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## ABSTRACT

A brief summary of data gathered from the Survey of Earned Doctorates during the academic year 1976-1977 is presented in this, the eleventh in a series of yearly summaries of data, a series that began in 1967. Data was obtained from questionnaires filled out by the graduates as they completed all requirements for their doctoral degrees, and refers to doctorates earned during the period July 1, 1976 to June 30, 1977, exclusive of professional degrees such as the M.D., D.D.S. and D.V.M. Statistics show that the 31,672 doctorates awarded by U.S. universities in 1977 was a 3.8 percent decrease from the 1976 figure of 32,936. In an analysis of 10 selected fields, graduate programs in mathematics, physics, chemistry, electrical engineering, zoology, and German rated as distinguished in earlier studies showed smaller percentage decrease in numbers of Ph.D.'s than programs with lower ratings. This was not true in mechanical engineering, entomology, geography and the classics. The number of doctorates awarded to men decreased by 5.6 percent from 25,253 in 1976 to 23,827 in 1977 while the number of doctorates awarded to women increased by 2.1 percent from 7,683 in 1976 to 7,845. It is also shown that the proportion of Ph.D.'s still seeking postdoctoral study at time of Ph.D. increased from 4.4 percent in 1976 to 4.8 percent in 1977 and the proportion of Ph.D.'s still seeking employment at time of Ph.D. in 1977 was 21.3 percent, unchanged from 1976. (SFG)

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DEPARTMENT OF HEALTH  
 EDUCATION & WELFARE  
 NATIONAL INSTITUTE OF  
 EDUCATION

## HIGHLIGHTS

- The 31,672 doctorates awarded by United States universities in 1977 was a 3.8% decrease from the 1976 figure of 32,936.
- There has been a decrease in the total number of Ph.D.'s in each year since 1973 and the largest of these decreases, 1,264 Ph.D.'s, occurred between 1976 and 1977.
- In an analysis of ten selected fields, graduate programs in mathematics, physics, chemistry, electrical engineering, zoology, and German rated as distinguished in earlier studies showed smaller percentage decreases in number of Ph.D.'s than programs with lower ratings. This was not true in mechanical engineering, entomology, geography and the classics.
- The number of doctorates awarded to men decreased by 5.6% from 25,253 in 1976 to 23,827 in 1977. The number of men Ph.D.'s decreased in all seven broad fields.
- The number of doctorates in the physical sciences and engineering awarded to men in 1977 is smaller than the number in 1967.
- The proportion of doctorates awarded to women continued to increase reaching an all-time high of 24.8% in 1977.
- The number of doctorates awarded to women increased by 2.1% from 7,683 in 1976 to 7,845.
- The number of women Ph.D.'s increased in all broad fields except the life sciences and the humanities.
- The proportion of Ph.D.'s still seeking postdoctoral study at time of Ph.D. increased from 4.4% in 1976 to 4.8% in 1977.
- The proportion of Ph.D.'s still seeking employment at time of Ph.D. in 1977 was 21.3%, unchanged from 1976.

**Summary  
Report  
1977  
DOCTORATE  
RECIPIENTS  
FROM  
UNITED  
STATES  
UNIVERSITIES**

The Survey of Earned Doctorates is conducted by the National Research Council for the National Science Foundation, the U.S. Office of Education, the National Institutes of Health, and the National Endowment for the Humanities

Dorothy M. Gilford  
*Project Director*

Peter D. Syverson  
*Staff Associate*

Commission on Human Resources  
NATIONAL RESEARCH COUNCIL

NATIONAL ACADEMY OF SCIENCES  
February 1978

FOREWORD

This report presents a brief summary of data gathered from the Survey of Earned Doctorates during the years 1966-1977. The survey was conducted on behalf of the Commission on Human Resources of the National Research Council. Questionnaire forms, distributed to the deans of the Graduate Schools and faculties of the graduates of the survey, were sent to them their doctoral degrees. The data in this report refer to doctorates earned during the period July 1, 1966 to June 30, 1977, but they do not include professional degrees such as the M.D., D.D.S., and D.V.M.

This is the eleventh in a series of yearly summaries of data from the Survey of Earned Doctorates, a series which has been published annually since 1966. The data gathered during the year in the survey of 1977 were collected from an earlier period of data from the Survey of Earned Doctorates, 1966-1977, available to the M.D. and D.V.M. A comparable report for the period 1966-1977 is in press. To date, we have not published either data on doctorates for the period 1966-1977.

The data published in this Survey of Earned Doctorates are the result of the cooperation of the resulting data, and the publication of the reports are supported jointly by the National Science Foundation, the National Institute of Education, the National Institutes of Health, and the National Employment for the Humanities. The CHP wishes to extend its appreciation to these agencies for their assistance.

The Survey of Earned Doctorates is under the administrative supervision of Dorothy M. Clifford. Peter G. Overton and Muriel S. Jones had continuing responsibility for the development of the survey, statistics and the graphics in the report. Charles Dinkard of the National Science Foundation, Donald Bigelow of the U.S. Office of Education, William D. DeLong of the National Institute of Health, and Stanley Fursten of the National Endowment for the Humanities are also administrative advisors in the design and analysis of the survey, which proceeded independently of national policy. Clifford was the principal lead reviewer for the report and Judith R. P. was the lead editor and layout designer. A number of the staff of the CHP, including the following, assisted in the data entry and analysis: George B. Jones, Robert R. Jones, and others. The CHP is concerned with the quality of the National Research Council's work, and the most effective use of time and money. The staff of the National Research Council is the point of contact for information on the survey.

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Dorothy M. Clifford  
Director, Human Resources Studies

NOTICE: This report is based on research conducted by the National Research Council with the support of the National Science Foundation, the U.S. Office of Education, the National Institute of Health, and the National Endowment for the Humanities. The views and conclusions expressed in this report are those of the authors and do not necessarily reflect the views of the sponsoring agencies.

# INTRODUCTION

The total number of doctorate recipients in 1977 was 31,672 (Text Table A). This number constitutes a decrease of 1,064 or 3.3% from the 32,736 doctorates awarded in 1976.

TEXT TABLE A - Doctorates Awarded by U.S. Universities, 1967-1977

Year	Doctorates	Year	Doctorates
1967	20,406	1970	31,766
1968	22,938	1974	33,546
1969	25,746	1975	32,346
1971	29,600	1976	32,736
1972	31,672	1977	31,672
1973	33,944		

Figure 1, which displays data from Text Table A on the annual number of doctorates awarded by U.S. universities, shows a steady drop in number of doctorates granted each year since 1970, to the largest drop of 1,064 (3.3%) occurring between 1976 and 1977. This is the largest annual drop in number of doctorate recipients in the 112 years that doctorates have been awarded by United States universities. It is the largest percentage drop since 1968.

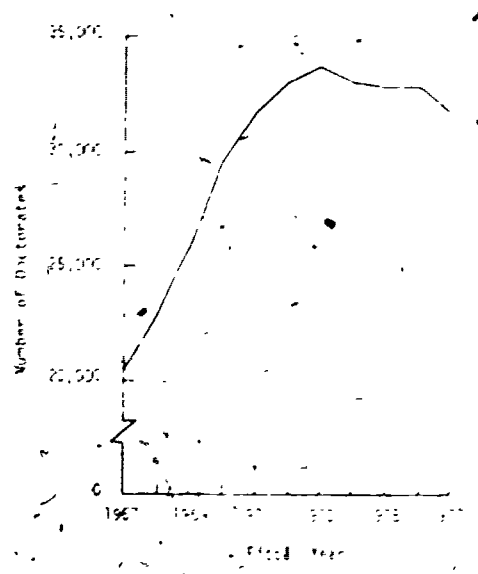


FIGURE 1 - Doctorates Awarded by U.S. Universities, 1967-1977

Selected statistics from the 1977 Survey of Earned Doctorates and trends on doctorate recipients based on the Doctorate Recipient File are included in this report. The data were selected to illuminate the drop in doctorate recipients trends by sex, by field, by race, a category of doctorate-granting institution, and by Ph.D. Anderson rating of doctorate department. The Summary Report for 1976 Doctorate Recipients presented trend data on postgraduate plans of doctorate recipients, with emphasis on those still seeking employment or postdoctoral study, and data on field of study from bachelor's degree field to Ph.D. field to field of first planned postdoctoral employment.

## PROPORTION OF WOMEN PH.D.'S INCREASES

The trend for an increasing proportion of doctorates to be women started in 1965, when 10.8% of the doctorates were women, and reached an all-time high of 24.3% in 1977. Doctorate number of women Ph.D. recipients to be doctorate, however. The 1977 figure is 1,160 greater than that for 1976, and that is more than in the past decade. Formerly, however, the decrease of 1,426 from 1976 to 1977 is the largest annual decrease since the 1960s.

From Figure 2, it can be seen that the number of men Ph.D. doctorates fell from 1976 to 1977 in all fields and that the number of women Ph.D. doctorates fell only in the health, physical, and life science. The number of women Ph.D. doctorates in the broad fields — education, social sciences, and behavioral sciences, professional fields and engineering — continued to increase. The total number of Ph.D. dropped from 1976 to 1977 in all seven of the broad fields. The largest percentage decrease occurred in the professional fields, which dropped by 9.1% (from 14,474 in 1976 to 13,140 in 1977), followed by a 6.8% decrease (from 2,331 in 1976 to 2,164 in 1977) in engineering.

1. Includes survey responses received after publication of earlier Summary Reports.  
 2. Data for 1920-1949 given in Summary Report, 1975, Doctorate Recipients from United States Universities, p. 4, National Research Council, Washington, D.C., 1975.  
 3. Data for 1956-1975 U.S. doctorates by broad field and sex given in Summary Report, 1976, Doctorate Recipients from United States Universities, p. 6, National Research Council, Washington, D.C., 1977. Text statistics include survey responses for 1976 received from seven women and six men after publication of the 1976 Summary Report.  
 4. Total for 1976 adjusted to compare with 1977 total which includes environmental engineers, who were formerly included in the environmental sciences.

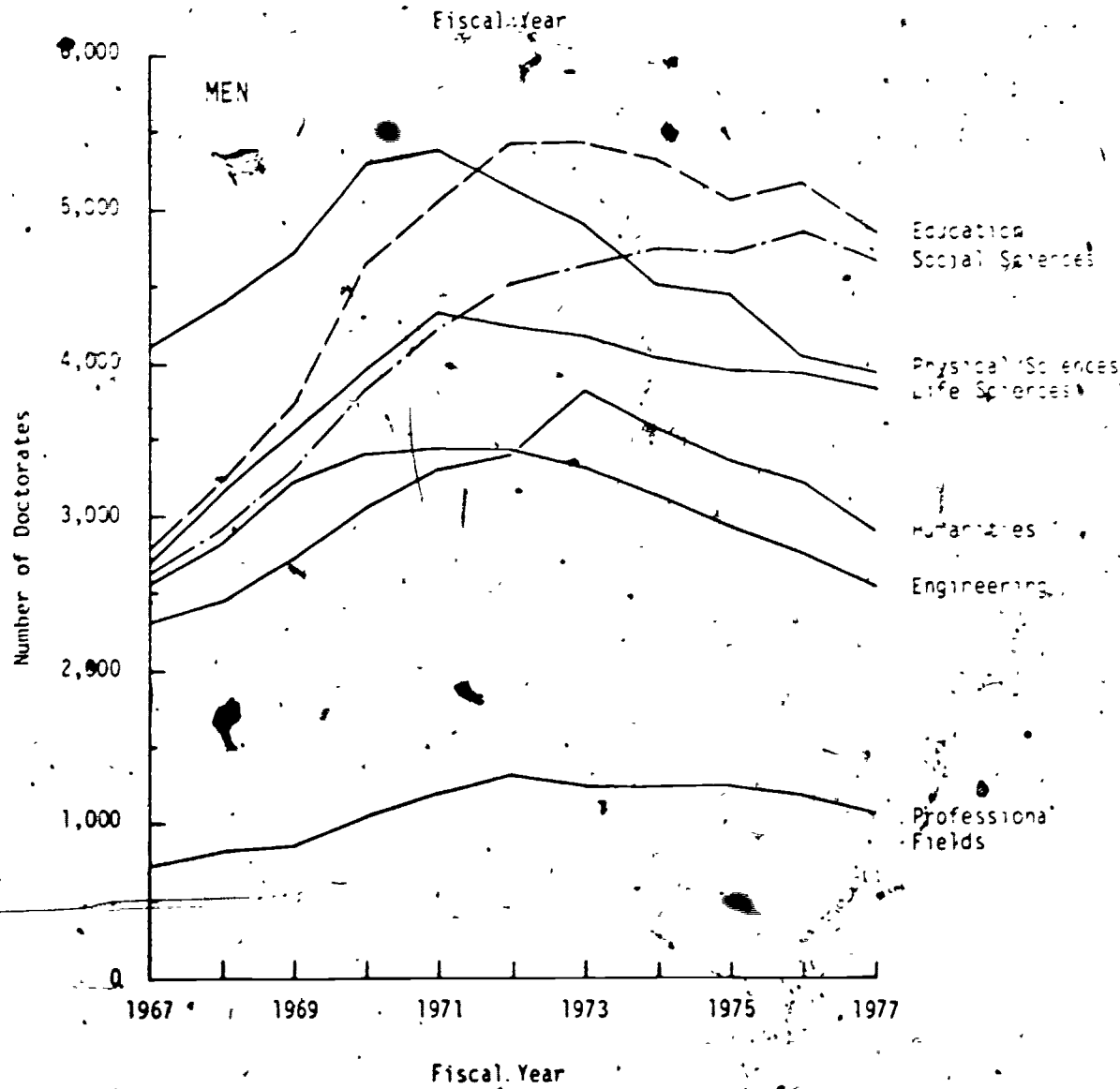
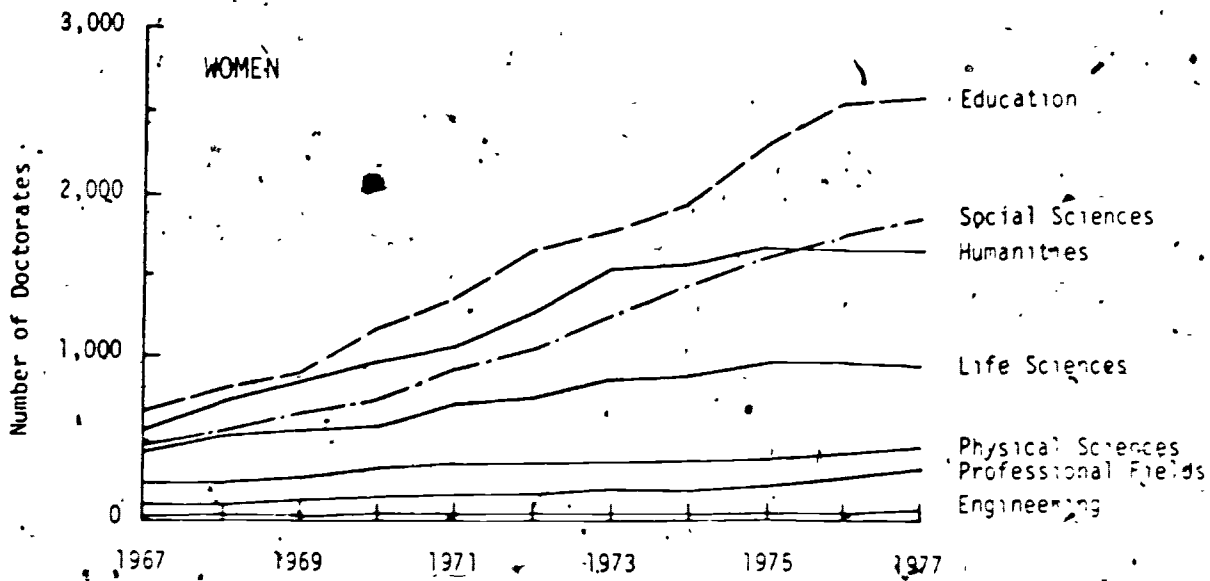


FIGURE 2  
Number of United States Doctorates by Broad Field, 1967-1977

# A DECREASE IN NUMBER OF DOCTORATES AWARDED TO MEN IS FOUND IN SEVERAL CATEGORIES OF UNIVERSITIES

To determine whether the decrease in number of Ph.D.'s is distributed evenly across the doctorate-granting institutions, Text Table B and Figure 3 provide data for the six largest broad fields on number of Ph.D.'s by Carnegie classification of institution, by sex. The Carnegie classification system is based on statistics on federal financial support and degrees awarded. Abbreviated definitions of the Carnegie categories used in this report are given below.

Research Universities I: The 50 leading universities by federal financial support of academic sciences in at least two of the three academic years 1968-1969, 1969-1970 and 1970-1971 provided they awarded at least 50 Ph.D.'s in 1969-1970.

Research Universities II: Included in the leading institutions by federal financial support in at least two of the above three years, awarded at least 50 Ph.D.'s in 1969-1970 or among the leading 50 institutions in total number of Ph.D.'s awarded from 1960-1961 to 1969-1970.

Doctoral-Granting Universities I: Awarded 40 or more Ph.D.'s in 1969-1970, or received at least \$3 million in federal financial support in 1969-1970 or 1970-1971 and granted more than 20 Ph.D.'s.

Doctoral-Granting Universities II: Awarded at least 10 Ph.D.'s in 1969-1970, or one of a few new institutions where expansion of the doctoral program is anticipated.

All Other Rated: Includes all other institutions that were classified by the Carnegie Commission. These are primarily, but not exclusively, professional schools and specialized institutions.

The Research Universities I category, the largest in terms of number of Ph.D.'s, has been further subdivided by type of control into the group of 30 public institutions and 22 private institutions in this category, to provide analysis groups more comparable in size.

Of the six largest fields, those showing large decreases in numbers of men Ph.D.'s are physical sciences, engineering, life sciences, humanities and education. The graphs for these fields generally show decreases in number of men Ph.D.'s for the four categories of institutions.

Public Research I, Private Research I, Research II and Doctoral-Granting I and II. The number of men receiving doctorates from institutions in the "All Other" category tended to increase slightly for these fields, except for the field of education, where there was a sizable increase followed by a drop from 1976 to 1977.

In the social sciences there has been only a small drop in the number of men Ph.D.'s during 1974-1977 but again the decrease is reflected in all the categories except "All Other." Of note is the number of doctorates in social sciences granted to men by the Doctoral-Granting I and II institutions. The number in this category exceeded the number in the Research II category in 1976 and 1977.

In the life sciences, the Research I institutions consistently granted more doctorates to men than did the Research I private institutions, an inversion of the relative position of these two categories in the physical sciences, engineering, social sciences and humanities. The pattern for education shows additional inversions of institutional categories.

The graphs for women Ph.D.'s differ from those for men primarily in that the lines are still ascending on, for the life sciences and the humanities, only starting to drop. The relative position of the lines on the graphs for different Carnegie categories for a field are essentially the same for women as for men. Because of the small numbers of women Ph.D.'s in some fields, there are more pronounced peaks and troughs in the graphs for women.

The proportion of women receiving Ph.D.'s from private Research I institutions is nearly equal to the proportion receiving Ph.D.'s from public Research I institutions for each of the fields, physical sciences, engineering and the humanities. On the other hand, public Research I institutions award by far the largest number of Ph.D.'s to men in these fields. In each of the six fields the proportion of women receiving Ph.D.'s from private Research I institutions is greater than the corresponding proportion of men.

