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ABSTRACT

This 30th annual report summarizes results of the 1995-96 Survey of Earned Doctorates (SED), which collected data from graduates as they completed requirements for their doctoral degrees. The report notes the continued, but slowing, increase in research doctorates. Following an examination of general trends in the overall number of doctorates, the report examines trends in doctorate production by field, and continues with sections examining trends in doctorates awarded by gender, race/ethnicity, and citizenship; time to degree; financial support during graduate school; and postgraduation status and plans of doctorate recipients. Narratives of key survey findings in each section are accompanied by figures displaying selected trend data and supported by a set of tables following the main text. The survey found that a record 42,415 doctorates were awarded by U.S. universities from July 1, 1995, through June 30, 1996, with women earning 16,945 doctorates and U.S. minorities nearly 13 percent of doctorates., up from 11 percent in 1994. Appendices provide supplementary tables on 1996 doctoral recipients, trend data on 1986-96 doctoral cohorts, technical notes, and a copy of the survey questionnaire. (CH)

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Summary Report 1996

Doctorate Recipients from United States Universities

Highlights

The following data characterize recipients of research doctorates awarded by U.S. universities from July 1, 1995, through June 30, 1996. This information is taken from the 1996 Survey of Earned Doctorates, an annual census of new doctorate recipients:

- The 392 colleges and universities in the United States that conferred research doctorates in 1996 awarded a record 42,415 doctorates, continuing the upward trend in Ph.D.s awarded that began in 1986. The growth rate in the number of doctorates ranged between 1.5 and 5.1 percent during the period 1986 to 1996.

- Engineering had the fastest growth among broad fields from 1986 to 1996, bringing it to a level near that of other, once much larger, fields. The number of doctorates awarded by broad field in 1996 were 8,255 in life sciences; 6,814 in social sciences; 6,772 in education; 6,675 in physical sciences; 6,305 in engineering; 5,116 in humanities; and 2,478 in professional/other fields.

- Women earned a record 16,945 Ph.D.s and constituted 40 percent of all doctorate recipients in 1996. Women constituted 47 percent of U.S. citizens earning doctorates. As in past years, women outnumbered men in education and, for the second year in a row, in social sciences. Men outnumbered women in every other broad field and by a large margin in engineering.

- As in 1995, U.S. citizen minorities—blacks, Asians, Hispanics, and American Indians—earned 13 percent of doctorates awarded to U.S. citizens in 1996, up from 11 percent in 1994. The number of blacks earning Ph.D.s in 1996 (1,315) sustained the 19 percent increase of 1995 (1,309) over 1994 (1,101). The number of Asians earning Ph.D.s decreased from 1995 to 1996, but the 1996 figure of 1,091 is still 15 percent more than in 1994. Hispanics earned a record 950 doctorates, and the number of American Indians jumped from 149 in 1995 to a record 186 in 1996. The fields with the largest percentage of minorities were education, in which blacks were the predominant minority group, and engineering, in which Asians were.

- U.S. citizens earned over two-thirds of the doctorates awarded in 1996, but the growth in the number of non-U.S. citizens accounts for nearly two-thirds of the growth in doctorates since 1986. After a one-year dip in 1995, the number of non-U.S. citizens earning Ph.D.s increased again in 1996. The percentage of doctorates awarded to non-U.S. citizens varied by field, from 58 percent in engineering and 47 percent in physical sciences to 10 percent in education.

- Median time to degree since the baccalaureate for Ph.D. recipients peaked at 10.9 years in 1995 and declined slightly in 1996 to 10.8 years. Median time to degree since first enrollment in any graduate program peaked at 7.2 years in 1992, where it has remained since. University funding was the primary source of support for the majority of 1996 Ph.D.s. Almost half of Ph.D.s reported debt related to undergraduate and graduate education.

- The proportion of Ph.D.s reporting definite postgraduation commitments declined from almost three-quarters in the 1970s to two-thirds in the mid-1990s. Meanwhile, of those doctorates with definite commitments, a smaller proportion planned to be employed and a larger proportion planned postdoctoral study in 1996. Among those with employment commitments, the proportion headed for academia decreased and the proportion going into industry increased.

Summary Report 1996

Doctorate Recipients from United States Universities

The Survey of Earned Doctorates is conducted for the following agencies of the U.S. government:

National Science Foundation
U.S. Department of Education
National Institutes of Health
National Endowment for the Humanities
U.S. Department of Agriculture

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OFFICE OF SCIENTIFIC AND ENGINEERING PERSONNEL
NATIONAL RESEARCH COUNCIL

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NOTICE: The project that is the subject of this report was approved by the Governing Board of the National Research Council, whose members are drawn from the councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The survey project is part of the program of the Office of Scientific and Engineering Personnel (OSEP).

The National Academy of Sciences is a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Under authority of the charter granted by Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters. Dr. Bruce M. Alberts is president of the National Academy of Sciences.

The National Academy of Engineering was established in 1964, under the charter of the National Academy of Sciences, as a parallel organization of outstanding engineers. It is autonomous in its administration and in the selection of its members, sharing with the National Academy of Sciences the responsibility for advising the federal government. The National Academy of Engineering sponsors engineering programs aimed at meeting national needs, encourages education and research, and recognizes the superior achievements of engineers. Dr. William A. Wulf is president of the National Academy of Engineering.

The Institute of Medicine was established in 1970 by the National Academy of Sciences to secure the services of eminent members of appropriate professions in the examination of policy matters pertaining to the health of the public. The Institute acts under the responsibility given to the National Academy of Sciences by its congressional charter to be an adviser to the federal government and, upon its own initiative, to identify issues of medical care, areas of research, and topics for education. Dr. Kenneth I. Shine is president of the Institute of Medicine.

The National Research Council (NRC) was organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and of advising the federal government. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities. The Council is administered jointly by both Academies and the Institute of Medicine. Dr. Bruce M. Alberts and Dr. William A. Wulf are chairman and vice-chairman, respectively, of the National Research Council.

This report is based on research conducted by OSEP with the support of the National Science Foundation (NSF), the National Institutes of Health (NIH), the National Endowment for the Humanities (NEH), the U.S. Department of Education (U.S. Dept. of Ed.), and the U.S. Department of Agriculture (USDA) under NSF Contract No. SRS-9309720. Opinions, findings, conclusions, or recommendations expressed in this publication are those of OSEP and do not necessarily reflect the views of the sponsoring agencies.

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PREFACE AND ACKNOWLEDGMENTS

This report presents a summary of the results of the 1995-1996 Survey of Earned Doctorates (SED), which has been conducted each year since 1958 by the National Research Council's (NRC) Office of Scientific and Engineering Personnel (OSEP) and its predecessor organizations. Questionnaires distributed with the cooperation of the graduate deans of U.S. universities are filled in by graduates as they complete requirements for their doctoral degrees. The doctorates are reported by academic year (from July 1 of one year through June 30 of the following year) and include *research* and *applied-research doctorates* in all fields.[1] Doctoral degrees such as the Ph.D., D.Sc., and Ed.D. are covered by this survey; professional degrees (e.g., M.D., D.D.S., J.D., Psy.D.) are not. A full list of included degrees can be found inside the back cover. For convenience throughout this report, "Ph.D." is used to represent any of the doctoral degrees covered by the survey.

This *Summary Report* is the thirtieth in an annual series of reports that began in 1967.[2] All survey responses become part of the Doctorate Records File (DRF), a virtually complete database on doctorate recipients from 1920 to 1996. Almost 90 percent of the 1,228,496 records now in the DRF were created from results of the 1958-1996 surveys. For doctorates granted during the 1920-1957 period, information was compiled from commencement bulletins, registrars' records, and other published material.

The conduct of the SED, the maintenance of the resulting data file, and the publication of this report are funded jointly by the National Science Foundation (NSF), the National Institutes of Health (NIH), the National Endowment for the Humanities (NEH), the U.S. Department of Education (U.S. Dept. of Ed.), and the U.S. Department of Agriculture (USDA). The survey's relevance to national policy issues has increased, thanks to constructive reviews of the design and analysis of the survey by Paul Seder (NIH), Nancy Schantz (U.S. Dept. of Ed.), Peter Muscato (USDA), Jeffrey Thomas (NEH), and Mary Golladay (NSF). Mary Golladay and Carolyn Shettle (NSF) served as the project officers for the five sponsoring agencies during the 1995-1996 survey cycle.

We would also like to acknowledge the graduate deans and their assistants in the doctorate-granting institutions for their interest and assistance. It is through their cooperation that the DRF continues to serve as a useful resource for monitoring developments in graduate education in the United States. Finally, we thank all of the doctorate recipients who have completed the SED over the years.

The 1995-1996 Survey of Earned Doctorates was conducted under the administrative supervision of Peter Henderson. Eileen Milner supervised data preparation and entry, survey closure, and the annual DRF update. Julie Clarke reviewed survey

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[1]The Survey of Earned Doctorates collects information on *research* doctorates only. This differs from the institutional collection of numbers of degrees done by the U.S. Department of Education on *all* doctorates. For an evaluation of the differences, see National Science Foundation, 1993, *Science and Engineering Doctorates 1960-1991*, NSF 93-301, Detailed Statistical Tables, Washington, D.C., pp. 2-6.

[2] Trend data from earlier periods can be found in Lindsey R. Harmon, 1978, *A Century of Doctorates: Data Analysis of Growth and Change,* National Academy of Sciences, Washington, D.C.

closure. Dr. Henderson collaborated with Ms. Clarke and Cynthia Woods on the development of this year's report. Dr. Henderson analyzed the survey results and drafted all text in the body of the report. He and Ms. Clarke produced the figures. Ms. Woods generated the data from the DRF. Martha Bohman prepared the final tables for the report. Ms. Clarke drafted the technical notes. Ms. Clarke and Ms. Bohman reviewed the manuscript for accuracy.

Special appreciation is expressed to the following NRC staff members: Eileen Milner, manager of the unit responsible for collecting and processing the survey forms; John Hines, institutional coordinator; Gedamu Abraha and Kevin Kocur, coordinators of the follow-up effort; Kevin Williams, quality control coordinator; Tom Arnold, full-time coder; and the many hourly coders who contributed to processing the survey. Special thanks are also expressed to Joseph Finan and Cynthia Woods for their service on application development, project programming, database management, and computer operations.

This report has been reviewed by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the NRC's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the authors and the NRC in making the published report as sound as possible and to ensure that the report meets institutional standards for objectivity and evidence. The content of the review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. We wish to thank the following individuals for their participation in the review of this report: Terrence S. Millar, University of Wisconsin; William H. Miller, University of California; and Leslie B. Sims, University of Iowa. While the individuals listed above provided many constructive comments and suggestions, responsibility for the final content of this report rests solely with the authors and the NRC.

The work of this project was overseen by the Advisory Committee of the Office of Scientific and Engineering Personnel, which is concerned with those activities of the NRC that contribute to effective development and utilization of the nation's scholars and research personnel. In addition, an advisory panel made recommendations on the improvement of this important survey. Charlotte Kuh, Executive Director of OSEP, and Marilyn Baker, Associate Executive Director, also provided helpful guidance. Suggestions for improvement of the content or format of the report, other comments, and questions are welcome and may be directed to the authors of this report.

M. R. C. Greenwood, Chair
Office of Scientific and Engineering Personnel
Advisory Committee

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INTRODUCTION

Summary Report 1996 is the thirtieth in a series of reports on research doctorates awarded by U.S. colleges and universities. The data for the report are from the annual Survey of Earned Doctorates, a census of research doctorate recipients from U.S. institutions.

The report notes the continued, but slowing, increase in research doctorates and examines the number of doctorates awarded per doctorate-granting institution. Following an exploration of these general trends in the overall number of doctorates, the report examines trends in doctorate production by field, focusing on the seven broad fields in which doctorates received their degrees. Each of the seven broad fields consists of several "major fields" which are also examined. For example, biological sciences is a major field within the life sciences. The data examined reflect the fields that doctorate recipients themselves reported, using a specialties list provided at the end of the questionnaire.

The discussion continues with sections examining trends in doctorate awards by gender, race/ethnicity, and citizenship. These are followed by sections describing time to degree, financial support during graduate school, and the postgraduation status and plans of doctorate recipients at the time the degree is awarded.

The brief narratives of key survey findings in these sections are accompanied by figures displaying selected trend data. The numbers and percentages from which the figures are drawn are provided in a set of tables that follow the main text. Relevant tables are referenced at the bottom of the figures. The narratives also discuss key findings from data presented in the tables but not in the figures.

Basic tables of data on 1996 doctorate recipients are displayed in Appendix A, and trend data on the 1986-1996 Ph.D. cohorts are presented in Appendix B. Appendix C provides technical notes that include nonresponse rates and other information related to tables and figures in the body of the report. Appendix D contains a copy of the Survey of Earned Doctorates questionnaire.

Additional data from the Survey of Earned Doctorates and the Doctorate Records File are available on request. For a fee, off-the-shelf tables on the baccalaureate origins of Ph.D.s by major field of doctorate and tables on the citizenship, race/ethnicity, and gender of Ph.D.s by field are available to requesters. Customized tables can also be prepared at cost. For more information, please contact:

Doctorate Data Project
National Opinion Research Center
1155 East 60th Street
Chicago, IL 60637

Phone: (773) 753-7500
Fax: (773) 753-7886
E-mail: 4800-sed@norcmail.uchicago.edu

*** IMPORTANT NOTICE ***

The estimates reported for the Survey of Earned Doctorates (SED) are simple tabulations of all available information with no adjustment for nonresponse. Therefore, differences in response rates from year to year can produce numerical fluctuations that are unrelated to real trends.

Although response to the SED has been 95 to 98 percent in most years, it declined to 92 percent during the 1980s. In an effort to improve the response rate, the survey methodology was modified in the years after 1989. Response has risen as hoped, stabilizing around 95 percent for 1991 to 1995. The response rate for 1996, however, was 92.8 percent. (Note: These percentages represent *self-report rates*, that is, the proportion of questionnaires completed by doctorate recipients. While survey forms containing partial information filled in by either the doctoral institution or staff of the National Research Council are not included in these rates, tables in this report incorporate the available data from these forms.) The self-report rate for 1996 may increase slightly in the next year if additional questionnaires are received from doctorate recipients. See page 99 in Appendix C for a table giving survey response rates from 1965 to 1996.

Item response rates have shown a parallel improvement since 1990—a natural consequence of the increase in the overall self-report rate, as well as a result of format revisions to the questionnaire and follow-ups for missing information. In 1990, new follow-up procedures were implemented to increase coverage of several variables: birth year, gender, race/ethnicity, citizenship status, country of citizenship, baccalaureate year and institution, and postgraduation plans. Response rates for these variables have since improved—especially for citizenship and race/ethnicity, resulting in an increase in the reported numbers of minority Ph.D.s. Whether or not individuals completed the survey questionnaire, the following four data items are available for all recipients: gender, Ph.D. institution, Ph.D. field, and Ph.D. year.

The data for a given year are updated the following year with any responses received *after* survey closure. Postsurvey adjustment was most significant for 1990 and 1991 Ph.D.s, with the largest impact on the number of blacks. For both of these years the total number of black Ph.D.s increased by about 7.5 percent in the year after survey closure. The survey cycle was then extended to allow receipt of more follow-up information before closure, resulting in much smaller postsurvey adjustments for 1992, 1993, 1994, and 1995 data (a 1.4 percent increase in black Ph.D.s for 1992, a 0.2 percent increase for 1993, a 0.5 percent increase for 1994, and a 1.5 percent increase in 1995). The same is expected for 1996 data.

Adjustments to data are presented in reports subsequent to the initial report for a survey. Updates for 1994 appeared in *Summary Report 1995*, and those for 1995 are included in this year's report (see Appendix Table B-2 for adjustments to racial/ethnic data). The data for 1996 will likewise be subject to further revision, but as for the past three years, adjustments are expected to be minimal. Updates to 1996 data will be presented in next year's report.

In using SED data the reader should keep in mind that numerical trends are affected by fluctuations in response rates. Increasing or decreasing numbers in a citizenship or racial/ethnic group reflect to some degree any change in both overall survey response and item response.

TRENDS IN DOCTORATE RECIPIENTS

Continued but Slowing Increase in Research Doctorate Awards

The 392 colleges and universities in the United States and its territories that conferred research doctorates in 1996 awarded a record 42,415 doctorate degrees. As shown in Figure 1, the number of doctorates earned at U.S. colleges and universities increased steeply throughout the 1960s. Doctorate production reached a peak in 1973, declined slightly in the mid-1970s, and leveled off through 1985. Since 1986 the number of doctorate recipients has again grown each year, and the 1996 figure continued the upward trend in doctorates awarded. (See Table 1, page 35.)

Rate of Growth

While the number of Ph.D.s[1] awarded has increased since 1986, the rate of growth in the past decade has not matched the rate of growth in the 1960s and has generally been below the average annual growth rate of 4 percent for the past 40 years. (See Table 2, page 35.)

Figure 2 shows that annual growth rates for 1960 to 1970 ranged from 5.6 to 14.6 percent as doctoral programs and the number of institutions offering doctoral degrees expanded. This was a period in which the numbers of undergraduate and graduate students grew because of the baby boom, an increase in federal support for higher education, the availability of draft deferments for graduate study through 1968, and institutional expansion accommodating growing scientific research brought by the Cold War.[2]

Growth rates for the period 1986 to 1996 ranged from 1.5 to 5.1 percent. Doctorate awards increased only 1.6 percent from 1995 to 1996. Nearly two-thirds of the increase in doctorate awards from 1986 to 1996—63 percent—was due to a doubling in the number of non-U.S. citizens receiving Ph.D.s in the United States during that period.

Trends in Baccalaureate, Master's, and Doctorate Degrees

The trends in the number of research doctorate awards have been roughly similar to trends in the number of baccalaureates and master's degrees awarded by U.S. colleges and universities since 1961. There were substantial increases in each degree category in the 1960s, particularly for doctorates, slower growth and/or declines in the 1970s and early 1980s, growing numbers of awards from the mid-1980s through the early 1990s, and still stronger growth in the mid-1990s.

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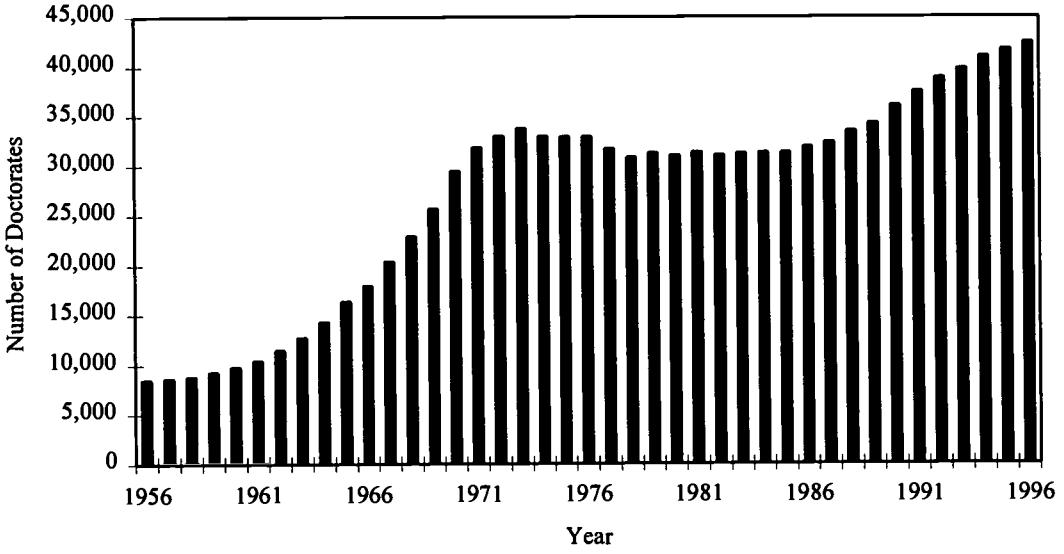
[1] "Ph.D." is used in this report to refer to the doctor of philosophy degree—and recipients of this degree—and to any of the other research doctoral degrees covered by the survey. Over 88 percent of the degrees earned in 1996 were the doctor of philosophy. More than two-thirds of the remaining degrees were Ed.D.s or other doctorates in education. A full list of included degrees can be found inside the back cover.

[2] See, for example, William G. Bowen and Neil L. Rudenstine, *In Pursuit of the Ph.D.*, Princeton: Princeton University Press, 1992, p. 23.

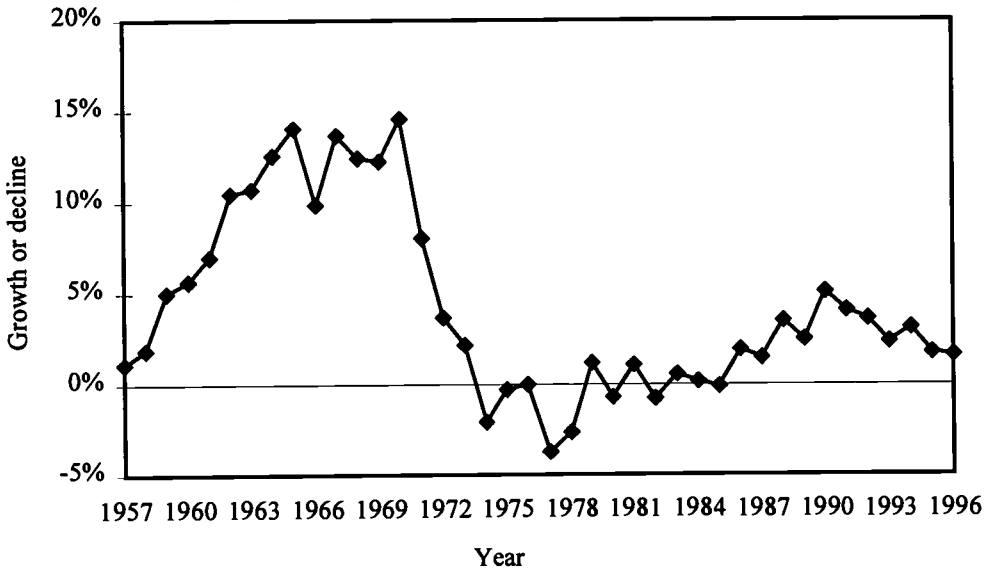
FIGURE 1 Doctorates awarded by U.S. colleges and universities, 1956-1996.



See Table 1, page 35.

SOURCE: National Research Council, Survey of Earned Doctorates.

FIGURE 2 Annual growth or decline in doctorates awarded by U.S. colleges and universities, 1957-1996.



See Table 2, page 35.

SOURCE: National Research Council, Survey of Earned Doctorates.

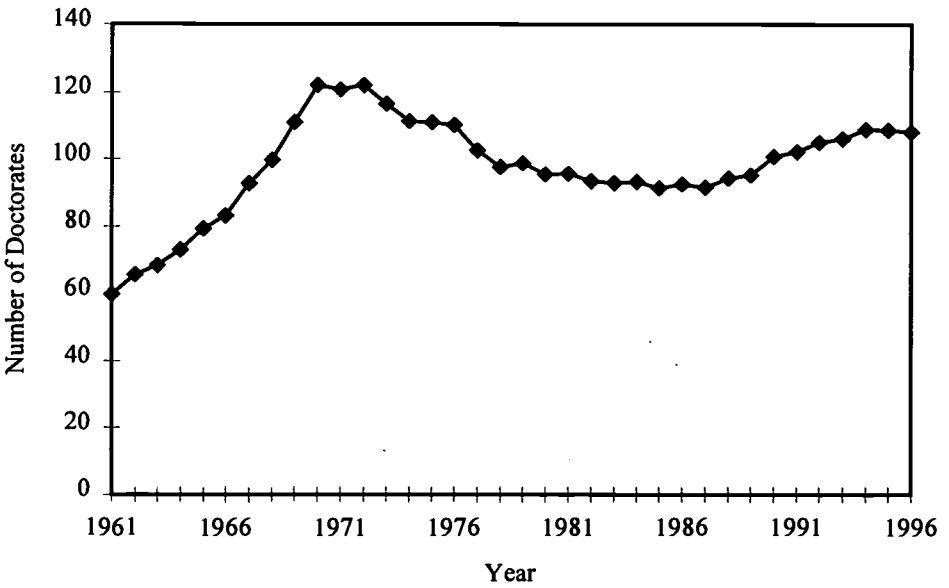
While patterns of growth have been similar, the rate of growth has differed for each degree. The number of master's degrees awarded has grown fastest since 1961, followed by the number of doctorates and then the number of baccalaureates.[3]

Doctorates per Institution

The number of doctorate-granting institutions has increased substantially and steadily since the early 1960s, even in periods when the number of doctorates awarded was declining or stabilizing. The number of institutions granting doctorates was 174 in 1961, climbed to 242 by 1971, 325 by 1981, and 367 by 1991. In 1996, 392 institutions in the United States and its territories granted research doctorates. (See Table 3, page 36.)

As seen in Figure 3, the number of doctorates granted per institution annually has fluctuated over time, though it has increased overall since 1961. During the 1960s, when doctorate production tripled, the average number of Ph.D.s per institution doubled, from 60 in 1961 to 122 in 1970. As the number of institutions granting doctorates continued growing in the 1970s even though the number of doctorates awarded decreased, the number of Ph.D.s per institution steadily declined to the low nineties by the early 1980s. Since the late 1980s the number of doctorates awarded has grown faster than the number of institutions awarding them, and the number of doctorates per institution has increased to almost 110.

FIGURE 3 Mean number of doctorates awarded by U.S. colleges and universities per institution, 1961-1996.



See Table 3, page 36.

SOURCE: National Research Council, Survey of Earned Doctorates.

[3]U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1993, NCES 93-292, by Thomas D. Snyder and Charlene M. Hoffman, Washington, D.C., 1993, p. 243, and *Projections of Education Statistics to 2007*, NCES 97-382, by Debra E. Gerald and William J. Hussar, Washington, D.C.: 1997, pp. 61-62.

Field of Doctorate

Trends in the number of doctorates awarded have varied by field. This section discusses trends for science and engineering fields, which have experienced sustained growth in the aggregate, and for humanities, education, and professional fields, which are rebounding after a collective decline.

Science and Engineering Fields

As can be seen in Figure 4, the number of doctorate awards in the four science and engineering broad fields has grown substantially in the past several decades. Together, they have grown in number, from 11,633 in 1966 to 28,049 in 1996. (See Table 4, page 37.)

- In 1996 more doctorates were awarded in life sciences than in any other broad field. The annual number of doctorates awarded in the life sciences grew from 5,734 in 1986 to 8,255 in 1996, a 44 percent increase. Within the life sciences, growth was fueled by a 72 percent increase in doctorates in health sciences and a 50 percent increase in biological sciences in the past decade. Doctorates in agricultural sciences grew only 4 percent since 1986.

- Though ranking second in the number of doctorates awarded among all broad fields, social sciences had below-average growth among broad fields over the past decade, growing at just 16 percent from 5,893 in 1986 to 6,814 in 1996. There were, however, substantial differences in growth among the major social science fields in the past decade: political science/international relations grew by 47 percent, economics by 17 percent, and psychology by 7 percent; sociology grew by 5 percent and anthropology by 4 percent. Sociology and anthropology decreased from 1986 to 1991 by 5 and 10 percent, respectively, before rebounding in the past five years. The "other" social sciences collectively grew by 57 percent, indicating more rapid growth among smaller fine fields.

- The annual number of doctorates in physical sciences grew from 4,807 to 6,675, or by 39 percent, between 1986 and 1996. The number of doctorates in 1996, though, is 133 fewer than in 1995. This broad field contains two major fields that have grown strongly in the past decade: computer sciences grew 131 percent and mathematics 54 percent since 1986. These two fields, however, dropped in the number of awards by 8 and 6 percent, respectively, from 1995 to 1996, helping to account for most of the overall decrease in physical science awards from 1995 to 1996.

- Engineering, which ranked fifth overall in number of awards, had both the most rapid growth and the largest numerical growth of any broad field from 1986 to 1996. The annual number of engineering doctorate awards grew from 3,376 to 6,305—or 87 percent—between 1986 and 1996.

Humanities, Education, and Professional Fields

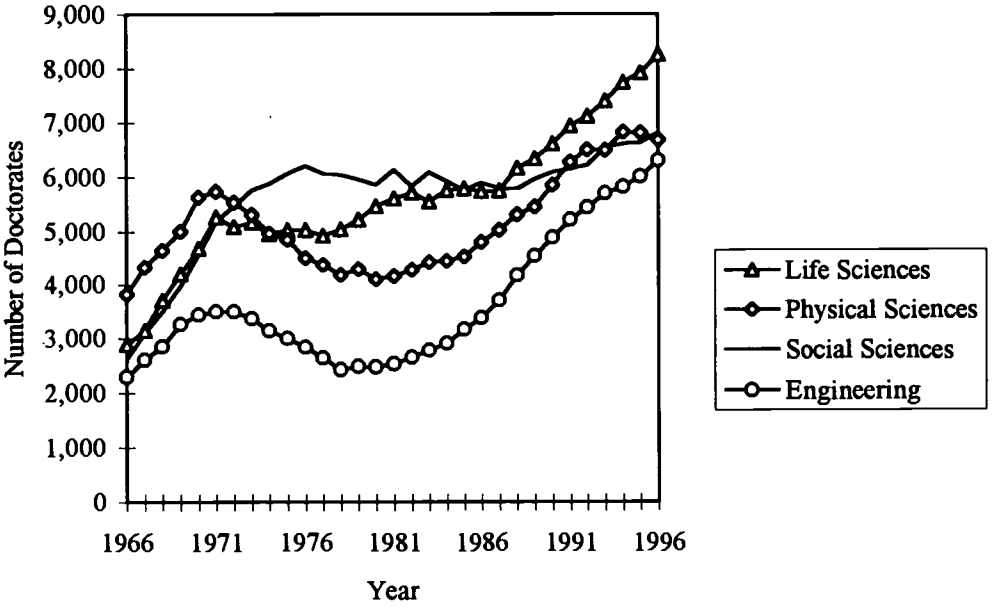
As shown in Figure 5, education, humanities, and professional/other fields experienced strong growth in the 1960s and early 1970s, with their aggregate numbers increasing from 6,316 in 1966 to 14,363 in 1976. The total number of doctorates in these fields in 1996, though, was 14,366, almost the same as in 1976. (See Table 4, page 37.)

- Humanities doctorates increased in the 1960s and early 1970s, only to experience a sharp decline from 1974 to 1985. The number of humanities doctorates has since increased substantially, registering the second fastest growth rate among broad fields for the period 1986 to 1996, during which time the field grew 48 percent, from 3,461 to 5,116. History led this recent growth with a 52 percent increase from 1986 to 1996. American/English language and literature and foreign language and literature also had strong growth at 41 and 36 percent, respectively. As with other high-growth fields, these three major fields had declines in annual awards from 1995 to 1996. Doctorates in the "other" humanities grew at 52 percent, indicating strong growth in smaller fields.

- After a period of tremendous growth that peaked in the 1970s, the number of doctorates in education fields slowly declined until the late 1980s, when the number of education doctorates began to grow again. The number of annual doctorates in education rose from 6,649 to 6,772—by just 2 percent—between 1986 and 1996. This represents the smallest numerical and percentage growth among the broad fields. Teacher education and teaching fields registered large decreases in annual awards of 24 percent each between 1986 and 1996. Growth in education has come in "other" fields.

- Professional and other fields, the smallest of the broad fields at 2,478 in 1996, has enjoyed sustained growth over the past three decades. The number for 1996, though, is 7 percent less than in 1995. Among professional/other fields, communications increased 51 percent in the number of awards and business and management increased 41 percent from 1986 to 1996. As with other high growth fields, though, business and management declined from 1995 to 1996 in awards. Communications Ph.D.s slowed to just 2 percent growth in the past year.

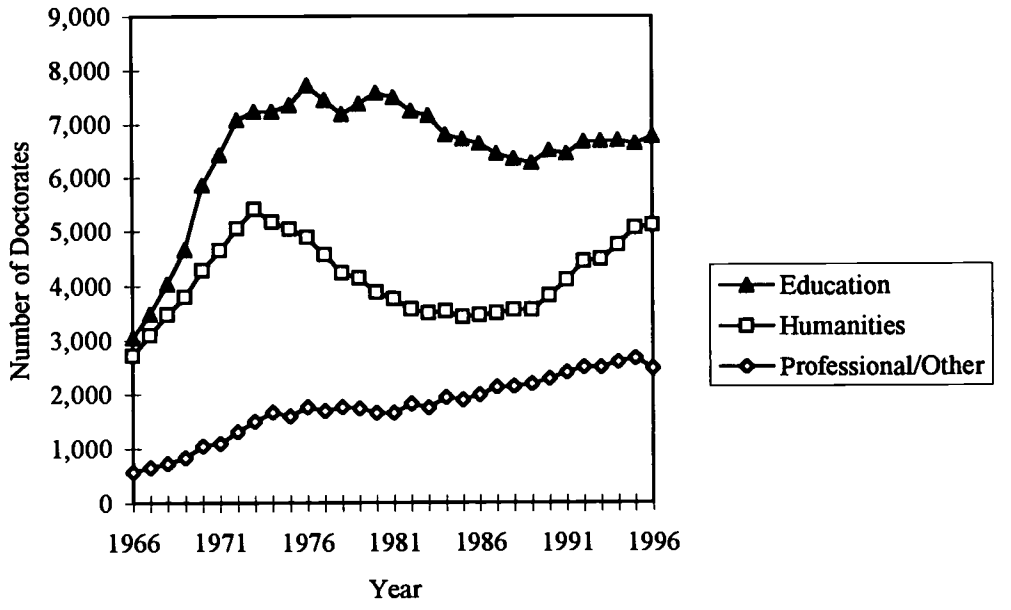
FIGURE 4 Science and engineering doctorates awarded by broad field, 1966-1996.



