5	12	51	146	150	7.2	-	-	4	49	97
Other	328	9.3	5	56	137	87	44	196	9.3	-	21	88	70	17

Field of degree	Male							Female						
	Total number	Percent	Doctorate/ professional	Master's	Bachelor's	Associate	Vocational	Total number	Percent	Doctorate/ professional	Master's	Bachelor's	Associate	Vocational
All fields	25,009	100.0	2,576	4,222	12,554	3,598	2,059	25,443	100.0	912	4,134	12,390	4,703	3,305
Percent	100.0	(X)	10.3	16.9	50.2	14.4	8.2	100.0	(X)	3.6	16.2	48.7	18.5	13.0
Agriculture/forestry	517	2.1	39	88	310	58	23	118	0.5	-	21	86	7	5
Biology	559	2.2	55	83	387	30	5	338	1.3	16	49	237	26	10
Business/management	5,556	22.2	35	1,062	3,427	812	220	4,039	15.9	5	355	1,855	1,185	639
Economics	551	2.2	20	96	435	-	-	283	1.1	5	34	224	20	-
Education	1,574	6.3	82	636	764	80	12	4,956	19.5	33	1,714	2,850	247	112
Engineering	3,623	14.5	148	598	2,240	517	119	583	2.3	6	96	337	102	41
English/journalism	551	2.2	33	80	406	26	6	905	3.6	-	106	731	57	10
Home economics	17	0.1	-	-	-	-	-	418	1.6	-	38	320	51	10
Law	913	3.7	729	34	102	41	6	400	1.6	247	11	43	62	36
Liberal arts/humanities	1,592	6.4	48	256	924	318	47	2,356	9.3	46	319	1,264	657	70
Mathematics/statistics	554	2.2	37	95	345	61	16	338	1.3	-	55	221	47	15
Medicine/dentistry	847	3.4	755	18	52	22	-	428	1.7	199	5	90	59	75
Nursing/pharmacy/technical health	651	2.6	37	49	266	173	126	4,081	16.0	125	329	1,360	1,088	1,179
Physical/earth sciences	764	3.1	119	120	411	109	5	353	1.4	31	36	203	84	-
Police science/law enforcement	497	2.0	5	12	234	194	53	144	0.6	-	20	92	27	5
Psychology	579	2.3	102	126	303	43	5	856	3.4	85	214	512	34	11
Religion/theology	521	2.1	169	207	108	15	22	113	0.4	26	37	30	19	-
Social science	1,109	4.4	43	249	731	81	5	1,448	5.7	36	253	1,029	120	10
Vocational/technical studies	1,907	7.6	4	12	124	570	1,196	1,284	5.0	-	5	57	333	890
Other	2,127	8.5	118	401	968	448	192	2,003	7.9	53	437	848	478	187

[1]Persons of Hispanic origin may be of any race. - Represents zero or rounds to zero. (X) Not applicable

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Table 2. **Average Monthly Earnings, by Level and Field of Degree: Spring 1993**

(Numbers in thousands)

Field of degree	All degrees			Advanced degrees			Bachelor's degrees		
	Persons with earnings	Mean earnings	Standard error	Persons with earnings	Mean earnings	Standard error	Persons with earnings	Mean earnings	Standard error
All persons	39,184	$2,339	$38	9,505	$3,331	$80	19,435	$2,269	$43
Agriculture/forestry	548	2,973	391	118	(B)	(B)	348	3,119	474
Biology	692	2,118	196	161	(B)	(B)	470	1,990	203
Business/management	7,575	2,426	69	1,187	3,525	165	4,302	2,626	81
Economics	630	3,330	496	135	(B)	(B)	495	2,923	372
Education	4,694	1,884	124	1,875	2,388	97	2,581	1,669	169
Engineering	3,495	3,117	124	725	3,996	263	2,160	3,189	131
English/journalism	1,108	2,331	372	169	(B)	(B)	880	2,032	146
Home economics	245	1,165	211	19	(B)	(B)	195	(B)	(B)
Law	1,075	4,353	352	859	5,062	347	95	(B)	(B)
Liberial arts/humanities	2,883	1,733	88	510	2,145	199	1,573	1,733	91
Mathematics/statistics	683	2 583	225	108	(B)	(B)	460	2,716	211
Medicine/dentistry	1,035	5,049	467	820	6,125	469	91	(B)	(B)
Nursing/pharmacy/technical health	3,602	1,889	80	420	2,480	221	1,272	2,080	136
Physical/earth sciences	854	2,357	209	229	3,234	456	447	2,045	183
Police science/law enforcement	548	2,178	179	31	(B)	(B)	283	2,331	211
Psychology	1,133	2,236	172	431	2,826	257	642	1,974	175
Religion/theology	517	1,963	184	381	2,285	186	95	(B)	(B)
Social science	2,034	1,970	105	457	2,275	187	1,386	1,922	104
Vocational/technical studies	2,461	1,713	107	14	(B)	(B)	149	(B)	(B)
Other	3,373	2,327	142	855	3,294	388	1,511	2,340	129

(B) Base less than 200,000 persons.

Note: All degrees include associate degrees and vocational certificates, not shown separately.