1 Carnegie Commission on Higher Education, A Classification of Institutions of Higher Education Berkeley: Carnegie Foundation for the Advancement of Teaching, 1963.  
2 Used with permission. Copyright © 1973 by the Carnegie Foundation for the Advancement of Teaching





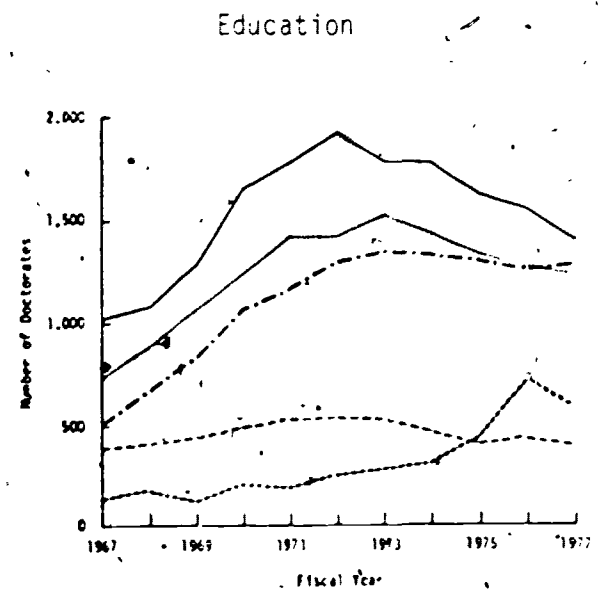
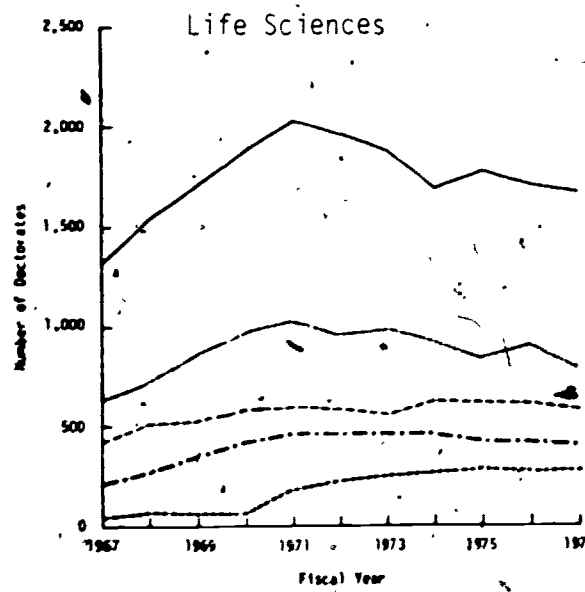
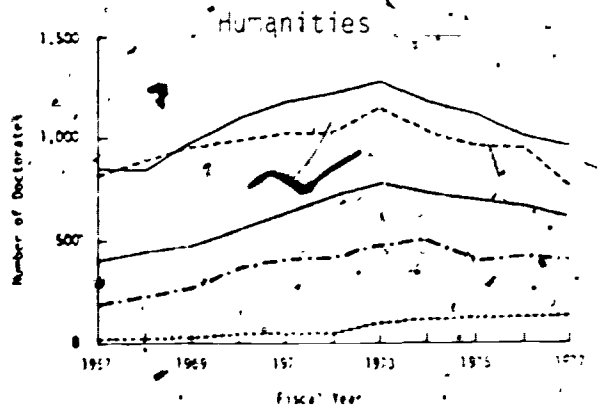
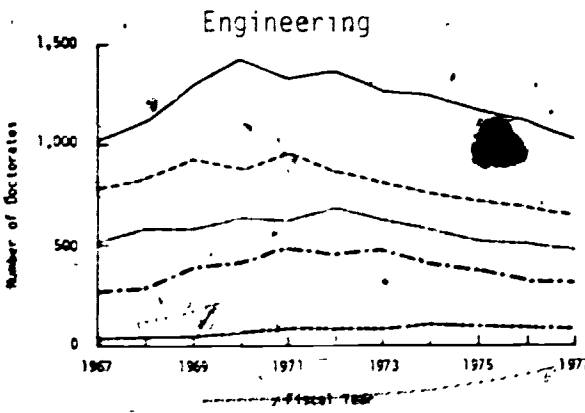
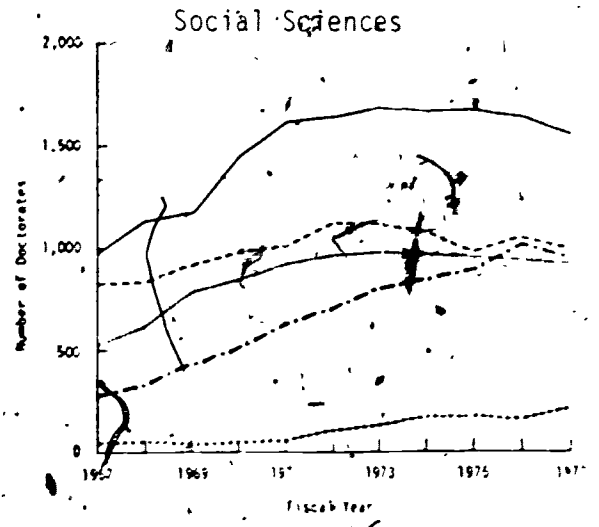
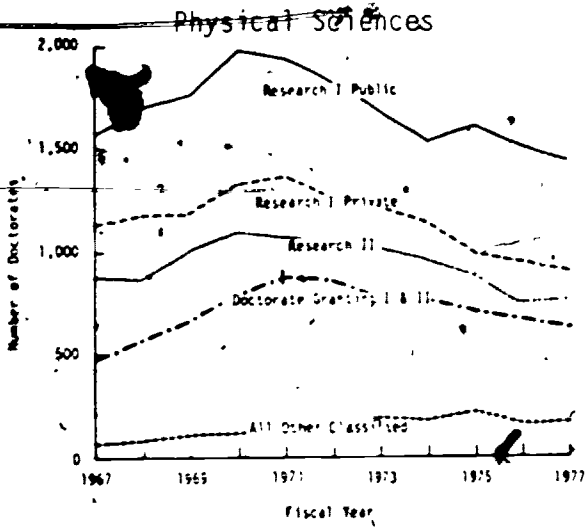
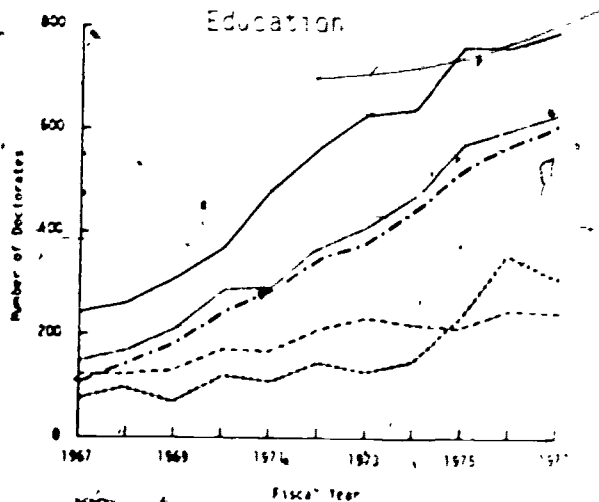
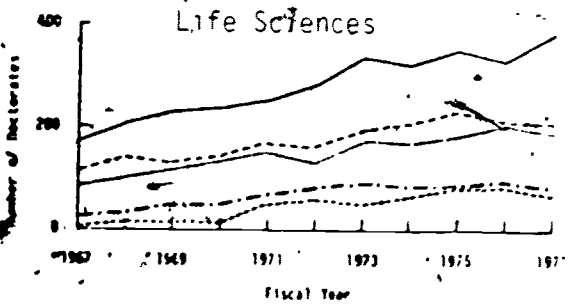
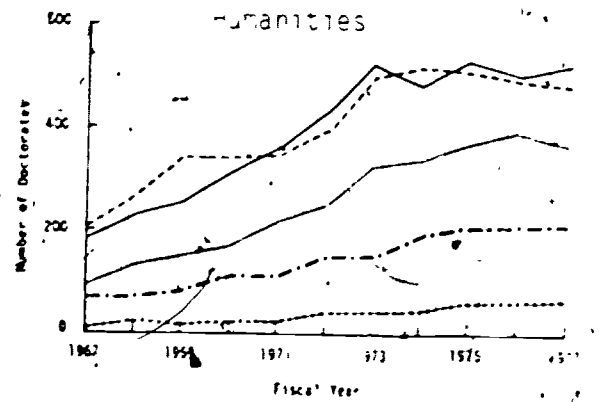
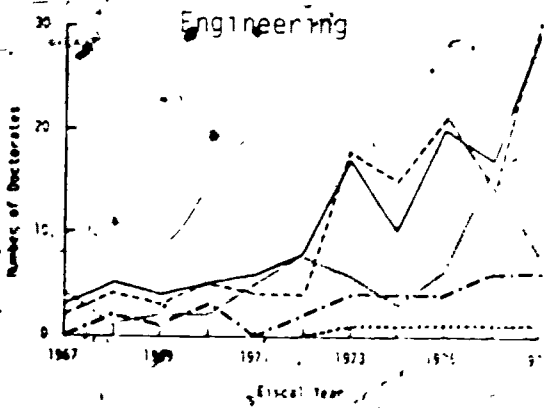
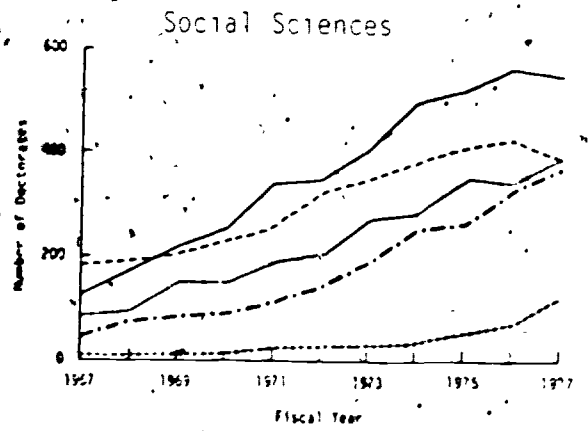
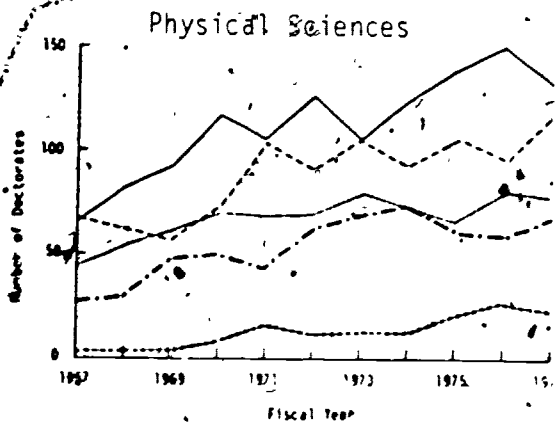


FIGURE 3  
 Doctorate Recipients by Carnegie Classification of Doctorate-Granting Institution, Sex and Field of Doctorate, 1967-1977

WOMEN\*



Research I Public  
 Research I Private  
 Research II

Doctorate Granting I & II  
 A: Other Classified

\* Scales vary because of large differences in field totals.

FIGURE 3 Continued

TEXT TABLE B

Distribution of Doctorate Recipients by Carnegie Classification of Doctorate-Granting Institution, Sex and Field of Doctorate Recipient

Carnegie Classification	MEN										WOMEN									
	'67	'68	'69	'70	'71	'72	'73	'74	'75	'76	'67	'68	'69	'70	'71	'72	'73	'74	'75	'76
Physical Sciences																				
Total 1/	4125	4409	4732	5117	5338	5669	6017	6356	6410	6709	2719	2808	2950	3124	3277	3451	3591	3704	3796	3914
Research I Public	1575	1710	1762	1910	1946	2074	2209	2284	2341	2410	1249	1300	1350	1410	1450	1500	1550	1600	1650	1700
Research I Private	3	72	735	133	168	174	176	177	177	177	88	101	101	101	101	101	101	101	101	101
Research II	879	873	1006	113	104	116	111	919	832	754	44	54	58	58	58	58	58	58	58	58
Doct. Granting I & II	458	575	552	732	758	850	78	851	717	658	38	50	48	55	55	55	55	55	55	55
All Other Classif	55	192	90	100	109	145	75	50	90	55	2	2	2	2	2	2	2	2	2	2
Engineering																				
Total 1/	2555	2836	324	348	2455	248	2167	2774	2880	2779	2587	2709	2809	2910	2910	2910	2910	2910	2910	2910
Research I Public	116	117	239	425	440	330	20	1610	156	108	108	108	108	108	108	108	108	108	108	108
Research I Private	79	325	924	881	983	878	138	768	730	600	600	600	600	600	600	600	600	600	600	600
Research II	507	552	575	635	50	580	540	768	542	519	48	48	48	48	48	48	48	48	48	48
Doct. Granting I & II	258	289	394	422	480	468	479	413	353	353	35	35	35	35	35	35	35	35	35	35
All Other Classif	28	43	49	54	78	78	68	103	51	56	5	5	5	5	5	5	5	5	5	5
Life Sciences																				
Total 1/	2726	2758	3559	3959	4757	4274	4708	3985	3431	292	191	191	191	191	191	191	191	191	191	191
Research I Public	333	354	3	829	213	1540	1873	584	742	777	777	777	777	777	777	777	777	777	777	777
Research I Private	433	484	533	585	536	589	557	518	542	542	542	542	542	542	542	542	542	542	542	542
Research II	658	710	819	985	1058	971	983	918	842	800	800	800	800	800	800	800	800	800	800	800
Doct. Granting I & II	225	274	357	439	484	457	437	455	417	417	417	417	417	417	417	417	417	417	417	417
All Other Classif	61	72	63	55	86	227	246	256	260	279	279	279	279	279	279	279	279	279	279	279
Social Sciences																				
Total 1/	2553	2939	3333	3827	4334	4553	4668	4725	4700	4551	4674	449	449	449	449	449	449	449	449	449
Research I Public	574	724	753	1445	1509	1545	1579	1555	1559	1547	1553	1553	1553	1553	1553	1553	1553	1553	1553	1553
Research I Private	821	824	938	975	1007	100	98	100	149	999	999	999	999	999	999	999	999	999	999	999
Research II	525	610	774	243	331	966	992	978	935	954	954	954	954	954	954	954	954	954	954	954
Doct. Granting I & II	285	391	422	572	619	703	796	848	890	894	894	894	894	894	894	894	894	894	894	894
All Other Classif	88	49	88	52	50	56	72	75	78	65	65	65	65	65	65	65	65	65	65	65
Humanities																				
Total 1/	2311	2491	2728	3095	3313	3424	3915	3593	3260	3207	2903	55	715	238	977	787	273	1546	576	656
Research I Public	851	853	959	1117	1167	227	1273	1556	120	109	969	969	969	969	969	969	969	969	969	969
Research I Private	822	898	974	964	1029	104	749	1038	362	957	764	764	764	764	764	764	764	764	764	764
Research II	405	454	477	564	547	704	794	738	703	677	677	677	677	677	677	677	677	677	677	677
Doct. Granting I & II	201	244	283	361	403	473	454	522	420	456	414	414	414	414	414	414	414	414	414	414
All Other Classif	30	39	24	54	52	54	72	75	72	44	44	44	44	44	44	44	44	44	44	44
Education																				
Total 1/	2791	3224	3745	4674	5025	5437	5455	5201	5063	5185	4864	590	807	903	86	1346	646	1780	779	2235
Research I Public	1019	1274	1280	1652	1785	1925	1790	1774	1609	1547	1596	1596	1596	1596	1596	1596	1596	1596	1596	1596
Research I Private	387	472	444	497	532	540	535	468	415	436	398	398	398	398	398	398	398	398	398	398
Research II	739	872	1057	1237	1417	1411	1505	1421	1342	1261	1227	1227	1227	1227	1227	1227	1227	1227	1227	1227
Doct. Granting I & II	508	673	822	1066	1156	1299	1342	1329	1309	1253	1274	1274	1274	1274	1274	1274	1274	1274	1274	1274
All Other Classif	147	193	143	219	195	262	283	309	418	593	581	581	581	581	581	581	581	581	581	581

1/ Total includes doctorate recipients from institutions not classified by Carnegie Commission

## DISTINGUISHED GRADUATE PROGRAMS TEND TO SHOW SMALLER PERCENTAGE DECREASES IN NUMBER OF PH.D.'S THAN PROGRAMS WITH LOWER RATINGS

To obtain a sharper focus on the locus of the decrease in number of Ph.D.'s, Text Table C and Figure 4 provide data for 10 of the 36 disciplines for which Roose-Andersen<sup>1</sup> ratings of graduate programs are available. The top Roose-Andersen ratings for departments are "Distinguished" (those with ratings of 4.00 and higher) and "Strong" (3.00-3.99). For the purpose of this report, programs receiving scores below 3.00 are included in a category of "Other Rated" programs. The disciplines included in Table C were selected from the 12 disciplines showing the largest percentage drop between the peak year in number of Ph.D.'s and 1977. Although this group included four engineering fields, two of them (chemical and civil) were omitted to maintain a wide spread of disciplines while meeting space limitations allowing only 10 fields.

In Figure 4, some similarities are discernible for the disciplines of mathematics, physics, chemistry, mechanical engineering and zoology. In each of these the largest number of Ph.D.'s was awarded by programs in the "Other Rated" category and the largest drop in number of Ph.D.'s from peak year to 1977 occurred in the "Other Rated" programs. The largest percentage decrease in Ph.D.'s occurred in the "Strong" programs except in the fields of zoology and mechanical engineering where it was in the "Other Rated" programs. The percentage decrease in Ph.D.'s for "Distinguished" programs was smaller than the decrease for "Strong" and "Other Rated" programs except in mechanical engineering. In mathematics and physics, the "Distinguished" programs and the "Strong" programs award approximately equal numbers of doctorate degrees. The number of Ph.D.'s from "Not Rated" programs grew from 1967 to 1973 or 1974 and then dropped slightly in all five fields.

The largest numbers of Ph.D.'s in entomology, geography and the classics are granted by the

"Strong" programs, followed by the "Other Rated" programs. The "Distinguished" programs and the "Not Rated" programs grant many fewer Ph.D.'s than the "Strong" and "Other Rated" programs, and in each of the three fields, the "Other Rated" programs have surpassed or equalled the "Distinguished" programs in number of Ph.D.'s during the period 1967-1977. In each of the three fields, the three rated categories of programs have shown decreases in number of Ph.D.'s but the numbers of Ph.D.'s are too small for meaningful comparison between categories.

In electrical engineering the number of Ph.D.'s awarded by the "Distinguished" programs is consistently smaller than the number for each of the other three categories. All three rated categories showed a drop of over 30% in number of Ph.D.'s from peak year to 1977, the largest numerical drop occurring in the "Other Rated" category.

In the field of German, the "Distinguished" category showed the smallest percentage drop of the three rated categories of programs. The "Not Rated" category grew rapidly during 1967-1976 but dropped in 1977.

In summary, in six of the seven largest fields analyzed, the trend in number of doctorates granted by distinguished departments has decreased at a slower rate than the trend in lesser rated departments. Moreover, the proportion of doctorates granted by the top-rated departments for fields shown in Text Table C has been relatively stable from 1967 to 1977. In fact, for the nine fields other than classics the distinguished departments' share of doctorates granted has changed by less than three percentage points from the peak year in number of Ph.D.'s to 1977. From Text Table C these changes, by field, are found to be: mathematics, 2.9%; physics, -0.7%; chemistry, 0.6%; electrical engineering, 1.6%; mechanical engineering, -1.3%; zoology, 1.8%; entomology, -1.0%; geography, -1.7%; German, 2.8%; and classics, -7.2%.

<sup>1</sup> Roose, Kenneth D., and Charles J. Andersen, A Rating of Graduate Programs. American Council on Education, Washington, D. C., 1970.

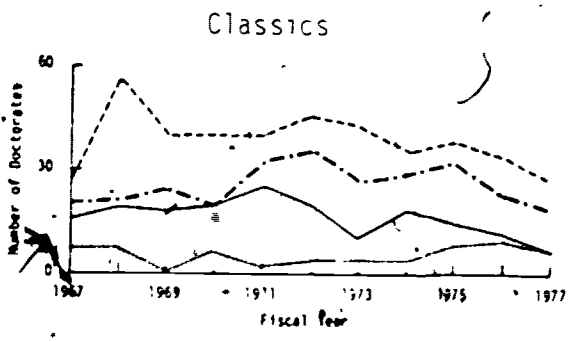
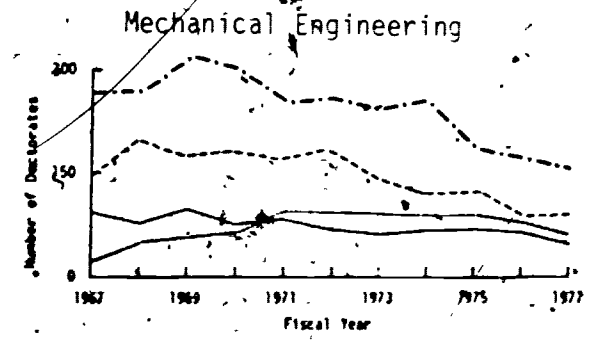
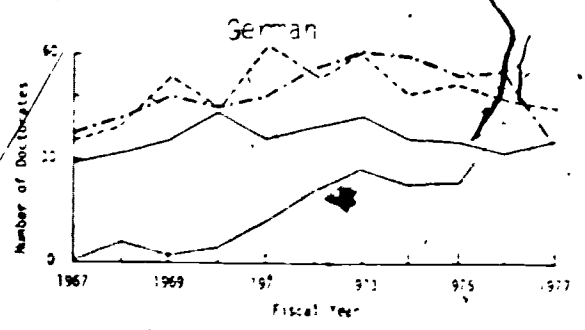
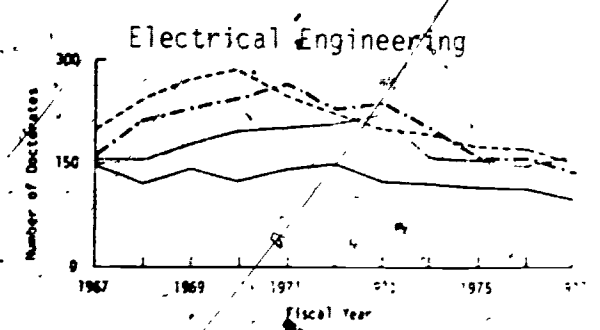
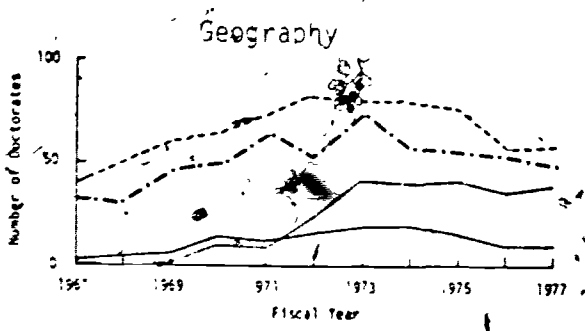
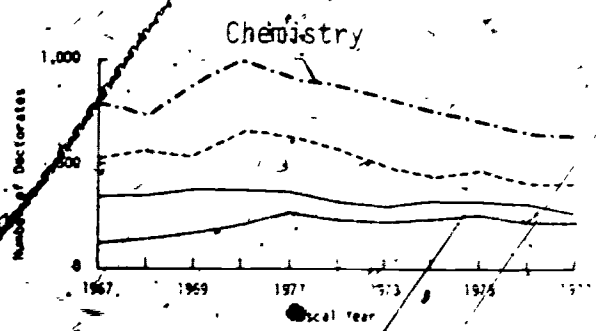
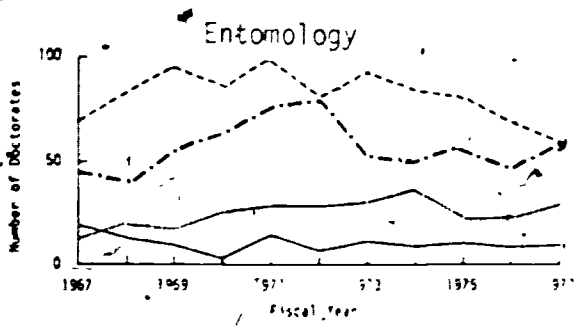
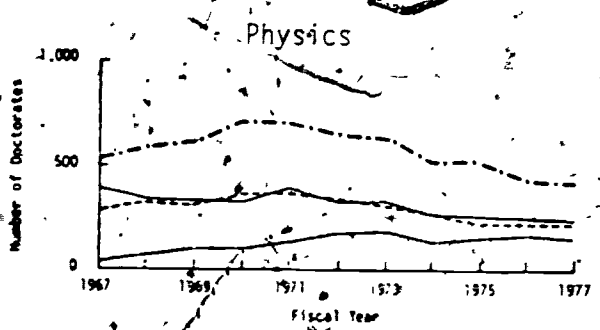
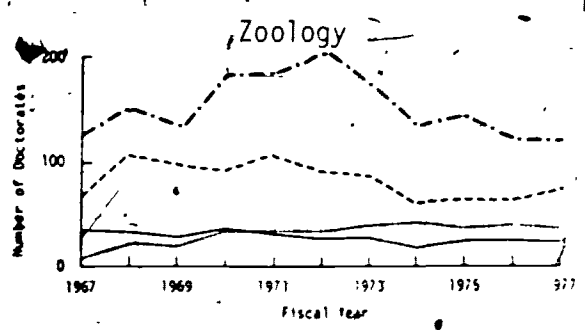
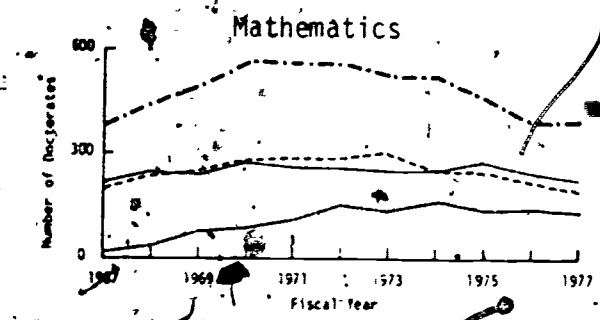
TEXT TABLE C