See Table 4, page 37.

SOURCE: National Research Council, Survey of Earned Doctorates.

FIGURE 5 Education, humanities, and professional/other doctorates awarded by broad field, 1966-1996.



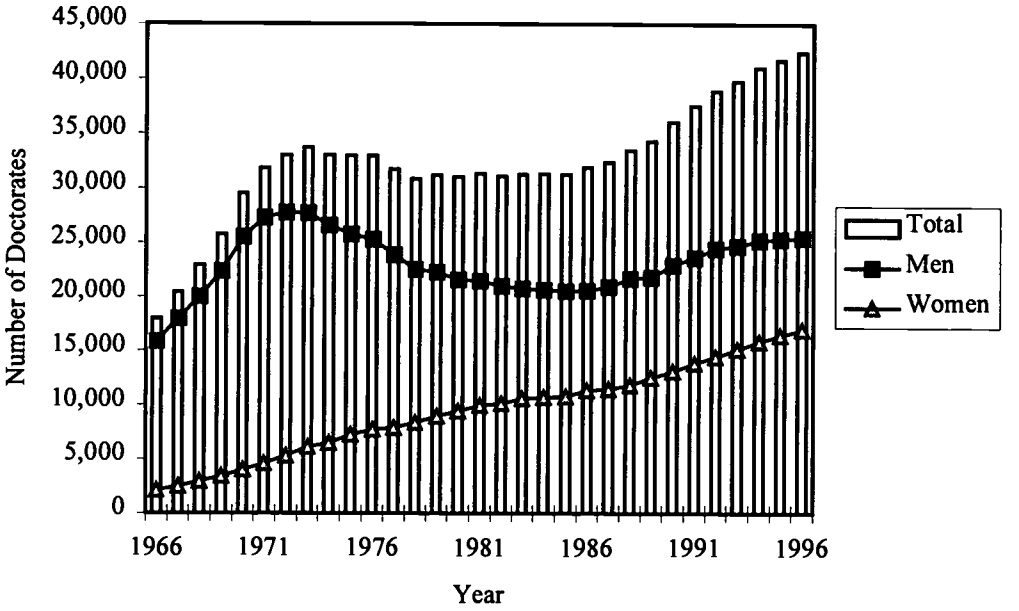
See Table 4, page 37.

SOURCE: National Research Council, Survey of Earned Doctorates.

Gender

As seen in Figure 6, women earned 16,945 research doctorates in 1996, or 40 percent of the 42,415 doctorates awarded by U.S. colleges and universities that year. This figure is about eight times the number reported in 1966, when women earned 2,086 Ph.D.s., or about 12 percent of all Ph.D.s. Men earned 25,470 doctorates in 1996, up from 1995 and the highest number earned by men since 1975. The highest number ever earned by men was 27,754 in 1972. (See Table 5, page 38, and Appendix Table B-2, pages 95-97.)

FIGURE 6 Doctorate recipients, total and by gender, 1966-1996.



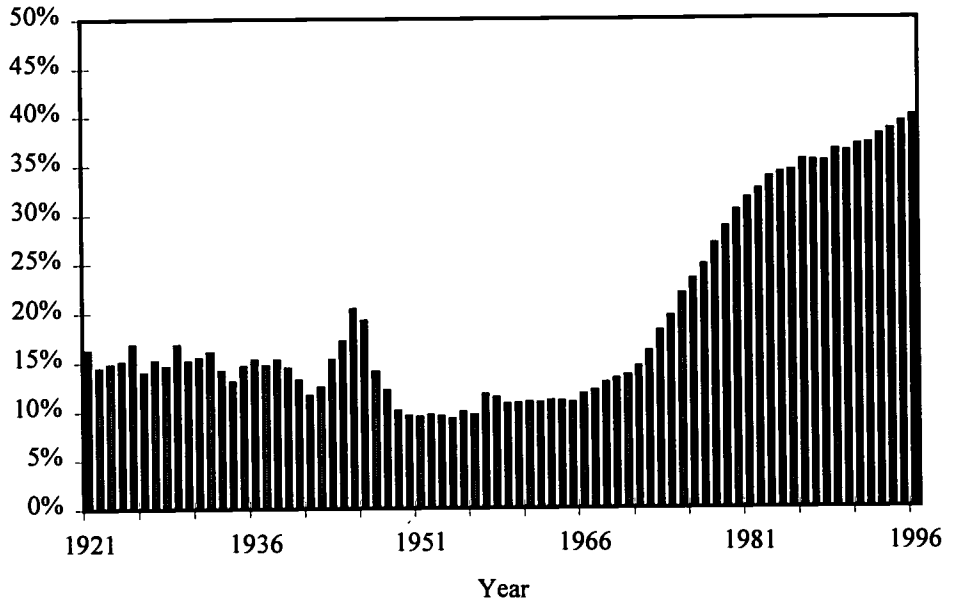
See Table 5, page 38, and Appendix Table B-2, pages 95-97.

SOURCE: National Research Council, Survey of Earned Doctorates.

- As seen in Figure 7, the percentage of Ph.D.s earned by women in the United States has increased considerably, especially in the past 30 years. Between World Wars I and II, women generally earned between 13 and 17 percent of doctorates awarded in the United States. After peaking slightly above 20 percent of all Ph.D.s during World War II, the percentage of doctorates earned by women dropped below 10 percent from 1949 to 1956 and then stabilized around 11 percent in the late 1950s and early 1960s. After 1965 the percentage of doctorates earned by women rose at a crisp pace until the 1980s, when it leveled off around 35 percent. The percentage has risen since 1989 to 40 percent in 1996.[4] (See Table 6, page, 39.)

[4]While women constituted 40 percent of all doctorate recipients in 1996, they have earned the majority of baccalaureate and master's degrees for some time. In 1995, the most recent year for which data are available, women earned about 55 percent of baccalaureate and master's degrees awarded by U.S. colleges and universities (U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions" survey, 1994-1995).

FIGURE 7 Percentage of doctorates from U.S. colleges and universities earned by women, 1921-1996.

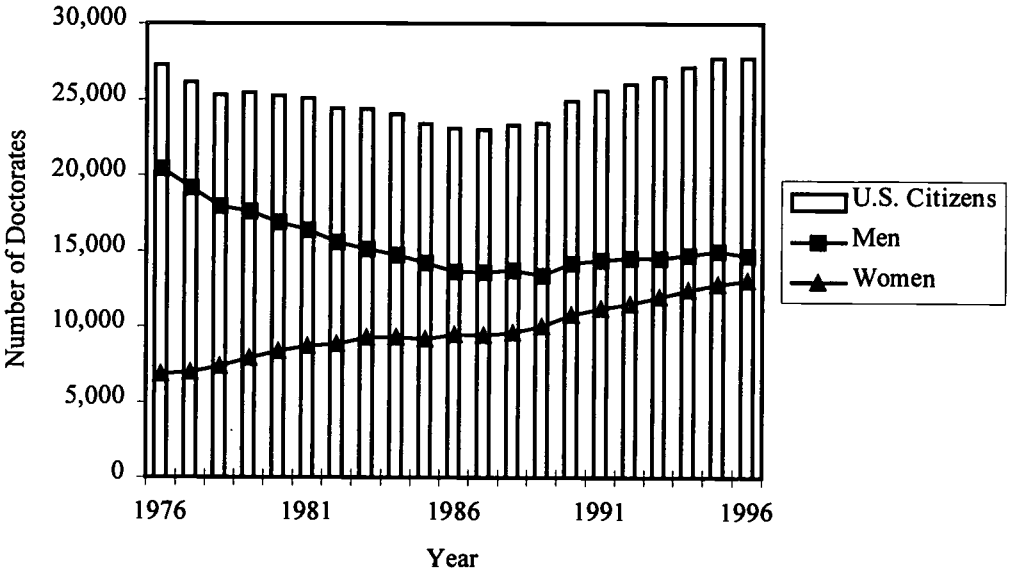


See Table 6, page 39.

SOURCE: National Research Council, Survey of Earned Doctorates.

- As seen in Figure 8, the percentage of doctorates earned by women has risen even more dramatically among U.S. citizens. The number of U.S. men earning doctorates has risen since their low number in 1987. Still, at 14,700 in 1996, U.S. men earned only three-quarters of the number of doctorates they earned in the early 1970s. Meanwhile, the number of U.S. women earning Ph.D.s has risen steadily. Thus, while women earned just one-quarter of doctorates earned by U.S. citizens in 1976, they earned 47 percent of doctorates awarded to U.S. citizens in 1996. Among non-U.S. citizens with permanent visas, women earned 34 percent of doctorates in 1996; among temporary residents, women earned 23 percent.

FIGURE 8 U.S. citizen doctorate recipients, total and by gender, 1976-1996.



See Appendix Table B-2, pages 95-97.

SOURCE: National Research Council, Survey of Earned Doctorates.

Gender by Field

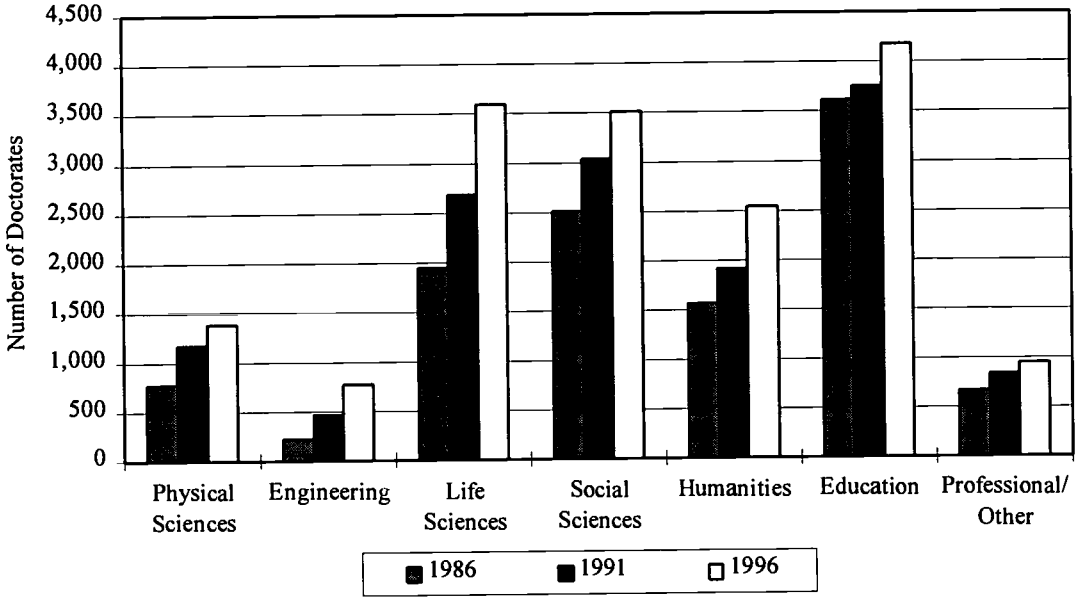
While women have earned an ever-larger percentage of Ph.D.s, the number and percentage of Ph.D.s earned by women varied substantially by field as can be seen in Figure 9. (See Table 5, page 38.)

- In 1996 a greater number of doctorates were awarded to men than to women in five of seven broad fields. Women remained outnumbered in life sciences (earning 44 percent of Ph.D.s), professional/other fields (38 percent), physical sciences (21 percent), and engineering (12 percent). In the fifth field, humanities, men earned only slightly more Ph.D.s than women (2,572 men and 2,544 women). Women continued to earn the majority of doctorates in education (62 percent). For the second year in a row, women also outnumbered men in social sciences (3,514 to 3,300).

- The number of female Ph.D.s has increased in every broad field over the past 30 years, and gains continued from 1995 to 1996 in every broad field except physical sciences, for which the number of women dropped from 1,499 to 1,384, and professional/other fields, in which the number of women dropped from 980 to 953.

- The field with the highest growth rate for women in the past decade was engineering, in which the number of female doctorates increased by 245 percent, growing from 225 in 1986 to 776 in 1996. Engineering, though, remains the broad field in which women earned the fewest and smallest percentage of doctorates. The largest numerical change for women was in life sciences, in which the number of women jumped from 1,984 in 1986 to 3,595 in 1996. Women earned their highest number of doctorates in education, at 4,179 in 1996; this field had the slowest growth rate for women over the past decade, at just 16 percent.

FIGURE 9 Number of female doctorate recipients, by field, 1986, 1991, 1996.



See Table 5, page 38.

SOURCE: National Research Council, Survey of Earned Doctorates.

Race/Ethnicity

U.S. minorities earned a record number of Ph.D.s in 1996, increasing from 3,517 awards in 1995 to 3,542 in 1996, while the number of white U.S. citizens earning Ph.D.s declined to 23,856 in 1996 from 23,920 in 1995—the highest number of whites since 1976. As in 1995, almost 13 percent of the doctorates awarded to U.S. citizens in 1996 were earned by racial/ethnic minorities—Asians, blacks, Hispanics, and American Indians—up from 11 percent in 1994.[5] The overall minority share of doctorates has increased by over 6 percentage points since 1976. (See Table 7, page 40, and Appendix Table B-2, pages 95-97.)

Among U.S. citizens, as shown in Figures 10 and 11, three of the four racial/ethnic minority groups reached record numbers in 1996:

- The number of blacks receiving doctorates increased 18.9 percent from 1,101 in 1994 to 1,309 in 1995, and the number of blacks remained at this higher level with 1,315 in 1996. At 4.8 percent in 1996, blacks earned their highest proportion among U.S. Ph.D.s ever.

- Of the 18 institutions awarding the most baccalaureates to blacks who later received Ph.D.s between 1992 and 1996, 11 are Historically Black Colleges and Universities (HBCUs). (See Table 9, page 42.) Three HBCUs are also among the 20 institutions that awarded the most Ph.D.s to blacks between 1992 and 1996. (See Table 10, page 43.)

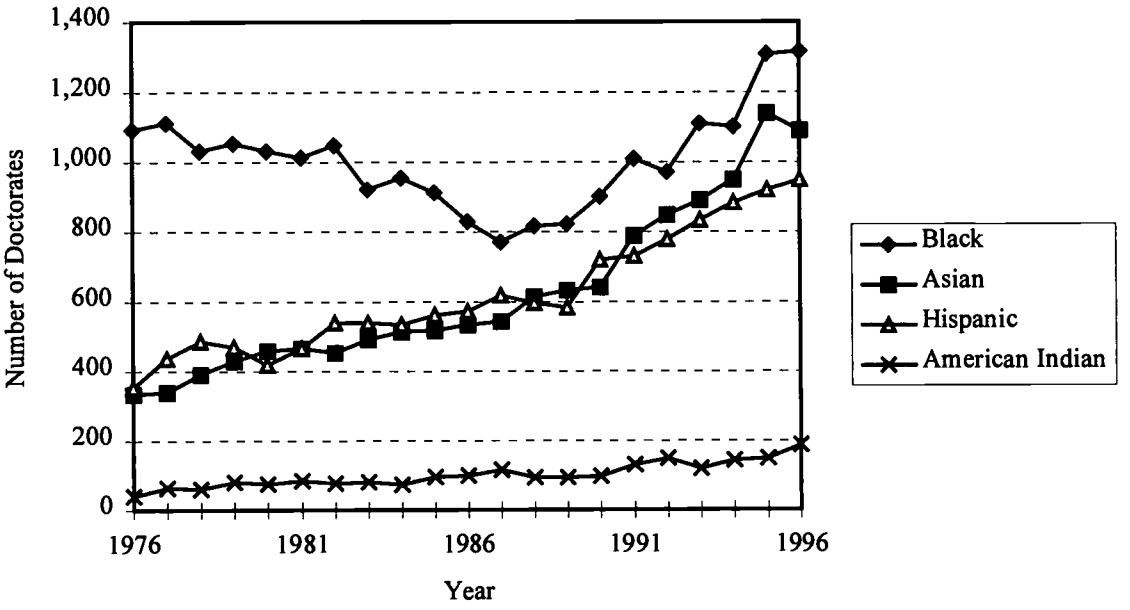
- The number of Asians receiving doctorates increased by 20 percent from 950 in 1994 to 1,140 in 1995 but decreased slightly to 1,091 in 1996, still a 15 percent increase over 1994. Asians received 4 percent of all doctorates awarded to U.S. citizens in 1996, three times as high as in 1976.

- Hispanics continued to increase their numbers among U.S. citizens receiving doctorates, rising from 884 in 1994 to 919 in 1995 and 950 in 1996. Their share of U.S. citizen doctorates is now nearly 3.5 percent.

- The number of American Indians receiving doctorates jumped 25 percent from 149 in 1995 to 186 in 1996, their highest number ever among U.S. citizens. The percentage of U.S. citizens earning Ph.D.s who are American Indians increased from 0.2 percent in 1976 to 0.7 percent in 1996.

[5]"Asians" includes Asians and Pacific Islanders; "American Indians" includes Alaskan Natives.

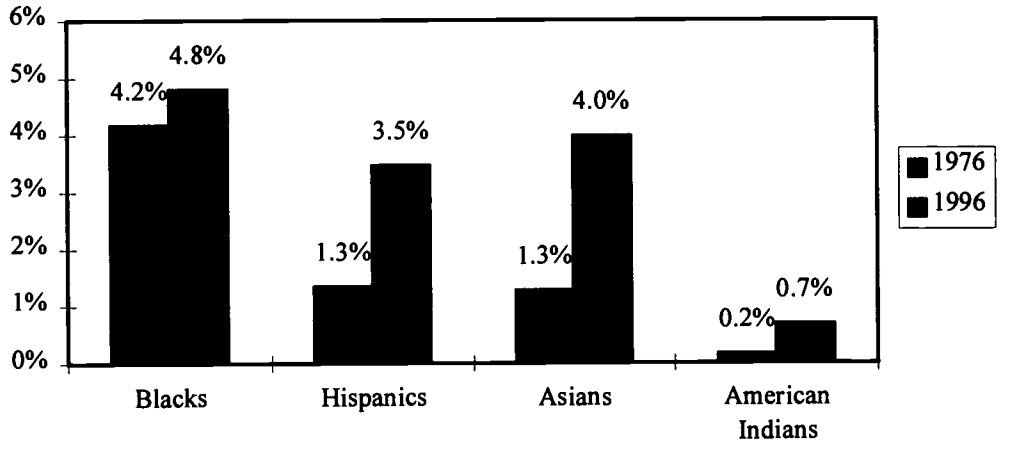
FIGURE 10 Minority Ph.D.s among U.S. citizens, by race/ethnicity, 1976-1996.



See Table 7, page 40, and Appendix Table B-2, pages 95-97.

SOURCE: National Research Council, Survey of Earned Doctorates.

FIGURE 11 Percentage of doctorates earned by U.S. minorities, 1976 and 1996.



NOTE: Percentages are based on the number of U.S. citizen Ph.D.s with known race/ethnicity. The category of "American Indians" includes Alaskan Natives. The category "Asians" includes Pacific Islanders.

See Table 7, page 40.
See technical notes in Appendix C for rates of nonresponse to the survey questions on citizenship and race/ethnicity.

SOURCE: National Research Council, Survey of Earned Doctorates.

Race by Field

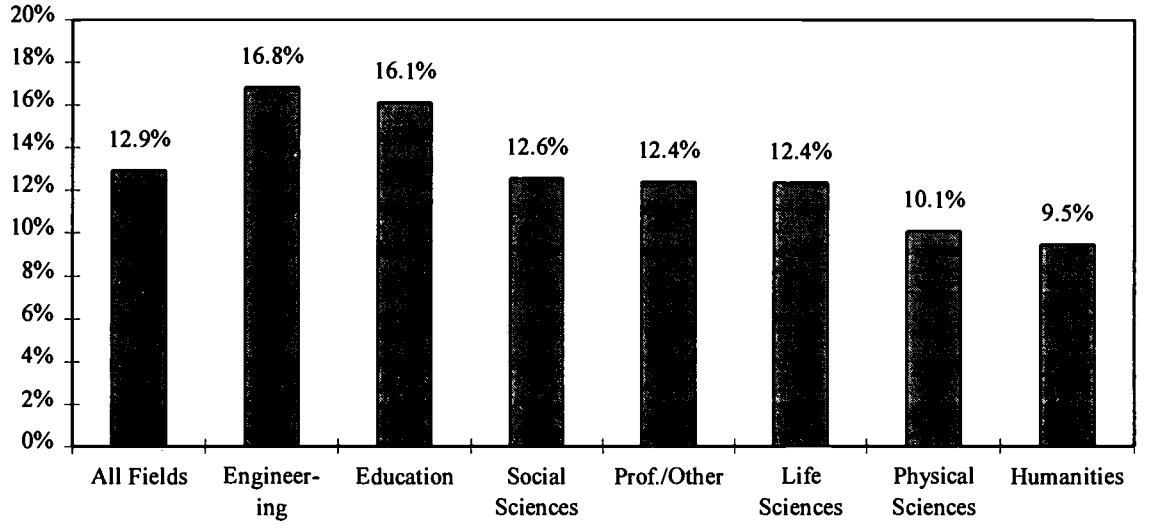
Racial and ethnic minorities received almost 13 percent of all doctorates awarded to U.S. citizens in 1996. As a group they accounted for more than 16 percent of doctorates in both education and engineering. They accounted for between 9 and 13 percent of Ph.D.s in each of the remaining broad fields. (See Tables 7 and 8, pages 40 and 41.)

- In 1996 blacks, Hispanics, and American Indians earned their largest numbers of doctorates in the fields of education or social sciences. Life sciences and engineering were the leading fields for Asians.

- Among blacks, 44 percent of all doctorates were in the field of education in 1996 as in 1995. Blacks received 10 percent of all Ph.D.s awarded to U.S. citizens in that field. Another 20 percent of blacks earned their Ph.D.s in social sciences. In 1996 half of all doctorates earned by Asians were in life sciences and engineering. Asians received 11 percent of Ph.D.s awarded to U.S. citizens in engineering and about 6 percent in life sciences. In 1996 almost half of the doctorates earned by Hispanics were in education or social sciences. Another 30 percent received their Ph.D.s in life sciences and humanities.

- More than 50 percent of all doctorates earned by American Indians in 1996 were in education and social sciences. Indeed, about half of the large increase from 1995 to 1996 in doctorate awards to American Indians was in the field of education, with the next largest numerical increase in social sciences.

FIGURE 12 Percentage of doctorates earned by U.S. minorities, by broad field, 1996.



NOTE: Percentages are based on the total number of U.S. citizen Ph.D.s whose race/ethnicity is known. Minorities include Asians, blacks, Hispanics, and American Indians. See technical notes in Appendix C for rates of nonresponse to survey questions on citizenship and race/ethnicity.

See Tables 7 and 8, pages 40 and 41.

SOURCE: National Research Council, Survey of Earned Doctorates.

Citizenship

U.S. citizens earned slightly over two-thirds of the doctorates awarded to those with known citizenship in 1996. After a one-year drop in numbers from 1994 to 1995, the number of non-U.S. Ph.D.s increased again in 1996. Non-U.S. citizens, in fact, account for most of the growth in the overall number of Ph.D.s since 1986. Meanwhile, trends among doctorate recipients from China have affected the percentage of non-U.S. citizens holding permanent as opposed to temporary visas in the past five years. The percentage of permanent residents increased substantially from 1992 to 1995; in 1996 it decreased. (See Tables 11 and 12, pages 44 and 45.)

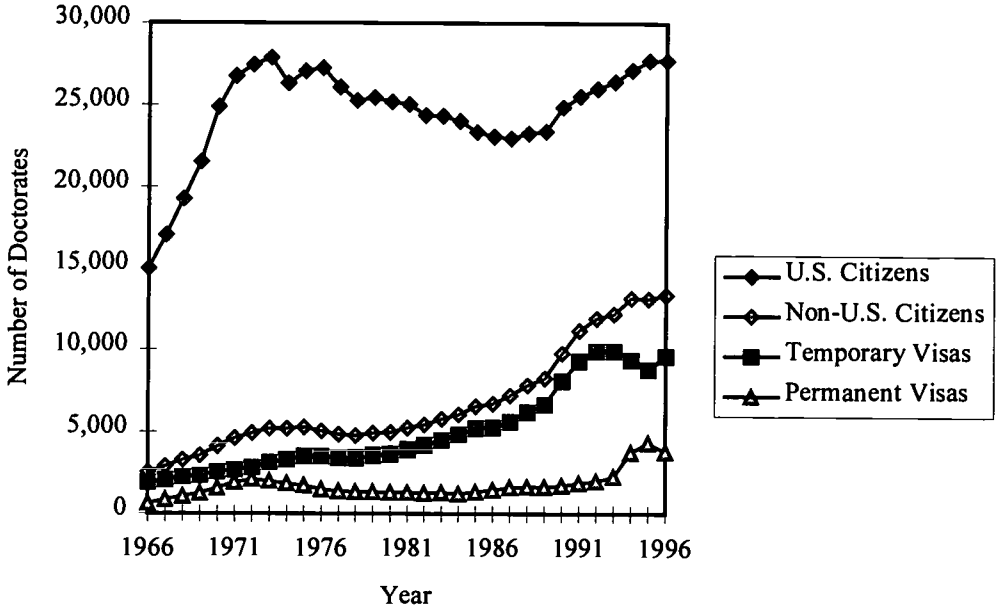
- As shown in Figure 13, the number of U.S. citizens earning doctorates in 1996 was 27,741, one more than the 27,740 earned in 1995. This 1996 figure is the second highest number of doctorates ever earned by U.S. citizens. The highest number was 27,914 in 1973.

- The number of non-U.S. citizens earning doctorates in 1996 was the highest ever, increasing to 13,375, after a small decline from 1994 to 1995. The number for 1996 is double the number of non-U.S. citizens earning Ph.D.s in 1986, when there were 6,709 non-U.S. Ph.D.s. During this period, the percentage of doctorates granted to non-U.S. citizens increased from 23 to 33 percent of all doctorates awarded.

- The mix of temporary and permanent visa holders among the growing numbers of non-U.S. citizens earning Ph.D.s in the United States shifted dramatically over the past five years. The total number of temporary visa holders declined in 1993, 1994, and 1995, while the number of permanent visa holders grew dramatically. Temporary visa holders dropped from 83 percent of non-U.S. citizens in 1991 and 1992 to just 67 percent in 1995. In 1996, however, the number of temporary residents grew again in number and in percentage of all non-U.S. citizens, climbing back to 72 percent.

- As seen in Figure 14, this change tracks the implementation of provisions in the Chinese Student Protection Act of 1992. This act made thousands of citizens of China who had been students in the United States at the time of the 1989 Tiananmen Square massacre eligible for permanent residency here as of July 1, 1993. It thus drove up the number of Chinese students graduating with permanent visas from 192 (or 9 percent of all Chinese Ph.D.s) in 1992 to 2,366 (or 80 percent of all) in 1995. As the remaining number of Chinese students who were enrolled here in 1989 dwindles, the percentage holding permanent visas at graduation is reversing—dropping from 80 percent in 1995 to just 56 percent in 1996. It will likely drop further next year.

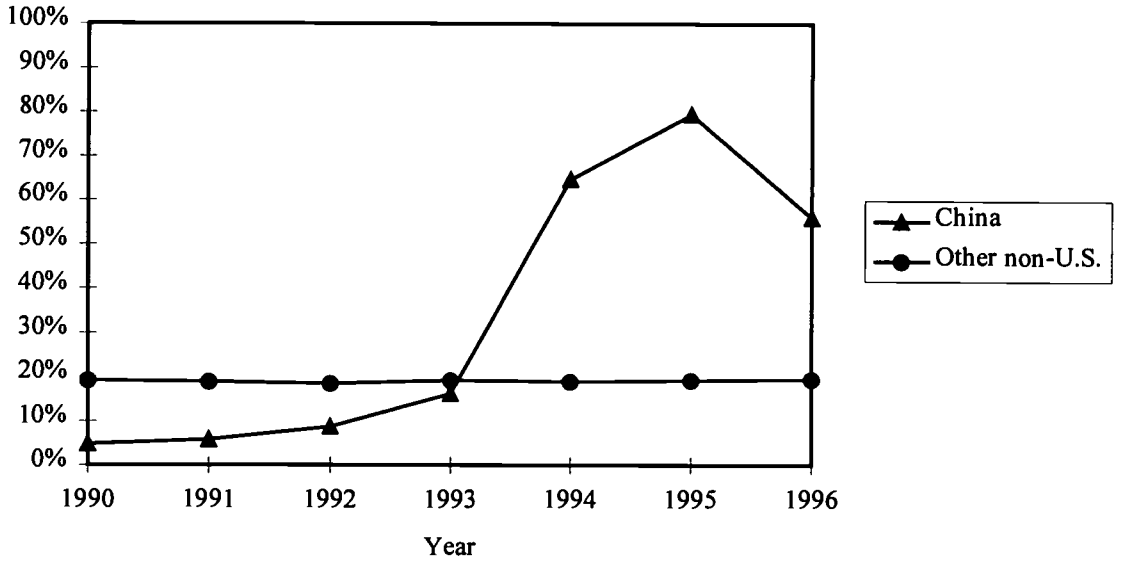
FIGURE 13 Doctorate recipients by citizenship status, 1966-1996.



See Table 11, page 44.

SOURCE: National Research Council, Survey of Earned Doctorates.

FIGURE 14 Percentage of Ph.D.s who are permanent residents, by country of citizenship, 1990-1996.



See Table 12, page 45.

SOURCE: National Research Council, Survey of Earned Doctorates.

Country of Citizenship

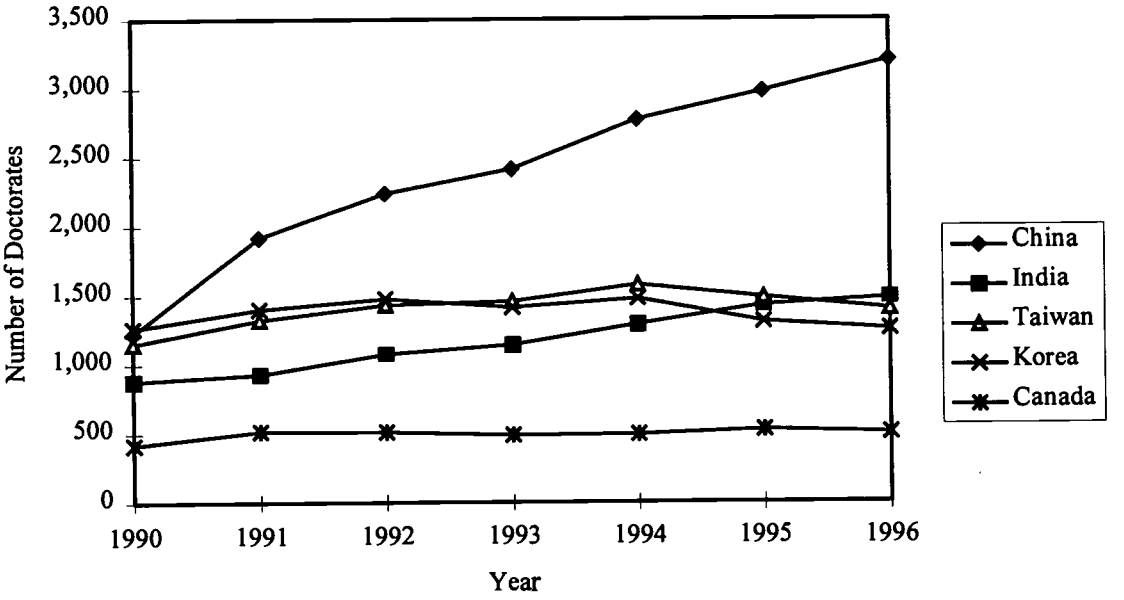
- Even with the drop in the percentage of Chinese who hold permanent visas, China remains the leading country of citizenship by far among non-U.S. citizen Ph.D.s. The number of Chinese earning Ph.D.s in the United States continued to increase, jumping from 2,979 in 1995 to 3,200 in 1996.

- In 1996 India became the second-largest country of citizenship, passing Korea and Taiwan, as seen in Figure 15. In 1990 India ranked fourth behind Korea, China, and Taiwan. The number of Ph.D. recipients from Korea began to decline in 1992 and from Taiwan in 1994, while the number from India grew steadily. Taiwan now ranks third and Korea fourth. Canada is the fifth-largest non-U.S country of origin for Ph.D.s.

- Together, China and India accounted for much of the growth in non-U.S. Ph.D.s in the past five years. In 1991 there were 2,843 Chinese and Indian Ph.D.s. In 1996 the number had increased to 4,681. This increase of 1,838 is 83 percent of all of the growth in non-U.S. citizen Ph.D.s during that period. Together, they now represent 35 percent of all non-U.S. citizens earning doctorates in the United States.

- One new country of note on the list of top 20 countries of origin for non-U.S. citizens is Russia, now ranked eighteenth. In 1996, 114 Russians earned their Ph.D.s in the United States, up from 45 in 1995, 18 in 1994, and just 5 in 1993.

FIGURE 15 Leading countries of origin for non-U.S. citizen doctorate recipients, 1990-1996.



See Table 13, page 46, for country rankings in 1996.

SOURCE: National Research Council, Survey of Earned Doctorates.

Institutions

- The institutions that granted the most Ph.D.s to non-U.S. citizens in 1996 were largely the same as those that granted the most Ph.D.s generally. The top 20 institutions granting doctorates to non-U.S. citizens, for example, were all among the top 25 doctorate-granting institutions. The institutions granting the most Ph.D.s to non-U.S. citizens were Ohio State University, University of Texas-Austin, University of Minnesota, University of Illinois-Champaign/Urbana, and Purdue University. (See Table 14, page 46.)

Citizenship by Field

As seen in Figures 16 and 17, non-U.S. citizens earned 33 percent of all doctorates awarded in the United States in 1996, but their number and percentage within each field varied considerably—from 58 percent of Ph.D.s in engineering and 47 percent in physical sciences to just 10 percent in education. (See Table 11, page 44.)

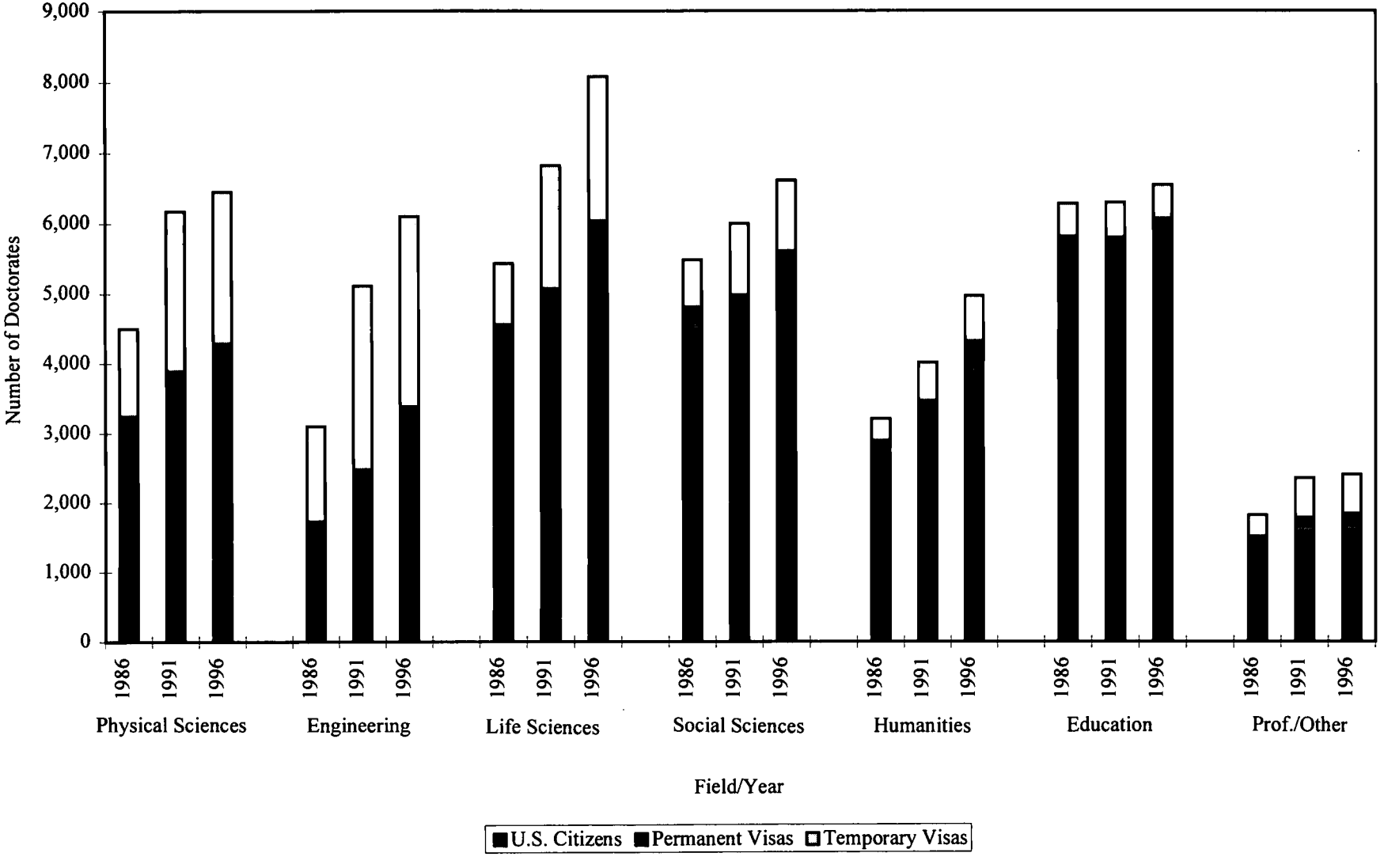
- Non-U.S. citizens have for some time made up a larger percentage of new Ph.D.s in engineering than in other disciplines, but that may be changing. The percentage of awards in life sciences made to non-U.S. citizens grew from 19 percent in 1986 to 38 percent in 1996, and in physical sciences from 33 to 47 percent during that period. Meanwhile, the percentage in engineering increased from 55 percent in 1986 to more than 60 percent and has since decreased to 58 percent.

- Also, while there has been a larger number of non-U.S. Ph.D.s in engineering than in other fields, the number of non-U.S. citizen Ph.D.s in life sciences increased more rapidly than the number in engineering from 1986 to 1996. The number of non-U.S. citizens earning Ph.D.s in engineering increased 105 percent, from 1,715 in 1986 to 3,508 in 1996, but the number of non-U.S. citizens in life sciences increased 184 percent, from 1,076 in 1986 to 3,057 in 1996.

- While the three top fields for temporary and permanent visa holders were the same, their orders were reversed. Temporary residents earned their greatest number of degrees in 1996 in engineering (2,716), physical sciences (2,161), and life sciences (2,040). Permanent residents earned their greatest number of degrees in life sciences (1,017), physical sciences (839), and engineering (792).

- Meanwhile, U.S. citizens earned their greatest number of degrees in education (5,866), social sciences (5,195), and life sciences (5,014).

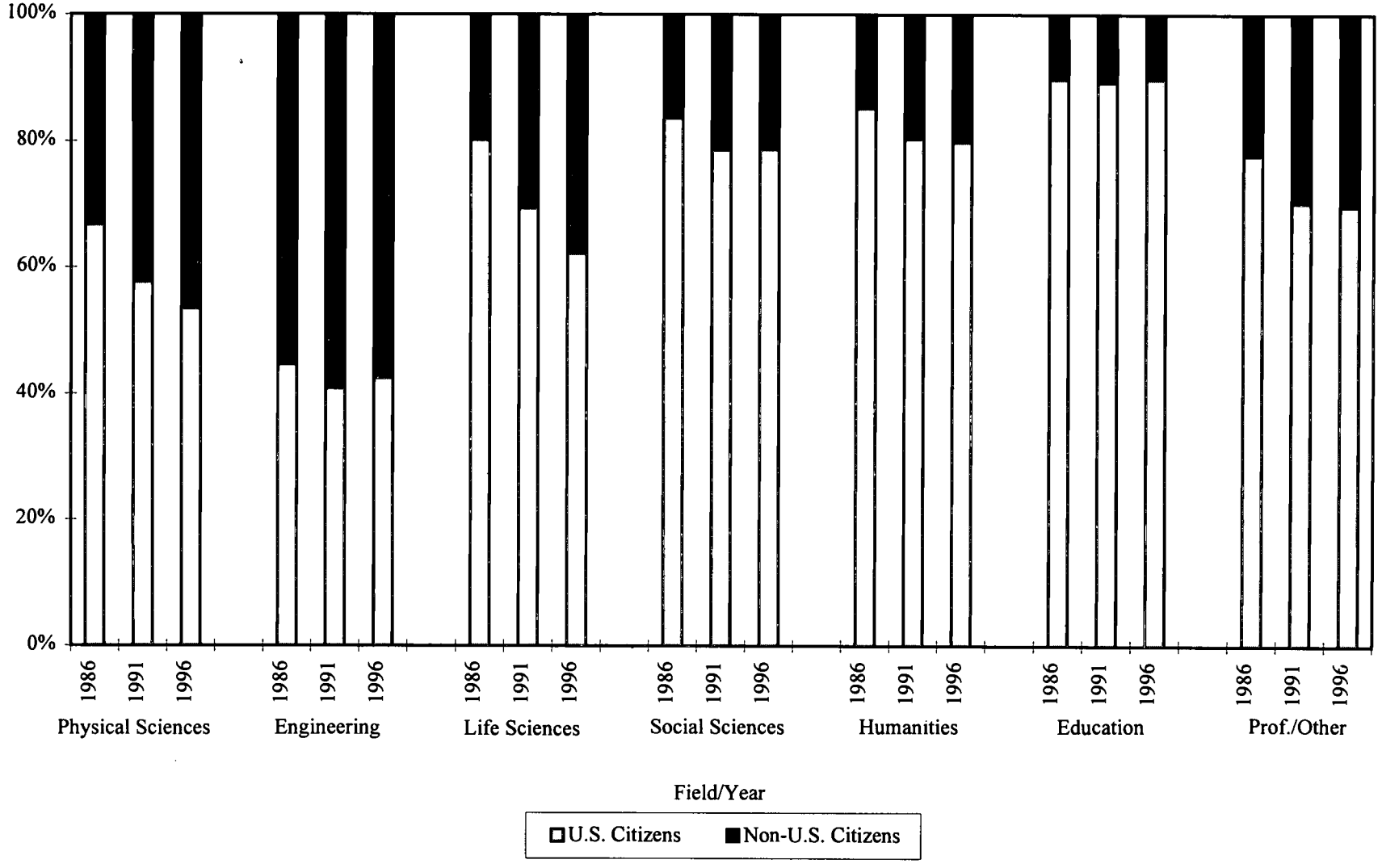
FIGURE 16 Number of doctorate recipients by citizenship status and broad field, 1986, 1991, 1996.



See Table 11, page 44.

SOURCE: National Research Council, Survey of Earned Doctorates.

FIGURE 17 Percentage of doctorates earned by U.S. and non-U.S. citizens, by broad field, 1986, 1991, 1996.



See Table 11, page 44.

SOURCE: National Research Council, Survey of Earned Doctorates.

Time to Degree

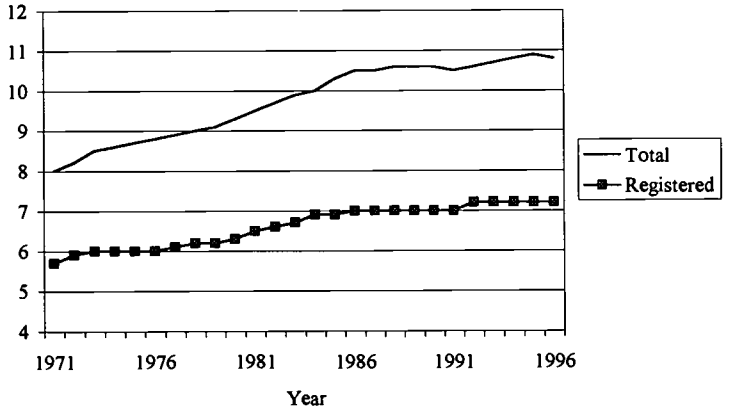
Total time to degree (TTD) measures the number of years elapsed between receipt of the baccalaureate and receipt of the Ph.D. Registered time to degree (RTD) gauges the amount of time a person was enrolled in educational programs between receipt of the baccalaureate and receipt of the Ph.D. RTD includes work on master's degrees, enrollment in nondegree programs, and time spent working on the doctorate.

- As shown in Figure 18, median TTD and RTD each increased dramatically between 1971 and 1986, from 8.0 to 10.5 years and from 5.7 to 7.0 years, respectively. This lengthening of time to degree occurred during a period in which annual Ph.D. production dropped and then stabilized. From 1986 to 1991 TTD and RTD held steady, until each increased again in the early 1990s. TTD peaked at 10.9 years in 1995, declining to 10.8 years in 1996; RTD peaked at 7.2 years in 1992, where it has remained since. (See Table 15, page 47.)

- As shown in Figure 19, TTD and RTD varied considerably by field. In 1996 doctorate recipients in education had the longest median TTD (20.2 years), while those in physical sciences had the shortest (8.3 years). The longest median RTD was in the humanities (8.3 years), and the shortest median RTD was in engineering (6.4 years).

- Time to degree was longer for women than for men, but the difference was often minimal within the same broad field. Blacks had the longest time to degree of all U.S. racial/ethnic groups, largely because their highest percentage of degrees was in the field of education. U.S. citizens and permanent residents exhibited longer time-to-degree rates than did temporary residents. (See Table 16, page 48.)

FIGURE 18 Median years to doctorate from baccalaureate award, 1971-1996.

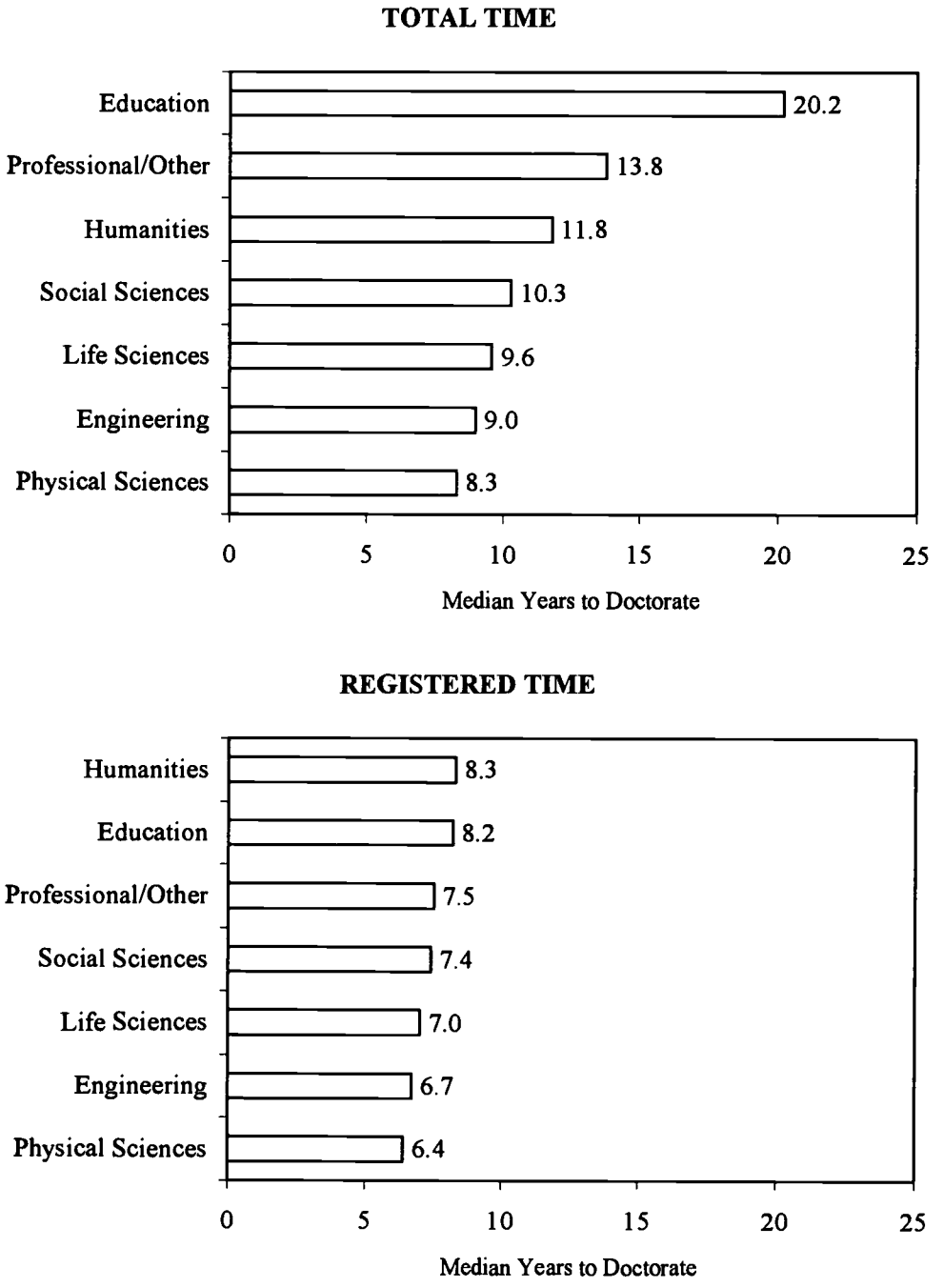


NOTE: The method of median computation was revised in 1995. See technical notes in Appendix C for explanation of the revision (page 105) and for rates of nonresponse to applicable survey questions (pages 102 and 103).

See Tables 15 and 16, pages 47 and 48.

SOURCE: National Research Council, Survey of Earned Doctorates.

FIGURE 19 Median years to doctorate from baccalaureate award, by broad field, 1996.



NOTE: The method of median computation was revised in 1995. See technical notes in Appendix C for explanation of the revision (page 105) and for rates of nonresponse to the applicable survey questions (pages 102 and 103).

See Tables 15 and 16, pages 47 and 48.

SOURCE: National Research Council, Survey of Earned Doctorates.

Financial Support

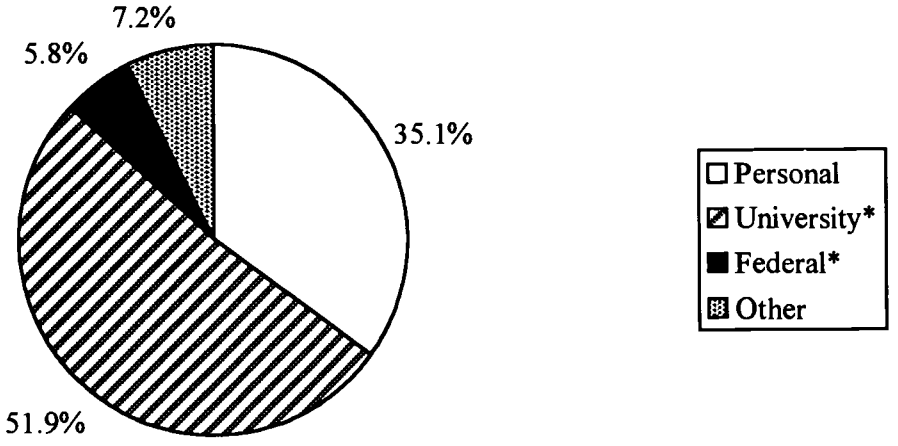
As in previous years, university funding (mostly via teaching and research assistantships) was the primary source of graduate school support for the majority of 1996 Ph.D.s (52 percent). (See Figure 20.) Another 35 percent of Ph.D.s were primarily supported by personal resources (their own earnings, family contributions, loans) and the remaining 13 percent by resources from federal or state governments, nonfederal competitive fellowships, businesses, and employers. (See Table 17, page 49.)

- As seen in Figure 21, the type of primary support varied greatly by field. University sources were reported by more than half of Ph.D.s in physical and life sciences and engineering. Personal resources were easily the most typical in education (75 percent).

- Fifty-eight percent of male Ph.D.s cited university funding as their primary source of support. Female Ph.D.s relied in equal portions on personal resources (45 percent) and university funding (43 percent) as their primary support. Differences between men and women were minimal within humanities, education, and professional/other fields. Differences largely disappeared within science and engineering fields, though several variations are noteworthy: a higher percentage of women than men in engineering cited federal funding as a primary source of support; men reported higher university support in life and social sciences while women reported higher personal support in these fields.

- U.S. citizens reported higher levels of personal and federal support than did non-U.S. citizens. Overall, more than 70 percent of non-U.S. citizens cited university support as their primary source of financing. Among U.S. citizens, a majority of Asians (54 percent) cited university support as primary. Hispanics reported university and personal sources as primary in equal numbers, about 40 percent each. Blacks, whites and American Indians reported personal support as primary.

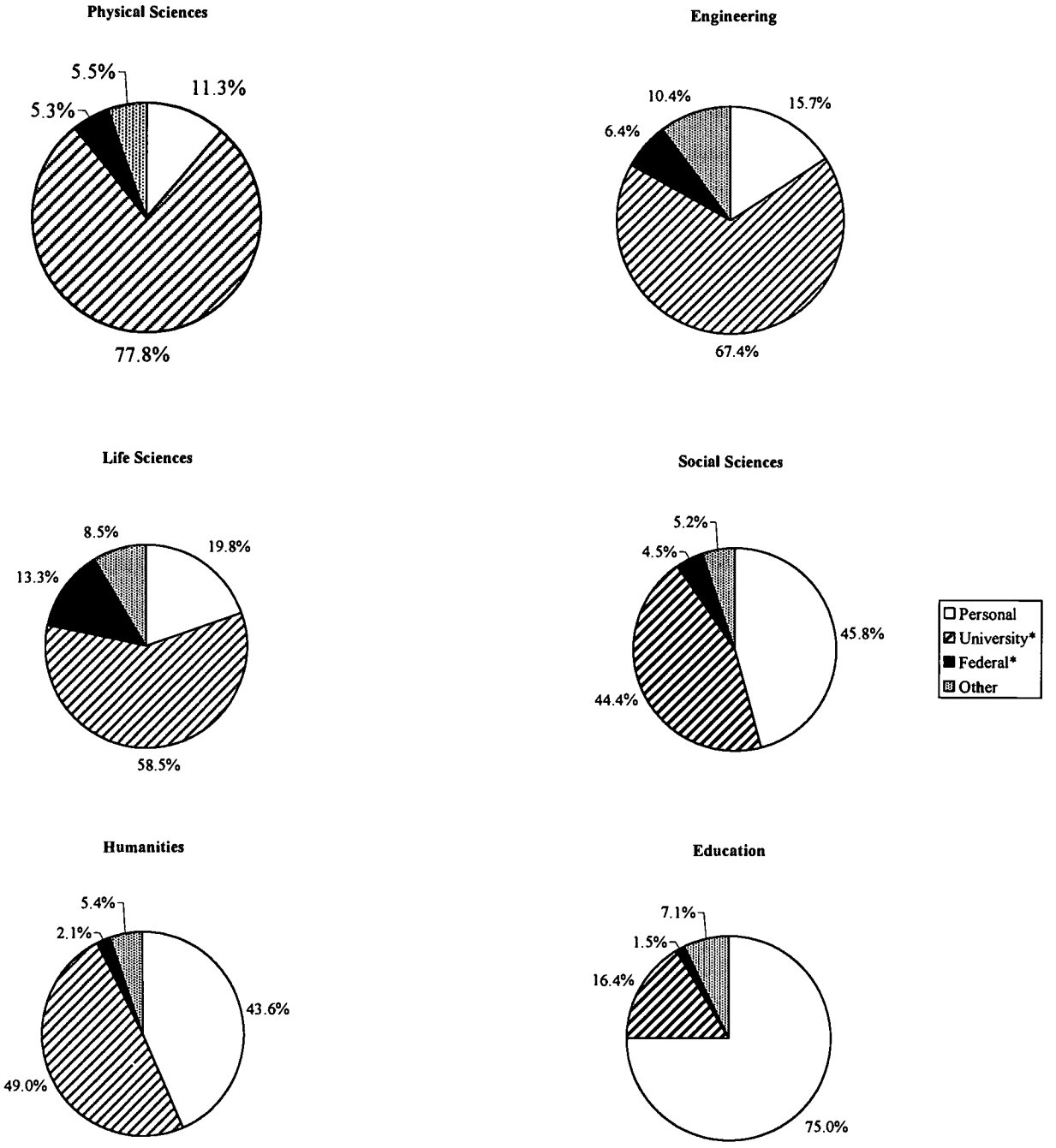
FIGURE 20 Primary sources of financial support for doctorate recipients, all fields, 1996.



See Table 17, page 49.
See technical notes in Appendix C for rates of nonresponse to this survey question.
*Research assistantships funded by the federal government are counted as university support.

SOURCE: National Research Council, Survey of Earned Doctorates.

FIGURE 21 Primary sources of financial support for doctorate recipients, by broad field, 1996.



See Table 17, page 49.
See technical notes in Appendix C for rates of nonresponse to this survey question.

*Research assistantships funded by the federal government are counted as university support.

SOURCE: National Research Council, Survey of Earned Doctorates.

Almost half (48 percent) of all Ph.D.s in 1996 reported debt related to their combined undergraduate and graduate education. The majority of those with debt (57 percent) reported owing more than $10,000. (See Table 18, page 50.)

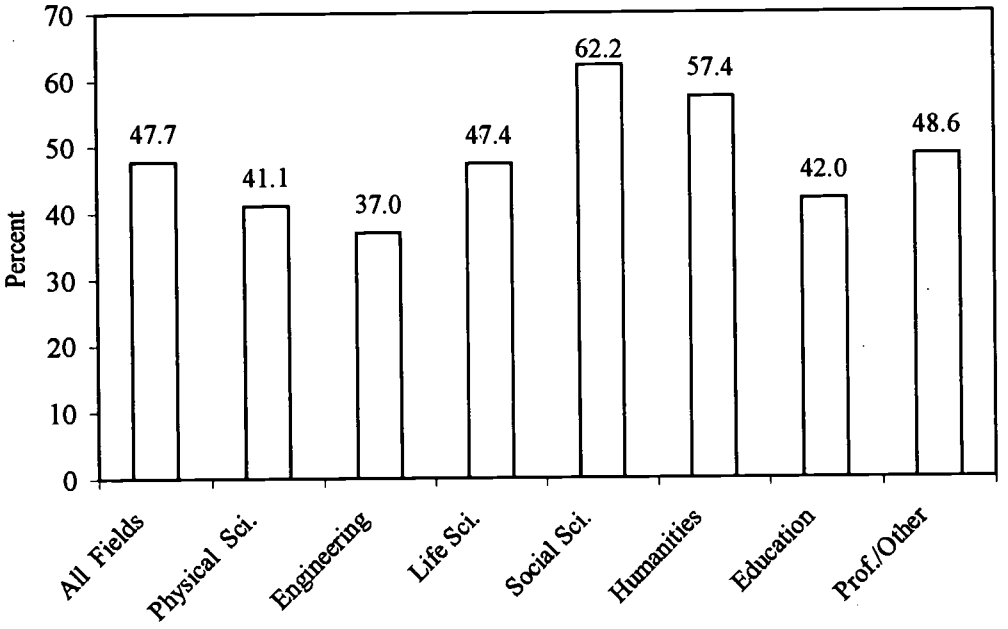
- As shown in Figure 22, Ph.D.s in engineering were the least likely to have incurred educational debt (37 percent), while those in social sciences were the most likely (62 percent).

- More than two-thirds of social sciences Ph.D.s with debt owed more than $10,000, and over one-quarter owed more than $30,000. By contrast, more than half of the indebted Ph.D.s in physical sciences and engineering and nearly half of those in life sciences owed $10,000 or less.

- Men and women reported debt in nearly equal proportions and had similar distributions across levels of debt. Among U.S. citizens, Hispanics and blacks were the most likely racial/ethnic groups to have educational debt and to report the highest level of debt. (See Table 19, page 50.)

- Non-U.S. citizens were much less likely to have incurred debt than U.S. citizens, the majority of whom were indebted. Temporary residents were more likely than permanent residents to report debt and a slightly higher percentage of temporary than permanent visa holders reported debt of more than $30,000.

FIGURE 22 Percentage of Ph.D.s with debt, total and by broad field, 1996.



See Table 18, page 50.
See technical notes in Appendix C for rates of nonresponse to the survey question on debt.

SOURCE: National Research Council, Survey of Earned Doctorates.

Postgraduation Status and Plans

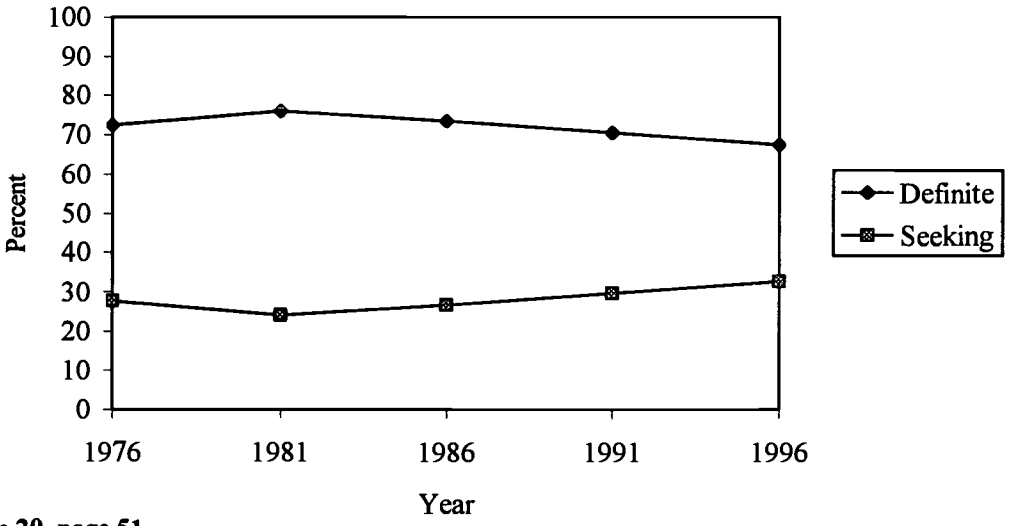
As shown in Figure 23, the proportion of Ph.D.s reporting definite postgraduation commitments for employment or postdoctoral study at the time the doctorate is earned declined from about three-fourths in the 1970s and 1980s to about two-thirds in the mid-1990s. In 1996 about one-third of new doctorate recipients were still seeking employment or study at the time they received their doctorates. (See Table 20, page 51.)

- In 1996 doctorate recipients in education were the most likely to have a definite commitment for work or study—74 percent of education doctorates had such commitments. Doctorates in the humanities were the least likely to have a commitment for work or study at 59 percent, leaving 41 percent of humanities doctorates seeking employment or study—usually employment—at graduation.

- Among science and engineering fields, 71 percent of doctorates in life sciences had commitments for work or study, followed by doctorates in physical sciences at 67 percent, social sciences at 65 percent, and engineering at 64 percent.

- In 1996 similar proportions of men and women had definite commitments, 68 and 67 percent, respectively. U.S. citizens, at 71 percent, were far more likely than non-U.S. citizens to have commitments at graduation—only 60 percent of permanent visa holders and 62 percent of temporary visa holders had commitments. Among U.S. citizens and permanent residents, 71 percent of Hispanics had a definite commitment for work or study, followed by whites and American Indians at 70 percent each and blacks at 68 percent. Asians were the least likely to have definite commitments, at 62 percent. (See Table 21, page 52.)

FIGURE 23 Percentage of Ph.D.s with definite commitments for employment or study, or seeking employment or study for selected years, 1976-1996.



See Table 20, page 51.
See technical notes in Appendix C for rates of nonresponse to the survey question on debt.

SOURCE: National Research Council, Survey of Earned Doctorates.

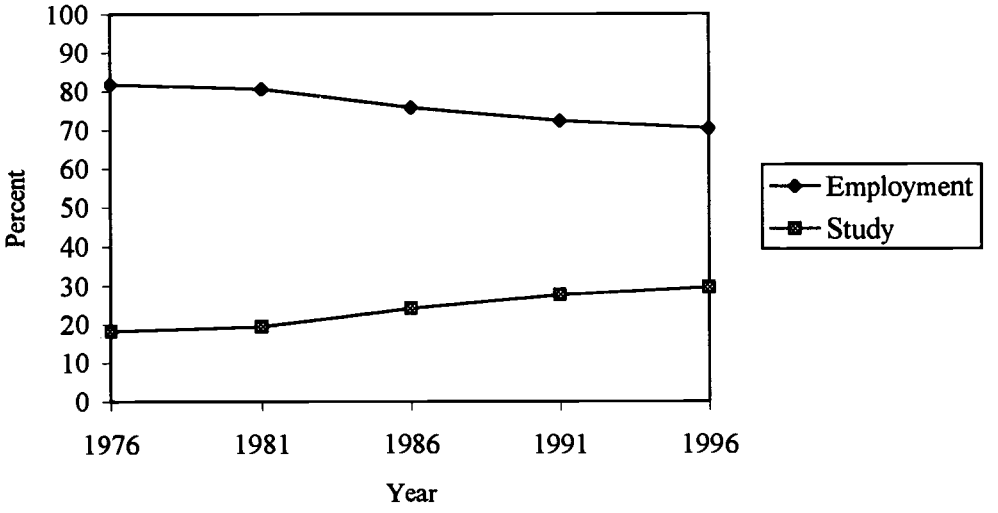
Of those Ph.D.s in 1996 who reported definite postgraduation commitments, 71 percent planned to be employed, while 29 percent planned postdoctoral study. (Postdoctoral appointments are considered to be study rather than employment in this report.) As shown in Figure 24, the proportion of new Ph.D.s with postdoctoral study plans has steadily increased since 1976, when only 18 percent planned further study. (See Table 22, page 53.)