Trends in Doctorates Granted by Departments Grouped by Roose-Andersen Ratings for Selected Fields, 1967-1977

Roose-Andersen Rating	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Mathematics												Biology										
Total	830	970	1065	1224	1232	1201	1232	1209	1197	1003	959	231	317	210	341	300	356	30	259	277	256	254
4.00 - 5.00 <sup>1</sup>	219	247	241	283	265	262	261	262	277	243	228	33	31	21	34	30	37	28	29	25	27	24
3.00 - 3.99 <sup>2</sup>	204	239	244	288	294	295	307	271	257	216	193	66	58	39	51	48	50	39	60	64	63	76
Other Rated	386	448	499	566	565	564	534	527	467	395	398	123	152	155	163	168	216	174	131	144	127	120
Not Rated	21	36	81	87	114	54	139	159	146	145	142	9	21	21	33	32	33	40	43	38	41	35
Physics												Entomology										
Total	1248	1334	1342	1544	1624	1505	1457	1204	1167	1006	1029	165	164	176	170	218	175	184	175	170	146	163
4.00 - 5.00	386	342	334	344	396	341	331	273	207	251	244	19	13	9	3	15	11	11	12	10	8	9
3.00 - 3.99	281	336	311	382	375	345	317	274	236	226	218	69	32	96	50	39	31	32	63	30	68	58
Other Rated	544	590	605	717	707	657	628	511	515	448	417	44	39	50	63	76	50	52	49	57	46	53
Not Rated	37	66	92	101	146	162	181	146	155	161	150	14	20	17	20	28	27	29	30	23	23	26
Chemistry												Geography										
Total	1774	1797	1962	2238	2212	2017	1855	1706	1775	1624	1570	75	87	114	137	158	177	215	195	87	155	165
4.00 - 5.00	346	349	372	378	365	323	300	331	322	309	275	3	5	6	14	12	7	19	19	15	19	11
3.00 - 3.99	519	557	545	650	644	567	499	450	470	416	416	41	50	60	54	73	84	80	80	75	57	58
Other Rated	794	749	882	1003	935	881	817	770	722	663	649	31	30	46	50	63	52	74	57	55	53	43
Not Rated	115	142	163	207	268	240	239	245	262	231	230	0	2	2	9	10	24	42	39	41	36	38
Electrical Engineering												German										
Total	675	740	824	856	862	815	787	678	612	591	544	103	119	139	139	160	173	195	169	164	175	140
4.00 - 5.00	143	123	145	125	141	151	126	123	117	110	98	29	32	36	44	36	40	43	37	35	32	35
3.00 - 3.99	204	246	270	285	249	224	203	196	175	177	152	36	39	53	46	63	55	62	49	52	43	45
Other Rated	164	213	230	246	268	231	240	198	160	157	139	38	42	48	44	43	57	62	50	54	55	34
Not Rated	159	158	179	199	204	209	213	161	159	147	155	0	6	12	5	13	21	25	23	23	42	26
Mechanical Engineering												Classics										
Total	537	595	642	635	613	616	541	544	487	417	372	71	103	82	86	100	106	85	82	93	79	60
4.00 - 5.00	93	77	98	77	87	70	64	71	75	70	52	16	19	18	20	26	20	10	15	15	12	7
3.00 - 3.99	147	200	171	186	172	133	141	125	128	93	96	28	56	40	40	40	46	43	36	38	34	27
Other Rated	269	270	315	306	262	264	242	256	192	174	159	20	21	24	20	32	36	28	29	32	23	19
Not Rated	28	48	58	66	92	94	94	91	92	80	65	7	7	0	6	2	4	4	4	8	10	7

1 "Distinguished" programs.

2 "Strong" programs.



— Distinguished (A, 00-5 00)  
 - - - Strong (3 00-3 99)  
 - · - Other Rated (less than 3 00)  
 Not Rated

FIGURE 4  
Trends in Doctorates Granted by Departments Grouped by Roose-Andersen Ratings for Selected Fields, 1967-1977

## EXPLANATION OF FIVE BASIC TABLES

TABLE 1. Number of Doctorate Recipients by Sex and Subfield, FY 1977

TABLE 1A. Number of Doctorate Recipients by Citizenship, Racial/Ethnic Group and Subfield, FY 1977

TABLE 2. Statistical Profile of Doctorate Recipients by Sex and by Field of Doctorate, FY 1977 (three tables)

TABLE 3. Percentage of FY 1977 Doctorate Recipients by Sources of Support in Graduate School, by Sex and Summary Field

TABLE 4. Number of FY 1977 Doctorate Recipients by Sex, State of Doctoral Institution and Summary Field

TABLE 5. Statistical Profile of Doctorate Recipients by Racial or Ethnic Group and U.S. Citizenship Status, FY 1977

Table titles and headings are generally self-explanatory, but a few terms need special definition or explanation. The survey questionnaire is reproduced on p. 30.

## Table 1A:

This table is being included for the first time in response to numerous requests for data about the availability of minority Ph.D.'s.

## Table 2:

There are three 2-page tables; one contains data about all doctorate recipients of FY 1977 and the other two present data by sex. This table provides data by field and also by broader summary field. Refer to inside back cover for the codes included in each broad field and the Specialties List on page 32 for the codes and the names of each subfield. The doctoral fields that head Table 2 are the same as those in the 1972-76 reports except for the Environmental Sciences field. For 1972-76 the Environmental Sciences were included in the Life Sciences summary field. The Environmental Sciences are now incorporated in the Earth, Environmental and Marine Sciences field which is included in the broader summary field of Physical Sciences.

"Median Age at Doctorate" --One-half received the doctorate at this age or younger.

"Percent with Master's" --This indicates the percentage of doctorate recipients in a field who received a master's degree in any field before

taking the doctorate.

"Median Time Lapse" --Total Time refers to total calendar time elapsed between year of baccalaureate and year of doctorate; Registered Time refers to the total time registered in a university between baccalaureate and doctorate. Postgraduation plans of the doctorate recipients are grouped as: Postdoctoral study (fellowship, research associateship, traineeship, other), Employment (educational institution, industry, etc.), or Unknown. The sum of the columns of percentages totals 100% with allowance for rounding. For example, 4.4% of all the engineers plan to go to postdoctoral fellowships, 9.1% to research associateships, 0.8% to traineeships, 0.6% plan on some other form of postdoctoral study support, 78.8% plan on employment and 6.3% did not indicate their postgraduation plans. The percentages listed by type of employer (educational institution, industry, etc.) total to the 78.8% planning on employment.

Four lines of data, first included in the 1974 report, distinguish between individuals who have definite postgraduation plans (item S: "Have signed contract or made definite commitment" in the survey questionnaire, and those who are still seeking employment or postdoctoral study (item S: negotiating, seeking, or other). These four lines when added to the prior line "status unknown" total 100%. The two lines for definite postdoctoral study and seeking postdoctoral study add to the total percentage planning study and the two lines for definite employment and seeking employment add to the total percentage planning employment.

Percentages showing the distribution of doctorate recipients by work activity and by region of employment are based on those who have a definite employment commitment. They exclude those still seeking employment and those planning postdoctoral study as described in the categories above. These data differ from Summary Reports prior to 1974 which included all individuals planning on employment, i.e., those seeking as well as those having definite employment.

## Table 3:-

Data in Table 3 describe sources of financial support during graduate school. The question was answered by 29,999 (94.7%) of the FY 1977 doctorate recipients. The data in the table should be interpreted as follows: 285 male doctorate recipients in the physical sciences reported financial support from NSF fellowships during graduate school. This number is 7.6% of the male physical sciences doctorates who answered the question, and it is 33.7% of the males in all fields who reported NSF fellowship support. Since students indicate multiple sources of support, the vertical percentages sum to more than 100%.

The 1977 data on sources of support are not comparable with data shown in Table 3 in earlier years because of a change in item 2 in the survey questionnaire. In previous years, the question was worded "Please check each source from which you received some support during graduate study. Check as many sources as apply." In 1977 the question was modified to request indication of primary and secondary sources of support in addition to all other sources. It appears that many respondents who used the new form provided information only on primary and secondary sources of support so that almost every percentage in Table 3 is lower for 1977 than for 1976.

There is some evidence for this inference since data are available for 11,674 (37%) of the respondents who used the old forms in 1977. Of those who used the new forms, 52% showed only 1 or 2 sources of support whereas only 36% of those reporting on the old forms showed only 1 or 2 sources of support. A version of Table 3 using only the responses on the old forms and another version based only on the new form have been prepared. These tables are available from the Commission on Human Resources on request. The percentages of doctorates receiving all forms of support are generally greater in the table based on old forms. Table 3 is included in the Summary Report this year, even though there is ambiguity concerning the numbers in the report, because the table still provides useful information.

There is no reason to question the relative position of the spaced numbers, e.g., the field with the largest number of Ph.D.'s with support from

NSF fellowships was the physical sciences and the source of support most frequently cited by Ph.D.'s in the physical sciences was a teaching assistantship.

## Table 4:

Table 4 shows the number of persons receiving a doctorate from universities in each of the 50 states, the District of Columbia and Puerto Rico.

## Table 5:

The 1973 Summary Report was the first to include data for racial and ethnic groups. The tables in that report stimulated many requests for more detailed data by individual racial or ethnic group. Such data are provided in Table 5, first included in the 1974 Summary Report. Table 5 contains data by racial or ethnic group and by U.S. citizenship status for selected variables from Tables 2 and 3. Comparisons between the 1973 data and data for 1974-76 are somewhat tenuous because of the large number of cases (8,592) for which racial or ethnic data were unavailable in 1973.

In 1977, item 4 on racial or ethnic group in the survey questionnaire was revised to coincide with the question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget for use in federally sponsored surveys. The Puerto Rican and Chicano groups which were previously reported separately are now combined in the Hispanic group. The Hispanic group may now include whites and Blacks of Hispanic origin who under the earlier classification system would have classified themselves as white, Black or Other. In addition, the Asian group (formerly called Oriental) has been clearly defined to include Pacific Islanders and persons with origins in the Indian Subcontinent. Some Pacific Islanders may have classified themselves as "Other" in earlier years and persons with origins in the Indian Subcontinent were included in the white group on the prior form and earlier may have classified themselves as "Other." These changes in categories can affect the consistency of the time series for all the racial/ethnic groups in the report.



TABLE 1  
NUMBER OF DOCTORATE RECIPIENTS BY SEX AND SUBFIELD BY 1977

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES		
	MEN	WOMEN	TOTAL
<b>TOTAL ALL FIELDS</b>	<b>23827</b>	<b>2865</b>	<b>26692</b>
<b>PHYSICAL SCIENCES</b>	<b>3538</b>	<b>431</b>	<b>3969</b>
MATHEMATICS	831	123	954
ALGEBRA	71	17	88
ANALYSIS AND FUNCTIONAL ANALYSIS	134	19	152
GEOMETRY	24	2	26
LOGIC	173	4	177
NUMBER THEORY	27	5	32
PROBABILITY, MATH STATISTICS	138	21	159
TOPOLOGY	62	7	70
COMPUTING THEORY AND PRACTICE	88	13	101
OPERATIONS RESEARCH	37	5	42
APPLIED	104	9	113
MATHEMATICS, GENERAL	78	11	89
MATHEMATICS, OTHER	54	16	70
PHYSICS AND ASTRONOMY	1085	64	1149
ASTRONOMY	56	7	63
ASTROPHYSICS	58	2	60
ATOMIC AND MOLECULAR	100	6	106
ELECTROMAGNETISM	9	9	18
ACOUSTICS	12	1	13
FLUIDS	14	1	15
PLASMA	72	2	74
OPTICS	30	1	31
THERMAL	7	7	14
ELEMENTARY PARTICLES	129	6	135
NUCLEAR STRUCTURE	86	4	90
SOLID STATE	245	12	257
PHYSICS, GENERAL	162	10	172
PHYSICS, OTHER	106	11	117
CHEMISTRY	1390	80	1470
ANALYTICAL	161	13	174
INORGANIC	149	29	178
ORGANIC	429	48	477
NUCLEAR	18	6	24
PHYSICAL	298	41	339
THEORETICAL	33	5	38
AGRICULTURAL AND FOOD	6	5	11
PHARMACEUTICAL	45	5	50
POLYMER	52	2	54
CHEMISTRY, GENERAL	124	23	147
CHEMISTRY, OTHER	58	8	66
EARTH, ENVIRONMENTAL & MARINE SCI	632	59	691
MINERALOGY, PETROLOGY	53	6	59
GEOCHEMISTRY	49	7	56
STRATIGRAPHY, SEDIMENTATION	40	2	42
PALEONTOLOGY	23	3	26
STRUCTURAL GEOLOGY	21	1	22
GEOPHYSICS (SOLID EARTH)	66	7	73
GEOCHEMOL, GLACIAL GEOLOGY	22	2	24
MORPHOLOGY	23	2	25
OCEANOGRAPHY	107	5	112
ATMOSPHERIC PHYSICS AND CHEMISTRY	15	3	18
ATMOSPHERIC DYNAMICS	25	3	28
ATMOSPHERIC SCIENCES, OTHER	39	6	45
ENVIRONMENTAL SCIENCES, GENERAL	24	1	25
ENVIRONMENTAL SCIENCES, OTHER	22	6	28
APPL GEOL, GEOL ENG, ECON GEOL	18	2	20
FUEL TECHNOL, PETROL ENG	5	1	6
EARTH SCIENCES, GENERAL	40	4	44
EARTH SCIENCES, OTHER	36	6	42

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES		
	MEN	WOMEN	TOTAL
<b>ENGINEERING</b>	<b>2567</b>	<b>24</b>	<b>2591</b>
AGRONOMICAL AND ASTRONAUTICAL	112	1	113
AGRICULTURAL	33	1	34
BIOMEDICAL	75	1	76
CIVIL	261	7	268
CHEMICAL	297	9	306
CERAMIC	25	3	28
COMPUTER	117	9	126
ELECTRICAL	452	9	461
ELECTRONICS	50	3	53
INDUSTRIAL	49	5	54
NUCLEAR	103	2	105
ENGINEERING, MECHANICS	99	3	102
ENGINEERING, PHYSICS	16	1	17
MECHANICAL	227	3	230
METALLURGY AND PHYSICAL MET	9	1	10
SYSTEMS DESIGN, SYSTEMS SCIENCE	7	1	8
OPERATIONS RESEARCH	72	4	76
FUEL TECHN, PETROLEUM	17	1	18
SANITARY AND ENVIRONMENTAL	46	1	47
MINING	2	1	3
MATERIALS SCIENCE	121	1	122
ENGINEERING, GENERAL	51	3	54
ENGINEERING, OTHER	52	3	55
<b>Life Sciences</b>	<b>2441</b>	<b>357</b>	<b>2798</b>
BIOLOGICAL SCIENCES	2441	357	2798
BIOCHEMISTRY	473	115	588
BIOPHYSICS	121	16	137
BIOMETRICS, BIostatistics	59	10	69
ANATOMY	53	10	63
CYTOLOGY	25	12	37
EMBRYOLOGY	12	7	19
IMMUNOLOGY	68	13	81
ECTANY	126	12	138
ECOLOGICAL	144	15	159
HYDROBIOLOGY	13	1	14
MICROBIOLOGY AND BACTERIOLOGY	226	56	282
PHYSIOLOGY, ANIMAL	264	55	319
PHYSIOLOGY, PLANT	32	1	33
ZOOLOGY	25	50	75
GENETICS	95	45	140
ENTOMOLOGY	135	18	153
MOLECULAR BIOLOGY	99	32	131
NUTRITION AND/OR DIETETICS	37	4	41
BIOLOGICAL SCIENCES, GENERAL	122	54	176
BIOLOGICAL SCIENCES, OTHER	111	42	153
AGRICULTURAL SCIENCES	861	63	924
AGRICULTURE	119	1	120
AGRICULTURAL ECONOMICS	136	5	141
ANIMAL HUSBANDRY	24	1	25
FOOD SCIENCE AND TECHNOLOGY	82	25	107
FISH AND WILDLIFE	64	2	66
FORESTRY	63	3	66
HORTICULTURE	56	4	60
SOILS AND SOIL SCIENCE	71	1	72
ANIMAL SCIENCE AND ANIMAL NUTRITION	97	4	101
PHYTOPATHOLOGY	71	11	82
AGRICULTURE, GENERAL	5	1	6
AGRICULTURE, OTHER	73	2	75
MEDICAL SCIENCES	506	165	671
PUBLIC HEALTH AND EPIDEMIOLOGY	65	37	102
VETERINARY MEDICINE	23	1	24
HOSPITAL ADMINISTRATION	7	1	8
NURSING	1	31	32
PARASITOLOGY	16	1	17
ENVIRONMENTAL HEALTH	21	4	25
PATHOLOGY	83	16	99
PHARMACOLOGY	154	42	196
PHARMACY	43	6	49
MEDICAL SCIENCES, GENERAL	13	5	18
MEDICAL SCIENCES, OTHER	76	21	97

TABLE 1. CONTINUED

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES			SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES		
	MEN	WOMEN	TOTAL		MEN	WOMEN	TOTAL
<b>SOCIAL SCIENCES (INCL PSYCH)</b>	<b>5674</b>	<b>1836</b>	<b>4504</b>	<b>EDUCATION</b>	<b>5829</b>	<b>2554</b>	<b>7448</b>
ANTHROPOLOGY	250	136	386	FOUNDATIONS: SOCIAL, PHILOS	152	78	230
COMMUNICATIONS	204	83	287	EDUCATIONAL PSYCHOLOGY	284	214	498
SOCIOLOGY	488	237	725	ELEMENTARY EDUCATION, GENERAL	71	116	187
ECONOMICS	738	71	809	SECONDARY EDUCATION, GENERAL	83	59	142
ECONOMETRICS	27	2	29	HIGHER EDUCATION	518	205	723
STATISTICS	31	5	36	ADULT EDUC AND EXTENSION EDUC	125	48	173
GEOGRAPHY	128	27	155	EDUCATIONAL MEAS AND STATISTICS	61	37	98
AREA STUDIES	15	3	18	CURRICULUM AND INSTRUCTION	412	143	555
POLITICAL SCIENCE	511	102	613	EDUCATIONAL ADMIN AND SUPERVISION	1182	328	1510
PUBLIC ADMINISTRATION	143	25	172	GUIDANCE, COUNSEL, STUDENT PERSONNEL	438	222	660
INTERNATIONAL RELATIONS	85	11	96	SPECIAL ED (BLIND, HANDICAPPED, ETC)	177	147	324
URBAN AND REGIONAL PLANNING	66	14	79	ADVISORY VISUAL MEDIA	63	14	79
SOCIAL SCIENCES, GENERAL	21	6	27	TEACHING FIELDS	4288	771	2059
SOCIAL SCIENCES, OTHER	89	23	112	AGRICULTURE	24	1	25
PSYCHOLOGY	1879	1081	2960	ART	35	20	55
CLINICAL	582	332	914	BUSINESS	42	23	65
COUNSELING AND GUIDANCE	174	89	263	ENGLISH	26	33	59
DEVELOP AND GERONTOLOG	84	119	203	FOREIGN LANGUAGE	17	16	33
EDUCATIONAL	74	59	133	HOME ECONOMICS	1	50	51
SCHOOL PSYCHOLOGY	76	68	147	INDUSTRIAL ARTS	37	2	39
EXPERIMENTAL	239	98	337	MATHEMATICS	64	34	98
COMPARATIVE	14	8	22	MUSIC	67	22	89
PHYSIOLOGICAL	100	32	132	PHYS ED, HEALTH AND PEAC	233	100	333
INDUSTRIAL AND PERSONNEL	58	13	81	READING	51	43	94
PERSONALITY	33	25	62	SCIENCE	94	32	126
PSYCHOMETRICS	15	4	19	SOCIAL SCIENCE	32	17	49
SOCIAL	132	69	201	SPEECH	8	1	9
PSYCHOLOGY, GENERAL	159	102	261	VOCATIONAL	133	48	181
PSYCHOLOGY, OTHER	126	59	185	OTHER TEACHING FIELDS	28	38	63
				EDUCATION, GENERAL	250	154	404
				EDUCATION, OTHER	107	109	216
<b>HUMANITIES</b>	<b>2923</b>	<b>1454</b>	<b>4355</b>	<b>OTHER AND UNSPECIFIED</b>	<b>26</b>	<b>10</b>	<b>36</b>
ART, HISTORY AND CRITICISM	69	83	152				
HISTORY, AMERICAN	280	62	342				
HISTORY, EUROPEAN	197	64	261				
HISTORY, OTHER	244	85	329				
HISTORY AND PHILOSOPHY OF SCIENCE	24	5	29				
AMERICAN STUDIES	52	39	91				
THEATRE AND THEATRE CRITICISM	64	21	85				
MUSIC	301	103	404				
SPEECH AS A DRAMATIC ART	37	24	61				
ARCHAEOLOGY	15	8	23				
RELIGION	750	25	775				
PHILOSOPHY	266	63	329				
LINGUISTICS	117	73	190				
COMPARATIVE LITERATURE	75	75	151				
HUMANITIES, GENERAL	11	10	21				
HUMANITIES, OTHER	25	24	49				
<b>LANGUAGES AND LITERATURE</b>	<b>975</b>	<b>892</b>	<b>1867</b>				
AMERICAN	130	92	222				
ENGLISH	460	397	857				
GERMAN	68	72	140				
RUSSIAN	32	24	56				
FRENCH	61	150	211				
SPANISH AND PORTUGUESE	99	100	199				
ITALIAN	12	10	22				
CLASSICAL	37	23	60				
OTHER LANGUAGES	76	24	100				
<b>PROFESSIONAL FIELDS</b>	<b>1227</b>	<b>393</b>	<b>1360</b>				
THEOLOGY	144	11	155				
BUSINESS ADMINISTRATION	627	40	667				
HOME ECONOMICS	13	63	76				
JOURNALISM	15	3	18				
SPEECH AND HEARING SCIENCES	75	71	146				
LAW, JURISPRUDENCE	25	2	27				
SOCIAL WORK	93	71	164				
LIBRARY AND ARCHIVAL SCIENCE	31	36	67				
PROFESSIONAL FIELDS, OTHER	14	6	20				