- Doctorate recipients in education and professional/other fields were the most likely to have commitments that were for employment (97 and 96 percent, respectively), followed closely by humanities Ph.D.s (92 percent). Commitments for further study were by far the most common in life sciences (65 percent). The percentages of physical and life sciences Ph.D.s whose commitments were for employment were up slightly in 1996.

- The majority of Ph.D.s in every major demographic group with commitments had them for employment rather than study after graduation. A higher percentage of women (74 percent) than men (68 percent) had commitments for employment. Among the aggregate of U.S. citizens and permanent residents, blacks had the largest proportion with work plans (about 85 percent), and Asians had the largest proportion with study plans (44 percent). (See Table 23, page 54.) These patterns are explained mainly—and for blacks and women, entirely—by the fields in which these different groups tend to earn degrees.

- Upon graduation, almost three-quarters of U.S. citizens had commitments for employment compared to about 60 percent for non-U.S. citizens. About 40 percent of permanent and temporary visa holders planned to continue their studies.

FIGURE 24 Percentage of doctorate recipients with postgraduation commitments, by employment or study for selected years, 1976-1996.



NOTE: Only Ph.D.s with definite commitments are included. Percentages are based on the number of Ph.D.s whose specific plans are known.

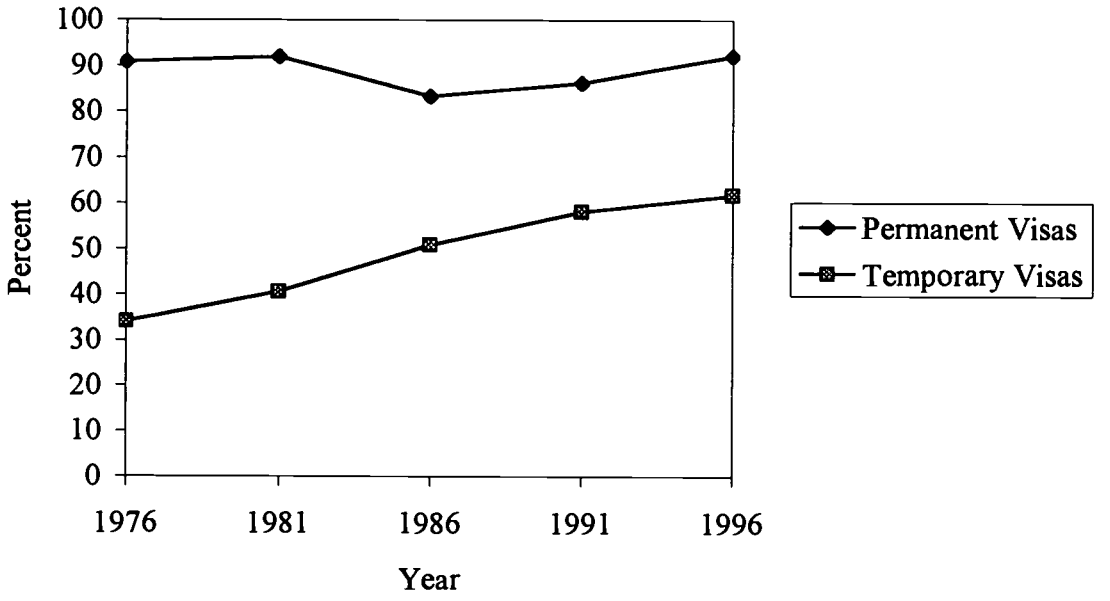
See Table 22 , page 53.
See technical notes in Appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

SOURCE: National Research Council, Survey of Earned Doctorates.

Of those non-U.S. citizens who reported definite postdoctoral commitments in 1996, permanent residents were much more likely than temporary residents to plan to remain in the United States immediately after graduation (92 versus 62 percent). However, as shown in Figure 25, while the proportion of permanent residents who remain in the United States immediately after graduation has remained around 90 percent over time, the proportion of temporary resident Ph.D.s planning to stay for at least some period of time has increased steadily since 1976 when 34 percent stayed. (See Table 24, page 55.)

- Almost equal shares of temporary residents who had definite commitments planned U.S.-located employment, U.S.-located study, or foreign-located employment. A smaller percentage had foreign-located study plans. More than half (54 percent) of permanent residents with definite commitments had plans for U.S.-located employment. The second-largest group (39 percent) among permanent residents with commitments had them for U.S.-located study. (See Table 25, page 56.)

FIGURE 25 Percentage of non-U.S. citizen doctorate recipients with definite plans to remain in the United States after graduation, by visa status for selected years, 1976-1996.



NOTE: Only Ph.D.s with definite commitments are included in the percentage computations.

See Table 24, page 55.
See technical notes in Appendix C for rates of nonresponse to the applicable survey questions.

SOURCE: National Research Council, Survey of Earned Doctorates.

In 1996, as before, academe was the primary employer of U.S. citizens and permanent residents who had definite commitments for employment in the United States after graduation.

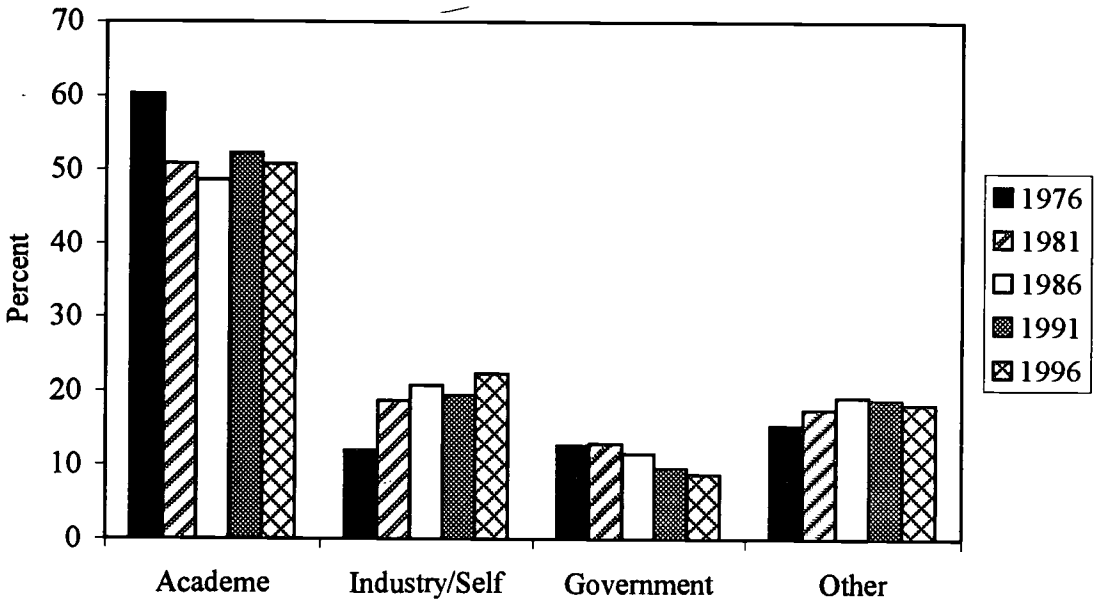
- As shown in Figure 26, the proportion of Ph.D.s intending to work in academe has fluctuated over the past two decades. In 1976, 60 percent of U.S. citizens and permanent residents with employment commitments were headed for academia. By 1986 the proportion had declined to 49 percent; it rose to 54 percent in 1995 but declined once more in 1996 to 51 percent. Plans for employment in industry (including self-employment), meanwhile, increased from 12 percent of Ph.D.s in 1976 to 22 percent in 1996. (See Table 26, page 57.)

- The sector of planned employment for Ph.D.s varied by field. In 1996 academic employment plans were most predominant in the humanities (81 percent) and professional/other fields (73 percent). Industry was most frequently reported among engineers (66 percent) and physical scientists (53 percent), for whom there were sizable increases in industrial employment from 1995 to 1996.

- In 1996 academic employment plans were more prevalent among women (56 percent) than men (46 percent) and, as has been the case since 1992, women outnumbered men (3,843 to 3,536) among doctorates with commitments for academic employment. The proportion of men in industry (30 percent) was more than twice that of women. (See Table 27, page 58.)

- The majority of Ph.D.s among every racial/ethnic group but Asians reported plans to work in academe. Asians favored industry, jumping from 51 percent in 1995 to 59 percent in 1996. The sectors chosen by the various demographic groups are partially explained by their fields of specialization.

FIGURE 26 Employment sector of doctorate recipients with postgraduation commitments in the United States for selected years, 1976-1996 (U.S. citizens and permanent residents).



NOTE: Only Ph.D.s with definite commitments for employment are included. Foreign locations are excluded. Percentages are based on the number of Ph.D.s whose employment sector is known. Government includes federal, state, and local government agencies in the United States.

See Table 26, page 57.
See technical notes in Appendix C for rates of nonresponse to this survey question.

SOURCE: National Research Council, Survey of Earned Doctorates.

LIST OF TABLES

TABLE 1 Doctorates Awarded by U.S. Colleges and Universities, 1956-1996

Year	Number	Year	Number	Year	Number
1956	8,517	1971	31,867	1986	31,902
1957	8,611	1972	33,041	1987	32,370
1958	8,773	1973	33,755	1988	33,500
1959	9,213	1974	33,047	1989	34,327
1960	9,733	1975	32,952	1990	36,067
1961	10,413	1976	32,946	1991	37,534
1962	11,500	1977	31,716	1992	38,890
1963	12,728	1978	30,875	1993	39,801
1964	14,325	1979	31,239	1994	41,034
1965	16,340	1980	31,020	1995	41,743
1966	17,949	1981	31,356	1996	42,415
1967	20,403	1982	31,111		
1968	22,937	1983	31,281		
1969	25,743	1984	31,337		
1970	29,498	1985	31,297		

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 2 Percentage of Annual Change in Doctorates Awarded by U.S. Colleges and Universities, 1956-1996

Year	Annual Change	Year	Annual Change	Year	Annual Change
1956	-4.4	1971	8.0	1986	1.9
1957	1.1	1972	3.7	1987	1.5
1958	1.9	1973	2.2	1988	3.5
1959	5.0	1974	-2.1	1989	2.5
1960	5.6	1975	-0.3	1990	5.1
1961	7.0	1976	0.0	1991	4.1
1962	10.4	1977	-3.7	1992	3.6
1963	10.7	1978	-2.7	1993	2.3
1964	12.5	1979	1.2	1994	3.1
1965	14.1	1980	-0.7	1995	1.7
1966	9.8	1981	1.1	1996	1.6
1967	13.7	1982	-0.8		
1968	12.4	1983	0.5		
1969	12.2	1984	0.2		
1970	14.6	1985	-0.1		

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 3 Doctorates Awarded by U.S. Colleges and Universities per Institution, 1961-1996

Year	Number of Ph.D.s	Number of Institutions	Ph.D.s per Institution	Year	Number of Ph.D.s	Number of Institutions	Ph.D.s per Institution
1961	10,413	174	60	1979	31,239	316	99
1962	11,500	175	66	1980	31,020	325	95
1963	12,728	186	68	1981	31,356	328	96
1964	14,325	196	73	1982	31,111	333	93
1965	16,340	206	79	1983	31,281	337	93
1966	17,949	216	83	1984	31,337	336	93
1967	20,403	220	93	1985	31,297	342	92
1968	22,937	230	100	1986	31,902	345	92
1969	25,743	232	111	1987	32,370	353	92
1970	29,498	242	122	1988	33,500	355	94
1971	31,867	264	121	1989	34,327	360	95
1972	33,041	271	122	1990	36,067	358	101
1973	33,755	290	116	1991	37,534	367	102
1974	33,047	297	111	1992	38,890	370	105
1975	32,952	297	111	1993	39,801	375	106
1976	32,946	299	110	1994	41,034	377	109
1977	31,716	309	103	1995	41,743	384	109
1978	30,875	316	98	1996	42,415	392	108

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 4 Major Field of Doctorate Recipients for Selected Years, 1966-1996

Field	1966	1971	1976	1981	1986	1991	1996
All Fields	17,949	31,867	32,946	31,356	31,902	37,534	42,415
Physical Sciences	3,828	5,739	4,509	4,170	4,807	6,280	6,675
Physics/Astronomy	1,061	1,738	1,237	1,015	1,187	1,411	1,677
Chemistry	1,594	2,211	1,624	1,612	1,903	2,194	2,148
Earth, Atmos., & Marine Sci.	404	552	645	583	589	836	807
Mathematics	769	1,238	1,003	728	729	1,039	1,122
Computer Sciences*	NA	NA	NA	232	399	800	921
Engineering	2,301	3,498	2,834	2,528	3,376	5,214	6,305
Life Sciences	2,885	5,268	5,026	5,611	5,734	6,933	8,255
Biological Sciences	2,135	3,654	3,573	3,803	3,807	4,650	5,723
Health Sciences	174	541	503	657	770	1,041	1,324
Agricultural Sciences	576	1,073	950	1,151	1,157	1,242	1,208
Social Sciences	2,619	5,189	6,214	6,141	5,893	6,152	6,814
Psychology	1,139	2,145	2,883	3,358	3,126	3,250	3,340
Anthropology	97	239	428	369	381	341	396
Economics	627	820	885	824	859	885	1,008
Poli. Sci. & Int'l. Relations	408	821	791	532	490	522	720
Sociology	260	587	734	605	491	465	516
Other Social Sciences	88	577	493	453	546	689	834
Humanities	2,711	4,648	4,881	3,751	3,461	4,099	5,116
History	645	1,064	1,095	692	563	663	857
Amer. & Eng. Lang. & Lit.	671	1,244	1,214	820	719	852	1,013
Foreign Lang. & Lit.	380	728	835	576	445	498	605
Other Humanities	1,015	1,612	1,737	1,663	1,734	2,086	2,641
Education	3,040	6,435	7,725	7,497	6,649	6,454	6,772
Teacher Education	362	591	588	639	490	408	371
Teaching Fields	691	1,564	1,418	1,437	1,142	973	863
Other Education	1,987	4,280	5,719	5,421	5,017	5,073	5,538
Professional/Other	565	1,090	1,757	1,658	1,982	2,402	2,478
Business & Management	372	673	739	624	902	1,163	1,276
Communications	17	37	295	240	258	332	389
Other Professional Fields	153	265	676	759	796	836	774
Other Fields	23	115	47	35	26	71	39

*"Computer sciences" first appeared on the survey form in 1978.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 5 Gender of Doctorate Recipients, by Broad Field for Selected Years, 1966-1996

Field/Gender	1966	1971	1976	1981	1986	1991	1996
All Fields	17,949	31,867	32,946	31,356	31,902	37,534	42,415
Men	15,863	27,271	25,262	21,464	20,595	23,661	25,470
Women	2,086	4,596	7,684	9,892	11,307	13,873	16,945
Physical Sciences*	3,828	5,739	4,509	4,170	4,807	6,280	6,675
Men	3,649	5,398	4,089	3,667	4,033	5,106	5,291
Women	179	341	420	503	774	1,174	1,384
Engineering	2,301	3,498	2,834	2,528	3,376	5,214	6,305
Men	2,293	3,483	2,780	2,429	3,151	4,747	5,529
Women	8	15	54	99	225	467	776
Life Sciences	2,885	5,268	5,026	5,611	5,734	6,933	8,255
Men	2,541	4,503	4,013	4,076	3,786	4,245	4,660
Women	344	765	1,013	1,535	1,948	2,688	3,595
Social Sciences	2,619	5,189	6,214	6,141	5,893	6,152	6,814
Men	2,241	4,265	4,580	3,944	3,381	3,112	3,300
Women	378	924	1,634	2,197	2,512	3,040	3,514
Humanities	2,711	4,648	4,881	3,751	3,461	4,099	5,116
Men	2,201	3,571	3,208	2,203	1,897	2,180	2,572
Women	510	1,077	1,673	1,548	1,564	1,919	2,544
Education	3,040	6,435	7,725	7,497	6,649	6,454	6,772
Men	2,461	5,089	5,185	3,957	3,036	2,706	2,593
Women	579	1,346	2,540	3,540	3,613	3,748	4,179
Professional/Other	565	1,090	1,757	1,658	1,982	2,402	2,478
Men	477	962	1,407	1,188	1,311	1,565	1,525
Women	88	128	350	470	671	837	953

*Includes mathematics and computer sciences.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 6 Women as a Percentage of all Doctorate Recipients from U.S. Colleges and Universities, 1921-1996

Year	Percent	Year	Percent
1921	16.2	1959	10.6
1922	14.4	1960	10.7
1923	14.8	1961	10.8
1924	15.0	1962	10.7
1925	16.7	1963	10.9
1926	13.9	1964	10.9
1927	15.1	1965	10.8
1928	14.5	1966	11.6
1929	16.7	1967	12.0
1930	15.1	1968	12.8
1931	15.4	1969	13.2
1932	16.0	1970	13.5
1933	14.1	1971	14.4
1934	13.0	1972	16.0
1935	14.6	1973	18.0
1936	15.2	1974	19.5
1937	14.6	1975	21.9
1938	15.2	1976	23.3
1939	14.4	1977	24.8
1940	13.1	1978	27.0
1941	11.6	1979	28.6
1942	12.4	1980	30.3
1943	15.2	1981	31.5
1944	17.1	1982	32.4
1945	20.3	1983	33.7
1946	19.2	1984	34.1
1947	14.0	1985	34.3
1948	12.1	1986	35.4
1949	10.0	1987	35.3
1950	9.5	1988	35.3
1951	9.3	1989	36.5
1952	9.5	1990	36.3
1953	9.4	1991	37.0
1954	9.1	1992	37.1
1955	9.9	1993	38.0
1956	9.5	1994	38.6
1957	11.6	1995	39.3
1958	11.3	1996	40.0

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 7 Race/Ethnicity of U.S. Citizen Doctorate Recipients, by Broad Field for Selected Years, 1976-1996

Field and Race/Ethnicity	1976	1981	1986	1991	1996
All Fields	27,269	25,060	23,086	25,573	27,741
Known Race/Ethnicity	26,190	24,009	22,674	25,085	27,398
Asians	334	465	533	789	1,091
Blacks	1,092	1,013	830	1,010	1,315
Hispanics	351	466	572	731	950
American Indians	40	85	99	130	186
Whites	24,373	21,980	20,640	22,425	23,856
Physical Sciences*	3,431	3,078	3,004	3,563	3,446
Known Race/Ethnicity	3,266	2,893	2,914	3,461	3,378
Asians	70	74	108	148	176
Blacks	28	31	26	41	69
Hispanics	24	36	53	83	83
American Indians	0	2	8	14	13
Whites	3,144	2,750	2,719	3,175	3,037
Engineering	1,557	1,170	1,383	2,086	2,591
Known Race/Ethnicity	1,506	1,118	1,354	1,991	2,553
Asians	59	77	80	187	271
Blacks	12	16	14	43	59
Hispanics	15	12	25	48	86
American Indians	0	4	6	6	14
Whites	1,420	1,009	1,229	1,707	2,123
Life Sciences	3,989	4,533	4,350	4,726	5,014
Known Race/Ethnicity	3,840	4,331	4,277	4,652	4,946
Asians	77	109	154	194	289
Blacks	71	73	64	92	141
Hispanics	30	48	72	99	150
American Indians	3	13	23	19	31
Whites	3,659	4,088	3,964	4,248	4,335
Social Sciences	5,365	5,174	4,579	4,712	5,195
Known Race/Ethnicity	5,140	4,983	4,500	4,621	5,142
Asians	48	76	70	88	127
Blacks	160	178	168	211	247
Hispanics	57	103	132	182	235
American Indians	7	12	20	21	38
Whites	4,868	4,614	4,110	4,119	4,495
Humanities	4,374	3,224	2,732	3,220	3,959
Known Race/Ethnicity	4,128	3,090	2,684	3,166	3,910
Asians	33	33	30	47	91
Blacks	91	84	71	93	119
Hispanics	73	92	76	115	140
American Indians	3	12	7	10	20
Whites	3,928	2,869	2,500	2,901	3,540
Education	7,114	6,581	5,629	5,614	5,866
Known Race/Ethnicity	6,928	6,362	5,551	5,572	5,817
Asians	37	79	60	85	92
Blacks	672	564	423	437	582
Hispanics	126	155	190	175	204
American Indians	21	39	26	55	60
Whites	6,072	5,525	4,852	4,820	4,879
Professional/Other	1,439	1,300	1,409	1,652	1,670
Known Race/Ethnicity	1,382	1,232	1,394	1,622	1,652
Asians	10	17	31	40	45
Blacks	58	67	64	93	98
Hispanics	26	20	24	29	52
American Indians	6	3	9	5	10
Whites	1,282	1,125	1,266	1,455	1,447

*Includes mathematics and computer sciences.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 8 Major Field of U.S. Citizen Ph.D.s, by Race/Ethnicity, 1996

Field	Total U.S. Citizen Ph.D.s	Known Race/ Ethnicity	Asians*	Blacks	His-panics	Amer. Indians†	Whites
All Fields	27,741	27,398	1,091	1,315	950	186	23,856
Physical Sciences	3,446	3,378	176	69	83	13	3,037
Physics/Astronomy	898	873	52	12	19	2	788
Chemistry	1,168	1,153	56	34	31	4	1,028
Earth, Atmos., & Marine Sci.	471	465	8	3	13	2	439
Mathematics	488	480	23	8	8	1	440
Computer Sciences	421	407	37	12	12	4	342
Engineering	2,591	2,553	271	59	86	14	2,123
Life Sciences	5,014	4,946	289	141	150	31	4,335
Biological Sciences	3,547	3,499	237	82	109	21	3,050
Health Sciences	933	921	39	42	31	4	805
Agricultural Sciences	534	526	13	17	10	6	480
Social Sciences	5,195	5,142	127	247	235	38	4,495
Psychology	3,010	2,995	76	140	165	18	2,596
Anthropology	305	297	9	3	9	5	271
Economics	432	424	18	18	12	0	376
Poli. Sci. & Int'l. Relations	520	511	11	36	23	3	438
Sociology	364	358	5	22	11	7	313
Other Social Sciences	564	557	8	28	15	5	501
Humanities	3,959	3,910	91	119	140	20	3,540
History	721	704	7	24	24	4	645
Amer. & Eng. Lang. & Lit.	885	876	14	32	22	6	802
Foreign Lang. & Lit.	363	359	12	4	47	0	296
Other Humanities	1,990	1,971	58	59	47	10	1,797
Education	5,866	5,817	92	582	204	60	4,879
Teacher Education	314	312	3	37	8	4	260
Teaching Fields	685	681	8	39	22	4	608
Other Education	4,867	4,824	81	506	174	52	4,011
Professional/Other	1,670	1,652	45	98	52	10	1,447
Business & Management	802	797	30	36	21	4	706
Communications	281	274	5	20	5	0	244
Other Professional Fields	566	560	9	40	26	6	479
Other Fields	21	21	1	2	0	0	18

NOTE: See technical notes in Appendix C for the rate of nonresponse to the survey question on race/ethnicity.

*"Asians" includes Pacific Islanders.
†"American Indians" includes Alaskan Natives.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 9 Leading U.S. Baccalaureate Institutions of U.S. Minority Ph.D.s, 1992-1996 (ranked on number of Ph.D.s)

Institution	Number
Asians	
Univ. of California-Berkeley	324
Univ. of California-Los Angeles	148
Massachusetts Institute of Technology	135
Univ. of Hawaii-Manoa	131
Harvard Univ.	89
Cornell Univ.	84
Univ. of California-Davis	77
Stanford Univ.	74
California Inst. of Technology	68
Univ. of Illinois-Urbana/Champaign	66
Univ. of Michigan	63
Univ. of California-Irvine	54
Princeton Univ.	52
Yale Univ.	50
Univ. of Washington	49
Univ. of Maryland-College Park	43
Johns Hopkins Univ.	42
Univ. of Southern California	42
Univ. of Chicago	40
Northwestern Univ.	35
Univ. of California-San Diego	35
Top 21 U.S. Institutions	*1,701*
Total U.S. Institutions Reported (528)	*3,711*
Blacks	
Howard Univ.*	147
Wayne State Univ.	75
Spelman College*	69
Florida A&M Univ.*	67
Hampton Univ.*	65
Tuskegee Univ.*	63
Southern Univ. & A&M Univ.-Baton Rouge*	62
North Carolina A&T St. Univ.*	59
Jackson State Univ.*	58
North Carolina Central Univ.*	56
Chicago State Univ.	55
Univ. of Maryland-College Park	48
Tennessee State Univ.*	45
Michigan State Univ.	43
Univ. of Michigan	41
Fisk Univ.*	40
CUNY-Grad. School & Univ. Center	39
Temple Univ.	39
Top 18 U.S. Institutions	*1,071*
Total U.S. Institutions Reported (899)	*5,562*

Institution	Number
Hispanics	
Univ. of Puerto Rico-Rio Piedras	488
Univ. of Puerto Rico-Mayaguez	126
Univ. of California-Berkeley	87
Univ. of California-Los Angeles	84
Univ. of Texas-Austin	71
Univ. of Miami	62
Univ. of Texas-El Paso	50
Univ. of New Mexico	47
Florida International Univ.	45
Univ. of Arizona	43
Univ. of California-Santa Barbara	42
Cornell Univ.	41
Catholic Univ. of Puerto Rico	40
Univ. of Florida	39
Univ. of California-Irvine	37
Harvard Univ.	35
Arizona State Univ.	34
Texas A&M Univ.	33
California State Univ.-Los Angeles	32
Inter American Univ.-San German	32
Top 20 U.S. Institutions	*1,468*
Total U.S. Institutions Reported (693)	*4,081*
American Indians	
Univ. of Oklahoma	20
Oklahoma State Univ.	14
Northeastern State Univ.	12
Univ. of Central Oklahoma	10
Michigan State Univ.	9
Auburn Univ.	9
Univ. of Arkansas-Fayetteville	9
Univ. of California-Berkeley	9
Univ. of Arizona	8
Univ. of Wisconsin-Madison	7
Pembroke State Univ.	7
Northern Arizona Univ.	7
Univ. of Washington	7
Univ. of Virginia	6
Oklahoma Baptist Univ.	6
Univ. of Montana	6
Univ. of California-Davis	6
Top 17 U.S. Institutions	*152*
Total U.S. Institutions Reported (382)	*739*

Note: Approximately 1,923 U.S. institutions awarded baccalaureate degrees to U.S. citizens who received Ph.D.s between 1992 and 1996.

NOTE: See technical notes in Appendix C for total numbers of U.S. minority Ph.D.s in this period; the percentage reporting foreign institutions; and rates of nonresponse to the survey questions on baccalaureate institution, citizenship, and race/ethnicity.

*This institution is one of the "Historically Black Colleges and Universities" (HBCUs) founded during legal segregation in the late 1800s and early 1900s for the specific purpose of educating blacks. There are currently 102 HBCUs, 89 of which award baccalaureates.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 10 Leading Ph.D. Institutions of U.S. Minority Ph.D.s, 1992-1996 (ranked on number of Ph.D.s)

Institution	Number	Institution	Number
Asians		Hispanics	
Univ. of California-Berkeley	247	Univ. of Puerto Rico-Rio Piedras	123
Univ. of California-Los Angeles	224	Univ. of Texas-Austin	119
Stanford Univ.	200	Univ. of California-Los Angeles	118
Univ. of Southern California	137	Univ. of California-Berkeley	110
Massachusetts Inst. of Technology	128	Texas A&M University	106
Univ. of Illinois-Urbana/Champaign	120	Harvard Univ.	78
Univ. of Michigan	113	Stanford Univ.	78
Harvard Univ.	110	Univ. of Southern California	74
Univ. of California-Davis	85	Univ. of Michigan	73
Univ. of Hawaii-Manoa	83	Univ. of Massachusetts-Amherst	72
Columbia Univ.	80	Univ. of New Mexico	69
Cornell Univ.	75	Univ. of Miami	68
Univ. of Wisconsin-Madison	72	Univ. of Arizona	67
Univ. of Washington	71	New York Univ.	64
Univ. of California-San Diego	67	Arizona State Univ.	61
Yale Univ.	64	Pennsylvania State Univ.	60
Northwestern Univ.	64	Univ. of Wisconsin-Madison	60
Univ. of California-Irvine	64	Nova Southeastern Univ.	59
Univ. of Maryland-College Park	60	Univ. of Colorado-Boulder	56
Johns Hopkins Univ.	59	Caribbean Center for Advanced Studies-PR	56
Top 20 Institutions	*2,123*	*Top 20 Institutions*	*1,571*
Total Institutions Reported (300)	*4,920*	*Total Institutions Reported (293)*	*4,365*
Blacks		American Indians	
Nova Southeastern Univ.	247	Univ. of Oklahoma	30
Howard Univ.*	209	Oklahoma State Univ.	21
Ohio State Univ.	132	Univ. of Wisconsin-Madison	15
Wayne State Univ.	126	Univ. of Arkansas-Fayetteville	14
Univ. of Michigan	124	Univ. of Arizona	13
Columbia Univ.-Teachers College	122	Univ. of California-Berkeley	13
Univ. of Maryland-College Park	121	Pennsylvania State Univ.	12
Temple Univ.	103	Univ. of Washington	12
Clark Atlanta Univ.*	103	Stanford Univ.	12
Walden Univ.	84	North Carolina State Univ.-Raleigh	11
Florida State Univ.	82	Texas A&M Univ.	11
Virginia Polytechnic Inst. & State Univ.	80	Univ. of Michigan	10
Univ. of Massachusetts-Amherst	75	Univ. of Missouri-Columbia	10
Michigan State Univ.	72	Univ. of Texas-Austin	10
Texas Southern Univ.*	69	Northern Arizona Univ.	10
Univ. of California-Los Angeles	68	Harvard Univ.	9
North Carolina State Univ.-Raleigh	66	Purdue Univ.	9
Univ. of Florida	66		
Univ. of California-Berkeley	66	*Top 17 Institutions*	*222*
Univ. of North Carolina-Chapel Hill	64	*Total Institutions Reported (204)*	*747*
Univ. of South Carolina	64		
Top 21 Institutions	*2,143*		
Total Institutions Reported (303)	*5,807*		

Note: Between 1992 and 1996, 398 institutions awarded doctorates.

NOTE: See technical notes in Appendix C for rates of nonresponse to the survey questions on citizenship and race/ethnicity.

*This institution is one of the "Historically Black Colleges and Universities" (HBCUs) founded during legal segregation in the late 1800s and early 1900s for the specific purpose of educating blacks. There are currently 102 HBCUs, 12 of which award doctorates.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 11 Citizenship Status of Doctorate Recipients, by Broad Field for Selected Years, 1966-1996

Field/Citizenship	1966	1971	1976	1981	1986	1991	1996
All Fields	17,949	31,867	32,946	31,356	31,902	37,534	42,415
U.S. Citizens	14,974	26,758	27,269	25,060	23,086	25,573	27,741
Non-U.S., Permanent Visas	636	1,907	1,494	1,281	1,433	1,857	3,765
Non-U.S., Temporary Visas	1,908	2,690	3,529	3,940	5,276	9,311	9,610
Unknown Citizenship	431	512	654	1,075	2,107	793	1,299
Physical Sciences*	3,828	5,739	4,509	4,170	4,807	6,280	6,675
U.S. Citizens	3,138	4,685	3,431	3,078	3,004	3,563	3,446
Non-U.S., Permanent Visas	132	409	304	226	240	324	839
Non-U.S., Temporary Visas	455	560	710	753	1,259	2,288	2,161
Unknown Citizenship	103	85	64	113	304	105	229
Engineering	2,301	3,498	2,834	2,528	3,376	5,214	6,305
U.S. Citizens	1,690	2,418	1,557	1,170	1,383	2,086	2,591
Non-U.S., Permanent Visas	144	530	390	301	343	388	792
Non-U.S., Temporary Visas	385	518	813	942	1,372	2,633	2,716
Unknown Citizenship	82	32	74	115	278	107	206
Life Sciences	2,885	5,268	5,026	5,611	5,734	6,933	8,255
U.S. Citizens	2,229	4,198	3,989	4,533	4,350	4,726	5,014
Non-U.S., Permanent Visas	94	327	241	206	206	343	1,017
Non-U.S., Temporary Visas	519	643	670	732	870	1,743	2,040
Unknown Citizenship	43	100	126	140	308	121	184
Social Sciences	2,619	5,189	6,214	6,141	5,893	6,152	6,814
U.S. Citizens	2,184	4,452	5,365	5,174	4,579	4,712	5,195
Non-U.S., Permanent Visas	97	244	195	192	223	263	404
Non-U.S., Temporary Visas	268	417	557	539	673	1,021	1,006
Unknown Citizenship	70	76	97	236	418	156	209
Humanities	2,711	4,648	4,881	3,751	3,461	4,099	5,116
U.S. Citizens	2,395	4,144	4,374	3,224	2,732	3,220	3,959
Non-U.S., Permanent Visas	116	220	181	150	152	242	353
Non-U.S., Temporary Visas	122	217	237	235	323	547	649
Unknown Citizenship	78	67	89	142	254	90	155
Education	3,040	6,435	7,725	7,497	6,649	6,454	6,772
U.S. Citizens	2,875	6,050	7,114	6,581	5,629	5,614	5,866
Non-U.S., Permanent Visas	31	123	114	130	173	174	196
Non-U.S., Temporary Visas	105	225	346	533	471	503	477
Unknown Citizenship	29	37	151	253	376	163	233
Professional/Other	565	1,090	1,757	1,658	1,982	2,402	2,478
U.S. Citizens	463	811	1,439	1,300	1,409	1,652	1,670
Non-U.S., Permanent Visas	22	54	69	76	96	123	164
Non-U.S., Temporary Visas	54	110	196	206	308	576	561
Unknown Citizenship	26	115	53	76	169	51	83

NOTE: See Table 12 for information related to the changing visa status of non-U.S. citizen Ph.D.s in recent years. See technical notes in Appendix C for rates of nonresponse to the survey question on citizenship status.