SOURCE: NRC, Commission on Human Resources, Doctorate Records File

TABLE 1A  
NUMBER OF DOCTORATE RECIPIENTS BY CITIZENSHIP, RACIAL/ETHNIC GROUP AND DEGREE, BY 1977

SUBFIELD OF DOCTORATE	TOTAL DOCTORATES	NON-U.S. CITIZENS TEMPORARILY IN U.S.	U.S. CITIZENS AND NON-U.S. WITH PERMANENT RESIDENCE BY RACIAL/ETHNIC GROUP						
			TOTAL	AMERICAN INDIAN	ASIAN	BLACK	HISPANIC	WHITE	OTHER UNKNOWN
<b>TOTAL ALL FIELDS</b>	<b>21672</b>	<b>3667</b>	<b>2327</b>	<b>218</b>	<b>567</b>	<b>1462</b>	<b>621</b>	<b>12511</b>	<b>1481</b>
<b>PHYSICAL SCIENCES</b>	<b>4365</b>	<b>877</b>	<b>2625</b>	<b>16</b>	<b>222</b>	<b>33</b>	<b>61</b>	<b>1221</b>	<b>244</b>
MATHEMATICS	559	170	704	2	40	1	10	667	27
ALGEBRA	66	12	71		3			70	
ANALYSIS AND FUNCTIONAL ANALYSIS	152	33	118		1			119	
GEOMETRY	21	7	28		1			28	
LOGIC	37	4	41					41	
NUMBER THEORY	32	4	36					36	
PROBABILITY, MATH. STATISTICS	155	71	124					124	
TOPOLOGY	70	13	83					83	
COMPUTING THEORY AND PRACTICE	101	12	89					89	
OPERATIONS RESEARCH	40	13	53					53	
APPLIED	111	17	94					94	
MATHEMATICS, GENERAL	29	26	55					55	
MATHEMATICS, OTHER	70	6	76					76	
PHYSICS AND ASTRONOMY	1147	208	914					914	
ASTRONOMY	63	2	61		2			61	
ASTROPHYSICS	57	8	59					59	
ATOMIC AND MOLECULAR	158	18	140					140	
ELECTROMAGNETISM	5	1	4					4	
ACOUSTICS	11	3	8					8	
FLUIDS	14	2	12					12	
PLASMA	70	1	69					69	
OPTICS	31	4	27					27	
THERMAL	7	2	5					5	
ELEMENTARY PARTICLES	138	24	114					114	
NUCLEAR STRUCTURE	51	14	37					37	
SOLID STATE	257	57	200					200	
PHYSICS, GENERAL	173	40	133	2				133	
PHYSICS, OTHER	117	22	95	22				95	
CHEMISTRY	1570	154	1442	5	37	14	21	1479	47
ANALYTICAL	174	8	166		10			166	
INORGANIC	198	28	170					170	
ORGANIC	477	45	428	2	24			428	
NUCLEAR	24	1	23					23	
PHYSICAL	334	40	294		14			294	
THEORETICAL	38	8	30		1			30	
AGRICULTURAL AND FOOD	1	1	0					0	
PHARMACEUTICAL	50	8	42		7			42	
POLYMER	54	12	42		4			42	
CHEMISTRY, GENERAL	147	36	111		7			111	
CHEMISTRY, OTHER	57	9	48		7			48	
EARTH, ENVIRONMENTAL AND MARINE SCI.	54	107	578	2	2			578	27
MINERALOGY, PETROLOGY	66	4	62	1	2			62	
GEOCHEMISTRY	51	1	50		3			50	
STRATIGRAPHY, SEDIMENTATION	42	10	32					32	
PALEONTOLOGY	24	1	23					23	
STRUCTURAL GEOLOGY	22	3	19					19	
GEOPHYSICS (EXCL. EARTH)	75	14	58		4			58	
GEOGRAPHICAL, GLACIAL GEOLOGY	22	1	21					21	
HYDROLOGY	23	8	15					15	
OCEANOGRAPHY	112	12	99		5			99	
ATMOSPHERIC PHYSICS AND CHEMISTRY	15	1	14	1				14	
ATMOSPHERIC DYNAMICS	32	6	26		1			26	
ATMOSPHERIC SCIENCES, OTHER	45	8	37		2			37	
ENVIRONMENTAL SCIENCES, GENERAL	25	2	22		2			22	
ENVIRONMENTAL SCIENCES, OTHER	28	2	25					25	
APPL. GEOL., GEOL. ENG., ECON. GEOL.	20	3	17		4			17	
FUEL TECHNOL., PETROL. ENG.	5	2	3					3	
EARTH SCIENCES, GENERAL	44	6	38		1			38	
EARTH SCIENCES, OTHER	42	10	30		1			30	

1. For more detailed explanation of racial/ethnic groups see term in glossary on page 30.  
 2. See definition on page 30. The definition used in this survey is the guidance received from DHS in 1977 subsequent to this survey, which defines "Hispanic or more recent origin" to exclude persons from Central and South America who are of Spanish or Spanish descent or culture. Under the revised definition persons from Brazil, Guyana, Surinam, Trinidad, and Belize would be classified according to their race and would not necessarily be included in the Hispanic category.  
 3. Includes 254 individuals who did not report their citizenship at time of doctorate.



CONTINUED

SUBFIELD OF DOCTORATE	NON-U.S. CITIZENS		U.S. CITIZENS AND NON-U.S. WITH PERMANENT VISA						
	TOTAL DOCTORATES	TEMP. VISAS	TOTAL	AMERICAN INDIAN	ASIAN	BLACK	HISPANIC	WHITE	OTHER UNKNOWN
<b>ENGINEERING</b>	<b>2661</b>	<b>733</b>	<b>1293</b>	<b>12</b>	<b>244</b>	<b>15</b>	<b>22</b>	<b>1212</b>	<b>64</b>
ASTRONOMICAL AND ASTRONAUTICAL	115	45	65		6		2	56	1
AGRICULTURAL	33	15	17		1			16	
BIOLOGICAL	75	8	56		6		1	54	4
CIVIL	268	108	157	1	25			120	
CHEMICAL	306	67	224	1	37		5	148	12
CERAMIC	29	4	24		1			22	
COMPUTER	122	30	92		4	1	1	29	2
ELECTRICAL	461	117	323	2	47	5	2	235	20
ELECTRONICS	83	24	59	1	12	1		43	2
INDUSTRIAL	73	22	48		5			37	
NUCLEAR	105	23	77		11	1	2	62	2
ENGINEERING MECHANICS	102	28	73		15			56	2
ENGINEERING PHYSICS	15		17		2			14	1
MECHANICAL	270	80	176		7		2	154	5
METALLURGY AND PHYSICAL MET	92	27	64		4			53	5
SYSTEMS DESIGN, SYSTEMS SCIENCE	71	22	47	1	5	1		39	
OPERATIONS RESEARCH	70	21	51		3			47	1
FUEL TECH. PETROLEUM	18	4	14		2			11	1
SANITARY AND ENVIRONMENTAL	65	14	52		3			45	2
MINING	2	1	1					1	
MATERIALS SCIENCE	127	37	83		17			61	4
ENGINEERING, GENERAL	33	10	22	1				20	1
ENGINEERING, OTHER	95	29	51	1	7		1	40	7
<b>LIFE SCIENCES</b>	<b>3747</b>	<b>1116</b>	<b>2924</b>	<b>37</b>	<b>1116</b>	<b>18</b>	<b>35</b>	<b>2524</b>	<b>158</b>
BIOLOGICAL SCIENCES	172	298	2733	29	120	5	24	2408	112
BIOCHEMISTRY	606	54	535	4	21	5	5	487	20
BIOPHYSICS	142	18	115	2	5			94	5
BIOMETRICS, BIOSTATISTICS	52	10	42		3		1	36	1
ANATOMY	116	6	102		2		2	94	4
CYTOLOGY	37	1	34		1			31	1
EMBRYOLOGY	19		19	1				18	
IMMUNOLOGY	101	6	90	1	7			80	2
BOTANY	158	12	145	2	1		3	131	5
ECOLOGY	169	11	152	3	1			140	5
HYDROBIOLOGY	14		14			2		11	1
MICROBIOLOGY AND BACTERIOLOGY	912	22	282	1	10	5	2	251	13
PHYSIOLOGY, ANIMAL	319	31	285	1	5		4	259	7
PHYSIOLOGY, PLANT	42	23	30					27	1
ZOOLOGY	254	13	236	3	3	3		217	10
GENETICS	140	11	125		5		3	113	3
ENTOMOLOGY	153	33	119	3	5			102	6
MOLECULAR BIOLOGY	131	13	118	3	5			100	5
NUTRITION AND/OR DIETETICS	62	22	40		3	4		33	3
BIOLOGICAL SCIENCES, GENERAL	176	11	152		4	4		133	7
BIOLOGICAL SCIENCES, OTHER	152	11	133	2	3	2		119	2
AGRICULTURAL SCIENCES	924	309	602	4	27	7	5	508	17
AGRONOMY	122	50	70		3	1	1	61	4
AGRICULTURAL ECONOMICS	142	53	82	1		2		79	2
ANIMAL HUSBANDRY	25	7	17					16	1
FOOD SCIENCE AND TECHNOLOGY	107	46	59		4	3		50	2
FISH AND WILDLIFE	64	5	57		3			51	1
FORESTRY	64	11	53	1	2			47	2
HORTICULTURE	60	25	35		3			33	2
SOILS AND SOIL SCIENCE	72	37	33			4		27	1
ANIMAL SCIENCE AND ANIMAL NUTRITION	101	27	74		1	2	1	68	2
PHYTOPATHOLOGY	82	25	57		2	2		53	
AGRICULTURE, GENERAL	6	6							
AGRICULTURE, OTHER	75	22	52	2	3	2		45	
MEDICAL SCIENCES	671	54	596	4	40	10	5	502	29
PUBLIC HEALTH AND EPIDEMIOLOGY	154	17	87	1	1	7	3	72	3
VETERINARY MEDICINE	24	6	18		2			15	1
HOSPITAL ADMINISTRATION	8		8					7	1
NURSING	32		32		1	2		29	
PARASITOLOGY	17	2	15		1			14	
ENVIRONMENTAL HEALTH	24	1	22		1	1		19	2
PATHOLOGY	99	8	83		5		1	71	6
PHARMACOLOGY	194	11	173	3	12	1		163	4
PHARMACY	45	6	43		14	2		24	3
MEDICAL SCIENCES, GENERAL	18	1	17		1	2	1	13	1
MEDICAL SCIENCES, OTHER	97	7	88		2	1		81	4



TABLE 4 CONTINUED

SUBFIELD OF DOCTORATE	TOTAL DOCTORATES	NON-U.S. CITIZENS TEMP. VISAS	U.S. CITIZENS AND NON-U.S. WITH PERMANENT VISAS RACIAL/ETHNIC GROUP						
			TOTAL	AMERICAN INDIAN	ASIAN	BLACK	HISPANIC	WHITE	OTHER OR UNKNOWN
<b>SOCIAL SCIENCES (INCL PSYCH)</b>	<b>6524</b>	<b>565</b>	<b>5718</b>	<b>97</b>	<b>126</b>	<b>225</b>	<b>92</b>	<b>5211</b>	<b>299</b>
ANTHROPOLOGY	386	25	351	3	1	1	5	313	22
COMMUNICATIONS	267	11	272	2	4	7	6	241	13
SOCIOLOGY	725	66	645	8	15	33	13	447	24
ECONOMICS	805	200	591	1	21	19	7	121	27
ECONOMETRICS	29	11	18		2			12	3
STATISTICS	36	17	19		1			16	1
GEOGRAPHY	155	23	128		1		3	113	14
AREA STUDIES	18	1	14					14	2
POLITICAL SCIENCE	612	67	535	4	18	33	5	445	28
PUBLIC ADMINISTRATION	172	13	145	2		5	4	119	11
INTERNATIONAL RELATIONS	96	15	81	2		5		64	5
URBAN AND REGIONAL PLANNING	79	20	57	1	2	6		44	1
SOCIAL SCIENCES, GENERAL	27	4	22			5		16	1
SOCIAL SCIENCES, OTHER	112	21	87	2			1	75	5
<b>PSYCHOLOGY</b>	<b>2960</b>	<b>71</b>	<b>2755</b>	<b>22</b>	<b>33</b>	<b>40</b>	<b>35</b>	<b>1480</b>	<b>92</b>
CLINICAL	414	7	905	6	6	40	16	815	5
COUNSELING AND GUIDANCE	263	6	255	4	3	7		228	6
DEVELOP AND DEFECTOL	203	5	198	1			1	185	4
EDUCATIONAL	192	7	125	1	1	2	3	117	1
SCHOOL PSYCHOLOGY	147		142		2	2	2	132	1
EXPERIMENTAL	337	14	321	1	2	6	1	299	13
COMPARATIVE	22		22			1		20	
PHYSIOLOGICAL	122	6	126	1	2		2	115	5
INDUSTRIAL AND PERSONNEL	81	3	76	1	1	1	3	71	2
PERSONALITY	62	1	61			4		55	2
PSYCHOMETRICS	19	2	17	1	2			14	
SOCIAL	201	7	194	1	4	8		175	4
PSYCHOLOGY, GENERAL	261	7	185	3	4	6	2	165	24
PSYCHOLOGY, OTHER	185	4	123	4	2	11	2	104	3
<b>HUMANITIES</b>	<b>9555</b>	<b>216</b>	<b>9229</b>	<b>30</b>	<b>19</b>	<b>148</b>	<b>122</b>	<b>8857</b>	<b>216</b>
ART, HISTORY AND CRITICISM	152	7	127			2		126	7
HISTORY, AMERICAN	342	5	334	2		4	4	299	14
HISTORY, EUROPEAN	261	4	256	1	1	2	2	240	10
HISTORY, OTHER	329	30	273	1	9	7	15	233	38
HISTORY AND PHILOSOPHY OF SCIENCE	29	1	28					27	1
AMERICAN STUDIES	91		89			8	1	80	
THEATRE AND THEATRE CRITICISM	85	10	75	1	1	1	1	70	2
MUSIC	404	16	365	6	2	14	3	324	16
SPEECH AS A DRAMATIC ART	61		59			2	1	56	
ARCHAEOLOGY	23	1	22	1				20	
RELIGION	175	13	157	1	2			145	4
PHILOSOPHY	329	6	317	4	5	6	1	284	17
LINGUISTICS	190	89	145		8	6	7	119	6
COMPARATIVE LITERATURE	151	8	135	1	4	1	14	109	6
HUMANITIES, GENERAL	21		21					21	
HUMANITIES, OTHER	49	1	47			1	2	41	2
<b>LANGUAGES AND LITERATURE</b>	<b>1867</b>	<b>73</b>	<b>1745</b>	<b>11</b>	<b>16</b>	<b>45</b>	<b>69</b>	<b>1524</b>	<b>84</b>
AMERICAN	222	5	217	2	1	8	2	196	8
ENGLISH	857	23	812	4	9	21	7	730	41
GERMAN	140	3	134	1		4		123	6
RUSSIAN	56	5	51					48	2
FRENCH	211	7	202	1	1	8	3	185	5
SPANISH AND PORTUGUESE	199	9	186	1		3	56	115	11
ITALIAN	22	6	14	1				13	
CLASSICAL	60	3	57			1		54	2
OTHER LANGUAGES	100	12	76	1	5		1	60	9
<b>PROFESSIONAL FIELDS</b>	<b>1340</b>	<b>166</b>	<b>1167</b>	<b>5</b>	<b>33</b>	<b>45</b>	<b>15</b>	<b>997</b>	<b>52</b>
THEOLOGY	155	9	141		4		1	129	7
BUSINESS ADMINISTRATION	667	104	550	2	16	7	4	488	33
HOME ECONOMICS	76	6	70	1	1	3		65	
JOURNALISM	18	3	15					15	
SPEECH AND HEARING SCIENCES	146	3	139	2	2		1	120	6
LAW, JURISPRUDENCE	27	15	10		1	2	1	6	
SOCIAL WORK	164	12	151	4	4	18	7	117	5
LIBRARY AND ARCHIVAL SCIENCE	67	11	55	3	5		1	44	2
PROFESSIONAL FIELDS, OTHER	20	3	16		2	1		13	

1/ For more detailed explanations of racial/ethnic groups see item 10 on questionnaire on page 30

TABLE A (CONTINUED)

SUBFIELD OF EDUCATION	TOTAL DOCTORS	NON-U.S. CITIZENS TEMP. VISAS	U.S. CITIZENS AND NON-U.S. WITH PERMANENT RES. FACIAL/ETHNIC GROUP						
			TOTAL	AMERICAN INDIAN	ASIAN	BLACK	HISPANIC	WHITE	OTHER JAPANESE
<b>EDUCATION</b>	<b>7448</b>	<b>325</b>	<b>8884</b>	<b>42</b>	<b>55</b>	<b>227</b>	<b>150</b>	<b>4718</b>	<b>208</b>
FOUNDATIONS: SOCIAL, PHILOS	230	25	205	1	2	16		163	7
EDUCATIONAL PSYCHOLOGY	498	24	464	3	4	33	12	397	15
ELEMENTARY EDUCATION, GENERAL	187	7	179	4	2	15		149	4
SECONDARY EDUCATION, GENERAL	142	6	134	3		10		117	4
HIGHER EDUCATION	713	25	681	12	8	64	7	540	21
ADULT EDUC AND EXTENSION EDU.	173	16	157	1			3	129	3
EDUCATIONAL MEAS AND STATISTICS	118	7	109	4	2	21		94	3
CURRICULUM AND INSTRUCTION	755	44	704	6	4	33	1	577	20
EDUCATIONAL ADMIN AND SUPERVISION	1510	64	1437	10	5	75	34	1179	34
GUIDANCE, COUNS, STUDENT PERSONEL.	640	18	622	5	8	56	14	543	14
SPECIAL ED. (CIFTED, HANDICAPPED, ETC)	324	2	320	4	2	24		277	7
AUDIO-VISUAL MEDIA	79	12	65		1	1		61	3
<b>TEACHING FIELDS</b>	<b>2059</b>	<b>23</b>	<b>1801</b>	<b>17</b>	<b>27</b>	<b>120</b>	<b>32</b>	<b>1479</b>	<b>70</b>
AGRICULTURE	25	2	23					21	
ART	55	2	53			3	1	45	1
BUSINESS	65	6	59			4		53	1
ENGLISH B	69	2	64			6		54	1
FOREIGN LANGUAGE	30	8	28		1			21	1
HOME ECONOMICS	31	1	30		1		1	25	
INDUSTRIAL ARTS	30	3	27			3		22	
MATHEMATICS	98	5	91	1	2	10		74	1
MUSIC	85	1	87	1	1	4		74	1
PHYS ED, HEALTH, AND REC	333	38	292	3	2	15	5	257	5
READING	134	2	131	2	2	1	2	104	6
SCIENCE	128	9	117	2	3	11	2	81	4
SOCIAL SCIENCE	44	2	47			7		38	2
SPEECH	14	1	12					12	
VOCATIONAL	211	4	207	2	3	12	6	181	3
OTHER TEACHING FIELDS	67	1	65		2	9		47	2
EDUCATION, GENERAL	624	24	594	6	3	43	4	465	25
EDUCATION, OTHER	217	12	201	1	2	25		161	10
<b>OTHER AND UNSPECIFIED</b>	<b>766</b>	<b>4</b>	<b>764</b>					<b>69</b>	<b>7</b>