*Includes mathematics and computer sciences.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 12 Visa Status of Ph.D.s from China Versus Other Non-U.S. Citizens, 1990-1996

		1990	1991	1992	1993	1994	1995	1996
Total Non-U.S. Citizens	N	9,791	11,168	11,933	12,191	13,153	13,129	13,375
Permanent Visas	%	17.3	16.6	16.6	18.5	28.5	32.9	28.1
Temporary Visas	%	82.7	83.4	83.4	81.5	71.5	67.1	71.9
Citizens of China	N	1,225	1,919	2,238	2,416	2,772	2,979	3,200
Permanent Visas	%	4.7	5.8	8.6	16.1	64.6	79.4	56.0
Temporary Visas	%	95.3	94.2	91.4	83.9	35.4	20.6	44.0
Other Non-U.S. Citizens	N	8,566	9,249	9,695	9,775	10,381	10,150	10,175
Permanent Visas	%	19.1	18.9	18.4	19.1	18.8	19.2	19.4
Temporary Visas	%	80.9	81.1	81.6	80.9	81.2	80.8	80.6

NOTE: See technical notes in Appendix C for rates of nonresponse to the survey questions on country of citizenship and citizenship status.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 13 Top 30 Countries of Origin of Non-U.S. Citizens Earning Ph.D.s at U.S. Colleges and Universities, 1996 (ranked on number of Ph.D.s)

Country	Number	Country	Number
1. China*	3,200	16. Spain	119
2. India	1,481	17. Israel	119
3. Taiwan*	1,398	18. Russia	114
4. Korea†	1,251	19. Philippines	109
5. Canada	501	20. Saudi Arabia	108
6. Brazil	259	21. Egypt	107
7. Germany	245	22. Italy	102
8. Japan	245	23. France	101
9. United Kingdom	205	24. Pakistan	97
10. Thailand	184	25. Jordan	91
11. Mexico	180	26. Argentina	90
12. Turkey	165	27. Malaysia	90
13. Iran	159	28. Indonesia	85
14. Greece	149	29. Sri Lanka	83
15. Hong Kong	134	30. Nigeria	77
		Top 30 Countries of Origin	*11,248*
		Total Countries Reported (152)	*13,175*

NOTE: The total number of non-U.S. citizens who earned doctorates in 1996 was 13,375; nearly all (13,175 Ph.D.s) reported their country of origin. See technical notes in Appendix C for rates of nonresponse to the survey questions on country of citizenship and citizenship status.

*An additional 10 Ph.D.s indicated "China" as their country of citizenship, but the specific origin could not be determined. Data for these recipients are excluded from this table.
†Includes "Korea" (unspecified). The Democratic People's Republic of Korea (North Korea) does not permit its citizens to study in the United States.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 14 Leading Ph.D. Institutions of Non-U.S. Citizen Ph.D.s, 1996 (ranked on number of Ph.D.s)

Institution	Number	Institution	Number
Ohio State Univ.	304	Pennsylvania State Univ.	187
Univ. of Texas-Austin	291	Stanford Univ.	183
Univ. of Minnesota-Minneapolis	262	Columbia Univ.	173
Univ. of Illinois-Urbana/Champaign	255	Univ. of Maryland-College Park	171
Purdue Univ.	254	Univ. of Pennsylvania	171
Texas A&M Univ.	250	Univ. of Florida	170
Univ. of Wisconsin-Madison	248	Massachusetts Institute of Technology	158
Cornell Univ.	232	Rutgers Univ.	154
Univ. of California-Berkeley	223	State Univ. of New York-Buffalo	149
Univ. of Michigan	214	Univ. of Arizona	140
Univ. of California-Los Angeles	194	Univ. of Iowa	139
Michigan State Univ.	192	Iowa State Univ.	136
Univ. of Southern California	188		
		Top 25 Institutions	*5,038*
		Total Institutions Reported (338)	*13,375*

Note: Between 1992 and 1996, 398 institutions awarded doctorates.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 15 Median Years to Doctorate from Baccalaureate Award, by Broad Field for Selected Years, 1971-1996

Field	1971	1976	1981	1986	1991	1996
All Fields						
Total	8.0	8.8	9.5	10.5	10.5	10.8
Registered	5.7	6.0	6.5	7.0	7.0	7.2
Physical Sciences*						
Total	6.2	6.9	6.9	7.3	8.0	8.3
Registered	5.4	5.7	5.9	6.0	6.4	6.7
Engineering						
Total	7.2	7.5	8.0	8.2	8.6	9.0
Registered	5.3	5.8	5.8	6.0	6.2	6.4
Life Sciences						
Total	6.9	7.3	7.4	8.7	9.1	9.6
Registered	5.5	5.7	6.0	6.5	6.8	7.0
Social Sciences						
Total	7.2	7.9	9.0	10.0	10.7	10.3
Registered	5.5	5.9	6.6	7.3	7.6	7.4
Humanities						
Total	9.0	9.9	11.0	12.2	12.3	11.8
Registered	6.1	7.0	7.9	8.3	8.4	8.3
Education						
Total	12.9	12.8	13.6	15.9	18.5	20.2
Registered	6.2	6.4	7.0	7.9	8.0	8.2
Professional/Other						
Total	10.2	10.3	11.2	13.0	13.6	13.8
Registered	5.6	6.1	6.6	7.4	7.6	7.5

NOTE: Median calculations are based on the number of individuals who provided complete information about their postbaccalaureate education. "Total" time to degree measures the number of years elapsed between receipt of the baccalaureate and the Ph.D. "Registered" time to degree gauges the amount of time enrolled in graduate school, including master's degrees and enrollment in nondegree programs. *Please note that the method of median computation was revised three years ago.* See technical notes in Appendix C for explanation of the revision and also for rates of nonresponse to the applicable survey questions.

*Includes mathematics and computer sciences.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 16 Median Years to Doctorate from Baccalaureate Award, by Demographic Group and Broad Field, 1996

	All Fields	Physical Sci.*	Engi-neering	Life Sci.	Social Sci.	Human-ities	Educa-tion	Prof./ Other
Total Time from Baccalaureate								
All Ph.D.s	10.8	8.3	9.0	9.6	10.3	11.8	20.2	13.8
Men	10.2	8.5	9.1	9.5	10.3	11.5	19.3	13.2
Women	12.0	7.9	8.3	9.9	10.2	12.0	20.8	15.3
U.S. Citizens	11.1	7.4	8.0	9.0	10.0	12.0	21.0	15.7
Non-U.S., Permanent Visas	11.4	11.0	11.2	10.8	12.0	13.0	14.3	12.9
Non-U.S., Temporary Visas	9.8	9.0	9.1	10.0	10.4	10.2	13.9	11.0
U.S. Citizens								
Asians†	9.0	7.3	8.4	8.1	9.0	10.6	18.3	17.0
Blacks	15.3	8.0	8.4	9.6	12.0	12.8	21.0	16.0
Hispanics	11.0	8.3	8.4	9.3	9.0	11.5	17.9	15.7
American Indians‡	12.0	9.9	8.3	11.0	11.0	11.3	18.5	12.0
Whites	11.1	7.3	8.0	9.0	10.0	12.0	21.0	15.6
Registered Time from Baccalaureate								
All Ph.D.s	7.2	6.7	6.4	7.0	7.4	8.3	8.2	7.5
Men	7.0	6.8	6.5	6.9	7.4	8.3	8.3	7.5
Women	7.5	6.3	6.3	7.0	7.4	8.5	8.2	7.6
U.S. Citizens	7.3	6.4	6.3	7.0	7.4	8.5	8.3	7.6
Non-U.S., Permanent Visas	7.8	7.8	7.3	7.4	8.6	8.7	8.3	7.9
Non-U.S., Temporary Visas	6.8	6.8	6.4	6.8	7.2	7.5	6.8	7.3
U.S. Citizens								
Asians†	7.0	6.3	6.5	7.0	7.6	8.6	7.0	9.3
Blacks	7.7	6.6	6.3	7.3	7.6	8.2	8.2	7.0
Hispanics	7.3	7.1	6.5	7.0	7.3	8.1	8.0	7.9
American Indians‡	7.3	7.0	6.7	6.6	7.3	8.8	7.5	6.6
Whites	7.3	6.4	6.1	7.0	7.4	8.5	8.5	7.6

NOTE: Median calculations are based on the number of individuals who provided complete information about their postbaccalaureate education. "Total" time to degree measures the number of years elapsed between receipt of the baccalaureate and the Ph.D. "Registered" time to degree gauges the amount of time enrolled in graduate school, including master's degrees and enrollment in nondegree programs. *Please note that the method of median computation was revised three years ago.* See technical notes in Appendix C for explanation of the revision and also for rates of nonresponse to the applicable survey questions.

*Includes mathematics and computer sciences.
†"Asians" includes Pacific Islanders.
‡"American Indians" includes Alaskan Natives.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 17 Primary Sources of Support for Doctorate Recipients, by Broad Field and Demographic Group, 1996 (includes only Ph.D.s who reported primary source of support)

Primary Source of Support (responses only)		All Ph.D.s	Men	Women	U.S. Cits.	Perm. Visas	Temp. Visas	U.S. Citizens*				
								Asians	Blacks	His-panics	Amer. Indians	Whites
All Fields	N	42,415	25,470	16,945	27,741	3,765	9,610	1,091	1,315	950	186	23,856
Personal	%	35.1	28.8	44.7	43.9	19.8	14.9	25.3	49.5	40.3	51.2	44.6
University	%	51.9	57.6	43.4	42.9	74.7	69.9	53.7	33.2	40.5	32.5	42.9
Federal	%	5.8	5.5	6.1	7.8	1.7	1.5	13.3	8.2	11.2	10.6	7.3
Other	%	7.2	8.1	5.8	5.5	3.9	13.6	7.7	9.2	8.1	5.6	5.1
Physical Sciences†	N	6,675	5,291	1,384	3,446	839	2,161	176	69	83	13	3,037
Personal	%	11.3	11.6	10.5	15.4	7.3	6.0	10.6	8.3	17.7	25.0	15.7
University	%	77.8	78.1	76.9	70.7	89.8	85.3	77.6	51.7	59.5	75.0	71.0
Federal	%	5.3	4.8	7.3	9.2	0.8	0.6	6.8	21.7	11.4	0.0	9.0
Other	%	5.5	5.5	5.3	4.7	2.0	8.1	5.0	18.3	11.4	0.0	4.3
Engineering	N	6,305	5,529	776	2,591	792	2,716	271	59	86	14	2,123
Personal	%	15.7	16.5	10.6	18.6	16.1	12.7	17.6	16.0	16.0	16.7	18.8
University	%	67.4	67.4	67.3	56.2	79.2	75.3	58.4	40.0	44.4	33.3	56.8
Federal	%	6.4	5.5	12.8	14.1	0.7	0.5	12.0	20.0	19.8	41.7	13.9
Other	%	10.4	10.6	9.3	11.1	4.1	11.6	12.0	24.0	19.8	8.3	10.4
Life Sciences	N	8,255	4,660	3,595	5,014	1,017	2,040	289	141	150	31	4,335
Personal	%	19.8	16.8	23.6	25.6	10.7	9.3	16.3	28.5	22.0	23.8	26.4
University	%	58.5	61.8	54.2	49.5	80.8	70.3	50.4	38.2	46.2	57.1	49.9
Federal	%	13.3	11.9	15.0	19.4	4.3	2.1	27.1	23.6	25.8	19.0	18.4
Other	%	8.5	9.4	7.3	5.5	4.2	18.3	6.2	9.8	6.1	0.0	5.4
Social Sciences	N	6,814	3,300	3,514	5,195	404	1,006	127	247	235	38	4,495
Personal	%	45.8	40.6	50.6	50.4	37.9	24.1	36.6	41.5	43.3	46.9	51.6
University	%	44.4	47.5	41.6	41.8	57.0	53.5	47.3	44.4	43.3	40.6	41.4
Federal	%	4.5	4.5	4.5	5.0	0.9	3.4	8.9	7.2	9.8	9.4	4.5
Other	%	5.2	7.4	3.3	2.8	4.2	18.9	7.1	6.8	3.6	3.1	2.4
Humanities	N	5,116	2,572	2,544	3,959	353	649	91	119	140	20	3,540
Personal	%	43.6	43.6	43.6	46.7	40.5	25.1	36.6	36.8	38.8	63.2	47.4
University	%	49.0	48.8	49.2	47.0	54.4	58.4	56.1	47.4	51.7	31.6	46.8
Federal	%	2.1	2.3	1.9	1.9	1.0	3.7	1.2	4.2	1.7	0.0	1.9
Other	%	5.4	5.3	5.4	4.3	4.2	12.8	6.1	11.6	7.8	5.3	3.9
Education	N	6,772	2,593	4,179	5,866	196	477	92	582	204	60	4,879
Personal	%	75.0	73.0	76.2	77.6	55.4	48.8	70.7	71.5	70.7	72.7	78.7
University	%	16.4	16.2	16.5	14.7	38.6	30.4	13.3	20.5	18.2	7.3	13.9
Federal	%	1.5	1.8	1.3	1.4	0.0	3.1	10.7	1.3	5.0	9.1	1.0
Other	%	7.1	9.0	6.0	6.3	6.0	17.7	5.3	6.6	6.1	10.9	6.3
Professional/Other	N	2,478	1,525	953	1,670	164	561	45	98	52	10	1,447
Personal	%	51.0	50.1	52.3	60.1	31.5	28.1	52.8	44.3	44.9	55.6	61.9
University	%	38.5	38.6	38.4	31.4	62.2	53.5	36.1	32.9	32.7	44.4	31.0
Federal	%	2.1	1.9	2.4	2.6	0.0	1.1	0.0	12.7	8.2	0.0	1.9
Other	%	8.4	9.4	6.9	5.8	6.3	17.3	11.1	10.1	14.3	0.0	5.1

NOTE: Numbers represent those Ph.D.s with known primary support; percentages are based on these numbers. Because nonresponse to "primary" source of support is much greater than for other variables and fluctuates from year to year, the reader is advised *not* to compare percentages in this table with those published in earlier reports. The overall nonresponse rate for "primary" source of support was 12.1 percent in 1996, compared to 25.2 percent in 1995, 27.6 percent in 1994, 33.8 percent in 1993, and 30.3 percent in 1992. See technical notes in Appendix C for further information.

"Personal" includes loans as well as one's own earnings and contributions from spouse/family. Federally funded research assistantships (RAs) are grouped under "University" because not all recipients of such support are aware of the actual source of funding. For further definition of "Federal" support, see item A11 on the survey questionnaire in Appendix D. "Other" support includes U.S. nationally competitive fellowships, business/employer funds, foreign government, and state government.

*"Asians" includes Pacific Islanders; "American Indians" includes Alaskan Natives.
†Includes mathematics and computer sciences.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 18 Cumulative Debt Related to the Education of Doctorate Recipients, by Broad Field, 1996

		All Fields	Physical Sci.*	Engi-neering	Life Sci.	Social Sci.	Human-ities	Educa-tion	Prof./ Other
All Ph.D.s	N	42,415	6,675	6,305	8,255	6,814	5,116	6,772	2,478
Responses to Debt Status	N	38,662	6,115	5,779	7,616	6,163	4,707	6,057	2,225
Without Debt	%	52.3	58.9	63.0	52.6	37.8	42.6	58.0	51.4
With Debt	%	47.7	41.1	37.0	47.4	62.2	57.4	42.0	48.6
$5,000 or less	%	11.3	12.2	11.2	12.5	9.9	11.9	10.4	9.2
$5,001 to $10,000	%	9.1	9.9	7.8	9.8	9.6	11.0	7.5	7.6
$10,001 to $15,000	%	6.9	6.7	5.0	7.1	8.7	8.8	5.6	7.0
$15,001 to $20,000	%	4.9	3.9	3.2	4.8	6.7	6.9	4.3	4.9
$20,001 to $25,000	%	3.8	2.9	1.9	3.6	5.5	5.1	3.7	4.1
$25,001 to $30,000	%	3.1	1.6	1.8	2.8	5.0	4.0	3.2	3.5
$30,001 or more	%	8.6	4.0	6.3	6.6	16.8	9.7	7.4	12.4

NOTE: This table displays information on debt related to a recipient's *combined undergraduate and graduate education.* "All Ph.D.s" includes recipients whose debt status is unknown. Percentages are based on the number with "Responses to Debt Status." The "With Debt" and "Without Debt" percentages add to 100.0. Percentages for levels of debt add to the total percentage of Ph.D.s "With Debt." See technical notes in Appendix C for the rate of nonresponse to the applicable survey question.
*Includes mathematics and computer sciences.
SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 19 Cumulative Debt Related to the Education of Doctorate Recipients, by Demographic Group, 1996

								U.S. Citizens*				
		All Ph.D.s	Men	Women	U.S. Cits.	Perm. Visas	Temp. Visas	Asians	Blacks	His-panics	Amer. Indians	Whites
All Ph.D.s	N	42,415	25,470	16,945	27,741	3,765	9,610	1,091	1,315	950	186	23,856
Responses to Debt Status	N	38,662	23,156	15,506	26,162	3,571	8,864	1,032	1,189	895	171	22,687
Without Debt	%	52.3	53.1	51.1	44.6	71.2	67.6	50.2	32.3	30.4	43.9	45.5
With Debt	%	47.7	46.9	48.9	55.4	28.8	32.4	49.8	67.7	69.6	56.1	54.5
$5,000 or less	%	11.3	11.4	11.0	11.7	8.8	11.0	9.4	12.7	13.1	11.7	11.7
$5,001 to $10,000	%	9.1	9.2	9.0	10.9	5.6	5.3	11.4	11.5	11.2	12.9	10.8
$10,001 to $15,000	%	6.9	6.9	7.0	8.4	3.3	3.9	8.4	9.3	11.2	5.8	8.3
$15,001 to $20,000	%	4.9	4.7	5.3	6.2	2.7	1.9	5.2	7.3	9.5	4.1	6.1
$20,001 to $25,000	%	3.8	3.4	4.2	4.7	1.7	1.7	3.9	5.2	5.0	2.9	4.7
$25,001 to $30,000	%	3.1	2.9	3.3	3.9	1.5	1.3	3.5	6.1	5.7	5.8	3.7
$30,001 or more	%	8.6	8.4	9.0	9.5	5.2	7.3	7.9	15.6	14.0	12.9	9.1

NOTE: This table displays information on debt related to a recipient's *combined undergraduate and graduate education.* "All Ph.D.s" includes recipients whose debt status is unknown. Percentages are based on the number with "Responses to Debt Status." The "With Debt" and "Without Debt" percentages add to 100.0. Percentages for levels of debt add to the total percentage of Ph.D.s "With Debt." See technical notes in Appendix C for the rate of nonresponse to the applicable survey question.
*"Asians" includes Pacific Islanders; "American Indians" includes Alaskan Natives.
SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 20 Postgraduation Status of Doctorate Recipients, by Broad Field for Selected Years, 1976-1996

		All Fields	Physical Sci.*	Engi-neering	Life Sci.	Social Sci.	Human-ities	Educa-tion	Prof./ Other
All Ph.D.s									
1976	N	32,946	4,509	2,834	5,026	6,214	4,881	7,725	1,757
1981	N	31,356	4,170	2,528	5,611	6,141	3,751	7,497	1,658
1986	N	31,902	4,807	3,376	5,734	5,893	3,461	6,649	1,982
1991	N	37,534	6,280	5,214	6,933	6,152	4,099	6,454	2,402
1996	N	42,415	6,675	6,305	8,255	6,814	5,116	6,772	2,478
Total Responses to Postgraduation Status									
1976	N	31,097	4,296	2,673	4,759	5,886	4,524	7,321	1,638
1981	N	28,802	3,883	2,298	5,147	5,611	3,418	6,936	1,509
1986	N	28,964	4,318	2,960	5,293	5,337	3,137	6,140	1,779
1991	N	34,353	5,763	4,598	6,452	5,587	3,807	5,976	2,170
1996	N	38,558	6,104	5,727	7,612	6,164	4,698	6,041	2,212
Definite Commitments for Employment or Study									
1976	%	72.4	72.4	71.5	76.1	73.0	60.3	74.7	83.3
1981	%	76.0	80.7	77.4	78.4	74.6	66.4	75.1	84.8
1986	%	73.5	76.4	69.8	75.8	72.0	63.9	75.4	81.2
1991	%	70.5	70.3	62.4	74.1	69.8	64.2	74.7	78.6
1996	%	67.5	67.4	63.6	70.8	65.4	58.5	74.1	73.3
Seeking Employment or Study									
1976	%	27.6	27.6	28.5	23.9	27.0	39.7	25.3	16.7
1981	%	24.0	19.3	22.6	21.6	25.4	33.6	24.9	15.2
1986	%	26.5	23.6	30.2	24.2	28.0	36.1	24.6	18.8
1991	%	29.5	29.7	37.6	25.9	30.2	35.8	25.3	21.4
1996	%	32.5	32.6	36.4	29.2	34.6	41.5	25.9	26.7

NOTE: Percentages are based on the number of Ph.D.s who reported their postgraduation status (definite or seeking), regardless of plans (employment or study). See technical notes in Appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 21 Postgraduation Status of Doctorate Recipients, by Demographic Group for Selected Years, 1976-1996

								U.S. Citizens & Permanent Residents*				
		All Ph.D.s	Men	Women	U.S. Cits.	Perm. Visas	Temp. Visas	Asians	Blacks	His-panics	Amer. Indians	Whites
All Ph.D.s												
1976	N	32,946	25,262	7,684	27,269	1,494	3,529	975	1,146	374	40	24,943
1981	N	31,356	21,464	9,892	25,060	1,281	3,940	1,073	1,110	529	85	22,470
1986	N	31,902	20,595	11,307	23,086	1,433	5,276	1,061	956	679	99	21,236
1991	N	37,534	23,661	13,873	25,573	1,857	9,311	1,531	1,166	867	132	23,185
1996	N	42,415	25,470	16,945	27,741	3,765	9,610	3,697	1,457	1,105	187	24,685
Total Responses to Postgraduation Status												
1976	N	31,097	23,856	7,241	26,264	1,431	3,326	934	1,104	361	39	24,436
1981	N	28,802	19,717	9,085	23,962	1,183	3,608	991	1,052	505	82	21,739
1986	N	28,964	18,515	10,449	22,635	1,344	4,913	994	929	656	96	20,882
1991	N	34,353	21,498	12,855	24,291	1,719	8,278	1,424	1,050	819	127	22,256
1996	N	38,558	23,080	15,578	26,113	3,528	8,860	3,469	1,308	1,042	172	23,434
Definite Commitments for Employment or Study												
1976	%	72.4	74.2	66.3	73.6	61.8	67.3	64.2	70.6	74.5	56.4	73.6
1981	%	76.0	78.4	70.8	77.0	66.4	72.3	70.5	72.3	74.3	75.6	77.0
1986	%	73.5	75.1	70.8	75.1	61.2	69.7	66.4	68.8	69.8	66.7	75.2
1991	%	70.5	70.3	70.8	73.9	57.2	63.4	61.7	68.6	68.7	67.7	73.9
1996	%	67.5	67.6	67.4	70.5	60.1	61.5	61.9	68.0	70.7	69.8	70.4
Seeking Employment or Study												
1976	%	27.6	25.8	33.7	26.4	38.2	32.7	35.8	29.4	25.5	43.6	26.4
1981	%	24.0	21.6	29.2	23.0	33.6	27.7	29.5	27.7	25.7	24.4	23.0
1986	%	26.5	24.9	29.2	24.9	38.8	30.3	33.6	31.2	30.2	33.3	24.8
1991	%	29.5	29.7	29.2	26.1	42.8	36.6	38.3	31.4	31.3	32.3	26.1
1996	%	32.5	32.4	32.6	29.5	39.9	38.5	38.1	32.0	29.3	30.2	29.6

NOTE: Percentages are based on the number of Ph.D.s who reported their postgraduation status (definite or seeking), regardless of plans (employment or study). See technical notes in Appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

*"Asians" includes Pacific Islanders; "American Indians" includes Alaskan Natives.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 22 Postgraduation Commitments of Doctorate Recipients, by Type of Plans and Broad Field for Selected Years, 1976-1996

		All Fields	Physical Sci.*	Engi-neering	Life Sci.	Social Sci.	Human-ities	Educa-tion	Prof./ Other
All Definite Commitments									
1976	N	22,503	3,111	1,911	3,622	4,297	2,730	5,468	1,364
1981	N	21,889	3,133	1,778	4,034	4,187	2,270	5,208	1,279
1986	N	21,300	3,300	2,066	4,013	3,842	2,006	4,629	1,444
1991	N	24,218	4,052	2,871	4,781	3,902	2,445	4,462	1,705
1996	N	26,027	4,116	3,642	5,392	4,033	2,747	4,475	1,622
Definite Commitments with Responses to Type of Plans									
1976	N	22,315	3,101	1,901	3,601	4,267	2,692	5,405	1,348
1981	N	21,828	3,122	1,770	4,026	4,181	2,259	5,196	1,274
1986	N	21,185	3,290	2,059	3,998	3,817	1,982	4,600	1,439
1991	N	24,115	4,047	2,861	4,771	3,893	2,428	4,419	1,696
1996	N	25,982	4,110	3,636	5,384	4,026	2,739	4,469	1,618
Employment									
1976	%	81.8	58.7	84.7	50.0	89.6	96.4	97.8	98.6
1981	%	80.6	65.7	88.5	46.3	86.4	95.7	97.6	99.1
1986	%	75.9	55.7	81.1	41.2	84.1	92.4	97.1	98.0
1991	%	72.5	51.5	78.9	37.5	82.6	92.5	96.1	97.1
1996	%	70.5	50.2	77.6	35.0	77.5	92.4	97.2	96.4
Study									
1976	%	18.2	41.3	15.3	50.0	10.4	3.6	2.2	1.4
1981	%	19.4	34.3	11.5	53.7	13.6	4.3	2.4	0.9
1986	%	24.1	44.3	18.9	58.8	15.9	7.6	2.9	2.0
1991	%	27.5	48.5	21.1	62.5	17.4	7.5	3.9	2.9
1996	%	29.5	49.8	22.4	65.0	22.5	7.6	2.8	3.6

NOTE: Only Ph.D.s with definite commitments are included. "All Definite Commitments" includes recipients who reported definite commitments but not type of plans (employment or study). Percentages are based on the number of Ph.D.s who reported a definite commitment and a type of plan. See technical notes in Appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 23 Postgraduation Commitments of Doctorate Recipients, by Type of Plans and Demographic Group for Selected Years, 1976-1996

								U.S. Citizens & Permanent Residents*				
		All Ph.D.s	Men	Women	U.S. Cits.	Perm. Visas	Temp. Visas	Asians	Blacks	His-panics	Amer. Indians	Whites
All Definite Commitments												
1976	N	22,503	17,703	4,800	19,318	885	2,238	600	779	269	22	17,986
1981	N	21,889	15,461	6,428	18,454	786	2,609	699	761	375	62	16,738
1986	N	21,300	13,904	7,396	17,007	822	3,424	660	639	458	64	15,706
1991	N	24,218	15,122	9,096	17,942	983	5,248	879	720	563	86	16,442
1996	N	26,027	15,597	10,430	18,421	2,120	5,452	2,147	889	737	120	16,499
Definite Commitments with Responses to Type of Plans												
1976	N	22,315	17,563	4,752	19,156	881	2,217	599	759	265	21	17,851
1981	N	21,828	15,414	6,414	18,417	782	2,591	696	759	374	62	16,706
1986	N	21,185	13,840	7,345	16,927	820	3,392	656	632	458	63	15,638
1991	N	24,115	15,059	9,056	17,871	975	5,224	873	710	562	86	16,380
1996	N	25,982	15,571	10,411	18,394	2,114	5,441	2,142	888	737	120	16,472
Employment												
1976	%	81.8	81.0	84.9	82.9	73.1	75.6	67.3	94.1	89.8	90.5	82.6
1981	%	80.6	79.3	83.7	80.8	82.6	78.7	77.3	93.9	85.3	90.3	80.4
1986	%	75.9	73.5	80.2	77.6	75.7	67.0	67.4	88.6	79.0	71.4	77.6
1991	%	72.5	69.8	77.0	75.6	69.5	62.5	63.1	86.3	74.4	77.9	75.5
1996	%	70.5	68.0	74.3	74.7	59.4	60.7	55.7	85.0	75.2	82.5	74.7
Study												
1976	%	18.2	19.0	15.1	17.1	26.9	24.4	32.7	5.9	10.2	9.5	17.4
1981	%	19.4	20.7	16.3	19.2	17.4	21.3	22.7	6.1	14.7	9.7	19.6
1986	%	24.1	26.5	19.8	22.4	24.3	33.0	32.6	11.4	21.0	28.6	22.4
1991	%	27.5	30.2	23.0	24.4	30.5	37.5	36.9	13.7	25.6	22.1	24.5
1996	%	29.5	32.0	25.7	25.3	40.6	39.3	44.3	15.0	24.8	17.5	25.3

NOTE: Only Ph.D.s with definite commitments are included. "All Definite Commitments" includes recipients who reported definite commitments but not type of plans (employment or study). Percentages are based on the number of Ph.D.s who reported a definite commitment and a type of plan. See technical notes in Appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

*"Asians" includes Pacific Islanders; "American Indians" includes Alaskan Natives.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 24 Postdoctoral Location of Non-U.S. Citizen Doctorate Recipients with Postgraduation Commitments, by Visa Status for Selected Years, 1976-1996

		All Non-U.S. Citizens	Permanent Visas	Temporary Visas
All Definite Commitments				
1976	N	3,123	885	2,238
1981	N	3,395	786	2,609
1986	N	4,246	822	3,424
1991	N	6,231	983	5,248
1996	N	7,572	2,120	5,452
Definite Commitments with Responses to Location				
1976	N	3,007	850	2,157
1981	N	3,193	742	2,451
1986	N	3,895	745	3,150
1991	N	6,040	958	5,082
1996	N	7,539	2,110	5,429
U.S. Location				
1976	%	50.0	90.7	34.0
1981	%	52.4	91.9	40.5
1986	%	56.9	83.2	50.7
1991	%	62.6	86.1	58.1
1996	%	70.2	92.0	61.7
Foreign Location				
1976	%	50.0	9.3	66.0
1981	%	47.6	8.1	59.5
1986	%	43.1	16.8	49.3
1991	%	37.4	13.9	41.9
1996	%	29.8	8.0	38.3

NOTE: Only non-U.S. citizen Ph.D.s with definite commitments are included. "All Definite Commitments" includes recipients who reported definite commitments but not location (U.S. or foreign). Percentages are based on the number of Ph.D.s who reported a definite commitment and a location. See technical notes in Appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 25 Postdoctoral Location of Non-U.S. Citizen Doctorate Recipients with Postgraduation Commitments, by Major Field and Visa Status, 1996

Field of Doctorate (responses only)	Postdoctoral Location: Permanent Visas — Resp. to Location/ Type of Plans (N)	U.S. Location Empl. (%)	U.S. Location Study (%)	Foreign Location Empl. (%)	Foreign Location Study (%)	Postdoctoral Location: Temporary Visas — Resp. to Location/ Type of Plans (N)	U.S. Location Empl. (%)	U.S. Location Study (%)	Foreign Location Empl. (%)	Foreign Location Study (%)
All Fields	2,105	53.5	38.5	6.0	2.0	5,421	29.8	32.0	31.0	7.3
Physical Sciences	453	53.6	41.5	2.2	2.6	1,274	27.4	46.8	14.7	11.1
Physics/Astronomy	107	45.8	46.7	0.9	6.5	307	14.3	58.3	9.8	17.6
Chemistry	155	44.5	54.2	0.6	0.6	389	17.7	66.6	8.7	6.9
Earth, Atmos., Marine	49	32.7	59.2	6.1	2.0	115	15.7	41.7	27.8	14.8
Mathematics	74	64.9	27.0	4.1	4.1	236	37.7	31.8	17.4	13.1
Computer Sciences	68	89.7	7.4	2.9	0.0	227	56.8	15.4	22.0	5.7
Engineering	442	76.0	18.3	4.5	1.1	1,429	47.9	23.5	24.8	3.8
Life Sciences	622	17.5	77.7	2.6	2.3	1,232	8.4	56.7	25.8	9.2
Biological Sciences	531	11.9	84.6	1.3	2.3	785	4.7	73.1	12.9	9.3
Health Sciences	49	55.1	36.7	8.2	0.0	158	20.9	28.5	43.7	7.0
Agricultural Sciences	42	45.2	38.1	11.9	4.8	289	11.4	27.3	51.2	10.0
Social Sciences*	206	64.6	18.0	15.5	1.9	566	30.7	9.9	52.5	6.9
Psychology	49	49.0	46.9	2.0	2.0	87	23.0	32.2	40.2	4.6
Economics	59	71.2	6.8	22.0	0.0	275	35.3	2.5	55.3	6.9
Poli. Sci./Int'l. Relat.	24	62.5	4.2	25.0	8.3	47	38.3	8.5	46.8	6.4
Sociology	30	73.3	13.3	10.0	3.3	41	17.1	2.4	75.6	4.9
Humanities	196	83.7	5.6	8.7	2.0	332	36.7	8.1	48.5	6.6
Education	105	80.0	4.8	12.4	2.9	251	18.3	4.0	72.9	4.8
Professional/Other*	81	71.6	6.2	22.2	0.0	337	40.7	3.0	52.8	3.6
Business & Mgmt.	50	78.0	6.0	16.0	0.0	207	51.2	1.4	44.9	2.4

NOTE: Only Ph.D.s with definite commitments are included; see Table 24 for numbers of non-U.S. citizens with commitments. Numbers in this table represent those Ph.D.s who responded to survey questions about both postdoctoral location and type of plans; percentages are based on these numbers. See technical notes in Appendix C for rates of nonresponse to these survey questions and for further explanation of postgraduation plans.

*Totals include other fields not shown.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 26 Employment Sector of Doctorate Recipients with Postgraduation Commitments in the United States, by Broad Field for Selected Years, 1976-1996 (U.S. citizens and permanent residents)

		All Fields	Physical Sci.*	Engi-neering	Life Sci.	Social Sci.	Human-ities	Educa-tion	Prof./ Other
All Employment Commitments									
1976	N	16,143	1,562	1,256	1,453	3,371	2,366	4,983	1,152
1981	N	15,262	1,774	1,052	1,460	3,222	1,946	4,711	1,097
1986	N	13,479	1,445	1,053	1,262	2,806	1,613	4,136	1,164
1991	N	13,839	1,441	1,300	1,305	2,671	1,900	3,941	1,281
1996	N	14,605	1,493	1,736	1,419	2,561	2,170	4,054	1,172
Employment Commitments with Responses to Sector									
1976	N	16,059	1,557	1,249	1,443	3,353	2,359	4,949	1,149
1981	N	15,166	1,768	1,048	1,457	3,204	1,931	4,661	1,097
1986	N	13,349	1,443	1,047	1,257	2,763	1,598	4,082	1,159
1991	N	13,699	1,433	1,298	1,294	2,629	1,885	3,889	1,271
1996	N	14,517	1,488	1,731	1,410	2,540	2,159	4,025	1,164
Academe†									
1976	%	60.2	45.7	26.1	59.0	63.3	86.7	54.8	77.5
1981	%	50.9	29.8	26.2	56.2	49.7	78.8	47.5	70.5
1986	%	48.6	30.1	29.4	52.5	44.3	77.2	44.1	70.9
1991	%	52.3	35.7	25.4	52.0	49.9	83.7	46.7	74.8
1996	%	50.8	35.5	17.0	53.1	52.3	81.3	46.5	73.1
Industry/Self-Employed									
1976	%	11.9	35.6	51.2	16.5	7.1	2.7	2.5	5.3
1981	%	18.7	56.2	57.0	22.3	13.7	6.4	5.4	10.0
1986	%	20.8	57.0	55.1	25.2	19.2	7.2	7.2	11.0
1991	%	19.4	49.3	57.0	24.3	18.6	4.2	5.8	7.8
1996	%	22.3	52.7	66.3	23.0	18.3	5.4	6.2	12.6
Government									
1976	%	12.6	16.2	20.1	17.9	17.0	3.1	11.1	6.7
1981	%	12.9	12.5	14.8	15.5	19.7	4.4	11.9	7.7
1986	%	11.5	10.5	13.8	15.9	16.1	3.7	11.2	6.8
1991	%	9.5	12.4	15.2	15.8	13.6	2.5	6.8	4.5
1996	%	8.7	8.7	14.5	16.0	12.1	1.6	6.4	4.7
Other‡									
1976	%	15.3	2.4	2.6	6.6	12.6	7.5	31.7	10.4
1981	%	17.5	1.5	2.0	6.0	16.9	10.4	35.2	11.9
1986	%	19.1	2.5	1.7	6.4	20.4	12.0	37.5	11.2
1991	%	18.8	2.7	2.4	8.0	18.0	9.7	40.8	12.9
1996	%	18.2	3.1	2.2	7.8	17.4	11.7	40.9	9.5

NOTE: Only Ph.D.s with definite commitments for employment are included. Foreign locations are excluded. "All Employment Commitments" includes recipients whose employment sector is unreported; percentages are based on the number of Ph.D.s who reported employment commitments in a specific sector. See technical notes in Appendix C for rates of nonresponse to this survey question and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.
†Academe includes two- and four-year colleges and universities and medical schools. Elementary and secondary schools are included in "Other."
‡"Other" is mainly composed of elementary and secondary schools and nonprofit organizations.

SOURCE: National Research Council, Survey of Earned Doctorates.

TABLE 27 Employment Sector of Doctorate Recipients with Postgraduation Commitments in the United States, by Demographic Group for Selected Years, 1976-1996

		U.S. Citizens & Permanent Residents*										
		All Ph.D.s	Men	Women	Asians	Blacks	His-panics	Amer. Indians	Whites	U.S. Cits.	Perm. Visas	Temp. Visas
All Employment Commitments												
1976	N	16,143	12,379	3,764	387	708	236	19	14,404	15,564	579	366
1981	N	15,262	10,227	5,035	513	705	312	56	13,218	14,666	596	597
1986	N	13,479	8,017	5,462	405	544	345	44	11,942	12,973	506	804
1991	N	13,839	7,572	6,267	519	605	409	64	12,093	13,258	581	1,541
1996	N	14,605	7,716	6,889	1,100	737	540	99	12,032	13,477	1,128	1,615
Employment Commitments with Responses to Sector												
1976	N	16,059	12,319	3,740	384	701	236	19	14,336	15,485	574	366
1981	N	15,166	10,180	4,986	507	694	308	55	13,150	14,577	589	597
1986	N	13,349	7,964	5,385	400	527	340	43	11,846	12,847	502	804
1991	N	13,699	7,513	6,186	514	598	406	64	11,971	13,122	577	1,532
1996	N	14,517	7,685	6,832	1,089	731	538	99	11,964	13,397	1,120	1,609
Academe†												
1976	%	60.2	57.0	70.5	40.9	68.0	71.2	73.7	60.1	60.4	52.4	56.0
1981	%	50.9	47.6	57.7	32.3	55.2	64.6	43.6	51.1	51.2	43.3	47.7
1986	%	48.6	45.2	53.5	34.5	51.2	58.2	62.8	48.6	48.5	50.4	64.4
1991	%	52.3	48.1	57.4	37.9	59.2	63.3	53.1	52.2	52.3	53.0	55.0
1996	%	50.8	46.0	56.2	28.2	53.4	60.4	54.5	52.3	51.9	38.5	34.4
Industry/Self-Employed												
1976	%	11.9	14.1	5.0	44.3	2.9	4.7	0.0	11.5	11.0	36.8	28.4
1981	%	18.7	22.8	10.5	54.0	8.5	9.1	14.5	17.9	17.6	46.5	42.0
1986	%	20.8	25.4	14.1	48.5	7.6	12.1	4.7	20.7	20.1	38.6	30.8
1991	%	19.4	24.6	13.0	47.3	8.0	13.5	14.1	18.9	18.6	36.7	38.7
1996	%	22.3	29.5	14.2	59.2	10.4	15.6	12.1	20.0	19.9	51.2	59.5
Government												
1976	%	12.6	14.0	8.1	10.4	11.6	10.2	0.0	12.8	12.9	4.4	5.5
1981	%	12.9	13.8	11.1	7.7	13.1	13.6	16.4	13.2	13.3	3.2	2.5
1986	%	11.5	12.7	9.8	8.5	15.2	13.2	16.3	11.4	11.8	5.6	1.4
1991	%	9.5	10.8	7.9	8.9	9.0	7.6	9.4	9.6	9.7	4.0	1.6
1996	%	8.7	10.0	7.2	6.2	10.4	8.6	15.2	8.7	9.0	4.4	1.6
Other‡												
1976	%	15.3	14.9	16.4	4.4	17.5	14.0	26.3	15.6	15.6	6.4	10.1
1981	%	17.5	15.8	20.8	5.9	23.2	12.7	25.5	17.8	17.9	7.0	7.7
1986	%	19.1	16.7	22.6	8.5	26.0	16.5	16.3	19.3	19.6	5.4	3.4
1991	%	18.8	16.4	21.7	5.8	23.7	15.5	23.4	19.3	19.3	6.2	4.7
1996	%	18.2	14.5	22.3	6.4	25.9	15.4	18.2	19.0	19.2	6.0	4.5

NOTE: Only doctorates with definite commitments for employment are included. Foreign locations are excluded. "All Employment Commitments" includes recipients whose employment sector is unreported. Percentages are based on the number of Ph.D.s who reported employment commitments in a specific sector. See technical notes in Appendix C for rates of nonresponse to this survey question and for further explanation of postgraduation plans.

*"Asians" includes Pacific Islanders; "American Indians" includes Alaskan Natives.
†Academe includes two- and four-year colleges and universities and medical schools. Elementary and secondary schools are included in "Other."
‡"Other" is mainly composed of elementary and secondary schools and nonprofit organizations.

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIXES

APPENDIX A: The Seven Basic Tables, 1996

Appendix A includes the following seven tables:

A-1 Number of Doctorate Recipients, by Gender and Subfield, 1996
A-2 Number of Doctorate Recipients, by Citizenship, Race/Ethnicity, and Subfield, 1996
A-3 Statistical Profile of Doctorate Recipients, by Major Field, 1996
A-4 Statistical Profile of Doctorate Recipients, by Race/Ethnicity and Citizenship, 1996
A-5 Sources of Graduate School Support for Doctorate Recipients, by Broad Field and Gender, 1996
A-6 State of Doctoral Institution of Doctorate Recipients, by Broad Field and Gender, 1996
A-7 Institutions Granting Doctorates, by Major Field, 1996

TABLE A-1 and TABLE A-2: Tables A-1 and A-2 display data for the most recent year by subfield of doctorate. The subfields correspond to the fields on the questionnaire's Specialties List located at the back of this report. Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates (SED). See inside the back cover for a description of field groupings as reported in these tables. The "general" field categories—e.g., "chemistry, general"—include individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The "other" field categories—e.g., "chemistry, other"—include individuals whose specified doctoral discipline was not among the specialty fields listed.

Table A-1 presents data by doctoral specialty and gender. Table A-2 displays doctoral specialty by citizenship and race/ethnicity. For a detailed description of the racial/ethnic variable, see the explanatory note for Table A-4.

TABLE A-3: Table A-3 is composed of three 2-page tables. The first table includes data on *all* doctorate recipients from the most recent year; the other two tables present the same data by gender. Field groupings may differ from those in reports published by federal sponsors of the SED. See inside the back cover for a description of field groupings as reported in these tables; see the questionnaire's Specialties List at the back of the report for the names and codes of the subfields included. Terms requiring definition are as follows:

Percentage with Master's: The percentage of doctorate recipients in a field who received a master's degree in any field before earning the doctorate.

Median Age at Doctorate: One-half received the doctorate at or before this age. A recipient's age is obtained by subtracting the month/year of birth from the month/year of doctorate. (See note on next page.)

Median Time Lapse: "Total Time" refers to the total calendar time elapsed between the month/year of baccalaureate and the month/year of doctorate. "Registered Time" refers to

the actual time in attendance at colleges and universities between receipt of the baccalaureate and the doctorate. Enrollment includes years of attendance not related to a recipient's doctoral program.

NOTE about medians: *The method of computing medians has been revised. Beginning with Summary Report 1994,* ***months*** *(of birth, baccalaureate, and doctorate) are included in the calculations; medians presented in earlier reports were based only on years. Some medians would be the same regardless of the method of computation, but the new method generally computes slightly different results than are obtained by the old method. While variation is small (usually one or two decimal places), the reader should consider these differences when comparing medians presented in this report with those in earlier reports.*

Postgraduation Plans: Each year's doctorate recipients provide information on post-graduation employment or study plans in response to items B1 through B9 on the survey form. Since the questionnaire is filled out around the time the doctorate is awarded, a recipient's plans are subject to change. However, comparisons with the longitudinal Survey of Doctorate Recipients (SDR) have shown SED data to be a reasonable indicator of actual employment status in the year following the doctorate, although results vary by sector. (The SDR, also conducted by the National Research Council, is a follow-up employment survey of a sample of doctorate recipients in science, engineering, and humanities fields.)

In Table A-3 the postgraduation plans of doctorate recipients are grouped as follows: "Postdoctoral Study Plans" (fellowship, research associateship, traineeship, other), "Planned Employment After Doctorate" (educational institution, industry, etc.), and "Postdoctoral Plans Unknown." These categories include recipients who were still negotiating or seeking positions at the time of survey completion, as well as those whose plans were definite. The sum of these lines equals 100 percent for each column, with allowance for rounding: for example, 21.9 percent of all engineers had postdoctoral study plans, 69.6 percent planned to be employed, and 8.4 percent did not report their post-graduation plans, totaling 100 percent. The study and employment rows are further subdivided. The data on study plans show that 7.0 percent of all engineers planned to pursue postdoctoral fellowships; 13.0 percent, research associateships; 0.9 percent, traineeships; and 1.0 percent, some other form of postdoctoral study. These percentages sum to 21.9 percent, the proportion of engineers who reported plans for postdoctoral study. The employment row is similarly subdivided by type of employer. The percentages for these rows add to 69.6 percent—the proportion of engineering Ph.D.s who planned employment. The category for educational institutions includes elementary and secondary schools as well as colleges and universities, and the category for government includes military service.

The four lines of data beginning with "Definite Postdoctoral Study" distinguish between individuals who had definite postgraduation plans at the time of survey completion (item B1: "Am returning to, or continuing in, predoctoral employment" or "Have signed contract or made definite commitment") and those who were still seeking employment or postdoctoral study (item B1: "Am negotiating with one or more specific organizations," "Am seeking position but have no specific prospects," or "Other"). These four lines, when added to the prior line, "Postdoctoral Plans Unknown," total 100 percent with allowance for rounding. The two lines "Definite Postdoctoral Study" and "Seeking Postdoctoral Study"

add to give the percentage for "Postdoctoral Study Plans"; the two lines "Definite Employment" and "Seeking Employment" add to give the percentage for "Planned Employment After Doctorate."

Percentages showing the distribution of doctorate recipients by postdoctoral work activity and region of employment are based only on the number of recipients who had *definite employment* commitments at the time they completed the questionnaire. These percentages exclude recipients who planned postdoctoral study (as described above) and recipients who were still *seeking* employment at the time they completed the questionnaire. (Note that the rows on specific postdoctoral study and employment plans discussed earlier include individuals whose plans were *not definite*.) Revisions to the questionnaire format beginning in 1990 resulted in higher rates of nonresponse to the item on work activity through 1993, when the rate was 15.1 percent. The questionnaire was revised again in 1994, and nonresponse subsequently dropped to 11.9 percent in 1994 and 10.7 in 1995. A final revision in 1995 dropped the nonresponse for this item to just 3.4 percent in 1996.

The U.S. regions of employment shown in Table A-3 include the following states and territories:

New England:	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Middle Atlantic:	New Jersey, New York, Pennsylvania
East North Central:	Illinois, Indiana, Michigan, Ohio, Wisconsin
West North Central:	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
South Atlantic:	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
East South Central:	Alabama, Kentucky, Mississippi, Tennessee
West South Central:	Arkansas, Louisiana, Oklahoma, Texas
Mountain:	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
Pacific & Insular:	Alaska, California, Hawaii, Oregon, Washington, American Samoa, Guam, Puerto Rico, Trust Territory, Virgin Islands

TABLE A-4: Table A-4 contains data by race/ethnicity and citizenship for selected variables included in Tables A-3 and A-5. Field groupings may differ from those in reports published by federal sponsors of the SED. See inside the back cover for a description of field groupings as reported in these tables; refer to the questionnaire's Specialties List at the back of the report for the names and codes of the subfields included.

The racial/ethnic question has undergone several revisions over the years. In 1977 it was modified to correspond to a standard question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use in federally sponsored surveys; an explanation of the effect of these changes is detailed on page 13 of *Summary Report 1977*. (Note: Changes in the OMB guidelines prompted the moving of persons having origins in the Indian subcontinent from the white category to the Asian category.) In 1980 the item was further revised in two ways: (1) the

Hispanic category was subdivided into Puerto Rican, Mexican American, and other Hispanic to provide more detail for users of the racial/ethnic data, and (2) respondents were asked to check only one racial category. (Before 1980 doctorate recipients could check more than one category to indicate their race.) The item was modified again in 1982 to separate the questions on race and ethnicity. Since then respondents have been asked to first check one of the four racial group categories (American Indian, Asian, black, or white) and then indicate whether or not they are Hispanic. In Table A-4, Ph.D.s who reported Hispanic heritage, regardless of racial designation, are included in one of three Hispanic groups: Puerto Rican, Mexican American, or other Hispanic. The remaining survey respondents are then counted in the respective racial groups. (Note: Doctorate recipients who checked the category "American Indian or Alaskan Native" are identified as American Indian in this report.)

NOTE about median age and time lapse (to doctorate): *The method of computing medians has been revised. Beginning with Summary Report 1994,* ***months*** *(of birth, baccalaureate, and doctorate) are included in the calculations; medians presented in earlier reports were based only on years. Some medians would be the same regardless of the method of computation, but the new method generally computes slightly different results. While variation is small (usually one or two decimal places), the reader should consider these differences when comparing medians presented in this report with those in earlier reports. See explanatory information on Table A-3 for further description.*

In the section on "Graduate School Support" a recipient counts in more than one category if support was received from multiple sources. Because a student counts once for each of his/her sources of support, the vertical percentages sum to more than 100 percent. See the explanatory note on Appendix Table A-5 for further detail. (Data on the *primary* source of support for doctorate recipients are presented in the body of the report.)

The other sections in Table A-4 correspond to many of those in Appendix Table A-3. The reader is referred to the explanatory note on Table A-3 for additional information.

TABLE A-5: Table A-5 displays data reported in item A11 on sources of financial support received during graduate school, by broad field and gender of recipient. Field groupings may differ from those in reports published by federal sponsors of the SED. See inside the back cover for a description of field groupings as reported in this table; see the questionnaire's Specialties List at the back of the report for the names and codes of the subfields included.

A recipient counts in more than one category in Table A-5 if support was received from multiple sources. Because a student counts once for each of his/her sources of support, the vertical percentages sum to more than 100 percent. (Data on the *primary* source of support for doctorate recipients are presented in the body of the report.)

Beginning with *Summary Report 1990*, federal research assistantships (RAs) have been aggregated with university RAs and shown under "University Research Assistant" in Table A-5. (Focus groups of doctoral candidates have indicated uncertainty as to the source

of their RA funding; it is therefore likely that some RAs have incorrectly identified support provided by the federal government as university rather than federal.) The reader is advised *not* to compare sources of support data presented in the 1990-1996 *Summary Reports* with data in earlier reports because percentages appear higher for university support and lower for federal support in tables where all RAs are aggregated as "University Research Assistants."

The data in Table A-5 should be interpreted as follows: 223 male doctorate recipients in the physical sciences in 1996 reported financial support from federal fellowships or traineeships during graduate school. This number is 4.5 percent of the male physical sciences Ph.D.s who answered the question on sources of support, and 13.2 percent of all males in *any* field who reported federal fellowship or traineeship support.

TABLE A-6: Table A-6 shows, by broad field and gender, the number of persons receiving a doctorate in the most recent year from institutions in each of the 50 states, the District of Columbia, and Puerto Rico. Field groupings may differ from those in reports published by federal sponsors of the SED. See inside the back cover for a description of field groupings as reported in this table; see the questionnaire's Specialties List at the back of the report for the names and codes of the subfields included.

TABLE A-7: Table A-7 displays data by doctorate-granting institution and major field. It includes all institutions in the United States (the 50 states, the District of Columbia, and Puerto Rico) that awarded doctoral degrees in the most recent year. Field groupings may differ from those in reports published by federal sponsors of the SED and from departmental designations at institutions. See inside the back cover for a description of field groupings as reported in this table; see the questionnaire's Specialties List at the back of the report for the names and codes of the subfields included.

APPENDIX TABLE A-1 Number of Doctorate Recipients, by Gender and Subfield, 1996

Subfield of Doctorate	Number of Doctorates		
	Total	Men	Women
TOTAL ALL FIELDS	42,415	25,470	16,945
PHYSICAL SCIENCES	6,675	5,291	1,384
MATHEMATICS	1,122	891	231
Applied Mathematics	230	178	52
Algebra	78	60	18
Analysis and Functional Analysis	100	85	15
Geometry	72	58	14
Logic	16	15	1
Number Theory	42	35	7
Mathematical Statistics	178	131	47
Topology	55	50	5
Computing Theory and Practice	18	16	2
Operations Research	21	17	4
Mathematics, General	233	188	45
Mathematics, Other	79	58	21
COMPUTER SCIENCE	921	782	139
Computer Science	837	721	116
Information Sciences and Systems	84	61	23
PHYSICS AND ASTRONOMY	1,677	1,443	234
Astronomy	84	63	21
Astrophysics	108	88	20
Acoustics	19	17	2
Chemical and Atomic/Molecular	129	119	10
Elementary Particles	175	156	19
Fluids	21	17	4
Nuclear	87	78	9
Optics	129	109	20
Plasma and High-Temperature	48	46	2
Polymer	33	21	12
Solid State and Low-Temperature	364	310	54
Physics, General	324	285	39
Physics, Other	156	134	22
CHEMISTRY	2,148	1,543	605
Analytical	346	235	111
Inorganic	249	181	68
Nuclear	5	5	0
Organic	506	388	118
Medicinal/Pharmaceutical	96	64	32
Physical	300	215	85
Polymer	121	91	30
Theoretical	57	43	14
Chemistry, General	396	277	119
Chemistry, Other	72	44	28
EARTH, ATMOS., & MARINE SCI.	807	632	175
Atmospheric Physics and Chemistry	22	15	7
Atmospheric Dynamics	21	17	4
Meteorology	35	33	2
Atmos. Sci./Meteorology, General	33	28	5
Atmos. Sci./Meteorology, Other	14	10	4
Geology	162	126	36
Geochemistry	49	39	10
Geophysics and Seismology	101	87	14
Paleontology	14	10	4
Mineralogy, Petrology	23	12	11
Stratigraphy, Sedimentation	12	9	3
Geomorphology and Glacial Geology	11	10	1
Geological & Related Sci., General	27	25	2
Geological & Related Sci., Other	22	20	2
Environmental Science	83	60	23
Hydrology and Water Resources	31	26	5
Oceanography	107	73	34
Marine Sciences	27	22	5
Misc. Physical Sciences, Other	13	10	3
ENGINEERING	6,305	5,529	776
Aerospace, Aeronautic., Astronautic.	287	263	24
Agricultural	104	87	17
Bioengineering and Biomedical	220	171	49
Ceramic Sciences	41	38	3
Chemical	681	555	126
Civil	599	535	64
Communications	32	30	2
Computer	208	185	23
Electrical, Electronics	1,500	1,356	144
Engineering Mechanics	105	95	10
Engineering Physics	37	34	3
Engineering Science	52	48	4
Environmental Health Engineering	98	83	15
Industrial/Manufacturing	258	207	51
Materials Science	470	399	71
Mechanical	947	879	68
Metallurgical	61	52	9
Mining and Mineral	31	28	3
Nuclear	113	104	9
Ocean	26	23	3
Operations Research	74	58	16
Petroleum	52	49	3
Polymer/Plastics	65	51	14
Systems	47	38	9
Engineering, General	60	49	11
Engineering, Other	137	112	25
LIFE SCIENCES	8,255	4,660	3,595
BIOLOGICAL SCIENCES	5,723	3,308	2,415
Biochemistry	794	477	317
Biomedical Sciences	140	86	54
Biophysics	142	101	41
Biotechnology Research	6	5	1
Bacteriology	16	8	8
Plant Genetics	41	25	16
Plant Pathology	38	25	13
Plant Physiology	73	44	29
Botany, Other	105	61	44
Anatomy	47	27	20
Biometrics and Biostatistics	81	47	34
Cell Biology	233	126	107
Ecology	245	161	84
Developmental Biology/Embryology	96	47	49
Endocrinology	24	11	13
Entomology	136	100	36
Biological Immunology	238	109	129
Molecular Biology	651	360	291
Microbiology	444	259	185
Neuroscience	404	239	165
Nutritional Sciences	142	44	98
Parasitology	22	10	12
Toxicology	138	78	60
Human and Animal Genetics	212	111	101
Human and Animal Pathology	135	83	52
Human and Animal Pharmacology	316	174	142
Human and Animal Physiology	275	168	107
Zoology, Other	100	69	31
Biological Sciences, General	291	171	120
Biological Sciences, Other	138	82	56
HEALTH SCIENCES	1,324	463	861
Speech-Lang. Pathology & Audiology	94	26	68
Environmental Health	58	29	29
Health Systems/Services Admin.	60	24	36
Public Health	156	46	110
Epidemiology	149	71	78
Exercise Physiology/Sci., Kinesiology	105	67	38
Nursing	354	12	342
Pharmacy	145	85	60
Rehabilitation/Therapeutic Services	26	8	18
Veterinary Medicine	65	41	24
Health Sciences, General	22	7	15
Health Sciences, Other	90	47	43
AGRICULTURAL SCIENCES	1,208	889	319
Agricultural Economics	169	132	37
Agricultural Business & Management	2	2	0
Animal Breeding and Genetics	12	9	3
Animal Nutrition	54	43	11
Dairy Science	9	7	2
Poultry Science	12	9	3
Fisheries Science and Management	46	36	10
Animal Sciences, Other	90	64	26
Agronomy and Crop Science	110	93	17
Plant Breeding and Genetics	63	50	13
Plant Pathology	90	63	27
Plant Sciences, Other	21	18	3
Food Engineering	7	7	0
Food Sciences, Other	142	73	69
Soil Chemistry/Microbiology	29	20	9
Soil Sciences, Other	78	64	14

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix A.

APPENDIX TABLE A-1 (Continued)

Subfield of Doctorate	Number of Doctorates		
	Total	Men	Women
Horticulture Science	73	51	22
Forest Biology	19	15	4
Forest Management	22	20	2
Wood Sci. and Pulp/Paper Tech.	18	15	3
Conservation/Renewable Nat. Res.	13	10	3
Forestry and Related Sci., Other	56	38	18
Wildlife/Range Management	64	42	22
Agricultural Sciences, General	5	5	0
Agricultural Sciences, Other	4	3	1
SOCIAL SCIENCES (INCL. PSYCH.)	6,814	3,300	3,514
Anthropology	396	182	214
Area Studies	28	19	9
Criminology	60	35	25
Demography/Population Studies	11	9	2
Economics	979	761	218
Econometrics	29	21	8
Geography	165	120	45
Human/Individual & Family Develop.	151	30	121
International Relations/Affairs	99	67	32
Political Science and Government	621	435	186
Public Policy Analysis	104	54	50
Sociology	516	242	274
Statistics	48	41	7
Urban Affairs/Studies	106	68	38
Social Sciences, General	26	11	15
Social Sciences, Other	135	72	63
PSYCHOLOGY	3,340	1,133	2,207
Clinical	1,325	406	919
Cognitive and Psycholinguistics	128	68	60
Comparative	3	1	2
Counseling	464	161	303
Developmental and Child	188	34	154
Experimental	128	60	68
Educational	92	26	66
Family and Marriage Counseling	52	24	28
Industrial and Organizational	162	63	99
Personality	24	13	11
Physiological/Psychobiology	80	39	41
Psychometrics	11	8	3
Quantitative	19	12	7
School	82	11	71
Social	170	59	111
Psychology, General	279	99	180
Psychology, Other	133	49	84
HUMANITIES	5,116	2,572	2,544
History, American	355	207	148
History, Asian	54	31	23
History, European	187	108	79
History/Philosophy of Sci. & Tech.	37	27	10
History, General	101	62	39
History, Other	123	68	55
Classics	72	45	27
Comparative Literature	164	65	99
Linguistics	230	117	113
Speech and Rhetorical Studies	155	64	91
Letters, General	28	11	17
Letters, Other	61	18	43
American Studies	115	48	67
Archeology	21	10	11
Art History/Criticism/Conservation	176	48	128
Music	699	400	299
Philosophy	369	261	108
Religion	317	245	72
Drama/Theater Arts	103	48	55
LANGUAGE AND LITERATURE	1,618	639	979
American	314	119	195
English	699	280	419
French	142	43	99
German	88	34	54
Italian	24	5	19
Spanish	196	82	114
Russian	37	13	24
Slavic	11	3	8
Chinese	29	19	10
Japanese	10	2	8
Hebrew	12	9	3
Arabic	6	4	2
Other Language and Literature	50	26	24
Humanities, General	39	9	30
Humanities, Other	92	41	51
EDUCATION	6,772	2,593	4,179
Curriculum and Instruction	896	266	630
Educational Admin. and Supervision	1,170	535	635
Educational Leadership	989	428	561
Educ./Instruct. Media Design	107	47	60
Educ. Stat./Research Methods	76	34	42
Educ. Assess., Test., & Meas.	32	19	13
Educational Psychology	309	90	219
School Psychology	114	33	81
Social/Phil. Found. of Educ.	125	44	81
Special Education	278	64	214
Counseling Educ./Couns. & Guidance	277	93	184
Higher Educ./Evaluation & Research	481	205	276
Pre-elementary/Early Childhood	81	13	68
Elementary Education	46	6	40
Secondary Education	34	10	24
Adult and Continuing Education	210	86	124
TEACHING FIELDS	863	361	502
Agricultural Education	32	22	10
Art Education	41	15	26
Business Education	20	9	11
English Education	57	15	42
Foreign Languages Education	44	15	29
Health Education	90	29	61
Home Economics Education	13	0	13
Technical/Industrial Arts Education	11	7	4
Mathematics Education	100	35	65
Music Education	91	46	45
Nursing Education	23	0	23
Physical Education and Coaching	101	60	41
Reading Education	66	13	53
Science Education	96	50	46
Social Science Education	12	5	7
Technical Education	24	20	4
Trade and Industrial Education	12	7	5
Teacher Ed./Spec. Acad. & Voc., Other	30	13	17
Education, General	353	141	212
Education, Other	331	118	213
PROFESSIONAL/OTHER FIELDS	2,478	1,525	953
BUSINESS AND MANAGEMENT	1,276	896	380
Accounting	156	91	65
Banking/Financial Support Services	114	90	24
Business Admin. and Management	393	295	98
Business/Managerial Economics	38	34	4
International Business	36	23	13
Mgmt. Info. Sys./Bus. Data Proc.	94	65	29
Marketing Management and Research	153	104	49
Operations Research	64	51	13
Organizational Behavior	108	58	50
Bus. Mgmt./Admin. Serv., General	67	53	14
Bus. Mgmt./Admin. Serv., Other	53	32	21
COMMUNICATIONS	389	192	197
Communications Research	60	22	38
Mass Communications	137	86	51
Communication Theory	37	18	19
Communications, General	81	26	55
Communications, Other	74	40	34
OTHER PROFESSIONAL FIELDS	774	417	357
Architectural Environmental Design	61	45	16
Home Economics	28	2	26
Law	26	19	7
Library Science	49	9	40
Parks/Recreation/Leisure/Fitness	29	19	10
Public Administration	104	67	37
Social Work	256	76	180
Theology/Religious Education	213	174	39
Professional Fields, General	2	2	0
Professional Fields, Other	6	4	2
OTHER FIELDS	39	20	19

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX TABLE A-2 Number of Doctorate Recipients, by Citizenship, Race/Ethnicity, and Subfield, 1996

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas								
			Total	American Indian	Asian	Black	White	Puerto Rican	Mex-ican Amer.	Other His-panic	Unkn. Race
TOTAL ALL FIELDS	42,415	9,610	31,506	187	3,697	1,457	24,685	251	293	561	375
PHYSICAL SCIENCES	6,675	2,161	4,285	13	832	84	3,171	23	31	57	74
MATHEMATICS	1,122	441	646	1	140	8	478	3	2	5	9
Applied Mathematics	230	90	140	0	46	4	82	2	2	2	2
Algebra	78	27	50	0	6	2	42	0	0	0	0
Analysis and Functional Analysis	100	42	57	0	13	0	42	1	0	0	1
Geometry	72	32	39	0	5	0	34	0	0	0	0
Logic	16	4	12	0	1	0	11	0	0	0	0
Number Theory	42	18	24	0	2	0	21	0	0	1	0
Mathematical Statistics	178	68	104	0	26	1	76	0	0	0	1
Topology	55	18	36	0	3	0	30	0	0	1	2
Computing Theory and Practice	18	6	12	0	2	0	10	0	0	0	0
Operations Research	21	9	12	0	3	1	8	0	0	0	0
Mathematics, General	233	100	108	1	26	0	77	0	0	1	3
Mathematics, Other	79	27	52	0	7	0	45	0	0	0	0
COMPUTER SCIENCE	921	376	513	4	111	12	356	5	1	10	14
Computer Science	837	356	450	3	106	8	306	4	1	8	14
Information Sciences and Systems	84	20	63	1	5	4	50	1	0	2	0
PHYSICS AND ASTRONOMY	1,677	523	1,097	2	207	15	816	3	8	20	26
Astronomy	84	18	66	0	9	0	56	0	0	1	0
Astrophysics	108	24	83	0	3	0	75	0	1	0	4
Acoustics	19	3	15	0	2	0	11	1	0	0	1
Chemical and Atomic/Molecular	129	33	96	0	17	2	74	0	1	0	2
Elementary Particles	175	65	110	0	11	1	90	0	1	5	2
Fluids	21	8	13	0	2	1	10	0	0	0	0
Nuclear	87	23	64	0	8	3	53	0	0	0	0
Optics	129	34	95	1	21	2	66	0	2	0	3
Plasma and High-Temperature	48	10	38	0	6	0	31	0	0	1	0
Polymer	33	10	23	0	9	0	13	0	1	0	0
Solid State and Low-Temperature	364	140	223	0	57	4	152	0	0	9	1
Physics, General	324	108	165	0	43	1	108	1	1	4	7
Physics, Other	156	47	106	1	19	1	77	1	1	0	6
CHEMISTRY	2,148	613	1,461	4	296	45	1,063	9	15	11	18
Analytical	346	86	260	1	55	7	188	4	0	3	2
Inorganic	249	57	188	0	24	5	153	0	1	1	4
Nuclear	5	2	3	0	1	0	2	0	0	0	0
Organic	506	130	365	2	70	17	259	3	7	5	2
Medicinal/Pharmaceutical	96	32	61	0	15	2	44	0	0	0	0
Physical	300	70	230	1	50	3	169	1	3	1	2
Polymer	121	54	67	0	23	2	42	0	0	0	0
Theoretical	57	25	32	0	4	0	26	0	2	0	0
Chemistry, General	396	133	208	0	47	5	145	1	1	1	8
Chemistry, Other	72	24	47	0	7	4	35	0	1	0	0
EARTH, ATMOS., & MARINE SCI.	807	208	568	2	78	4	458	3	5	11	7
Atmospheric Physics and Chemistry	22	5	17	0	5	0	12	0	0	0	0
Atmospheric Dynamics	21	8	12	0	3	0	8	0	1	0	0
Meteorology	35	7	25	0	3	0	21	0	0	0	1
Atmos. Sci./Meteorology, General	33	13	18	1	7	0	10	0	0	0	0
Atmos. Sci./Meteorology, Other	14	3	11	0	1	0	10	0	0	0	0
Geology	162	36	122	0	11	0	103	0	1	4	3
Geochemistry	49	10	38	0	5	0	31	0	0	2	0
Geophysics and Seismology	101	31	61	0	14	1	44	0	2	0	0
Paleontology	14	2	12	0	0	0	10	0	0	1	1
Mineralogy, Petrology	23	2	21	0	1	0	18	0	1	1	0
Stratigraphy, Sedimentation	12	2	10	0	1	0	9	0	0	0	0
Geomorphology and Glacial Geology	11	0	11	0	0	0	11	0	0	0	0
Geological & Related Sci., General	27	8	18	0	0	0	17	0	0	0	1
Geological & Related Sci., Other	22	6	16	0	2	1	13	0	0	0	0
Environmental Science	83	28	53	1	7	2	43	0	0	0	0
Hydrology and Water Resources	31	9	21	0	3	0	18	0	0	0	0
Oceanography	107	27	74	0	12	0	57	2	0	2	1
Marine Sciences	27	8	18	0	2	0	14	1	0	1	0
Misc. Physical Sciences, Other	13	3	10	0	1	0	9	0	0	0	0
ENGINEERING	6,305	2,716	3,383	14	895	74	2,260	22	28	48	42
Aerospace, Aeronautic., Astronautic.	287	93	184	0	28	5	149	0	1	1	0
Agricultural	104	53	51	1	18	3	28	0	0	1	0
Bioengineering and Biomedical	220	56	155	0	34	1	108	1	3	5	3
Ceramic Sciences	41	12	28	1	4	1	21	1	0	0	0
Chemical	681	334	341	1	63	11	244	4	4	10	4
Civil	599	326	254	1	78	5	163	1	2	3	1
Communications	32	14	17	0	10	1	6	0	0	0	0
Computer	208	97	106	0	40	1	63	0	0	1	1

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix A.