SOURCE: NRC, Commission on Human Resources, General Records, 1964

TABLE 2  
STATISTICAL PROFILE OF DOCTORATE RECIPIENTS, BY FIELD OF DOCTORATE, FY 1977

TOTAL ALL DOCTORATES

	FY 1977 TOTAL	PHYSICS AND ASTRONOMY	CHEMISTRY	EARTH, ENVIRONMENTAL AND MARINE SCIENCES	PHYSICAL SCIENCES	MATHEMATICS	ENGINEERING	EMP. FIELDS	BIOL. MEDICAL SCIENCES	OTHER BIOSCIENCES	BIOSCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES	LIFE SCIENCES
NUMBER IN FIELD	31672	1149	1570	651	3610	959	2641	7710	1765	1067	3172	67	924	4767
MALE %	75.2	94.4	88.5	91.5	91.1	86.7	97.2	92.8	77.6	76.2	77.0	75.4	85.2	76.4
FEMALE %	24.8	5.6	11.5	8.5	8.9	13.3	2.8	7.2	22.4	23.8	23.0	24.6	14.8	23.6
U.S. CITIZENSHIP %	82.1	72.2	78.8	80.5	76.9	74.0	55.6	68.5	83.2	83.6	83.6	76.8	61.6	76.7
FOREIGN CITIZENSHIP %	15.2	25.6	19.4	17.7	21.1	25.4	41.6	29.1	17.4	14.1	13.7	18.8	37.0	18.5
UNKNOWN %	2.7	2.2	1.8	1.9	2.0	2.6	2.8	2.4	3.0	2.3	2.7	2.4	1.4	2.4
MARRIED %	56.1	61.2	61.4	70.6	63.2	58.6	67.7	66.3	62.9	65.4	64.0	66.3	76.9	62.8
NOT MARRIED %	29.5	34.3	35.4	24.9	32.6	36.9	28.5	31.8	32.6	30.8	31.8	24.8	18.0	29.4
UNKNOWN %	4.4	4.5	3.2	4.5	3.9	4.5	3.6	4.0	4.7	4.2	4.2	3.6	2.8	3.8
MEDIAN AGE AT DOCTORATE	31.6	29.5	28.4	30.5	29.2	29.1	30.0	29.5	29.0	30.0	29.5	30.4	31.3	30.0
PERCENT WITH BACC IN SAME FIELD AS DOCTORATE	55.5	79.7	67.5	46.3	76.5	76.2	60.0	77.6	77.5	66.0	39.7	22.5	69.3	41.1
PERCENT WITH MASTERS	91.3	66.7	59.9	79.5	56.0	76.7	51.8	72.5	43.0	69.9	64.7	61.1	62.1	51.5
MEDIAN TIME LAPSE FROM BACC TO DOCT	8.7	7.3	6.3	8.0	6.9	6.9	7.5	7.1	6.5	7.9	7.0	7.3	8.2	7.0
TOTAL TIME YRS REGISTERED TIME YRS	6.1	6.2	5.2	5.9	5.7	5.8	5.6	5.7	5.5	6.0	5.8	5.6	5.4	5.7
POSTDOCTORAL STUDY PLANS %	17.0	46.6	46.6	25.9	42.6	31.0	14.8	27.8	74.0	38.4	56.6	39.0	13.2	47.1
FELLOWSHIP	8.9	14.0	20.9	9.5	16.0	4.5	4.4	15.1	46.0	23.1	36.0	23.4	4.5	29.1
RESEARCH ASSOC	6.6	31.4	25.0	15.9	25.3	4.6	9.1	15.4	20.1	22.3	16.7	10.3	7.8	21.1
TRAINERSHIP	.8	.4	.0	.0	.4	1.0	.8	.6	2.7	1.2	2.0	4.5	.5	1.1
OTHER	1.4	.8	1.1	.1	.8	.9	.5	.8	5.2	2.0	2.9	2.9	1.4	3.2
PLANNED EMPLOYMENT AFTER DOCTORATE %	75.4	43.0	47.5	69.0	50.1	81.3	78.8	65.2	20.5	54.8	35.4	52.4	61.2	46.7
EDUC INSTITUTION	49.4	16.5	12.4	27.9	16.9	59.1	22.8	24.9	12.3	34.6	22.4	26.2	45.5	27.7
INDUSTRY/BUSINESS	9.5	13.4	27.8	18.2	21.0	13.0	38.4	24.4	4.2	4.8	4.4	11.3	12.4	21.8
GOVERNMENT	9.2	9.7	4.3	18.4	6.9	6.0	13.6	10.3	2.2	7.7	4.6	4.8	18.2	8.1
NONPROFIT	4.0	1.1	1.1	1.3	1.2	1.1	1.9	1.4	.6	2.5	1.5	4.6	1.5	7.0
OTHER & UNKNOWN	3.4	2.3	2.0	2.2	2.1	2.0	2.2	2.1	1.1	3.0	1.9	1.8	3.8	2.2
POSTDOCT STATUS UNKN	7.9	10.4	9.4	6.1	7.3	7.5	6.3	7.0	5.5	6.7	6.0	8.0	5.5	6.2
DEFINITE POSTDOCTORAL STUDY	12.2	33.9	36.1	18.8	31.8	6.7	9.1	19.8	61.8	27.7	46.9	31.0	8.3	77.2
SEEKING POSTDOCTORAL STUDY	4.8	12.7	10.1	7.1	10.7	4.4	5.7	8.0	12.2	11.1	11.7	6.0	5.0	9.9
DEFINITE EMPLOYMENT	54.1	29.2	36.1	51.8	37.1	56.4	59.3	48.1	14.2	35.8	23.6	38.9	56.3	32.5
SEEKING EMPLOYMENT	11.3	13.8	11.2	16.2	13.1	24.9	19.5	17.1	4.3	16.7	11.8	14.0	22.8	14.2
EMPLOYMENT ACTIVITY AFTER DOCTORATE %														
PRIMARY ACTIVITY														
R & D	21.7	56.8	66.8	48.0	58.9	35.1	61.4	56.2	41.9	33.7	36.4	37.9	49.5	41.3
TEACHING	46.0	30.4	20.4	27.7	25.1	52.3	20.7	27.4	36.8	46.0	42.9	34.9	25.6	35.5
ADMINISTRATION	13.1	2.1	1.8	3.6	2.4	1.8	2.7	2.5	4.0	3.6	3.7	6.4	2.4	4.1
PROF. SERVICES	9.8	2.7	2.1	7.3	3.7	3.3	5.2	4.4	7.5	6.7	6.9	6.8	7.1	7.3
OTHER	2.2	2.1	1.2	4.2	2.5	2.0	2.6	2.4	1.2	2.6	2.1	2.3	3.0	2.5
ACTIVITY UNKNOWN	7.3	6.0	7.7	8.7	7.5	5.4	7.4	7.1	8.7	7.5	7.9	7.7	12.4	9.4
SECONDARY ACTIVITY														
R & D	25.7	19.0	12.6	26.5	18.3	38.6	18.4	21.6	29.2	30.6	30.2	27.6	21.3	26.7
TEACHING	9.8	5.1	3.5	6.7	4.8	17.6	8.0	8.3	15.0	11.3	12.5	15.3	15.1	15.1
ADMINISTRATION	8.6	6.5	10.5	10.6	9.5	3.9	7.9	7.9	12.3	8.1	9.5	10.3	6.5	8.6
PROF. SERVICES	6.2	2.1	2.8	5.6	3.4	3.1	5.6	4.4	4.0	3.8	3.9	8.0	4.6	4.6
OTHER	1.7	.6	.2	1.4	.6	.2	1.3	.9	1.2	.2	.5	1.1	.6	.6
NO SECONDARY ACTIVITY	40.6	60.7	62.6	40.5	55.9	31.2	51.3	49.8	29.6	38.5	35.5	29.9	36.0	34.7
UNKNOWN	7.3	6.0	7.2	8.7	7.5	5.4	7.4	7.1	8.7	7.5	7.9	7.7	12.4	9.4
REGION OF EMPLOYMENT AFTER DOCTORATE %														
NEW ENGLAND	6.5	6.5	6.3	5.6	6.2	7.6	5.7	6.2	4.7	6.6	6.1	6.1	1.7	4.6
MIDDLE ATLANTIC	14.6	14.6	24.0	9.2	17.3	16.3	16.9	17.0	15.0	9.5	11.3	12.6	5.4	9.5
EAST SO CENTRAL	14.8	8.6	20.2	8.9	13.9	16.3	12.9	13.8	13.8	9.3	12.8	12.6	9.6	10.7
WEST SO CENTRAL	6.7	3.0	5.1	3.6	4.1	4.6	4.0	4.1	6.7	6.0	6.3	7.3	8.7	7.3
SOUTH ATLANTIC	16.5	18.5	12.5	15.9	15.0	17.0	12.3	14.1	18.6	17.9	18.2	22.2	14.1	17.4
EAST SO CENTRAL	4.9	2.4	3.9	3.9	3.5	3.7	4.9	4.2	4.7	6.3	5.7	2.7	4.1	4.6
WEST SO CENTRAL	8.1	5.1	7.2	13.1	8.3	7.8	8.4	8.2	4.7	7.5	6.5	10.3	8.2	7.7
MOUNTAIN	5.5	8.6	3.5	13.4	7.7	9.0	6.5	6.7	2.0	4.8	3.9	4.6	5.8	4.6
PACIFIC & INSULAR	10.2	19.3	8.9	12.6	12.7	10.7	13.9	13.0	12.6	13.5	13.2	6.1	9.1	10.5
FOREIGN	8.9	9.8	6.5	12.3	9.0	9.4	11.2	10.1	11.5	15.1	13.9	12.3	30.8	19.5
REGION UNKNOWN	3.3	3.6	1.9	1.4	2.2	1.7	3.4	2.7	5.5	3.2	4.0	3.1	2.6	3.4

1/ Refer to explanatory note on page 12 and the description of doctors' field groupings inside back cover



TABLE 2. CONTINUED  
TOTAL ALL DOCTORATES

PSYCHOLOGY	ECONOMICS	ANTHROPOLOGY & SOCIOLOGY	POLIT. SCI. PUBLIC ADMIN. INTER-REL.	OTHER SOCIAL SCIENCES	SOCIAL SCIENCES EXCL. PSYCHOL.	TOTAL SCIENCES	MILITARY	ENG. AND ARCH. LANG. AND LIT.	FOREIGN LANG. AND LIT.	OTHER QUANTITIES	HUMANITIES	PROFESSIONAL FIELDS	EDUCATION	TOTAL NON-SCIENCES	OTHER OR UNSPECIFIED
2960	838	1111	881	714	6504	18281	961	1279	788	1721	5559	1340	7448	23347	44
63.5	91.3	66.4	83.9	77.5	71.6	82.0	77.5	54.7	48.9	68.3	63.7	77.4	65.3	66.0	77.3
36.5	8.7	33.6	16.1	22.5	28.1	18.0	22.5	45.3	51.1	31.7	36.3	22.6	24.7	34.0	22.7
91.5	67.3	85.9	81.0	80.5	84.8	74.9	90.9	53.0	51.5	87.6	88.8	80.7	91.0	89.2	
4.0	30.5	12.0	15.3	17.0	11.8	20.3	5.9	5.0	13.5	5.1	8.2	17.2	9.0	6.2	
4.5	2.1	2.2	3.6	2.2	3.4	2.8	3.1	2.0	2.9	3.4	2.9	2.1	2.5	2.6	
58.4	68.1	63.3	66.1	67.9	62.6	64.3	65.1	64.4	60.3	58.8	61.8	71.6	72.8	68.6	
35.3	28.5	32.9	27.2	27.2	32.5	31.2	29.0	34.4	34.5	36.1	34.1	24.7	23.3	27.1	
6.3	3.3	3.8	6.7	4.9	5.4	4.4	5.8	4.2	4.8	5.7	5.2	3.7	4.0	4.4	
29.9	30.6	32.5	32.6	32.5	31.9	31.1	32.2	32.3	31.0	32.9	32.8	33.9	36.5	34.6	
69.6	63.6	56.3	56.9	28.3	56.2	61.3	65.2	60.2	65.2	51.5	62.5	37.8	39.7	47.7	
75.5	78.0	87.2	87.1	94.4	81.5	73.1	90.0	87.3	85.3	84.7	86.5	93.1	96.2	92.6	
7.1	7.5	9.1	5.6	9.5	8.0	7.4	9.7	9.7	10.0	10.1	9.9	10.7	12.5	11.3	
5.5	5.7	6.7	6.3	6.4	5.6	5.7	7.3	7.0	7.2	7.0	7.1	6.2	6.4	6.7	
15.6	3.9	9.6	5.3	3.6	10.4	26.6	7.3	3.4	5.8	5.0	5.2	2.5	3.3	3.9	
8.6	1.6	5.9	2.6	1.3	5.6	13.2	4.3	1.6	2.7	2.1	2.5	.9	1.1	1.0	
2.8	2.0	2.7	1.7	1.0	2.3	10.8	.8	.2	1.5	1.0	.9	1.1	.9	.9	
2.4	.1	.1	.1	.3	1.2	1.1	.1	.1	.1	.2	.2	.4	.5	.3	
1.9	.2	1.0	.9	1.1	1.3	1.6	2.1	2.8	1.5	1.7	1.7	.2	.6	1.1	
75.6	90.5	83.2	84.1	85.8	81.2	86.1	79.7	85.7	82.6	84.6	83.6	94.6	92.5	88.3	
35.8	57.5	69.6	57.2	66.9	50.7	34.8	60.4	74.1	71.1	69.6	69.0	68.0	70.5	65.5	
5.6	9.2	2.9	5.7	4.8	5.8	13.8	2.8	4.2	2.5	3.4	3.3	6.9	2.8	3.4	
16.1	16.7	4.6	13.1	7.7	12.9	10.6	6.5	4.5	1.6	2.8	2.9	5.3	10.4	7.1	
12.6	2.6	2.9	4.3	3.8	7.5	3.8	3.4	4.8	1.9	5.3	3.3	5.1	1.2	4.4	
5.4	4.4	3.2	2.9	3.6	4.5	3.0	6.7	4.8	5.5	4.2	5.1	2.1	1.4	3.9	
8.8	5.6	7.2	12.6	9.5	8.4	7.3	12.0	10.8	11.5	10.2	11.2	5.7	6.3	7.8	
10.6	2.2	6.2	3.4	2.1	6.8	19.7	3.5	1.7	1.9	2.6	2.5	1.6	1.7	1.9	
5.0	1.7	3.4	2.3	1.5	3.6	6.5	3.7	1.8	3.9	2.4	2.8	1.0	1.7	2.0	
52.4	74.2	62.6	62.4	63.2	59.2	48.0	46.0	51.4	49.0	55.9	51.0	78.4	66.4	62.5	
23.2	16.2	22.6	21.7	23.8	22.0	18.1	53.7	36.3	33.6	26.9	32.0	13.3	14.1	25.7	
15.0	33.8	19.9	12.0	13.9	18.3	36.9	6.3	2.2	11.6	5.4	4.2	7.2	4.0	5.6	
31.9	52.1	67.3	58.4	67.7	49.0	38.3	47.6	51.8	85.0	76.8	77.6	67.1	40.2	54.1	
4.6	3.1	3.3	14.2	6.0	5.7	4.2	9.3	5.0	3.1	3.9	5.1	7.2	31.9	22.4	
42.8	1.6	2.5	3.3	4.0	18.9	11.3	4.3	2.7	1.3	3.5	3.1	9.2	10.4	8.2	
1.2	3.4	.9	4.9	1.3	2.0	2.3	4.3	2.3	3.4	2.3	3.3	2.9	14.4	2.1	
4.6	6.3	6.1	9.3	7.1	6.1	7.1	8.1	5.9	5.7	7.1	6.8	6.3	8.2	7.6	
29.8	38.0	45.2	35.1	43.4	35.7	28.7	29.2	27.2	36.5	30.3	30.4	38.7	15.5	22.8	
13.5	11.1	8.9	5.6	19.5	10.7	10.6	6.1	3.6	2.6	5.4	4.6	8.4	11.3	9.0	
10.9	8.2	7.1	6.9	5.5	8.6	8.3	6.3	7.2	7.0	8.1	7.4	7.6	9.9	8.9	
8.4	2.9	1.2	3.1	4.0	5.4	4.9	2.3	2.2	1.8	4.9	3.2	8.8	9.5	7.6	
1.9	1.0	.8	2.2	2.7	1.6	1.2	1.6	2.7	.5	6.2	3.6	1.1	1.9	2.3	
30.0	35.5	30.9	37.8	27.9	31.9	39.3	46.4	51.2	45.9	38.1	44.0	29.1	43.8	42.0	
4.6	6.3	6.1	9.3	7.1	6.1	7.1	8.1	5.9	5.7	7.1	6.8	6.3	8.2	7.6	
8.5	9.5	8.3	6.7	3.3	7.8	6.6	8.1	11.5	15.8	8.0	10.1	4.6	5.1	6.5	
13.3	13.7	14.6	15.5	15.3	16.1	15.3	18.1	15.9	17.1	14.7	16.0	11.6	13.2	13.6	
16.3	12.2	12.9	9.1	14.0	14.2	13.5	16.1	14.6	15.5	17.8	16.2	16.4	16.1	16.1	
6.4	4.5	6.4	4.9	4.6	5.7	5.4	5.9	5.9	5.7	7.7	6.6	6.4	9.1	8.1	
15.9	24.9	14.1	27.5	13.9	18.5	16.6	16.7	16.8	12.2	11.5	13.8	15.2	17.8	16.4	
9.0	2.7	5.1	4.2	3.8	4.4	4.4	5.4	5.8	3.1	4.1	4.6	7.2	5.7	5.6	
7.6	3.5	8.5	6.0	6.6	6.8	7.5	6.6	5.9	7.0	9.1	8.5	10.0	8.5	8.7	
4.8	3.9	6.8	2.2	7.1	9	5.5	5.0	3.8	2.8	4.1	4.0	5.6	6.3	5.6	
9.8	6.6	10.7	10.9	11.9	9.7	11.2	7.5	7.6	10.4	11.1	9.4	8.6	9.1	9.2	
3.5	16.2	10.4	9.6	11.7	8.6	11.1	6.3	4.7	7.5	8.9	7.2	12.0	5.3	6.7	
3.8	2.3	2.8	3.5	2.9	3.2	3.8	4.3	3.6	3.9	3.1	3.6	2.1	3.8	3.6	

2/ Statistics are not presented for this group because too few records contained the specified data.



TABLE 2  
STATISTICAL PROFILE OF DOCTORATE RECIPIENTS BY FIELD OF DOCTORATE, FY 1977<sup>1/</sup>

DOCTORATES: MEN

	FY 1977 TOTAL	PHYSICS AND ASTRONOMY	CHEMISTRY	EARTH, ENVIRONM... AND MARINE SCIENCES	PHYSICAL SCIENCES	MATHEMATICS	ENGINEERING	EMP. FIELDS	BASIC MEDICAL SCIENCES	OTHER BIOSCIENCES	BIOSCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES	LEFT SCIENCES
TOTAL MALE	23827	1085	1390	632	3107	831	2567	6505	1386	1352	2443	506	861	3810
MALE AS A PERCENT OF TOTAL DOCTORATES	75.2	94.4	88.5	91.5	91.1	86.7	97.2	92.8	77.6	78.2	77.0	75.4	93.2	79.9
U.S. CITIZENSHIP %	80.0	72.7	79.7	80.5	77.4	74.4	55.6	68.4	83.9	83.6	83.6	78.3	61.6	77.9
FOREIGN CITIZENSHIP %	17.2	25.1	18.3	17.4	20.5	22.9	41.6	29.1	13.3	14.1	13.7	19.0	36.4	19.6
UNKNOWN %	2.7	2.2	1.9	2.1	2.1	2.8	2.9	2.5	3.1	2.3	2.7	2.8	1.5	2.5
MARRIED %	70.3	60.3	62.6	72.3	63.9	58.8	67.7	64.8	66.7	70.1	69.2	72.1	79.4	71.2
NOT-MARRIED %	25.2	34.7	34.2	22.9	32.1	36.6	28.4	31.2	29.1	25.7	27.7	23.5	17.9	24.9
UNKNOWN %	4.5	4.6	3.2	4.7	4.0	4.6	3.9	4.0	4.2	4.2	4.2	4.3	2.7	3.9
MEDIAN AGE AT DOCTORATE	31.3	29.5	28.6	30.7	29.3	29.1	30.0	29.6	28.9	30.5	29.5	30.1	31.4	30.0
PERCENT WITH BACC IN SAME FIELD AS DOCTORATE	56.5	79.8	88.3	45.6	76.6	74.7	81.0	78.1	17.4	68.6	39.5	19.4	61.2	41.8
PERCENT WITH MASTERS	80.1	86.5	89.1	79.1	86.8	75.6	91.1	72.7	42.3	70.1	64.3	64.9	82.5	63.0
MEDIAN TIME LAPSE FROM BACC TO DOCT	8.4	7.3	6.3	8.1	7.0	6.9	7.5	7.2	6.5	7.6	7.0	7.0	8.2	7.2
TOTAL TIME YRS REGISTERED TIME <sup>2/</sup> YRS	6.0	6.2	5.2	6.0	5.7	5.8	5.6	5.7	5.6	6.0	5.8	5.6	5.5	5.7
POSTDOCTORAL STUDY PLANS %	17.9	46.4	46.4	24.6	42.0	11.4	14.8	27.4	73.6	36.9	57.7	39.7	12.8	45.2
FELLOWSHIP	8.5	14.4	20.4	9.2	15.0	4.8	4.3	10.0	44.7	20.7	34.3	24.7	4.3	26.2
RESEARCH ASSOC	7.4	31.0	24.4	15.5	24.9	4.8	9.1	16.1	20.2	12.2	16.7	9.5	7.5	13.7
TRAINEESHIP	.8	.5	.5	.0	.4	.8	.8	.6	2.8	1.4	2.2	1.2	.6	.7
OTHER	1.3	.6	.1	.2	.7	1.0	.6	.7	5.9	2.6	4.5	4.3	.3	3.5
PLANNED EMPLOYMENT AFTER DOCTORATE %	74.9	43.4	48.2	69.1	50.8	81.0	79.0	65.8	21.1	56.2	36.3	52.6	81.5	48.7
EDUC INSTITUTION	46.8	16.8	11.6	28.2	16.8	58.1	22.8	24.4	12.3	37.4	23.2	24.1	45.8	28.4
INDUSTRY/BUSINESS	11.3	13.6	29.1	18.7	21.6	13.6	38.6	27.3	4.7	5.0	4.9	11.9	12.4	7.5
GOVERNMENT	10.0	10.0	4.4	19.0	9.3	6.5	13.7	10.7	2.3	8.3	4.9	6.7	18.6	8.6
NONPROFIT	3.9	1.1	1.1	1.1	1.1	1.1	1.8	1.4	.9	2.6	1.7	5.3	1.3	2.1
OTHER & UNKNOWN	2.9	1.9	2.0	2.2	2.0	1.7	2.1	2.0	.8	2.6	1.6	1.8	3.6	2.1
POSTDOCT STATUS UNKN.	7.2	10.2	5.4	6.0	7.2	7.6	6.2	6.9	5.3	6.9	6.0	7.5	5.6	6.1
DEFINITE POSTDOCTORAL STUDY	13.1	34.3	35.8	17.7	31.6	7.3	9.1	19.6	62.0	26.2	46.5	31.2	9.1	55.8
SEEKING POSTDOCTORAL STUDY	4.9	12.1	10.6	7.1	10.4	4.1	5.7	7.7	11.5	10.7	11.2	9.5	4.6	4.3
DEFINITE EMPLOYMENT	55.1	30.1	37.3	53.6	38.1	57.3	59.5	49.0	14.8	37.4	24.6	45.3	59.6	34.6
SEEKING EMPLOYMENT	19.8	13.3	10.9	15.5	12.6	23.7	19.4	16.7	6.3	18.8	11.7	12.5	22.1	14.1
EMPLOYMENT ACTIVITY AFTER DOCTORATE %														
PRIMARY ACTIVITY														
R & D	24.9	57.5	68.2	49.0	59.7	36.8	61.3	57.0	44.4	35.4	38.5	41.2	49.3	43.1
TEACHING	42.7	30.0	19.1	26.8	24.3	50.4	20.5	26.4	34.1	43.3	40.2	31.9	25.7	33.3
ADMINISTRATION	13.2	2.1	1.7	3.8	2.4	1.7	2.7	2.5	3.9	3.3	3.5	8.3	2.3	3.8
PROF. SERVICES	9.0	2.4	2.3	6.5	3.5	3.4	5.4	4.4	8.3	7.1	7.5	8.3	7.2	7.5
OTHER	2.2	1.8	1.0	5.0	2.4	2.3	2.6	2.5	.5	2.8	2.0	2.5	2.7	2.4
ACTIVITY UNKNOWN	8.0	6.1	7.7	8.8	7.6	5.5	7.5	7.2	8.8	8.1	8.3	7.8	12.7	9.9
SECONDARY ACTIVITY														
R & D	24.9	19.0	11.8	25.7	17.7	37.4	18.3	20.9	29.8	29.4	29.5	27.9	21.4	26.1
TEACHING	9.8	5.2	3.7	7.1	5.1	18.1	8.0	8.4	14.6	11.9	12.8	14.2	17.9	15.0
ADMINISTRATION	8.7	6.7	11.2	10.6	9.8	4.4	8.0	8.1	13.2	8.4	10.0	10.8	6.9	8.9
PROF. SERVICES	6.0	2.1	2.9	5.6	3.5	2.9	5.7	4.5	3.9	4.1	4.0	9.8	4.7	5.2
OTHER	1.6	.6	.2	1.5	.7	.0	1.4	.9	1.5	.0	.5	1.5	.6	.7
NO SECONDARY ACTIVITY	41.1	60.2	62.6	40.7	55.7	31.7	51.1	49.9	28.3	38.2	34.8	27.9	35.9	34.2
UNKNOWN	8.0	6.1	7.7	8.8	7.6	5.5	7.5	7.2	8.8	8.1	8.3	7.8	12.7	9.9
REGION OF EMPLOYMENT AFTER DOCTORATE %														
NEW ENGLAND	6.0	6.4	6.2	9.3	6.0	6.9	5.8	6.1	4.9	6.1	5.7	6.4	1.8	4.3
MIDDLE ATLANTIC	14.3	14.7	23.7	19.4	17.1	16.4	16.7	16.8	15.6	9.9	11.8	12.3	5.7	9.5
EAST NO CENTRAL	14.4	8.3	19.8	8.6	13.4	15.1	13.1	13.5	14.1	8.4	10.3	12.7	9.6	10.4
WEST NO CENTRAL	6.7	3.1	5.4	3.8	4.3	4.8	4.1	4.3	6.8	5.6	6.0	8.3	8.4	7.3
SOUTH ATLANTIC	16.3	18.3	12.5	16.2	15.2	17.6	12.1	14.1	19.0	16.5	17.3	22.5	13.6	16.7
EAST SO CENTRAL	4.9	2.4	3.9	4.1	3.5	4.0	4.8	4.2	4.4	6.6	5.8	2.0	3.5	4.3
WEST SO CENTRAL	8.1	5.2	7.7	13.6	8.7	7.6	8.3	8.3	5.4	7.3	6.7	10.3	8.6	8.0
MOUNTAIN	5.7	8.9	3.9	13.0	7.8	5.5	6.5	6.9	1.5	5.3	4.0	5.4	5.7	4.9
PACIFIC & INSULAR	10.4	19.0	9.1	12.4	12.7	11.1	13.9	13.0	11.7	15.2	14.0	5.4	9.4	10.9
FOREIGN	10.1	10.1	5.8	12.1	8.8	9.5	11.3	10.1	11.7	16.5	14.8	11.3	31.2	20.7
REGION UNKNOWN	3.2	3.7	2.1	1.5	2.4	1.5	3.5	2.8	4.9	2.8	3.4	2.7	3.2	3.2

1/ Refer to explanatory note on page 12 and the description of doctoral fields inside back cover.

TABLE 2. CONTINUED

DOCTORATES: MEN

PSYCHOLOGY	ECONOMICS	ANTHROPOLOGY & SOCIOLOGY	POLIT. SCI. PUBLIC ADMIN. INTERN'L REL.	OTHER SOCIAL SCIENCES	SOCIAL SCIENCES EXCL. PSYCHOL.	TOTAL SCIENCES	HISTORY	ENG AND AMER LANG AND LIT	FOREIGN LANG AND LIT	OTHER HUMANITIES	HUMANITIES	PROFESSIONAL FIELDS	EDUCATION	TOTAL NON-SCIENCES	OTHER OR UNSPECIFIED
1879	765	738	739	553	4674	14989	745	590	385	1183	2903	1037	4864	8804	34
63.5	91.3	66.4	83.9	77.5	71.9	82.0	77.5	54.7	48.9	68.3	63.7	77.4	65.3	66.0	77.3
91.5	66.9	84.0	79.2	78.5	82.8	75.3	91.0	92.9	81.3	87.2	88.5	79.0	89.8	88.1	
3.9	30.7	13.8	17.1	19.3	13.8	21.9	6.3	5.6	15.8	9.3	8.6	18.9	7.6	9.3	
4.6	2.4	2.2	3.8	2.2	3.4	2.8	2.7	1.5	2.9	3.6	2.8	2.1	2.5	2.6	
63.0	70.1	69.5	67.9	73.8	67.2	67.2	68.1	66.1	65.7	63.7	65.6	77.4	81.1	75.6	
30.3	26.3	26.6	25.2	22.1	27.3	28.4	26.3	29.7	29.4	30.2	29.0	18.5	14.7	15.9	
6.7	3.7	3.9	6.9	4.2	5.5	4.4	5.6	4.2	4.9	6.1	5.4	4.1	4.1	4.6	
29.8	30.7	32.3	32.7	32.7	31.0	30.1	32.1	31.6	33.3	32.8	32.4	33.8	36.1	34.4	
67.5	63.1	56.0	55.3	30.4	58.6	62.8	66.2	80.2	59.0	54.4	63.2	38.4	37.4	46.0	
76.2	78.4	86.7	88.0	95.1	82.3	73.3	88.9	84.2	81.6	83.3	84.7	92.6	95.9	91.8	
7.1	7.9	9.0	9.6	9.5	8.1	7.4	9.5	9.2	10.1	10.0	9.7	10.4	12.3	11.0	
5.5	5.7	6.7	6.2	6.1	5.9	5.7	7.2	6.6	7.0	6.8	6.9	5.3	6.5	6.6	
16.0	3.8	9.1	5.0	3.8	9.7	26.4	7.0	3.6	5.2	4.4	5.0	2.1	3.0	3.6	
8.9	1.6	5.1	2.6	1.3	5.2	12.6	4.2	1.7	1.6	1.8	2.3	.7	1.0	1.4	
2.9	1.8	3.0	1.6	.9	2.3	11.2	.9	.2	2.1	.9	.9	4.0	.8	.9	
2.6	.1	.1	.1	.4	1.2	1.1	.1	.2	.3	.2	.2	.3	.5	.3	
1.6	.3	.8	.7	1.3	1.1	1.5	1.7	1.5	1.3	1.6	1.6	.2	.8	1.0	
75.6	90.8	83.7	84.7	87.2	82.2	56.6	81.2	87.1	83.6	85.5	84.5	92.4	91.2	89.1	
33.8	57.9	69.1	58.6	65.3	51.0	33.7	65.0	75.3	70.9	69.7	68.5	68.0	64.9	69.2	
6.3	9.5	3.3	5.4	5.1	6.1	15.6	3.1	4.9	3.1	4.0	3.8	7.7	3.0	3.8	
18.3	16.9	5.6	13.1	8.9	14.2	13.2	7.9	1.7	2.3	2.6	3.8	5.2	11.2	8.0	
12.4	2.6	3.0	3.8	3.8	6.9	3.3	3.8	1.5	2.8	6.0	4.0	9.5	4.4	4.9	
4.8	3.9	2.8	3.8	4.2	4.1	2.7	6.4	3.7	4.9	3.3	4.4	1.9	2.7	3.2	
8.4	5.4	7.2	10.3	9.0	8.1	7.1	11.8	9.3	11.2	10.1	10.5	5.5	5.8	7.3	
11.2	2.1	5.7	3.0	2.4	6.5	19.6	3.4	1.7	2.1	2.7	2.6	1.4	1.5	1.8	
4.8	1.7	3.4	2.0	1.4	3.3	6.7	3.6	1.9	3.1	1.7	2.4	.7	1.6	1.7	
53.7	74.8	61.8	62.8	64.4	61.1	49.1	47.9	51.7	50.9	58.1	53.2	81.4	69.1	55.3	
21.9	16.1	22.0	21.9	22.8	21.1	17.4	33.3	35.4	33.0	27.5	31.3	11.0	22.1	23.8	
15.7	33.9	20.2	10.8	13.8	19.0	39.8	7.3	1.3	2.1	5.5	4.7	6.9	6.0	5.8	
29.7	51.6	66.2	57.8	66.6	49.0	36.4	66.7	81.6	81.5	73.9	74.7	67.3	35.9	50.9	
7.9	3.3	3.3	13.6	6.5	5.9	4.0	9.2	6.2	3.1	4.5	5.8	5.7	38.5	24.9	
43.2	1.4	2.9	3.7	4.5	17.2	9.9	4.8	2.0	1.5	4.2	3.6	9.5	9.3	7.8	
1.1	3.5	.9	5.0	.8	2.1	2.3	4.5	2.6	5.1	3.5	3.8	3.3	1.1	2.2	
5.5	6.3	6.6	9.9	7.9	6.8	7.6	7.6	6.2	6.7	8.3	7.5	7.3	9.2	8.5	
28.3	34.8	44.5	34.9	44.7	35.4	27.5	26.6	27.5	37.9	27.2	28.5	39.2	14.1	21.7	
12.7	11.4	9.4	5.4	8.7	10.2	10.3	6.4	3.0	4.6	6.6	5.6	7.5	11.3	9.2	
11.4	8.6	7.5	7.3	5.9	8.9	8.5	6.7	6.6	7.2	8.4	7.5	7.0	9.8	8.8	
10.0	3.0	.4	3.0	3.7	5.1	4.8	2.5	2.6	2.6	5.1	3.7	8.5	8.8	7.4	
2.2	1.0	.9	1.7	2.2	1.7	1.2	1.1	2.6	1.0	6.7	3.9	1.2	1.5	2.1	
29.7	35.0	30.7	37.7	27.0	31.9	40.1	49.0	51.5	40.0	37.7	43.3	29.3	45.3	42.4	
5.5	6.3	6.6	9.9	7.9	6.8	7.6	7.6	6.2	6.7	8.3	7.5	7.3	6.2	8.5	
7.4	9.3	7.7	6.9	3.6	7.2	6.2	6.0	10.5	14.8	7.4	9.3	4.1	4.7	5.9	
17.4	14.0	14.0	14.2	16.6	15.6	15.0	16.5	13.8	14.8	13.7	14.4	15.9	13.7	13.5	
18.0	12.4	12.1	8.4	18.3	14.4	13.3	14.6	13.1	15.4	18.0	15.9	15.4	15.9	15.8	
6.5	4.7	6.8	5.2	5.1	5.8	5.4	5.6	5.6	6.7	7.9	6.7	6.4	9.4	8.2	
15.4	24.7	13.6	21.6	14.0	18.8	16.4	16.8	18.7	13.3	11.8	14.5	15.9	17.0	16.2	
5.6	2.6	5.3	4.3	3.1	4.4	4.3	5.6	7.2	2.6	4.8	5.2	7.2	5.4	5.6	
8.2	3.8	9.0	6.5	7.0	7.0	7.8	7.8	10.5	7.2	9.6	9.1	9.8	7.9	8.5	
4.9	3.7	5.9	2.2	6.5	4.6	5.6	4.5	4.9	3.1	4.2	4.3	5.9	6.5	5.8	
9.6	6.3	10.5	11.4	10.4	9.5	11.3	8.1	6.9	8.7	9.8	8.7	9.0	6.5	9.2	
3.8	16.8	12.1	10.8	12.9	9.9	11.9	6.7	6.2	9.2	9.5	8.2	13.0	6.2	7.7	
3.2	1.9	3.1	2.6	2.8	2.8	2.8	4.8	2.6	4.6	3.3	3.7	2.5	3.9	3.6	

2/ Statistics are not presented because too few records contained the specified data

TABLE 2  
STATISTICAL PROFILE OF DOCTORATE RECIPIENTS BY FIELD OF DOCTORATE, FY 1977

DOCTORATES: WOMEN

	FY 1977 TOTAL	PHYSICS AND ASTRONOMY	CHEMISTRY	EARTH, ENVIRONMENT AND MARINE SCIENCES	PHYSICAL SCIENCES	MATHEMATICS	ENGINEERING	EMP. FIELDS	BASIC MEDICAL SCIENCES	OTHER BIOSCIENCES	BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES	LIFE SCIENCES
TOTAL FEMALE	7845	64	180	59	303	128	74	505	399	330	729	165	63	957
FEMALE AS A PERCENT OF TOTAL DOCTORATES	24.8	5.6	11.5	8.5	8.9	13.3	2.8	7.2	22.4	23.8	23.0	24.6	6.8	20.1
U.S. CITIZENSHIP %	88.4	65.1	71.7	79.7	71.6	71.9	56.8	69.5	83.7	83.6	83.7	80.6	61.9	81.7
FOREIGN CITIZENSHIP %	8.9	32.4	27.2	20.3	27.4	26.6	41.9	29.9	13.5	13.9	13.7	18.2	38.1	18.1
UNKNOWN %	2.7	1.6	1.1	.0	1.0	1.6	1.4	1.2	2.6	2.4	2.6	1.2	.0	2.2
MARRIED %	53.5	68.8	52.2	52.5	55.8	57.0	56.2	58.6	49.9	50.3	50.1	48.5	42.9	49.3
NOT MARRIED %	42.3	28.1	43.8	45.8	40.9	39.1	32.4	32.2	45.6	46.1	45.8	49.1	57.1	47.1
UNKNOWN %	4.1	3.1	3.9	1.7	3.3	3.9	3.2	3.2	4.5	3.6	4.1	2.4	.0	3.6
MEDIAN AGE AT DOCTORATE	32.8	29.1	28.2	29.1	28.6	29.0	28.2	28.7	29.0	29.7	29.2	32.4	32.1	29.0
PERCENT WITH BACC IN SAME FIELD AS DOCTORATE	52.2	28.1	81.7	54.2	75.4	85.9	97.3	74.1	17.8	67.6	46.3	32.1	33.3	38.5
PERCENT WITH MASTERS	84.9	70.3	45.6	83.1	58.1	84.4	90.5	63.5	45.4	69.1	56.1	67.9	90.5	60.4
MEDIAN TIME LAPSE FROM BACC TO DOCT TOTAL TIME YRS	9.7	7.2	5.1	6.9	6.5	7.2	6.4	6.7	6.6	7.6	7.1	8.6	8.0	7.3
REGISTERED TIME YRS	6.2	6.2	5.2	5.9	5.5	5.9	5.4	5.6	5.5	6.1	5.9	5.5	5.3	5.7
POSTDOCTORAL STUDY PLANS %	14.3	51.6	50.6	37.8	38.2	8.6	16.2	23.5	75.4	44.8	51.6	37.6	20.6	54.6
FELLOWSHIP	7.7	7.8	18.9	16.9	16.2	2.3	6.8	11.3	50.6	30.9	41.7	19.4	7.9	35.6
RESEARCH ASSOC	4.3	39.1	30.0	20.3	20.0	3.1	8.1	20.0	19.8	12.4	16.8	12.7	11.1	15.5
TRAINEESHIP	.7	.0	.0	.0	.0	2.3	.0	.4	2.3	.3	1.4	2.4	.0	1.5
OTHER	1.6	4.7	1.7	.0	2.0	.8	1.4	1.8	2.6	1.2	2.1	2.4	1.6	2.1
PLANNED EMPLOYMENT AFTER DOCTORATE %	77.0	35.9	42.2	55.9	43.6	89.6	74.3	58.2	18.5	49.1	32.4	53.3	74.6	26.8
EDUC INSTITUTION	57.3	12.5	18.3	25.4	18.5	65.6	24.3	11.2	12.0	33.9	21.9	32.7	41.2	25.1
INDUSTRY/BUSINESS	4.0	9.4	17.2	13.6	14.9	9.4	31.1	15.8	2.5	3.3	2.9	5.5	12.7	4.7
GOVERNMENT	6.5	4.7	3.3	11.9	5.3	3.1	12.2	5.7	1.8	5.8	3.6	17.3	12.7	5.3
NONPROFIT	4.5	1.6	1.7	3.4	2.0	1.6	2.7	2.0	.3	2.1	1.1	3.0	4.8	1.7
OTHER & UNKNOWN	4.8	7.8	1.7	1.7	3.0	3.9	4.1	3.4	2.0	3.9	2.9	1.8	3.2	2.7
POSTDOCT STATUS UNKN %	8.7	12.5	7.2	6.8	8.3	7.8	9.5	8.3	6.0	6.1	6.0	9.7	4.8	6.6
DEFINITE POSTDOCTORAL STUDY SEEKING POSTDOCTORAL STUDY	4.6	23.4	12.8	6.8	13.9	6.3	6.8	10.9	14.3	12.4	13.4	6.7	9.5	12.0
DEFINITE EMPLOYMENT SEEKING EMPLOYMENT	51.1	14.1	28.3	32.2	26.1	50.8	51.4	36.0	12.0	30.6	20.4	34.5	41.3	24.2
SEEKING EMPLOYMENT	25.9	21.9	13.9	23.7	17.5	32.8	23.0	22.2	6.5	18.5	11.9	16.8	33.3	17.6
EMPLOYMENT ACTIVITY AFTER DOCTORATE %														
PRIMARY ACTIVITY														
R & D	11.1	33.3	52.9	31.6	45.6	23.1	65.8	41.8	31.3	26.3	28.1	26.3	53.8	30.9
TEACHING	56.7	44.4	33.3	42.1	36.7	66.2	28.9	45.6	47.9	56.4	53.1	45.6	23.1	48.3
ADMINISTRATION	12.7	.0	2.0	.0	1.3	3.1	2.6	2.2	4.2	5.2	4.1	8.8	3.8	5.6
PROF. SERVICES	12.3	11.1	.0	21.1	6.3	3.1	.0	3.8	4.2	5.0	7.7	10.5	3.8	6.0
OTHER	2.0	11.1	3.9	.0	3.8	.0	.0	1.6	4.2	2.0	2.7	1.8	7.7	3.0
ACTIVITY UNKNOWN	5.2	.0	7.8	5.3	6.3	4.6	2.6	4.9	8.3	5.0	6.0	7.0	7.7	6.5
SECONDARY ACTIVITY														
R & D	28.3	22.2	21.6	42.1	26.6	47.7	23.7	33.5	27.1	35.6	32.9	26.3	19.2	29.7
TEACHING	9.9	.0	2.0	.0	1.3	13.8	5.3	6.6	16.7	8.9	11.4	19.3	30.8	15.5
ADMINISTRATION	8.5	.0	3.9	10.5	5.1	.0	5.3	3.3	8.3	6.9	7.4	8.8	.0	6.9
PROF. SERVICES	7.1	.0	2.0	5.3	2.5	4.6	2.6	3.3	4.2	3.0	3.4	1.8	3.8	3.0
OTHER	2.1	.0	.0	.0	.0	1.5	.0	.5	.0	1.0	.7	.0	.0	.4
NO SECONDARY ACTIVITY	39.0	77.8	62.7	36.8	58.2	27.7	60.5	47.8	35.4	39.6	38.3	36.8	38.5	37.9
UNKNOWN	5.2	.0	7.8	5.3	6.3	4.6	2.6	4.9	8.3	5.0	6.0	7.0	7.7	6.5
REGION OF EMPLOYMENT AFTER DOCTORATE %														
NEW ENGLAND	8.1	11.1	7.8	10.5	8.9	12.3	.0	8.2	4.2	9.9	8.1	5.3	.0	6.5
MIDDLE ATLANTIC	15.2	11.1	27.5	5.3	20.3	15.4	26.3	19.8	12.5	7.9	9.4	14.0	.0	9.5
EAST NO CENTRAL	15.9	22.2	23.5	15.8	21.5	24.6	5.3	19.2	12.5	12.9	12.8	12.3	11.5	12.5
WEST NO CENTRAL	6.8	.0	2.0	.0	1.3	3.1	.0	1.6	6.3	7.9	7.4	3.5	15.4	7.3
SOUTH ATLANTIC	17.2	22.2	11.8	10.5	12.7	12.3	18.4	13.7	16.7	23.8	21.5	21.1	23.1	21.8
EAST SO CENTRAL	5.2	.0	3.9	.0	2.5	1.9	10.5	3.8	6.3	5.0	5.4	5.3	15.4	6.5
WEST SO CENTRAL	8.1	.0	2.0	5.3	2.5	9.2	10.5	6.6	2.1	7.9	6.0	10.5	.0	6.5
MOUNTAIN	5.1	.0	.0	21.1	5.1	1.5	5.3	3.8	4.2	3.0	3.4	1.8	7.7	3.4
PACIFIC & INSULAR	9.7	33.3	7.8	15.8	12.7	7.7	15.8	11.5	16.7	6.9	10.1	8.8	3.8	9.1
FOREIGN	5.2	.0	13.7	15.8	22.7	9.2	7.9	10.4	10.4	9.9	10.1	15.8	23.1	12.9
REGION UNKNOWN	3.5	.0	.0	.0	.0	3.1	.0	1.1	8.3	5.0	6.0	4.8	.0	4.3

1/ Refer to explanatory note on page 12 and the description of doctoral field groupings inside back cover