*Includes individuals who did not report their citizenship at time of doctorate.

APPENDIX TABLE A-2 (Continued)

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas								
			Total	American Indian	Asian	Black	White	Puerto Rican	Mexican Amer.	Other Hispanic	Unkn. Race
Electrical, Electronics	1,500	638	803	2	225	20	519	4	9	12	12
Engineering Mechanics	105	44	59	1	16	1	41	0	0	0	0
Engineering Physics	37	8	29	0	5	0	24	0	0	0	0
Engineering Science	52	17	34	0	9	0	22	0	1	1	1
Environmental Health Engineering	98	43	51	1	11	3	36	0	0	0	0
Industrial/Manufacturing	258	116	136	3	28	3	94	2	1	3	2
Materials Science	470	179	280	0	88	1	181	1	1	1	7
Mechanical	947	386	529	2	150	9	351	3	4	6	4
Metallurgical	61	29	28	1	10	1	14	0	0	2	0
Mining and Mineral	31	14	16	0	7	1	8	0	0	0	0
Nuclear	113	53	53	0	9	0	38	2	1	1	2
Ocean	26	6	16	0	5	0	10	0	0	0	1
Operations Research	74	37	37	0	6	2	29	0	0	0	0
Petroleum	52	31	21	0	8	0	12	0	0	0	1
Polymer/Plastics	65	34	30	0	10	1	18	0	0	1	0
Systems	47	24	23	0	6	0	16	0	0	0	1
Engineering, General	60	18	26	0	8	1	15	1	1	0	0
Engineering, Other	137	54	76	0	19	3	50	2	0	0	2
LIFE SCIENCES	8,255	2,040	6,031	31	1,067	174	4,496	43	36	105	79
BIOLOGICAL SCIENCES	5,723	1,240	4,365	21	888	98	3,171	32	28	71	56
Biochemistry	794	209	570	5	163	7	379	3	3	6	4
Biomedical Sciences	140	28	107	0	33	5	65	1	3	0	0
Biophysics	142	39	100	0	35	0	59	3	0	1	2
Biotechnology Research	6	3	3	0	0	0	3	0	0	0	0
Bacteriology	16	3	12	0	3	1	8	0	0	0	0
Plant Genetics	41	11	30	0	8	0	22	0	0	0	0
Plant Pathology	38	20	18	0	5	1	12	0	0	0	0
Plant Physiology	73	25	48	0	4	1	41	0	0	0	2
Botany, Other	105	19	84	1	11	1	67	0	2	0	2
Anatomy	47	11	36	0	9	2	25	0	0	0	0
Biometrics and Biostatistics	81	22	55	0	12	2	40	0	0	0	1
Cell Biology	233	36	196	2	45	4	137	0	2	2	4
Ecology	245	35	208	2	6	3	189	1	0	6	1
Developmental Biology/Embryology	96	21	75	0	18	2	54	0	1	0	0
Endocrinology	24	4	19	1	5	0	12	1	0	0	0
Entomology	136	46	88	0	8	2	72	3	1	1	1
Biological Immunology	238	38	198	0	35	7	147	2	0	4	3
Molecular Biology	651	163	484	1	136	6	329	1	1	9	1
Microbiology	444	95	343	2	64	14	244	7	3	4	5
Neuroscience	404	58	338	2	60	7	253	2	4	4	6
Nutritional Sciences	142	38	100	0	6	4	83	1	1	5	0
Parasitology	22	4	18	1	1	1	14	0	0	0	1
Toxicology	138	25	108	1	12	4	85	1	1	2	2
Human and Animal Genetics	212	36	173	0	33	4	129	1	0	4	2
Human and Animal Pathology	135	28	106	0	26	2	73	0	0	2	3
Human and Animal Pharmacology	316	54	257	2	56	8	182	1	1	4	3
Human and Animal Physiology	275	70	203	0	45	5	144	1	2	5	1
Zoology, Other	100	20	79	0	7	0	67	0	0	4	1
Biological Sciences, General	291	56	200	1	26	5	151	2	2	3	10
Biological Sciences, Other	138	23	109	0	16	0	85	1	1	5	1
HEALTH SCIENCES	1,324	267	1,016	4	89	49	822	7	6	25	14
Speech-Lang. Pathology & Audiology	94	14	77	0	3	4	64	2	0	4	0
Environmental Health	58	16	40	0	4	1	31	0	0	0	4
Health Systems/Services Admin.	60	10	49	0	4	6	36	1	0	2	0
Public Health	156	27	123	1	9	6	99	0	2	4	2
Epidemiology	149	38	107	1	13	1	86	0	0	5	1
Exercise Physiology/Sci., Kinesiology	105	16	87	0	3	4	76	0	1	3	0
Nursing	354	33	316	1	10	16	282	2	2	2	1
Pharmacy	145	59	83	0	26	4	45	2	1	1	4
Rehabilitation/Therapeutic Services	26	3	23	0	0	1	21	0	0	1	0
Veterinary Medicine	65	22	42	0	7	2	32	0	0	1	0
Health Sciences, General	22	2	15	1	1	2	11	0	0	0	0
Health Sciences, Other	90	27	54	0	9	2	39	0	0	2	2
AGRICULTURAL SCIENCES	1,208	533	650	6	90	27	503	4	2	9	9
Agricultural Economics	169	91	72	1	9	1	58	0	0	2	1
Agricultural Business & Management	2	0	2	0	0	1	1	0	0	0	0
Animal Breeding and Genetics	12	7	5	0	0	0	5	0	0	0	0
Animal Nutrition	54	15	39	1	1	2	34	1	0	0	0
Dairy Science	9	2	7	0	0	0	7	0	0	0	0
Poultry Science	12	4	7	0	2	0	5	0	0	0	0
Fisheries Science and Management	46	14	29	1	0	0	27	0	0	1	0
Animal Sciences, Other	90	37	49	0	3	0	42	1	2	0	1
Agronomy and Crop Science	110	57	52	0	6	4	41	1	0	0	0
Plant Breeding and Genetics	63	32	31	0	3	0	28	0	0	0	0
Plant Pathology	90	47	42	0	6	2	31	1	0	2	0
Plant Sciences, Other	21	6	15	0	1	2	12	0	0	0	0
Food Engineering	7	2	5	0	3	0	2	0	0	0	0
Food Sciences, Other	142	70	70	0	20	5	44	0	0	0	1
Soil Chemistry/Microbiology	29	14	15	0	3	3	8	0	0	0	1
Soil Sciences, Other	78	34	43	0	14	1	28	0	0	0	0
Horticulture Science	73	32	39	1	6	1	28	0	0	2	1

APPENDIX TABLE A-2 (Continued)

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas								
			Total	American Indian	Asian	Black	White	Puerto Rican	Mex-ican Amer.	Other His-panic	Unkn. Race
Forest Biology	19	10	9	0	1	0	8	0	0	0	0
Forest Management	22	12	10	0	2	0	6	0	0	1	1
Wood Sci. and Pulp/Paper Tech.	18	9	9	0	5	0	3	0	0	0	1
Conservation/Renewable Nat. Res.	13	5	8	0	1	1	5	0	0	0	1
Forestry and Related Sci., Other	56	18	35	1	1	0	33	0	0	0	0
Wildlife/Range Management	64	9	54	1	3	2	46	0	0	1	1
Agricultural Sciences, General	5	3	2	0	0	1	1	0	0	0	0
Agricultural Sciences, Other	4	3	1	0	0	1	0	0	0	0	0
SOCIAL SCIENCES (INCL. PSYCH.)	6,814	1,006	5,599	38	353	275	4,617	60	56	141	59
Anthropology	396	53	325	5	16	5	278	2	3	7	9
Area Studies	28	7	18	0	2	3	10	0	0	1	2
Criminology	60	5	54	1	2	4	44	1	0	1	1
Demography/Population Studies	11	8	3	0	0	0	3	0	0	0	0
Economics	979	424	518	0	88	19	384	1	2	15	9
Econometrics	29	11	18	0	6	2	10	0	0	0	0
Geography	165	26	136	1	8	0	125	1	0	1	0
Human/Individual & Family Develop.	151	22	121	0	5	8	105	0	1	1	1
International Relations/Affairs	99	20	77	0	6	9	57	0	0	2	3
Political Science and Government	621	83	506	3	31	35	407	3	6	13	8
Public Policy Analysis	104	25	79	0	4	8	63	0	1	1	2
Sociology	516	79	420	7	44	25	324	3	4	6	7
Statistics	48	22	23	1	8	0	14	0	0	0	0
Urban Affairs/Studies	106	36	67	1	5	7	53	0	0	1	0
Social Sciences, General	26	5	18	0	1	0	16	0	0	1	0
Social Sciences, Other	135	21	111	1	8	4	88	1	2	5	2
PSYCHOLOGY	3,340	159	3,105	18	119	146	2,636	48	37	86	15
Clinical	1,325	32	1,279	8	34	74	1,088	11	14	46	4
Cognitive and Psycholinguistics	128	25	102	0	3	0	93	0	2	0	4
Comparative	3	0	3	0	0	0	3	0	0	0	0
Counseling	464	12	444	4	14	26	377	1	6	14	2
Developmental and Child	188	9	178	0	12	10	144	2	3	7	0
Experimental	128	13	114	1	5	1	107	0	0	0	0
Educational	92	7	83	0	4	4	71	1	1	2	0
Family and Marriage Counseling	52	6	45	0	2	2	41	0	0	0	0
Industrial and Organizational	162	5	156	2	7	4	128	10	1	4	0
Personality	24	1	23	1	1	1	18	2	0	0	0
Physiological/Psychobiology	80	5	75	0	6	1	59	2	4	2	1
Psychometrics	11	4	7	0	1	0	6	0	0	0	0
Quantitative	19	5	14	0	2	0	11	1	0	0	0
School	82	0	82	0	3	2	71	2	1	2	1
Social	170	12	158	0	8	6	137	3	1	3	0
Psychology, General	279	14	223	2	14	11	175	11	2	5	3
Psychology, Other	133	9	119	0	3	4	107	2	2	1	0
HUMANITIES	5,116	649	4,312	21	219	131	3,707	39	43	100	52
History, American	355	11	340	4	7	16	298	0	5	5	5
History, Asian	54	11	43	0	14	0	27	1	1	0	0
History, European	187	11	176	0	1	2	168	0	1	3	1
History/Philosophy of Sci. & Tech.	37	5	29	0	0	1	27	0	0	1	0
History, General	101	7	77	0	2	3	60	1	1	1	9
History, Other	123	26	97	0	1	3	84	1	3	3	2
Classics	72	9	63	0	4	0	58	0	0	0	1
Comparative Literature	164	36	124	0	13	0	100	1	2	5	3
Linguistics	230	107	118	1	20	4	88	1	0	3	1
Speech and Rhetorical Studies	155	7	148	2	3	4	137	0	0	0	2
Letters, General	28	2	25	0	1	0	22	1	1	0	0
Letters, Other	61	3	57	0	0	2	52	3	0	0	0
American Studies	115	9	105	2	7	7	85	0	2	0	2
Archeology	21	6	15	0	1	0	13	0	0	1	0
Art History/Criticism/Conservation	176	13	159	0	8	2	143	1	1	4	0
Music	699	107	561	5	45	12	490	0	2	5	2
Philosophy	369	46	294	0	12	6	261	8	0	2	5
Religion	317	26	288	0	13	11	259	1	1	2	1
Drama/Theater Arts	103	8	94	1	2	5	84	1	0	0	1
LANGUAGE AND LITERATURE	1,618	177	1,402	6	61	43	1,176	19	22	61	14
American	314	19	294	3	6	14	261	0	6	3	1
English	699	48	630	3	20	23	562	1	5	7	9
French	142	25	117	0	6	2	107	0	0	1	1
German	88	18	69	0	2	0	64	0	0	0	3
Italian	24	3	20	0	0	1	18	0	1	0	0
Spanish	196	34	158	0	4	3	77	15	10	49	0
Russian	37	6	31	0	0	0	31	0	0	0	0
Slavic	11	2	8	0	0	0	8	0	0	0	0
Chinese	29	6	23	0	17	0	6	0	0	0	0
Japanese	10	1	9	0	3	0	6	0	0	0	0
Hebrew	12	3	9	0	0	0	9	0	0	0	0
Arabic	6	3	3	0	0	0	3	0	0	0	0
Other Language and Literature	50	9	31	0	3	0	24	3	0	1	0
Humanities, General	39	4	24	0	2	1	19	0	0	1	1
Humanities, Other	92	18	73	0	2	9	56	0	1	3	2

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix A.
*Includes individuals who did not report their citizenship at time of doctorate.

APPENDIX TABLE A-2 (Continued)

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas								
			Total	American Indian	Asian	Black	White	Puerto Rican	Mex-ican Amer.	Other His-panic	Unkn. Race
EDUCATION	6,772	477	6,062	60	185	609	4,940	51	79	87	51
Curriculum and Instruction	896	72	796	10	21	68	645	16	6	18	12
Educational Admin. and Supervision	1,170	43	1,079	12	19	146	855	6	20	15	6
Educational Leadership	989	28	948	14	20	105	776	5	16	9	3
Educ./Instruct. Media Design	107	15	90	3	4	9	70	2	0	1	1
Educ. Stat./Research Methods	76	13	63	1	11	5	44	0	0	1	1
Educ. Assess., Test., & Meas.	32	7	23	0	3	0	20	0	0	0	0
Educational Psychology	309	27	275	3	11	18	229	1	8	1	4
School Psychology	114	1	112	1	1	4	104	1	1	0	0
Social/Phil. Found. of Educ.	125	11	109	0	7	14	87	0	0	1	0
Special Education	278	22	250	1	7	26	203	3	5	5	0
Counseling Educ./Couns. & Guidance	277	14	258	2	4	19	224	3	0	6	0
Higher Educ./Evaluation & Research	481	27	446	0	11	52	364	3	8	4	4
Pre-elementary/Early Childhood	81	11	70	0	6	10	54	0	0	0	0
Elementary Education	46	2	43	1	1	4	37	0	0	0	0
Secondary Education	34	2	32	1	1	3	25	0	0	2	0
Adult and Continuing Education	210	20	182	2	2	20	150	0	5	1	2
TEACHING FIELDS	863	113	731	4	36	44	617	7	5	14	4
Agricultural Education	32	7	23	1	1	4	14	1	0	1	1
Art Education	41	5	36	0	0	6	28	0	0	1	1
Business Education	20	4	16	0	1	2	13	0	0	0	0
English Education	57	4	53	0	4	4	43	1	0	0	1
Foreign Languages Education	44	19	25	0	6	1	13	0	1	3	1
Health Education	90	9	74	1	4	4	62	0	1	2	0
Home Economics Education	13	5	8	0	1	1	6	0	0	0	0
Technical/Industrial Arts Education	11	0	11	0	0	1	9	0	0	1	0
Mathematics Education	100	10	90	0	1	4	78	3	1	3	0
Music Education	91	6	84	0	4	3	76	1	0	0	0
Nursing Education	23	0	22	0	1	1	20	0	0	0	0
Physical Education and Coaching	101	14	85	0	6	4	74	0	0	1	0
Reading Education	66	6	58	0	1	2	52	1	1	1	0
Science Education	96	13	82	1	2	5	73	0	0	1	0
Social Science Education	12	3	9	0	0	0	9	0	0	0	0
Technical Education	24	3	18	0	1	1	15	0	1	0	0
Trade and Industrial Education	12	4	8	0	2	0	6	0	0	0	0
Teacher Ed./Spec. Acad. & Voc., Other	30	1	29	1	1	1	26	0	0	0	0
Education, General	353	24	260	4	8	31	199	3	2	1	12
Education, Other	331	25	295	1	12	31	237	1	3	8	2
PROFESSIONAL/OTHER FIELDS	2,478	561	1,834	10	146	110	1,494	13	20	23	18
BUSINESS AND MANAGEMENT	1,276	338	897	4	95	39	731	4	7	12	5
Accounting	156	32	122	0	6	2	108	0	0	4	2
Banking/Financial Support Services	114	39	74	0	18	1	55	0	0	0	0
Business Admin. and Management	393	93	276	3	22	17	228	2	1	3	0
Business/Managerial Economics	38	11	26	0	3	0	21	0	0	1	1
International Business	36	17	19	0	4	1	14	0	0	0	0
Mgmt. Info. Sys./Bus. Data Proc.	94	29	64	0	9	1	52	0	1	1	0
Marketing Management and Research	153	45	107	0	11	4	87	1	2	1	1
Operations Research	64	30	31	0	4	2	23	0	2	0	0
Organizational Behavior	108	19	89	1	4	5	77	1	0	1	0
Bus. Mgmt./Admin. Serv., General	67	17	46	0	6	4	35	0	1	0	0
Bus. Mgmt./Admin. Serv., Other	53	6	43	0	8	2	31	0	0	1	1
COMMUNICATIONS	389	77	302	0	19	24	247	1	4	0	7
Communications Research	60	7	53	0	1	2	48	0	0	0	2
Mass Communications	137	34	100	0	7	7	84	0	1	0	1
Communication Theory	37	4	33	0	0	1	29	0	3	0	0
Communications, General	81	13	63	0	7	3	51	0	0	0	2
Communications, Other	74	19	53	0	4	11	35	1	0	0	2
OTHER PROFESSIONAL FIELDS	774	137	612	6	29	45	498	8	9	11	6
Architectural Environmental Design	61	28	31	1	2	0	27	0	0	0	1
Home Economics	28	6	22	0	2	1	17	1	1	0	0
Law	26	11	11	0	0	2	7	1	0	1	0
Library Science	49	5	44	0	4	1	35	1	0	0	3
Parks/Recreation/Leisure/Fitness	29	6	22	0	4	1	17	0	0	0	0
Public Administration	104	19	81	1	5	7	65	0	2	1	0
Social Work	256	23	227	2	6	21	181	3	5	7	2
Theology/Religious Education	213	36	170	2	6	12	146	1	1	2	0
Professional Fields, General	2	1	1	0	0	0	0	1	0	0	0
Professional Fields, Other	6	2	3	0	0	0	3	0	0	0	0
OTHER FIELDS	39	9	23	0	3	2	18	0	0	0	0

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX TABLE A-3 Statistical Profile of Doctorate Recipients, by Major Field, 1996

Total All Doctorates

		1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos. and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES	ENGINEERING	Biochemistry	Other Biosciences	Biosciences Subtotal	Health Sciences	Agricultural Sciences	LIFE SCIENCES
Number in Field		**42,415**	**1,677**	**2,148**	**807**	**1,122**	**921**	**6,675**	**6,305**	**794**	**4,929**	**5,723**	**1,324**	**1,208**	**8,255**
Men	%	60.0	86.0	71.8	78.3	79.4	84.9	79.3	87.7	60.1	57.4	57.8	35.0	73.6	56.5
Women		40.0	14.0	28.2	21.7	20.6	15.1	20.7	12.3	39.9	42.6	42.2	65.0	26.4	43.5
U.S. Citizenship	%	65.4	53.5	54.4	58.4	43.5	45.7	51.6	41.1	53.8	63.3	62.0	70.5	44.2	60.7
Non-U.S., Permanent Visa		8.9	11.9	13.6	12.0	14.1	10.0	12.6	12.6	18.0	13.7	14.3	6.3	9.6	12.3
Non-U.S., Temporary Visa		22.7	31.2	28.5	25.8	39.3	40.8	32.4	43.1	26.3	20.9	21.7	20.2	44.1	24.7
Unknown		3.1	3.4	3.4	3.8	3.1	3.5	3.4	3.3	1.9	2.1	2.1	3.1	2.1	2.2
Married	%	56.8	50.2	53.8	60.5	52.4	56.0	53.8	59.5	55.0	56.1	55.9	58.2	65.0	57.6
Not Married		34.8	42.8	38.0	32.1	39.4	35.0	38.3	33.5	39.5	38.2	38.4	32.0	26.7	35.7
Unknown		8.4	7.0	8.2	7.4	8.2	9.0	7.9	7.1	5.4	5.7	5.7	9.8	8.3	6.7
Median Age at Doct.*	Yrs	33.8	30.5	30.0	33.8	30.9	32.7	31.1	31.7	30.4	31.7	31.5	38.5	34.3	32.5
Percent with Bacc. in Same Field as Doctorate	%	54.8	72.6	74.3	50.7	69.7	40.5	65.6	80.2	26.1	52.2	48.6	46.7	54.6	49.2
Percent with Masters	%	77.2	68.0	43.2	78.6	76.0	87.0	65.3	86.0	35.6	45.8	44.4	82.6	86.4	56.6
Median Time Lapse from Bacc. to Doct.*															
Total Time	Yrs	10.8	7.8	7.2	11.0	8.3	10.0	8.3	9.0	7.9	8.9	8.7	14.3	11.4	9.6
Registered Time		7.2	6.8	6.0	7.6	6.7	7.2	6.7	6.4	6.6	7.0	6.9	7.8	6.7	7.0
Postdoctoral Study Plans	%	26.1	51.9	52.0	46.0	30.0	16.2	42.6	21.9	80.5	70.8	72.1	19.0	32.2	57.8
Fellowship		13.0	19.9	23.6	20.0	14.8	6.2	18.3	7.0	49.9	41.7	42.8	10.8	9.6	32.8
Research Assoc.		9.9	29.0	26.9	24.4	10.1	8.7	21.8	13.0	22.8	19.9	20.3	5.4	21.0	18.0
Traineeship		1.0	0.7	0.4	0.7	2.4	0.7	0.9	0.9	1.0	2.2	2.0	0.5	0.6	1.6
Other Study		2.2	2.3	1.2	0.9	2.8	0.7	1.6	1.0	6.8	7.1	7.0	2.2	1.0	5.4
Planned Employment After Doctorate	%	65.1	39.3	39.2	45.5	61.2	75.4	48.7	69.6	13.6	23.3	22.0	71.1	59.3	35.3
Educ. Institution†		36.3	9.5	9.2	15.9	38.0	25.5	17.2	13.3	3.7	10.9	9.9	43.2	22.8	17.1
Industry/Business		16.7	22.8	25.8	16.7	16.9	42.2	24.7	46.0	7.4	6.1	6.3	10.5	16.6	8.5
Government		4.7	2.7	1.4	8.1	2.1	3.6	3.0	6.3	1.3	3.0	2.7	7.3	12.6	4.9
Nonprofit		3.5	0.9	0.3	1.2	0.5	1.2	0.7	1.0	0.4	1.2	1.1	6.4	2.1	2.1
Other & Unknown		4.0	3.3	2.4	3.6	3.7	2.8	3.0	3.0	0.9	2.2	2.0	3.8	5.1	2.7
Postdoc. Plans Unknown	%	8.8	8.8	8.8	8.6	8.7	8.5	8.7	8.4	5.9	5.9	5.9	9.9	8.5	6.9
Definite Postdoc. Study	%	18.0	37.9	39.6	28.9	19.3	11.7	30.6	12.9	61.2	53.2	54.3	13.0	18.0	42.4
Seeking Postdoc. Study		8.0	14.0	12.4	17.1	10.7	4.5	12.0	9.0	19.3	17.5	17.8	6.0	14.2	15.4
Definite Employment		43.2	21.8	25.5	29.6	37.7	53.1	30.9	44.7	7.4	14.4	13.5	50.5	36.9	22.8
Seeking Employment		21.9	17.5	13.6	15.9	23.5	22.3	17.7	24.9	6.2	8.9	8.5	20.6	22.4	12.5
Employment Commitments After Doctorate		**18,327**	**366**	**548**	**239**	**423**	**489**	**2,065**	**2,821**	**59**	**711**	**770**	**669**	**446**	**1,885**
Primary Activity‡															
R & D	%	29.4	57.7	65.0	46.4	34.8	63.4	55.0	69.5	59.3	45.3	46.4	30.8	53.6	42.5
Teaching		37.7	19.9	22.1	23.0	48.0	22.3	27.2	11.9	13.6	28.0	26.9	42.9	21.7	31.4
Administration		12.9	2.7	2.0	4.6	1.4	2.2	2.4	2.0	1.7	3.7	3.5	11.7	4.9	6.7
Prof. Services		13.0	11.2	6.2	17.6	8.5	5.5	8.7	9.4	16.9	14.3	14.5	10.9	10.5	12.3
Other		3.6	5.5	2.9	3.8	2.8	2.9	3.4	4.2	3.4	4.5	4.4	1.9	5.2	3.7
Secondary Activity															
R & D	%	30.9	25.4	19.2	32.6	46.8	23.5	28.5	17.7	20.3	27.7	27.1	36.6	26.7	30.4
Teaching		17.2	8.2	4.9	14.6	17.3	17.6	12.2	13.2	15.3	17.7	17.5	20.2	17.3	18.4
Administration		13.0	19.9	22.6	12.6	5.4	11.7	14.9	17.2	16.9	13.5	13.8	13.9	14.3	14.0
Prof. Services		11.3	9.8	14.8	11.3	8.7	10.6	11.3	13.7	6.8	10.8	10.5	14.6	13.2	12.6
Other		3.2	2.2	2.7	2.9	1.9	1.6	2.2	3.7	0.0	3.0	2.7	2.1	3.1	2.6
No Secondary Activity		21.1	31.4	33.9	21.3	15.4	31.3	27.6	31.5	35.6	23.1	24.0	10.8	21.3	18.7
Activity(ies) Unknown	%	3.4	3.0	1.8	4.6	4.5	3.7	3.3	2.9	5.1	4.2	4.3	1.8	4.0	3.3
Region of Employment After Doctorate§															
New England	%	6.0	5.7	7.5	4.6	8.5	6.5	6.8	5.7	6.8	7.5	7.4	4.6	2.5	5.3
Middle Atlantic		13.5	14.8	17.9	5.4	14.4	18.0	15.2	14.0	25.4	10.4	11.6	13.2	4.9	10.6
East No. Central		13.5	12.0	20.6	7.9	14.2	8.0	13.3	12.9	6.8	13.5	13.0	13.0	9.2	12.1
West No. Central		6.9	3.8	5.5	5.4	8.3	5.5	5.8	3.8	1.7	5.5	5.2	5.8	11.0	6.8
South Atlantic		15.7	13.4	15.7	15.5	13.7	12.7	14.1	10.6	18.6	16.2	16.4	20.0	13.7	17.0
East So. Central		4.5	2.7	3.6	2.5	4.5	1.0	2.9	2.1	0.0	5.2	4.8	6.0	3.4	4.9
West So. Central		8.5	5.7	6.4	14.6	6.4	5.3	7.0	9.0	5.1	6.3	6.2	8.4	6.1	6.9
Mountain		5.7	9.3	3.3	10.0	5.7	3.5	5.7	5.6	1.7	5.1	4.8	5.5	4.7	5.0
Pacific & Insular		13.0	22.1	11.3	16.3	12.3	26.0	17.5	21.1	15.3	12.8	13.0	10.6	8.1	11.0
U.S., Region Unknown		1.2	0.8	1.1	0.0	0.2	1.2	0.8	1.2	5.1	1.7	1.9	0.3	0.7	1.1
Foreign		11.4	9.6	6.9	16.7	10.9	12.3	10.6	14.0	13.6	15.8	15.6	12.4	35.7	19.2
Region Unknown		0.2	0.0	0.2	0.8	0.9	0.0	0.3	0.1	0.0	0.1	0.1	0.1	0.2	0.2

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences. Refer also to the explanatory note for this table.
*The method of median computation has been revised. See page 62 for more information.
†Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.
‡Includes only recipients with definite employment plans.
§Includes only recipients with definite employment plans. See Table A-3 explanatory note for regional definitions.