TABLE 2. CONTINUED  
DOCTORATES: WOMEN

PSYCHOLOGY	ECONOMICS	ANTHROPOLOGY & SOCIOLOGY	POLIT SCI PUBLIC ADMIN (INTERN'L REL)	OTHER SOCIAL SCIENCES	SOCIAL SCIENCES EXCL PSYCHOL	TOTAL SCIENCES	HISTORY	ENG AND AMER LANG AND LIT	FOREIGN LANGS AND LIT	OTHER HUMANITIES	HUMANITIES	PROFESSIONAL FIELDS	EDUCATION	TOTAL NON SCIENCES	OTHER OR UNSPECIFIED
1081	73	37	142	161	830	3292	216	489	403	548	1656	303	2564	4543	
36.5	8.7	33.6	16.1	22.5	28.1	18.0	22.5	45.3	51.1	21.7	36.3	22.6	34.7	34.0	22.7
91.6	71.2	89.5	93.8	87.6	89.9	84.4	90.7	93.0	85.6	88.1	89.3	86.8	93.1	91.3	
4.2	28.8	8.3	6.3	9.9	6.7	12.9	4.6	4.3	11.4	8.8	7.5	11.6	4.5	6.1	
4.3	.0	2.1	2.8	2.5	3.4	2.7	4.6	2.7	3.0	3.1	3.1	1.7	2.4	2.6	
50.5	47.9	50.9	56.3	47.8	50.7	51.4	55.1	55.8	55.1	46.9	52.5	51.8	57.0	55.0	
43.8	52.1	45.6	38.0	44.7	44.2	44.3	38.4	40.1	40.2	48.7	42.8	45.4	39.3	41.0	
5.6	.0	3.5	5.6	7.5	5.1	4.4	6.5	4.1	4.7	4.7	4.8	2.3	3.7	4.0	
30.0	29.6	32.8	31.7	31.6	30.7	30.0	33.4	33.2	32.7	23.1	33.1	34.4	37.5	35.2	
68.3	68.5	56.8	52.8	21.1	57.1	54.3	62.0	80.2	71.2	45.3	64.1	36.0	44.1	51.8	
74.2	74.0	88.2	82.4	91.9	79.2	72.3	64.0	91.0	88.8	87.8	89.8	64.7	94.7	91.1	
7.2	7.8	9.3	9.4	9.4	7.9	7.5	10.5	10.2	9.9	10.3	10.2	11.4	13.2	11.8	
5.5	5.8	6.9	6.7	6.2	5.9	5.8	7.8	7.4	7.4	7.3	7.4	5.8	7.3	6.7	
15.0	5.5	10.7	7.0	3.1	12.1	27.7	8.3	3.3	6.5	6.2	5.7	4.3	3.9	4.6	
8.0	1.4	7.2	2.8	1.2	6.8	19.8	4.8	1.4	3.7	2.7	2.8	.7	1.2	1.8	
2.5	4.1	2.1	2.1	1.2	2.3	8.9	.5	.2	1.0	1.3	.8	1.7	1.0	1.0	
2.1	.0	.0	.0	.0	1.3	1.2	.0	.0	.0	.4	.1	.7	.5	.6	
2.3	.0	1.8	2.1	.6	1.9	1.9	3.2	1.0	1.7	1.8	1.9	.7	1.1	1.6	
75.6	86.3	82.0	81.0	85.7	78.6	63.9	74.5	84.0	81.6	83.2	81.9	89.1	89.2	86.6	
39.4	53.4	70.5	50.0	72.7	50.1	39.9	61.6	72.8	71.2	65.5	69.9	67.0	72.0	65.9	
4.5	5.5	2.1	7.0	3.7	4.2	5.9	1.9	3.3	2.8	2.8	2.4	4.3	2.6	2.6	
12.4	15.1	2.7	12.7	3.7	9.8	7.9	1.4	1.2	1.0	1.5	1.3	5.6	8.1	5.5	
12.9	2.7	2.7	7.0	3.7	9.1	5.9	2.3	.6	1.5	3.8	2.1	7.6	3.8	3.4	
6.4	9.6	4.0	4.2	1.9	5.5	4.3	7.4	6.1	6.0	6.2	6.3	2.6	4.7	5.1	
9.4	8.2	7.2	12.0	11.2	9.3	8.4	17.1	12.7	11.9	10.6	12.4	6.6	6.9	8.6	
9.7	4.1	7.2	3.5	1.2	7.8	20.2	4.2	1.6	1.7	2.4	2.2	2.0	2.1	2.4	
5.3	1.4	3.5	3.5	1.9	4.3	7.6	4.2	1.6	4.7	3.8	3.4	2.3	1.8	2.4	
50.1	68.5	58.2	60.6	59.6	54.2	42.7	39.4	51.1	47.4	51.3	48.7	68.0	61.4	57.2	
25.4	17.8	23.9	20.4	26.1	24.5	21.2	35.2	32.9	34.2	31.9	33.2	21.1	27.8	29.3	
13.7	30.0	19.4	18.6	14.6	16.2	21.9	2.4	3.2	1.0	5.0	3.2	5.7	5.9	5.3	
35.8	58.0	68.6	52.3	71.9	49.2	48.6	71.8	82.0	88.5	82.6	83.0	66.5	49.1	61.0	
4.2	.0	23.2	17.4	4.2	7.9	4.7	9.4	3.6	3.1	2.5	3.7	13.6	24.2	17.0	
4.1	4.0	1.8	1.2	2.1	23.9	18.4	2.4	3.6	1.0	1.8	2.2	8.3	12.6	9.0	
8.3	2.0	.9	4.7	3.1	1.7	1.9	3.5	2.0	1.6	2.8	2.4	1.0	2.0	2.0	
3.0	6.0	5.1	5.8	4.2	3.9	4.5	10.6	5.6	4.7	4.3	5.5	1.9	6.1	5.6	
32.1	38.0	46.5	36.0	38.5	36.5	35.0	40.0	26.8	35.1	37.7	34.0	36.4	18.4	24.7	
14.9	8.0	7.8	7.0	12.5	12.1	12.0	4.7	4.4	.2	2.5	2.9	12.1	11.2	8.7	
10.0	4.0	6.5	4.7	4.2	7.9	7.1	4.7	8.0	6.8	7.1	7.1	10.2	10.1	9.2	
8.3	2.0	2.8	3.5	5.2	6.1	5.2	1.2	1.6	1.0	4.3	2.4	9.7	10.9	8.2	
1.3	.0	.0	4.7	4.2	4.3	1.2	3.5	2.8	.9	5.0	3.0	1.0	2.6	2.6	
30.4	42.0	31.3	38.4	31.3	38.0	35.0	35.3	50.6	51.8	39.1	45.4	28.6	40.6	41.2	
3.0	6.0	5.1	5.8	4.2	3.9	4.5	10.6	5.6	4.7	4.3	5.5	1.4	6.1	5.6	
10.5	12.0	9.7	5.8	3.1	9.3	8.7	4.7	12.8	16.8	9.3	11.6	6.3	5.9	7.7	
19.9	10.0	15.7	22.1	9.4	17.7	16.6	24.7	18.4	19.9	17.1	19.0	14.6	12.3	14.5	
13.1	10.0	12.9	12.8	21.9	13.7	14.2	22.4	16.4	13.6	17.1	16.6	20.4	16.5	16.8	
6.1	2.0	5.5	3.5	3.8	5.2	5.1	7.1	6.4	4.7	7.5	6.4	5.3	8.6	7.7	
17.0	28.0	19.2	26.7	13.5	17.7	17.8	16.5	14.0	11.0	10.7	12.5	12.6	19.5	16.8	
4.1	4.0	4.6	3.5	6.3	4.3	4.6	4.7	4.0	3.7	2.5	3.5	7.3	6.3	5.5	
6.5	.0	7.4	3.5	5.2	6.0	6.1	1.2	9.2	6.8	7.8	7.3	11.7	9.8	9.2	
4.8	6.0	8.8	2.3	9.4	5.9	5.2	7.1	2.4	2.6	3.9	3.5	4.4	5.9	5.0	
10.1	10.0	11.1	8.1	17.7	10.9	10.7	4.7	8.4	12.0	14.2	10.9	8.3	8.3	9.1	
3.1	12.0	6.9	3.5	7.3	7.8	6.9	4.7	2.8	5.8	7.5	5.3	7.8	3.3	4.3	
5.0	6.0	2.3	8.1	3.1	4.5	4.1	2.4	4.8	3.1	2.5	3.3	.5	3.5	3.2	

2/ Statistics are not presented because too few records contained the specified data.





TABLE 4  
NUMBER OF DOCTORATE RECIPIENTS BY SEX, STATE OF DOCTORAL INSTITUTION AND SUMMARY FIELD, FY 1977

STATE OF DOCTORAL INSTITUTION	PHYSICAL SCIENCES		ENGI-NEERING		LIFE SCIENCES		NUMBER OF DOCTORATE RECIPIENTS BY FIELD						OTHER & UNSPEC.		TOTAL			
							SOCIAL SCIENCES		HUMANITIES		PROF. FIELDS		EDUCATION					
	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN			
U.S. TOTAL	3938	431	2567	74	3810	957	4674	1830	2903	1656	1027	303	4864	2584	34	10	23827	7845
ALABAMA	18	0	12	2	42	11	23	2	0	7	7	1	85	47	0	0	187	70
ALASKA	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	5	0
ARIZONA	66	3	29	1	94	16	61	19	17	9	11	0	86	49	0	0	324	91
ARKANSAS	9	0	7	0	10	0	7	2	7	6	16	0	24	18	0	0	80	26
CALIFORNIA	529	49	448	9	413	123	578	197	304	180	86	20	294	156	4	0	2656	734
COLORADO	85	5	44	0	69	11	87	34	44	29	18	5	175	77	0	0	542	161
CONNECTICUT	63	11	23	1	71	24	89	24	85	64	9	3	36	19	1	0	377	146
DELAWARE	14	2	7	0	4	2	9	2	3	3	0	0	1	2	0	0	38	11
D. C.	50	11	30	0	22	23	117	53	54	46	23	6	72	48	0	1	368	188
FLORIDA	98	10	43	4	101	17	134	60	46	32	26	6	440	205	0	1	981	335
GEORGIA	49	5	36	0	74	17	84	26	48	19	31	2	83	63	0	0	405	132
HAWAII	17	2	0	0	26	7	39	9	14	7	0	0	2	5	0	0	105	30
IDAHO	12	-1	3	0	13	1	2	0	5	2	0	0	10	0	0	0	45	4
ILLINOIS	232	27	180	7	207	36	300	115	173	93	71	25	213	132	4	1	1380	436
INDIANA	152	8	87	6	118	26	141	46	126	55	48	10	177	74	0	0	849	225
IOWA	67	10	48	0	79	11	59	13	60	22	16	2	92	33	1	0	422	91
KANSAS	27	3	26	0	57	11	47	23	21	16	10	4	94	32	1	0	283	89
KENTUCKY	11	3	11	0	32	6	33	7	17	12	16	0	24	8	0	0	144	36
LOUISIANA	36	4	19	0	41	8	41	8	40	15	37	2	28	25	0	0	242	62
MAINE	4	0	6	0	7	0	3	1	1	0	0	0	13	3	0	0	34	4
MARYLAND	90	17	45	4	84	33	69	36	57	31	9	2	56	69	0	0	420	192
MASSACHUSETTS	299	38	172	11	142	64	277	122	191	120	61	22	224	133	1	0	1367	508
MICHIGAN	129	16	82	2	216	31	219	83	138	77	53	22	273	145	1	0	1111	376
MINNESOTA	35	4	32	0	97	17	82	38	51	25	16	10	66	35	1	0	388	129
MISSISSIPPI	13	1	9	0	44	6	37	1	17	5	14	0	82	38	0	0	216	62
MISSOURI	68	8	68	0	65	16	87	30	46	24	34	9	122	47	0	0	490	134
MONTANA	12	0	1	0	13	0	13	0	0	0	0	0	20	1	0	0	59	4
NEBRASKA	14	3	3	0	29	6	28	12	22	11	14	0	48	18	0	0	168	50
NEVADA	13	0	0	0	3	0	8	4	2	0	0	0	0	3	0	0	26	7
NEW HAMPSHIRE	22	3	3	0	12	1	6	3	3	3	0	0	0	0	0	0	46	10
NEW JERSEY	115	25	64	3	72	30	89	36	92	29	6	11	83	50	0	0	521	172
NEW MEXICO	26	2	17	1	13	3	19	3	20	21	0	0	28	14	0	0	119	44
NEW YORK	397	51	245	3	354	122	586	309	365	257	98	32	365	257	3	3	2413	733
NORTH CAROLINA	90	6	45	0	126	29	95	53	80	51	16	7	70	32	0	0	522	176
NORTH DAKOTA	9	0	0	0	23	2	8	4	2	0	0	0	15	1	0	0	57	7
OHIO	156	16	100	2	129	44	204	78	126	58	68	29	235	130	5	0	1023	347
OKLAHOMA	39	1	40	1	53	12	50	20	23	12	11	4	82	40	0	0	298	90
OREGON	53	7	11	0	78	9	55	32	27	18	12	2	75	25	0	0	311	94
PENNSYLVANIA	194	25	144	8	148	37	225	91	148	92	53	23	262	123	8	1	1182	400
RHODE ISLAND	58	7	17	0	19	4	28	16	35	19	0	0	0	0	0	0	157	46
SOUTH CAROLINA	35	3	10	0	19	1	16	5	17	6	8	1	28	21	0	0	133	37
SOUTH DAKOTA	0	0	1	0	7	2	1	1	0	0	0	0	14	15	0	0	28	18
TENNESSEE	34	6	53	2	57	20	75	37	50	25	8	13	89	77	0	0	366	180
TEXAS	191	17	157	5	184	38	175	74	123	54	87	12	254	158	1	1	1172	356
UTAH	47	1	27	0	48	10	65	15	22	6	6	7	138	32	0	0	357	71
VERMONT	3	1	1	0	12	1	5	6	2	3	0	0	0	0	0	0	22	11
VIRGINIA	52	1	56	2	71	12	55	9	30	11	6	0	110	54	0	0	380	98
WASHINGTON	67	3	37	0	83	14	71	38	50	22	15	3	37	20	2	0	262	100
WEST VIRGINIA	6	1	9	0	23	7	18	6	8	1	0	0	30	13	0	0	94	28
WISCONSIN	122	12	50	0	120	33	120	28	89	58	17	9	85	39	1	0	604	180
WYOMING	14	2	2	0	14	2	9	1	1	0	0	0	14	4	0	0	54	9
PUERTO RICO	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0

1/ Refer to explanatory note on page 3.  
2/ Includes mathematics.

SOURCE: NRC, Commission on Human Resources, Doctorate Records File



TABLE 5  
STATISTICAL PROFILE OF DOCTORATE RECIPIENTS BY RACIAL OR ETHNIC GROUP AND U.S. CITIZENSHIP STATUS, FY 1977

	TOTAL			INDIAN	ASIAN			ELACA					
	U.S.	NON-U.S. PERM.	TEMP.		TOTAL	U.S.	NON-U.S. PERM.	TEMP.	TOTAL	U.S.	NON-U.S. PERM.	TEMP.	TOTAL
TOTAL NUMBER	26007	1366	3447	31672	220	338	569	1117	2052	1109	77	248	1446
MALE VS FEMALE	73.3 VS 26.7	80.8 VS 19.2	87.3 VS 12.7	75.2 VS 24.8	72.3 VS 27.7	74.0 VS 26.0	85.4 VS 14.6	85.4 VS 14.6	83.5 VS 16.5	61.4 VS 38.6	89.6 VS 10.4	94.8 VS 5.2	68.5 VS 31.5
DOCTORAL FIELD													
PHYSICAL SCIENCES	12.8	19.6	19.6	13.8	7.7	18.0	28.5	25.2	25.1	3.8	2.0	5.0	4.1
ENGINEERING	5.6	23.8	22.4	8.2	5.3	19.8	31.8	25.2	26.1	1.0	5.2	7.7	2.4
LIFE SCIENCES	14.4	17.3	19.3	15.1	16.8	18.3	21.1	21.1	20.5	5.0	15.5	22.2	8.5
SOCIAL SCIENCES	21.2	14.7	16.4	20.5	21.8	16.3	9.0	13.0	12.3	17.9	27.3	24.0	19.6
ARTS & HUMANITIES	15.6	11.7	6.3	14.4	14.1	11.2	1.9	4.3	4.8	8.6	16.9	12.5	9.7
EDUCATION	26.1	7.9	11.0	23.5	31.4	11.6	4.6	5.2	7.8	45.0	28.6	22.2	51.8
PROFESSIONS & OTHER	4.2	9.0	5.0	4.4	2.7	4.4	3.2	2.9	3.2	3.7	7.9	4.8	3.9
MEDIAN AGE AT DOCTORATE	31.6	32.1	31.3	31.6	33.7	32.8	31.1	31.0	31.3	35.9	35.0	33.4	34.2
MEDIAN TIME LAPSE BA-PhD													
TOTAL TIME REGISTERED TIME	8.8 VS 6.1	8.8 VS 6.3	5.0 VS 5.5	6.7 VS 6.1	5.9 VS 6.3	9.8 VS 6.5	8.8 VS 6.1	8.0 VS 5.7	8.0 VS 5.9	11.8 VS 5.9	8.8 VS 6.5	7.7 VS 6.0	10.3 VS 5.7
GRADUATE SCHOOL SUPPORT													
FEDERAL FELLOW/TRAINEE	27.6	11.0	9.6	24.2	26.4	29.3	11.2	9.4	13.1	24.3	3.9	1.1	20.1
GI BILL	12.0	.1	.0	9.9	14.1	4.1	.0	.0	12.0	2.0	.0	.0	5.0
OTHER FELLOWSHIP	21.1	23.4	22.5	20.8	16.8	22.8	22.2	20.8	20.7	28.0	22.1	22.5	26.8
TEACHING ASSISTANTSHIP	46.9	49.0	38.3	44.8	46.4	44.4	49.2	36.0	42.4	25.9	31.2	33.7	27.3
RESEARCH ASSISTANTSHIP	32.6	51.9	48.7	34.4	30.0	44.1	69.9	58.4	58.0	15.0	53.8	27.5	48.2
EDUC./INST. FUNDS	11.2	8.3	11.9	10.8	11.8	12.7	7.4	10.5	9.8	12.2	5.2	16.5	12.6
OWN/SPOUSE EARNINGS	70.8	53.3	30.1	63.8	78.6	61.2	42.5	23.1	34.6	67.4	74.0	34.7	60.8
FAMILY CONTRIBUTIONS	14.9	15.5	15.5	14.6	12.7	14.8	16.3	21.3	18.6	5.3	13.0	12.5	9.5
NATL DIRECT STONT LOAN	10.4	6.6	.6	8.9	16.4	8.9	3.5	.4	2.7	4.8	23.4	.4	12.7
OTHER LOANS	11.5	8.6	5.4	10.4	20.5	10.1	4.0	2.6	4.2	14.6	23.4	7.7	13.8
OTHER	4.7	4.7	22.0	8.5	4.5	2.7	2.5	12.6	8.0	5.7	7.5	31.5	10.4
UNKNOWN	2.6	1.9	4.0	5.2	.9	1.2	1.9	2.0	2.8	2.3	1.3	3.2	2.8
POSTDOCTORAL STUDY PLANS													
PLANNED EMPLOYMENT AFTER DOCTORATE	16.1	25.5	24.6	17.0	19.8	35.7	33.5	31.4	31.4	6.9	10.4	13.3	5.2
EDUC. INSTITUTION	52.7	35.7	41.3	49.4	55.9	40.2	20.9	35.5	31.9	69.3	57.1	51.6	48.3
INDUSTRY/BUSINESS	8.9	23.1	10.4	9.5	10.0	20.4	32.5	12.4	19.2	3.5	5.5	4.0	3.7
GOVERNMENT	9.5	3.9	10.6	9.5	10.0	5.9	3.3	9.3	7.5	9.5	11.7	14.5	10.4
NON-PROFIT	4.4	2.6	2.4	4.0	4.1	2.7	1.8	2.2	2.1	3.1	1.3	2.4	2.8
OTHER & UNKNOWN	3.3	4.1	3.9	3.4	2.7	3.0	2.1	1.9	2.1	2.7	7.8	6.0	3.6
POSTDOCT STATUS UNKNOWN	4.9	5.1	6.9	7.5	2.7	5.0	3.7	5.3	5.8	5.1	5.2	5.1	6.0
DEFINITE POSTDOCT STUDY	12.1	15.3	14.4	12.2	8.2	13.0	20.9	20.1	18.9	4.8	3.9	6.5	4.7
SEEKING POSTDOCT STUDY	4.0	10.2	10.2	4.8	6.4	6.8	14.8	13.4	12.5	2.5	6.5	6.9	3.5
DEFINITE EMPLOYMENT	57.3	41.7	47.1	54.1	60.0	50.0	35.1	40.1	39.9	61.7	40.3	49.2	58.0
SEEKING EMPLOYMENT	21.6	27.6	21.5	21.3	22.7	25.1	25.5	21.1	22.9	26.3	44.2	29.4	27.9
EMPLOYMENT LOCATION AFTER DOCTORATE													
U.S.	94.9	85.2	23.7	87.8	93.2	92.9	90.0	27.2	56.2	94.0	67.7	16.4	81.6
FOREIGN	2.0	10.7	72.2	8.9	3.8	1.2	6.0	68.1	39.0	1.0	22.6	77.9	13.0
UNKNOWN	3.1	4.0	4.1	3.3	3.9	5.9	4.0	4.7	4.8	5.0	9.7	5.7	5.4

1/ Data not comparable with data for earlier years because of changes in the survey question on racial or ethnic group. See discussion on page 30.  
 2/ See definition on page 30. The definition used in this survey is not consistent with the guidance received from OMB (11/73) 577, subsequent to this survey, which defines "Hispanic" more restrictively, to exclude persons from Portugal and to include only those persons from Central and South America who are of Spanish origin, descent or culture. Under the revised definition persons from Brazil, Guiana, Surinam, Trinidad, and Belize would be classified according to their race, and would not necessarily be included in the Hispanic category.  
 3/ Includes 854 individuals who did not report their citizenship at time of doctorate.



TABLE 5. CONTINUED

HISPANIC <sup>4</sup>			WHITE			OTHER & UNKNOWN			TOTAL					
U.S.	NON-U.S.	TOTAL	U.S.	NON-U.S.	TOTAL	U.S.	NON-U.S.	TOTAL	U.S.	NON-U.S.	TOTAL			
PERM.	TEMP.		PERM.	TEMP.		U.S.	NON-U.S.		PERM.	TEMP.				
421	50	232	714	22824	587	1448	24920	1102	1476	2320	26007	1364	3447	31672
73.6	70.0	90.5	79.1	73.7	75.8	86.5	74.5	77.1	88.0	78.8	73.3	80.8	87.3	75.2
26.4	30.0	9.5	20.9	26.3	24.2	13.5	25.5	22.9	12.0	21.2	26.7	19.2	12.7	24.8
14.2	18.0	20.3	14.6	13.0	13.3	17.7	13.3	17.6	19.1	15.5	12.8	19.6	19.6	13.8
4.3	8.0	17.2	8.8	5.6	21.1	23.5	7.1	6.5	21.8	10.1	5.6	23.8	22.4	8.3
7.1	10.0	32.8	15.8	15.0	14.1	15.3	15.0	13.0	19.5	14.5	14.4	17.3	19.3	15.1
17.8	14.0	15.9	16.8	21.5	17.9	17.5	21.2	21.2	17.4	22.5	21.2	14.7	16.4	20.5
24.5	36.0	4.3	19.0	15.7	19.1	7.3	15.2	18.9	5.7	15.4	15.6	11.7	6.3	14.4
31.8	12.0	6.0	21.7	24.9	7.8	11.7	23.7	18.0	11.3	17.5	26.1	7.9	11.0	23.5
3.3	2.0	3.4	3.2	4.3	6.6	7.0	4.5	4.8	5.0	4.5	4.3	5.0	5.0	4.4
30.1	34.5	32.7	33.0	31.4	32.8	30.7	31.4	31.3	32.0	31.5	31.6	32.1	31.3	31.6
9.1	9.3	8.8	9.0	8.7	9.2	7.8	8.7	8.5	8.8	8.6	8.8	8.8	8.0	8.7
6.2	6.1	5.1	5.8	6.1	6.4	5.5	6.1	6.3	5.8	5.1	6.1	6.3	5.5	6.1
23.5	10.0	12.9	18.8	28.2	11.1	9.2	26.7	16.4	12.2	11.6	27.6	11.0	9.6	24.2
10.2	.0	.0	6.3	12.4	.2	.0	11.4	7.0	.0	3.3	12.1	.1	.0	9.9
25.9	14.0	16.6	21.6	21.0	27.6	28.1	21.4	14.4	18.5	10.7	21.1	23.4	22.5	20.8
42.0	46.0	20.7	34.9	48.7	50.9	42.6	48.3	33.5	35.9	23.5	46.8	49.0	38.3	44.8
22.8	28.0	35.3	26.9	33.9	39.5	48.6	34.9	25.1	43.3	21.1	32.6	51.9	48.8	34.4
11.2	18.0	18.8	13.4	11.3	8.3	11.1	11.2	6.9	12.8	5.9	11.2	8.3	11.9	10.8
67.0	66.0	24.6	52.2	72.3	61.2	37.0	69.9	44.0	28.2	26.9	70.8	53.3	30.1	63.8
12.1	16.0	9.5	11.3	15.6	15.8	13.5	15.4	8.1	12.4	6.5	14.9	15.5	15.5	14.6
14.5	4.0	.9	9.2	10.2	7.3	.6	9.6	7.7	2.3	4.2	10.4	6.6	.6	8.9
13.5	8.0	6.0	10.5	11.4	10.9	7.2	11.1	8.3	5.5	5.1	11.5	6.6	5.4	10.4
6.2	10.0	37.9	16.8	4.7	6.1	25.1	5.9	2.9	18.7	5.3	4.7	4.7	22.0	6.5
1.2	2.0	7.3	4.5	1.2	1.4	3.0	1.4	33.3	10.9	49.5	2.6	1.9	4.0	5.2
14.3	14.0	15.5	14.4	16.7	18.7	23.3	17.1	13.7	17.6	10.2	16.1	25.5	24.6	17.0
82.7	78.0	74.1	78.6	79.9	75.6	72.3	79.2	49.3	65.8	37.6	66.9	66.4	68.6	75.4
59.1	56.0	42.7	52.8	59.1	44.8	44.7	52.3	29.0	38.9	22.3	52.7	35.7	41.3	49.4
5.5	10.0	7.3	6.3	9.1	18.2	11.3	9.5	7.8	8.8	5.5	8.9	23.1	12.4	9.5
12.4	6.0	18.5	13.9	9.6	3.2	9.7	9.5	6.4	9.0	5.0	9.5	3.9	10.6	9.2
2.1	2.0	3.4	2.5	4.6	3.7	2.5	4.5	3.3	1.7	2.0	4.4	2.6	2.4	4.0
3.6	4.0	2.2	3.1	3.4	5.6	4.1	3.5	2.8	7.4	2.8	3.3	4.1	2.9	3.4
3.1	8.0	10.3	7.0	3.4	5.6	4.4	3.7	37.0	16.6	52.2	4.9	5.1	6.9	7.5
8.1	6.0	9.1	8.1	12.7	12.3	14.2	12.8	10.5	8.8	4.9	12.4	15.3	14.4	12.2
6.2	8.0	6.5	6.3	4.0	6.5	9.2	4.3	3.2	8.8	3.3	4.0	10.2	12.2	4.8
61.8	50.0	56.9	58.7	58.2	48.0	51.3	57.5	34.1	43.1	25.7	57.3	41.7	47.1	54.1
20.9	28.0	17.2	19.9	21.6	27.6	21.0	21.7	15.2	22.7	11.9	21.6	27.6	21.5	21.3
94.6	80.0	7.6	66.1	95.0	85.5	26.1	91.2	92.3	30.2	71.0	94.9	85.2	23.7	87.8
1.2	18.0	90.9	30.5	2.1	11.7	70.1	5.8	2.1	63.9	23.5	2.0	10.7	72.2	8.9
4.2	4.0	1.5	3.3	2.9	2.8	3.6	3.0	5.6	5.9	5.5	3.1	4.0	4.1	3.3

4/ Includes individuals who did not report their citizenship at time of doctorate  
 5/ Includes those who provided no usable response to the item on "race" or ethnic group and those who used an earlier form which did not contain this item  
 6/ Includes mathematics  
 7/ The base for this VI is the number of doctorates in the column caption group who have found definite employment

SOURCE: IBC, Commission on Human Resources, Doctorate Records File





### SURVEY OF EARNED DOCTORATES

This form is to be returned to the GRADUATE DEAN, for forwarding to

Board on Human-Resource Data and Analyses  
Commission on Human Resources  
National Research Council  
2101 Constitution Avenue, Washington, D.C. 20418

Please print or type.

A. Name in full: (Last Name) (First Name) (Middle Name) (9-30)

Cross Reference: Maiden name or former name legally changed (31)

B. Permanent address through which you could always be reached (Care of, if applicable)  
(Number) (Street) (City) (State) (Zip Code) (Or Country if not U.S.)

C. U.S. Social Security Number: (32-40)

D. Date of birth: (41-45) (Month) (Day) (Year) Place of birth: (46-47) (State) (Or Country if not U.S.)

E. Sex: 1  Male 2  Female (48)

F. Marital status: 1  Married 2  Not married (including widowed, divorced) (49)

G. Citizenship: 0  U.S. native 2  Non-U.S. Immigrant (Permanent Resident)  
1  U.S. naturalized 3  Non-U.S. Non-Immigrant (Temporary Resident) (50-51)  
If Non-U.S. indicate country of present citizenship (52)

H. Racial or ethnic group (Check all that apply) A person having origins in —  
0  American Indian or Alaskan Native any of the original peoples of North America and who maintain a cultural identification through tribal affiliation or community recognition  
1  Asian or Pacific Islander any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.  
2  Black, not of Hispanic Origin any of the black racial groups of Africa  
3  White, not of Hispanic Origin any of the original peoples of Europe, North Africa, or the Middle East  
4  Hispanic Mexican, Puerto Rican, Central or South American, or other Spanish culture or origins regardless of race (53-55)

I. Number of dependents Do not include yourself. Dependent = someone receiving at least one-half of his or her support from you. (56)

J. U.S. veteran status: 0  Veteran 1  On active duty 2  Non-veteran or not applicable (57)

K. High school last attended: (School Name) (City) (State) (58-59)

Year of graduation from high school: (60-61)

L. List in the table below all collegiate and graduate institutions you have attended, including 2-year colleges. List chronologically and include your doctoral institution as the last entry.

Institution Name	Location	Year Attended		Major Field	Minor Field	Degree (if any)	
		From	To	Use Specialties List Name	Number	Title of Degree	Granted Mo. Yr.

M. Enter below the title of your doctoral dissertation and the most appropriate classification number and field. If a project report or a musical or literary composition (not a dissertation) is a degree requirement, please check box  (64)

Title: \_\_\_\_\_  
Classify using Specialties List  
Number Name of field

N. Name the department (or interdisciplinary committee, center, institute, etc.) and school or college of the university which supervised your doctoral program:  
(Department/Institute/Committee/Program) (School)

O. Name of your dissertation adviser: (Last Name) (First Name) (Middle Initial)

continued on next page

**SURVEY OF EARNED DOCTORATES, Cont.**

P Please enter a 1 beside your primary source of support during graduate study. Enter a 2 beside your secondary source of support during graduate study. Check all other sources from which support was received

- 58 \_\_\_ NSF Fellowship
- 59 \_\_\_ NSF Traineeship
- 60 \_\_\_ NIH Fellowship
- 61 \_\_\_ NIH Traineeship
- 62 \_\_\_ IDEA Fellowship
- 63 \_\_\_ Other HEW
- 64 \_\_\_ AEC ERDA Fellowship
- 65 \_\_\_ NASA Traineeship
- 66 \_\_\_ GI Bill
- 67 \_\_\_ Other Federal support (specify)
- 68 \_\_\_ Woodrow Wilson Fellowship
- 69 \_\_\_ Other U.S. national fellowship (specify)
- 70 \_\_\_ University Fellowship
- 71 \_\_\_ Teaching Assistantship
- 72 \_\_\_ Research Assistantship
- 73 \_\_\_ Educational fund of industrial or business firm
- 74 \_\_\_ Other institutional funds (specify)
- 75 \_\_\_ Own earnings
- 76 \_\_\_ Spouse's earnings
- 77 \_\_\_ Family contributions
- 78 \_\_\_ Loans (NDSL direct)
- 79 \_\_\_ Other loans
- 80 \_\_\_ Other (specify)

Q. Please check the space which most fully describes your status during the year immediately preceding the doctorate

- 0  Held fellowship
- 1  Held assistantship
- 2  Held own research grant
- 3  Not employed
- 4  Part-time employed
- 5  College or university, teaching
- 6  College or university, non-teaching
- 7  Elem. or sec. school, teaching
- 8  Elem. or sec. school, non-teaching
- 9  Industry or business
- 10  Other (specify)
- 11  Other (specify)
- 12  Any other (specify)

R How many years (full-time equivalent basis) of professional work experience did you have prior to the doctorate? Include assistantships as professional experience.

**POSTGRADUATION PLANS**

S. How well defined are your postgraduation plans?

- 0  Have signed contract or made definite commitment
- 1  Am negotiating with a specific organization, or more than one
- 2  Am seeking appointment but have no specific prospects
- 3  Other (specify)

T. What are your immediate postgraduation plans?

- 0  Postdoctoral fellowship?
- 1  Postdoctoral research associateship?
- 2  Traineeship?
- 3  Other study (specify)
- 4  Employment (other than 1, 2, 3)
- 5  Military service?
- 6  Other (specify)

U. If you plan to be on a postdoctoral fellowship, associateship, traineeship or other study

What will be the field of your postdoctoral study?

Number	Class (using Specialties List)	Field

What will be the primary source of support?

- 0  U.S. Government
- 1  College or university
- 2  Private foundation
- 3  Nonprofit other than private foundation
- 4  Other (specify)
- 6  Unknown

If you plan to be employed, enter military service, or other. What will be the type of employment?

- 1  4-year college or university (other than medical school)
- 2  Medical school
- 3  Elem. or comm. college
- 4  Elem. or sec. school
- 5  Foreign government
- 6  U.S. Federal government
- 7  U.S. state government
- 8  U.S. local government
- 9  Nonprofit organization
- 10  Industry or business
- 11  Self-employed
- 12  Other (specify)

Indicate primary work activity in appropriate box

- 0  Research and development
- 1  Teaching
- 2  Administration
- 3  Professional services to individuals
- 4  Other (specify)

In what field will you be working? Please enter number from Specialties List

Go to Item W

W. What is the name and address of the organization with which you will be associated?

(Name of Organization)

(Street)

(City, State)

(Country if not U.S.)

(14-15)

**BACKGROUND INFORMATION**

X. Please indicate, by circling the highest grade attained, the education of

your father	none	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA	MD	PhD	Postdoctoral
your mother	none	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA	MD	PhD	Postdoctoral
	0	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA	MD	PhD	Postdoctoral

Signature

Date completed

(32-34)

## SPECIALTIES LIST

## MATHEMATICS

- 000 — Algebra
- 010 — Analysis & Functional Analysis
- 020 — Geometry
- 030 — Logic
- 040 — Number Theory
- 050 — Probability & Math. Statistics  
(see also 544, 670, 725, 727, 920)
- 060 — Topology
- 080 — Computing Theory & Practice
- 082 — Operations Research (see also 478)
- 085 — Applied Mathematics
- 098 — Mathematics, General
- 099 — Mathematics, Other\*

## ASTRONOMY

- 101 — Astronomy
- 102 — Astrophysics

## PHYSICS

- 110 — Atomic & Molecular
- 120 — Electromagnetism
- 132 — Acoustics
- 134 — Fluids
- 135 — Plasma
- 136 — Optics
- 138 — Thermal
- 140 — Elementary Particles
- 150 — Nuclear Structure
- 160 — Solid State
- 198 — Physics, General
- 199 — Physics, Other\*

## CHEMISTRY

- 200 — Analytical
- 210 — Inorganic
- 220 — Organic
- 230 — Nuclear
- 240 — Physical
- 250 — Theoretical
- 260 — Agricultural & Food
- 270 — Pharmaceutical
- 275 — Polymer
- 298 — Chemistry, General
- 299 — Chemistry, Other\*\*

## EARTH, ENVIRONMENTAL AND MARINE SCIENCES

- 301 — Mineralogy, Petrology
- 305 — Geochemistry
- 310 — Stratigraphy, Sedimentation
- 320 — Paleontology
- 330 — Structural Geology
- 341 — Geophysics (Solid Earth)
- 350 — Geomorph. & Glacial Geology
- 360 — Hydrology
- 370 — Oceanography
- 381 — Atmospheric Physics and Chemistry
- 382 — Atmospheric Dynamics
- 383 — Atmospheric Sciences, Other\*
- 388 — Environmental Sciences, General  
(see also 480, 528)
- 389 — Environmental Sciences, Other\*
- 391 — Applied Geol., Geol. Engr.  
& Econ. Geol.
- 395 — Fuel Tech. & Petrol. Engr. (see also 479)
- 398 — Earth Sciences, General
- 399 — Earth Sciences, Other\*

## ENGINEERING

- 400 — Aeronautical & Astronautical
- 410 — Agricultural
- 415 — Biomedical
- 420 — Civil
- 430 — Chemical
- 435 — Ceramic
- 437 — Computer
- 440 — Electrical
- 445 — Electronics
- 450 — Industrial
- 455 — Nuclear
- 460 — Engineering Mechanics
- 465 — Engineering Physics
- 470 — Mechanical
- 475 — Metallurgy & Phys. Met. Engr.

- 476 — Systems Design & Systems Science
- 478 — Operations Research (see also 082)
- 479 — Fuel Tech & Petrol Engr (see also 395)
- 480 — Sanitary & Environmental
- 486 — Mining
- 497 — Materials Science
- 498 — Engineering, General
- 499 — Engineering, Other\*

## AGRICULTURAL SCIENCES

- 500 — Agronomy
- 501 — Agricultural Economics
- 502 — Animal Husbandry
- 503 — Food Science & Technology
- 504 — Fish & Wildlife
- 505 — Forestry
- 506 — Horticulture
- 507 — Soils & Soil Science
- 510 — Animal Science & Animal Nutrition
- 511 — Phytopathology
- 518 — Agriculture General
- 519 — Agriculture, Other\*

## MEDICAL SCIENCES

- 522 — Public Health & Epidemiology
- 523 — Veterinary Medicine
- 524 — Hospital Administration
- 526 — Nursing
- 527 — Parasitology
- 528 — Environmental Health
- 534 — Pathology
- 536 — Pharmacology
- 537 — Pharmacy
- 538 — Medical Sciences General
- 539 — Medical Sciences Other\*

## BIOLOGICAL SCIENCES

- 540 — Biochemistry
- 542 — Biophysics
- 544 — Biometrics & Biostatistics  
(see also 050, 670, 725, 727, 920)
- 545 — Anatomy
- 546 — Cytology
- 547 — Embryology
- 548 — Immunology
- 550 — Botany
- 560 — Ecology
- 562 — Hydrobiology
- 564 — Microbiology & Bacteriology
- 566 — Physiology, Animal
- 567 — Physiology Plant
- 569 — Zoology
- 570 — Genetics
- 571 — Entomology
- 572 — Molecular Biology
- 576 — Nutrition and/or Dietetics
- 578 — Biological Sciences, General
- 579 — Biological Sciences, Other\*

## PSYCHOLOGY

- 600 — Clinical
- 610 — Counseling & Guidance
- 620 — Developmental & Gerontological
- 630 — Educational
- 635 — School Psychology
- 641 — Experimental
- 642 — Comparative
- 643 — Physiological
- 650 — Industrial & Personnel
- 660 — Personality
- 670 — Psychometrics  
(see also 050, 544, 725, 727, 920)
- 680 — Social
- 698 — Psychology, General
- 699 — Psychology, Other\*

## SOCIAL SCIENCES

- 700 — Anthropology
- 708 — Communications\*
- 710 — Sociology
- 720 — Economics (see also 501)
- 725 — Econometrics  
(see also 050, 544, 670, 727, 920)
- 727 — Statistics  
(see also 050, 544, 670, 725, 920)

- 740 — Geography
- 745 — Area Studies\*
- 751 — Political Science
- 752 — Public Administration
- 755 — International Relations
- 770 — Urban & Reg. Planning
- 798 — Social Sciences, General
- 799 — Social Sciences, Other\*

## HUMANITIES

- 802 — Art, History & Criticism
- 804 — History, American
- 805 — History, European
- 806 — History, Other\*
- 807 — History & Philosophy of Science
- 808 — American Studies
- 809 — Theatre and Theatre Criticism
- 830 — Music
- 831 — Speech as a Dramatic Art  
(see also 885)
- 832 — Archeology
- 833 — Religion (see also 881)
- 834 — Philosophy
- 835 — Linguistics
- 836 — Comparative Literature
- 878 — Humanities General
- 879 — Humanities, Other\*

## LANGUAGES &amp; LITERATURE

- 811 — American
- 812 — English
- 821 — German
- 822 — Russian
- 823 — French
- 824 — Spanish & Portuguese
- 826 — Italian
- 827 — Classical\*
- 829 — Other Languages\*

## EDUCATION

- 900 — Foundations, Social & Philosoph
- 910 — Educational Psychology
- 918 — Elementary Educ., General
- 909 — Secondary Educ., General
- 918 — Higher Education
- 919 — Adult Educ. & Extension Educ
- 920 — Educ. Meas. & Stat
- 929 — Curriculum & Instruction
- 930 — Educ. Adm'n. & Superv.
- 940 — Guid. Couns. & Student Pers.
- 950 — Special Education  
(Gifted, Handicapped, etc.)
- 960 — Audio-Visual Media

## TEACHING FIELDS

- 970 — Agriculture Educ.
- 972 — Art Educ.
- 974 — Business Educ.
- 976 — English Educ.
- 978 — Foreign Languages Educ.
- 980 — Home Economics Educ.
- 982 — Industrial Arts Educ.
- 984 — Mathematics Educ.
- 986 — Music Educ.
- 988 — Phys. Ed., Health, & Recreation
- 989 — Reading Education
- 990 — Science Educ.
- 992 — Social Science Educ.
- 993 — Speech Education
- 994 — Vocational Educ.
- 996 — Other Teaching Fields\*
- 998 — Education, General
- 999 — Education, Other\*

## OTHER PROFESSIONAL FIELDS

- 881 — Theology (see also 833)
- 882 — Business Administration
- 883 — Home Economics
- 884 — Journalism
- 885 — Speech & Hearing Sciences  
(see also 831)
- 886 — Law & Jurisprudence
- 887 — Social Work
- 891 — Library & Archival Science
- 897 — Professional Field, Other\*
- 899 — OTHER FIELDS\*

\* Identify the specific field in the space provided on the questionnaire

CODE NUMBERS FOR FIELDS DISPLAYED IN TABLE 2

Physics & Astronomy (101-199)

Chemistry (200-299)

Earth Sciences (301-399)

Physical Sciences Subtotal (101-399)

Mathematics (400-499)

Engineering (400-499)

ENP Total (000-499)

Basic Medical Sciences (540-542, 545-548, 564-566, 572)

Other Biosciences (544, 550-562, 567-571, 576-579)

Biosciences Subtotal (540-579)

Medical Sciences (520-539)

Agricultural Sciences (500-519)

Life Sciences (500-579)

Psychology (600-699)

Economics and Econometrics (720, 725)

Anthropology & Sociology (700, 710)

Political Science, Public Administration, International Relations (751-755)

Other Social Sciences (708, 727-745, 770-799)

Social Sciences Total (600-799)

Total Sciences (000-799)

History (804-807)

English & American Language & Literature (811-812)

Foreign Languages & Literature (821-829)

Other Humanities (802, 808-809, 830-879)

Humanities Total (802-879)

Professional Fields (881-897)

Education (900-999)

Total Non-Sciences (802-897, 900-999)

Other or unspecified (899)