APPENDIX TABLE A-3 (Continued)

Psychology	Economics	Anthropology and Sociology	Political Sci./ Internat'l Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. and Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Fields ‖	PROFESSIONAL/ OTHER FIELDS	TOTAL NONSCIENCES
3,340	**1,008**	**912**	**720**	**834**	**6,814**	**28,049**	**857**	**1,013**	**605**	**2,641**	**5,116**	**6,772**	**1,276**	**1,163**	**39**	**2,478**	**14,366**
33.9	77.6	46.5	69.7	55.0	48.4	67.0	58.7	39.4	39.7	54.1	50.3	38.3	70.2	52.4	51.3	61.5	46.6
66.1	22.4	53.5	30.3	45.0	51.6	33.0	41.3	60.6	60.3	45.9	49.7	61.7	29.8	47.6	48.7	38.5	53.4
90.1	42.9	73.4	72.2	67.6	76.2	57.9	84.1	87.4	60.0	75.4	77.4	86.6	62.9	72.8		67.4	80.0
2.8	10.3	8.3	8.8	7.9	5.9	10.9	4.8	3.8	19.0	6.0	6.9	2.9	7.4	5.8		6.6	5.0
4.8	43.2	14.5	14.3	21.2	14.8	28.2	8.3	6.6	18.2	15.2	12.7	7.0	26.5	18.4		22.6	11.7
2.3	3.7	3.8	4.7	3.2	3.1	3.0	2.8	2.2	2.8	3.5	3.0	3.4	3.2	3.0		3.3	3.3
50.2	54.6	56.1	54.3	57.4	52.9	56.0	57.1	51.9	52.2	51.5	52.6	61.9	61.0	60.3		60.2	58.3
39.9	38.0	35.4	35.3	31.3	37.5	36.2	35.5	40.7	40.7	39.3	39.1	27.5	28.9	30.9		29.8	32.0
9.9	7.4	8.4	10.4	11.3	9.6	7.8	7.5	7.4	7.1	9.2	8.3	10.6	10.1	8.9		10.0	9.7
33.2	32.1	35.8	33.7	36.8	33.7	32.2	34.8	35.3	34.4	35.4	35.2	44.3	36.4	39.6		37.9	39.9
63.1	57.8	44.7	49.7	21.7	53.4	61.1	55.2	65.6	49.8	53.5	55.8	36.1	35.1	30.3		32.4	42.5
78.8	75.5	88.6	83.3	88.4	81.3	71.3	87.6	87.8	87.8	85.8	86.7	90.9	83.1	92.9		87.4	88.8
9.5	9.4	12.2	10.5	12.9	10.3	9.3	11.5	11.5	11.0	12.0	11.8	20.2	12.7	15.5		13.8	15.5
7.2	6.8	8.6	7.7	7.8	7.4	6.9	8.6	8.3	8.0	8.4	8.3	8.2	7.3	8.0		7.5	8.1
27.6	9.2	15.0	10.4	11.8	19.5	36.8	8.9	6.4	7.3	7.8	7.6	3.4	3.4	5.1		4.3	5.1
18.7	3.6	8.1	5.8	5.6	12.1	18.5	5.8	3.9	2.5	4.1	4.2	1.2	1.2	2.3		1.8	2.4
4.4	3.9	4.7	2.6	4.2	4.2	14.4	0.9	0.5	1.0	1.1	0.9	1.1	1.2	0.9		1.2	1.1
2.6	0.7	0.4	0.4	0.5	1.5	1.3	0.2	0.4	0.8	0.3	0.4	0.4	0.2	0.8		0.4	0.4
2.0	1.1	1.8	1.5	1.4	1.7	2.6	1.9	1.6	3.0	2.2	2.1	0.8	0.9	1.0		0.9	1.3
62.4	82.9	76.0	78.2	77.6	70.8	54.8	82.5	85.8	85.1	82.5	83.5	86.3	86.1	86.8		85.9	85.2
24.0	47.0	51.8	54.2	49.4	37.4	21.2	64.8	71.9	77.0	61.3	65.9	67.8	64.7	54.9		59.5	65.7
14.9	14.1	6.9	5.6	9.7	12.1	21.7	5.1	5.2	2.1	6.2	5.4	6.1	15.3	10.2		13.0	7.0
6.6	11.1	4.5	6.1	7.2	7.0	5.3	2.1	0.5	1.0	1.1	1.1	5.2	2.4	5.0		3.6	3.5
11.1	2.9	4.9	4.2	5.2	7.6	2.9	2.8	1.2	0.8	8.3	5.1	3.8	1.1	11.6		6.1	4.6
5.8	7.8	7.9	8.2	6.1	6.7	3.8	7.7	7.0	4.1	5.6	6.0	3.5	2.5	5.0		3.8	4.5
10.0	7.8	9.0	11.4	10.7	9.8	8.4	8.6	7.8	7.6	9.7	8.9	10.3	10.6	8.2		9.8	9.7
20.5	4.9	9.2	4.9	6.1	13.3	25.9	5.8	3.4	3.8	3.8	4.0	1.8	1.8	2.8		2.4	2.7
7.1	4.4	5.8	5.6	5.6	6.2	10.9	3.0	3.1	3.5	4.0	3.6	1.6	1.6	2.3		1.9	2.4
40.7	58.9	43.2	48.5	51.0	45.8	35.3	46.3	49.5	54.9	49.3	49.5	64.1	64.5	62.3		62.9	58.7
21.7	24.0	32.8	29.7	26.6	25.0	19.6	36.2	36.3	30.2	33.2	34.0	22.2	21.6	24.4		23.0	26.5
1,359	**594**	**394**	**349**	**425**	**3,121**	**9,892**	**397**	**501**	**332**	**1,302**	**2,532**	**4,344**	**823**	**725**		**1,559**	**8,435**
14.9	47.6	28.9	18.3	28.0	25.1	47.3	6.8	3.8	7.8	7.8	6.9	5.6	27.9	9.0		19.0	8.5
20.7	31.6	49.5	58.7	46.8	34.2	25.8	76.3	82.0	84.6	67.3	73.9	38.1	52.9	54.9		53.7	51.7
5.6	3.0	4.8	8.0	8.9	5.7	4.2	3.3	4.0	2.1	6.1	4.7	39.3	6.0	11.3		8.5	23.2
54.1	7.9	9.4	4.6	10.1	28.1	15.7	4.3	3.6	1.2	9.3	6.3	11.2	6.0	16.7		11.0	9.7
2.6	5.1	3.0	4.3	3.3	3.4	3.7	4.3	2.0	1.5	6.1	4.4	2.3	3.8	5.1		4.6	3.4
28.0	35.2	46.7	47.3	42.8	35.9	28.1	60.2	49.7	59.0	41.1	48.1	22.5	46.5	40.0		43.4	34.1
18.4	25.8	20.8	17.8	19.8	20.2	16.2	6.5	7.6	8.7	15.4	11.6	20.4	27.8	19.6		23.8	18.4
14.6	8.4	11.7	8.0	9.2	11.6	14.3	6.5	11.2	9.3	13.1	11.2	12.8	5.6	10.5		7.9	11.4
10.2	7.2	3.3	4.0	9.6	8.0	11.2	3.8	4.8	3.6	7.8	6.0	15.7	5.7	10.3		8.0	11.4
4.1	2.9	1.8	2.3	2.4	3.1	3.0	2.0	4.2	3.3	6.7	5.0	2.9	1.8	2.9		2.4	3.4
22.5	15.8	11.4	14.6	13.4	17.7	23.9	15.9	18.0	13.3	12.5	14.2	22.1	9.0	13.7		11.4	17.8
2.1	4.7	4.3	6.0	2.8	3.4	3.3	5.0	4.6	2.7	3.4	3.8	3.5	3.5	3.0		3.3	3.5
5.6	4.7	8.4	8.6	7.8	6.4	6.1	8.3	7.6	12.3	7.3	8.2	4.4	8.1	5.2		6.7	6.0
19.8	10.9	12.9	13.5	10.6	15.3	14.0	14.6	16.6	13.3	12.7	13.9	12.2	11.7	14.3		12.9	12.8
14.1	9.3	14.0	13.8	13.6	13.0	12.9	15.6	13.4	16.3	13.9	14.4	14.7	13.2	11.7		12.4	14.2
8.1	3.2	5.8	3.7	4.7	5.9	5.4	7.8	8.2	7.5	9.2	8.6	9.1	5.8	7.7		6.7	8.5
14.7	22.2	14.7	21.5	17.2	17.2	14.7	16.4	16.2	16.6	14.0	15.1	18.7	16.3	13.2		14.9	16.9
4.1	2.2	3.6	4.0	5.6	3.9	3.4	5.0	6.6	4.2	4.1	4.8	6.7	5.2	5.1		5.1	5.8
9.3	4.9	7.4	8.0	7.3	7.8	7.8	6.8	7.8	6.0	8.8	7.9	9.9	10.3	10.9		10.5	9.4
7.1	3.2	6.6	4.6	7.1	6.0	5.6	5.3	4.2	5.4	4.9	4.9	6.7	4.5	5.7		5.0	5.9
12.4	7.9	12.2	7.7	11.3	10.9	15.2	11.8	11.6	10.5	10.8	11.1	10.8	9.5	7.9		8.7	10.5
1.5	1.2	0.8	1.4	0.7	1.2	1.1	1.8	2.4	0.6	1.5	1.6	1.3	0.5	1.4		1.0	1.3
3.3	30.3	13.2	13.2	13.9	12.2	13.7	6.3	5.6	7.2	12.4	9.4	5.5	14.8	16.6		15.8	8.6
0.1	0.0	0.5	0.0	0.2	0.1	0.2	0.3	0.0	0.0	0.2	0.2	0.2	0.0	0.3		0.1	0.2

‖ Statistics are not presented for this group because too few records contained the specific data.

APPENDIX TABLE A-3 (Continued)

Doctorates: Men

		1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos. and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES	ENGINEERING	Biochemistry	Other Biosciences	Biosciences Subtotal	Health Sciences	Agricultural Sciences	LIFE SCIENCES
Total Men		**25,470**	**1,443**	**1,543**	**632**	**891**	**782**	**5,291**	**5,529**	**477**	**2,831**	**3,308**	**463**	**889**	**4,660**
Men as a Percent of Total Doctorates	%	60.0	86.0	71.8	78.3	79.4	84.9	79.3	87.7	60.1	57.4	57.8	35.0	73.6	56.5
U.S. Citizenship	%	57.7	53.1	54.1	56.2	43.0	44.0	50.7	39.4	56.4	59.8	59.3	53.3	42.6	55.5
Non-U.S., Permanent Visa		9.7	11.2	12.1	12.8	13.2	10.0	11.8	12.4	16.4	13.6	14.0	9.7	9.0	12.6
Non-U.S., Temporary Visa		29.0	32.1	30.1	27.1	40.2	42.8	33.9	45.0	25.6	23.9	24.2	32.6	46.2	29.2
Unknown		3.5	3.6	3.6	4.0	3.6	3.2	3.6	3.3	1.7	2.7	2.6	4.3	2.1	2.7
Married	%	59.8	50.9	55.3	62.8	52.5	57.7	54.9	60.0	57.4	58.9	58.7	62.2	70.5	61.3
Not Married		31.9	42.1	36.4	29.4	39.4	33.9	37.3	33.0	37.5	35.0	35.3	26.8	22.0	32.0
Unknown		8.4	6.9	8.3	7.8	8.1	8.4	7.8	7.0	5.0	6.1	6.0	11.0	7.4	6.8
Median Age at Doctorate*	Yrs	33.2	30.6	30.3	33.9	31.0	32.7	31.2	31.8	30.9	32.0	31.8	35.1	34.6	32.5
Percent with Bacc. in Same Field as Doctorate	%	57.6	72.3	75.3	52.2	69.0	41.6	65.7	80.9	25.8	49.8	46.3	29.6	59.1	47.1
Percent with Masters	%	76.2	66.8	44.7	79.6	75.5	86.7	66.3	86.6	35.0	47.9	46.1	73.7	87.2	56.7
Median Time Lapse from Bacc. to Doct.*															
Total Time	Yrs	10.2	7.8	7.4	11.0	8.4	10.0	8.5	9.1	8.0	9.0	8.9	11.4	11.5	9.5
Registered Time		7.0	6.8	6.1	7.6	6.9	7.2	6.8	6.5	6.7	7.0	7.0	7.6	6.7	6.9
Postdoctoral Study Plans	%	28.2	52.3	54.4	43.8	29.7	16.4	42.8	21.8	81.1	70.2	71.8	25.3	32.4	59.6
Fellowship		13.1	19.2	24.0	19.5	14.8	6.0	18.0	6.9	51.8	39.0	40.9	14.3	9.0	32.1
Research Assoc.		11.9	30.1	28.7	22.8	9.2	9.1	22.2	13.1	21.0	20.8	20.8	6.9	21.9	19.7
Traineeship		1.0	0.8	0.4	0.5	2.6	0.6	0.9	0.9	0.8	2.6	2.3	1.1	0.7	1.9
Other Study		2.2	2.1	1.3	1.1	3.1	0.6	1.7	0.9	7.5	7.8	7.7	3.0	0.8	5.9
Planned Employment After Doctorate	%	62.8	38.9	37.1	47.2	61.5	75.4	48.6	69.8	13.2	23.2	21.8	63.1	60.3	33.2
Educ. Institution†		30.8	8.9	8.0	16.3	37.8	23.7	16.6	12.7	4.2	10.7	9.7	33.3	22.9	14.6
Industry/Business		20.6	23.1	25.4	17.9	17.4	44.1	25.3	46.6	6.7	6.6	6.6	12.7	16.9	9.2
Government		5.2	2.8	1.5	8.4	2.2	4.1	3.2	6.5	1.3	3.3	3.0	10.6	13.3	5.7
Nonprofit		2.9	0.9	0.1	1.3	0.6	1.0	0.7	1.0	0.4	1.3	1.2	4.1	2.0	1.6
Other & Unknown		3.3	3.1	2.1	3.3	3.5	2.6	2.8	3.0	0.6	1.4	1.3	2.4	5.2	2.1
Postdoc. Plans Unknown	%	9.0	8.9	8.4	9.0	8.8	8.2	8.6	8.4	5.7	6.6	6.4	11.7	7.3	7.1
Definite Postdoc. Study	%	19.5	37.8	42.5	27.8	18.9	12.3	31.0	12.8	62.1	53.9	55.1	17.3	17.7	44.2
Seeking Postdoc. Study		8.6	14.4	11.9	16.0	10.9	4.1	11.8	9.1	19.1	16.2	16.7	8.0	14.7	15.4
Definite Employment		41.6	21.1	23.7	31.0	37.4	53.3	30.5	44.9	7.8	15.0	14.0	47.1	38.2	21.9
Seeking Employment		21.2	17.8	13.5	16.1	24.1	22.1	18.0	24.9	5.5	8.2	7.8	16.0	22.0	11.4
Employment Commitments After Doctorate		**10,594**	**304**	**365**	**196**	**333**	**417**	**1,615**	**2,482**	**37**	**425**	**462**	**218**	**340**	**1,020**
Primary Work Activity‡															
R & D	%	37.8	59.2	67.1	48.5	36.3	65.7	56.7	70.0	62.2	48.5	49.6	45.0	54.4	50.2
Teaching		32.5	17.8	20.3	21.4	46.5	19.7	25.2	11.3	10.8	24.9	23.8	30.3	20.3	24.0
Administration		10.7	2.6	2.5	4.1	1.5	1.7	2.3	2.2	0.0	3.3	3.0	7.3	4.7	4.5
Prof. Services		11.3	11.8	5.5	16.8	8.1	6.5	8.9	9.3	18.9	15.3	15.6	12.8	12.1	13.8
Other		4.0	5.3	3.3	4.1	3.0	3.1	3.7	4.1	5.4	3.5	3.7	2.3	4.4	3.6
Secondary Activity															
R & D	%	29.0	23.7	18.4	32.1	45.0	22.5	27.6	17.4	16.2	26.8	26.0	31.7	25.9	27.2
Teaching		17.2	7.9	4.7	14.8	19.2	17.5	12.8	12.9	21.6	19.3	19.5	22.0	16.5	19.0
Administration		14.0	21.1	24.4	12.2	5.4	11.5	15.0	17.7	16.2	15.1	15.2	17.9	15.9	16.0
Prof. Services		11.4	9.9	14.5	12.2	9.3	11.3	11.5	14.3	8.1	11.5	11.3	11.9	13.5	12.2
Other		2.8	2.3	2.5	2.6	1.5	1.4	2.0	3.5	0.0	2.8	2.6	0.9	3.8	2.6
No Secondary Activity		21.9	31.9	34.2	20.9	15.0	32.4	27.7	31.0	35.1	20.0	21.2	13.3	20.3	19.2
Activity(ies) Unknown	%	3.7	3.3	1.4	5.1	4.5	3.4	3.3	3.1	2.7	4.5	4.3	2.3	4.1	3.8
Region of Employment After Doctorate§															
New England	%	5.8	4.9	7.4	4.1	9.0	6.5	6.6	5.7	8.1	7.5	7.6	4.1	2.1	5.0
Middle Atlantic		12.5	15.1	17.5	4.1	14.7	18.9	15.2	13.4	18.9	9.9	10.6	11.5	4.7	8.8
East No. Central		12.7	12.2	21.4	5.1	15.3	7.2	12.8	12.7	8.1	12.7	12.3	10.1	8.5	10.6
West No. Central		6.5	3.9	5.8	5.6	8.1	5.8	5.9	3.6	2.7	5.2	5.0	7.8	11.5	7.7
South Atlantic		14.4	12.5	12.9	15.3	12.9	13.4	13.3	10.3	18.9	15.8	16.0	22.5	12.1	16.1
East So. Central		4.2	3.0	4.1	3.1	3.9	1.0	2.9	1.9	0.0	5.4	5.0	6.4	3.5	4.8
West So. Central		8.7	6.2	7.7	16.3	6.6	4.1	7.3	9.2	8.1	5.2	5.4	8.3	6.5	6.4
Mountain		5.7	9.2	2.5	10.2	4.8	3.4	5.4	5.6	2.7	4.7	4.5	2.8	5.9	4.6
Pacific & Insular		13.7	23.4	11.2	16.8	12.3	26.1	18.3	21.7	13.5	13.4	13.4	7.8	7.4	10.2
U.S., Region Unknown		1.0	0.3	0.8	0.0	0.0	1.2	0.6	1.2	5.4	1.9	2.2	0.0	0.9	1.3
Foreign		14.5	9.2	8.5	18.4	11.1	12.5	11.4	14.7	13.5	18.1	17.7	18.3	36.8	24.2
Region Unknown		0.2	0.0	0.3	1.0	1.2	0.0	0.4	0.1	0.0	0.2	0.2	0.5	0.3	0.3

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences. Refer also to the explanatory note for this table.
*The method of median computation has been revised. See page 62 for more information.
†Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.
‡Includes only recipients with definite employment plans.
§Includes only recipients with definite employment plans. See Table A-3 explanatory note for regional definitions.

APPENDIX TABLE A-3 (Continued)

Psychology	Economics	Anthropology and Sociology	Political Sci./ Internat'l Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. and Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Fields ‖	PROFESSIONAL/ OTHER FIELDS	TOTAL NONSCIENCES
1,133	**782**	**424**	**502**	**459**	**3,300**	**18,780**	**503**	**399**	**240**	**1,430**	**2,572**	**2,593**	**896**	**609**	**20**	**1,525**	**6,690**
33.9	77.6	46.5	69.7	55.0	48.4	67.0	58.7	39.4	39.7	54.1	50.3	38.3	70.2	52.4	51.3	61.5	46.6
87.5	39.8	68.2	69.3	62.3	67.4	51.5	83.1	85.5	61.2	73.4	76.0	82.9	56.2	67.5		60.6	75.2
2.3	10.5	7.8	9.8	8.1	6.9	11.3	4.6	3.8	16.2	6.1	6.4	3.4	7.6	5.9		7.0	5.4
7.5	45.5	18.6	15.7	26.4	21.8	33.9	8.9	7.8	18.8	16.4	13.8	9.3	32.4	23.0		28.6	15.5
2.7	4.2	5.4	5.2	3.3	3.9	3.3	3.4	3.0	3.8	4.1	3.8	4.4	3.8	3.6		3.9	4.0
52.4	54.7	60.6	56.6	63.0	56.1	58.2	61.6	56.1	51.2	55.6	56.5	70.4	65.4	68.6		66.4	64.1
36.5	37.6	29.0	32.3	25.9	33.7	34.0	29.8	37.6	41.2	35.2	35.1	18.3	23.3	21.0		22.5	25.7
11.1	7.7	10.4	11.2	11.1	10.2	7.7	8.5	6.3	7.5	9.2	8.5	11.3	11.3	10.3		11.1	10.2
33.5	32.3	35.9	33.7	36.5	33.8	32.2	34.2	35.0	34.0	35.4	35.0	43.7	36.3	38.8		37.2	38.4
63.5	57.2	43.4	50.2	25.9	52.2	63.2	58.4	66.4	47.1	56.2	57.3	31.0	34.5	33.3		33.7	41.7
76.6	73.8	85.4	84.3	87.4	79.7	72.2	88.1	86.5	86.2	84.6	85.7	89.9	82.3	92.1		86.0	87.4
9.5	9.4	12.4	10.4	12.5	10.3	9.2	11.0	11.4	10.7	12.0	11.5	19.3	12.5	14.6		13.2	14.2
7.3	6.8	8.5	7.6	7.9	7.4	6.8	8.4	8.0	7.9	8.3	8.3	8.3	7.3	8.0		7.5	8.0
28.0	10.1	16.5	11.0	12.6	17.5	36.4	8.7	8.3	7.9	6.7	7.5	3.5	3.0	5.4		4.1	5.1
19.1	3.8	8.7	6.6	7.0	10.5	16.9	6.0	5.0	1.7	3.5	4.0	1.2	0.9	2.0		1.3	2.3
5.1	4.2	5.4	2.4	3.7	4.3	15.7	0.8	0.3	0.8	1.1	0.9	1.2	1.3	1.5		1.5	1.2
2.1	0.9	0.2	0.6	0.2	1.1	1.2	0.4	1.0	1.2	0.3	0.5	0.4	0.2	1.0		0.5	0.5
1.7	1.2	2.1	1.4	1.7	1.6	2.5	1.6	2.0	4.2	1.8	2.0	0.7	0.6	1.0		0.7	1.2
61.4	81.5	72.4	76.3	76.7	72.0	55.1	81.7	84.2	85.4	83.4	83.4	85.2	85.6	84.7		85.0	84.5
25.1	44.5	50.5	52.0	44.9	39.8	19.0	63.0	72.7	78.3	61.0	64.8	66.8	62.9	52.1		58.1	64.0
14.7	14.3	6.6	5.8	12.2	11.9	25.2	6.0	5.3	2.1	6.2	5.6	6.4	16.6	8.2		13.4	7.7
8.1	12.1	5.2	6.6	10.7	8.8	5.8	2.4	0.5	0.4	1.3	1.3	5.8	2.9	4.9		3.7	3.6
10.0	3.2	4.2	3.8	4.8	6.0	1.9	2.6	2.0	0.8	10.1	6.5	3.7	0.8	16.1		7.0	5.5
3.5	7.3	5.9	8.2	4.1	5.5	3.2	7.8	3.8	3.8	4.8	5.1	2.6	2.3	3.4		2.9	3.6
10.6	8.4	11.1	12.7	10.7	10.5	8.5	9.5	7.5	6.7	9.9	9.1	11.3	11.4	9.9		10.9	10.4
20.6	5.2	9.9	4.8	6.5	11.2	25.4	6.2	4.3	5.4	3.7	4.4	1.9	1.8	2.8		2.2	3.0
7.4	4.9	6.6	6.2	6.1	6.3	10.9	2.6	4.0	2.5	3.0	3.0	1.5	1.2	2.6		1.8	2.2
41.2	57.3	42.7	46.6	51.2	47.4	35.6	41.7	48.4	55.4	49.6	48.4	65.7	64.7	62.2		63.1	58.5
20.2	24.2	29.7	29.7	25.5	24.5	19.5	40.0	35.8	30.0	33.8	35.0	19.5	20.9	22.5		21.9	26.0
467	**448**	**181**	**234**	**235**	**1,565**	**6,682**	**210**	**193**	**133**	**709**	**1,245**	**1,704**	**580**	**379**		**963**	**3,912**
16.5	46.9	32.0	20.5	31.5	29.8	54.4	8.1	4.1	7.5	7.3	7.0	4.8	29.0	8.4		20.8	9.4
22.9	30.6	49.7	55.1	43.0	36.0	22.4	72.4	80.8	85.7	65.3	71.1	33.2	50.7	54.4		52.0	49.9
7.3	4.0	4.4	7.7	6.8	6.0	3.5	3.8	3.6	3.0	6.3	5.1	45.2	5.7	10.3		7.5	23.2
49.0	8.5	6.6	4.7	11.9	20.3	12.5	5.2	3.1	0.8	10.4	7.4	10.2	6.4	16.6		10.6	9.4
2.6	5.1	3.3	4.7	3.8	3.9	3.9	4.8	2.1	0.8	7.3	5.4	2.4	4.5	6.6		5.4	4.1
31.9	35.0	44.8	43.6	40.0	37.3	26.0	57.1	51.8	60.9	37.2	45.4	21.1	44.5	38.3		42.1	34.0
16.7	25.4	22.7	18.8	20.0	20.7	15.7	8.6	6.7	9.0	16.1	12.6	22.4	29.0	18.7		24.8	19.9
14.3	8.9	16.0	9.0	9.4	11.4	15.3	7.6	12.4	12.0	14.1	12.5	12.7	6.9	11.6		8.8	11.7
10.9	7.1	1.7	4.7	11.1	7.9	11.8	4.3	4.1	3.0	8.9	6.7	15.3	5.3	12.1		8.0	10.8
2.6	2.9	1.1	1.3	1.3	2.1	2.7	1.9	4.1	1.5	7.1	5.1	2.3	1.6	1.8		1.7	3.1
21.8	15.6	9.9	15.4	15.3	16.7	25.1	14.8	14.5	11.3	13.4	13.6	22.0	9.0	13.7		10.9	16.6
1.7	4.9	3.9	7.3	3.0	3.9	3.5	5.7	6.2	2.3	3.2	4.0	4.1	3.8	3.7		3.7	4.0
5.1	4.2	7.7	8.5	6.0	5.8	5.8	9.0	6.7	8.3	6.8	7.3	4.2	7.9	4.7		6.6	5.8
16.5	11.8	12.7	11.1	10.6	13.0	13.0	14.3	14.5	10.5	11.8	12.5	11.2	11.6	11.3		11.4	11.7
12.6	10.0	12.2	12.0	14.5	12.0	12.2	13.8	12.4	20.3	12.4	13.5	14.6	12.9	10.6		11.9	13.6
10.1	2.9	7.2	3.4	5.1	5.9	5.3	8.1	7.8	12.8	10.0	9.6	9.2	4.8	6.1		5.3	8.4
14.8	20.5	12.2	24.4	18.3	18.1	13.7	14.8	17.6	16.5	13.1	14.5	16.8	15.7	12.9		14.7	15.5
4.3	1.6	5.0	4.3	5.1	3.7	3.0	4.8	9.8	4.5	4.8	5.5	7.3	5.3	4.5		5.0	6.2
8.4	3.8	6.1	7.3	7.2	6.5	7.7	9.0	8.3	6.0	10.3	9.3	10.3	10.7	14.8		12.3	10.5
7.9	3.8	7.7	4.7	6.8	6.1	5.5	6.2	4.7	1.5	4.9	4.7	7.5	4.7	4.7		4.7	5.9
13.7	6.7	10.5	6.0	8.1	9.3	16.2	10.5	9.3	7.5	10.3	9.9	10.0	9.0	6.9		8.1	9.5
1.1	1.1	0.0	2.1	0.9	1.1	1.0	1.4	1.6	0.8	1.4	1.4	1.0	0.5	1.1		0.7	1.0
5.6	33.5	18.8	16.2	17.0	18.4	16.2	7.6	7.3	11.3	13.8	11.5	7.6	16.9	22.2		19.1	11.7
0.0	0.0	0.0	0.0	0.4	0.1	0.2	0.5	0.0	0.0	0.3	0.2	0.2	0.0	0.3		0.1	0.2

‖ Statistics are not presented for this group because too few records contained the specific data.

APPENDIX TABLE A-3 (Continued)

Doctorates: Women

		1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos. and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES	ENGINEERING	Biochemistry	Other Biosciences	Biosciences Subtotal	Health Sciences	Agricultural Sciences	LIFE SCIENCES
Total Women		**16,945**	**234**	**605**	**175**	**231**	**139**	**1,384**	**776**	**317**	**2,098**	**2,415**	**861**	**319**	**3,595**
Women as a Percent of Total Doctorates	%	40.0	14.0	28.2	21.7	20.6	15.1	20.7	12.3	39.9	42.6	42.2	65.0	26.4	43.5
U.S. Citizenship	%	77.0	56.4	55.0	66.3	45.5	55.4	55.1	53.5	49.8	68.0	65.6	79.7	48.6	67.5
Non-U.S., Permanent Visa		7.6	15.8	17.5	9.1	17.3	10.1	15.4	13.9	20.5	13.9	14.7	4.4	11.3	12.0
Non-U.S., Temporary Visa		13.1	25.6	24.5	21.1	35.9	29.5	26.7	29.4	27.4	16.9	18.3	13.5	38.2	18.9
Unknown		2.4	2.1	3.0	3.4	1.3	5.0	2.8	3.2	2.2	1.2	1.4	2.4	1.9	1.7
Married	%	52.3	45.7	49.8	52.0	51.9	46.8	49.4	55.5	51.4	52.3	52.2	56.0	49.5	52.9
Not Married		39.3	46.6	42.1	41.7	39.4	41.0	42.3	37.0	42.6	42.6	42.6	34.8	39.8	40.5
Unknown		8.5	7.7	8.1	6.3	8.7	12.2	8.3	7.5	6.0	5.1	5.3	9.2	10.7	6.7
Median Age at Doct.*	Yrs	35.4	30.3	29.3	33.3	30.6	32.3	30.3	30.8	29.8	31.3	31.0	40.8	33.6	32.4
Percent with Bacc. in Same Field as Doctorate	%	50.6	74.4	71.6	45.1	72.3	34.5	65.1	74.9	26.5	55.5	51.7	55.9	42.0	51.8
Percent with Masters	%	78.7	75.2	39.3	74.9	77.9	88.5	61.3	82.1	36.6	42.9	42.0	87.3	84.3	56.6
Median Time Lapse from Bacc. to Doct.*															
Total Time	Yrs	12.0	7.8	6.8	11.0	8.0	9.6	7.9	8.3	7.6	8.7	8.5	16.0	11.0	9.9
Registered Time		7.5	6.7	5.8	8.0	6.2	7.2	6.3	6.3	6.3	6.9	6.9	8.0	7.0	7.0
Postdoctoral Study Plans	%	22.9	49.6	46.0	53.7	31.2	15.1	42.0	22.4	79.5	71.6	72.6	15.6	31.7	55.3
Fellowship		13.0	23.9	22.3	21.7	14.7	7.2	19.7	7.3	47.0	45.2	45.4	8.9	11.3	33.7
Research Assoc.		6.9	21.8	22.1	30.3	13.4	6.5	20.1	12.8	25.6	18.6	19.5	4.6	18.5	15.9
Traineeship		0.9	0.4	0.5	1.7	1.7	0.7	0.9	0.8	1.3	1.6	1.6	0.2	0.3	1.1
Other Study		2.1	3.4	1.0	0.0	1.3	0.7	1.3	1.5	5.7	6.1	6.1	1.7	1.6	4.6
Planned Employment After Doctorate	%	68.6	41.9	44.3	39.4	60.2	74.8	49.0	68.7	14.2	23.4	22.2	75.5	56.4	38.0
Educ. Institution†		44.4	12.8	12.1	14.3	38.5	36.0	19.3	17.4	2.8	11.2	10.1	48.5	22.6	20.4
Industry/Business		10.8	20.9	26.9	12.6	15.2	31.7	22.6	41.9	8.5	5.4	5.8	9.3	16.0	7.5
Government		3.9	2.6	1.3	6.9	1.7	0.7	2.2	5.4	1.3	2.5	2.4	5.5	10.7	3.8
Nonprofit		4.3	0.9	0.8	1.1	0.4	2.2	0.9	0.6	0.3	1.0	0.9	7.7	2.2	2.6
Other & Unknown		5.2	4.7	3.1	4.6	4.3	4.3	3.9	3.4	1.3	3.2	3.0	4.5	5.0	3.5
Postdoc. Plans Unknown	%	8.6	8.5	9.8	6.9	8.7	10.1	9.0	8.9	6.3	5.0	5.2	8.9	11.9	6.7
Definite Postdoc. Study	%	15.8	38.5	32.2	32.6	21.2	8.6	29.1	13.9	59.9	52.3	53.3	10.7	18.8	40.0
Seeking Postdoc. Study		7.1	11.1	13.7	21.1	10.0	6.5	12.9	8.5	19.6	19.3	19.3	4.9	12.9	15.3
Definite Employment		45.6	26.5	30.2	24.6	39.0	51.8	32.5	43.7	6.9	13.6	12.8	52.4	33.2	24.1
Seeking Employment		22.9	15.4	14.0	14.9	21.2	23.0	16.5	25.0	7.3	9.8	9.4	23.1	23.2	13.9
Employment Commitments After Doctorate		**7,733**	**62**	**183**	**43**	**90**	**72**	**450**	**339**	**22**	**286**	**308**	**451**	**106**	**865**
Primary Activity															
R & D	%	18.0	50.0	60.7	37.2	28.9	50.0	48.9	65.8	54.5	40.6	41.6	23.9	50.9	33.5
Teaching		44.9	30.6	25.7	30.2	53.3	37.5	34.2	16.2	18.2	32.5	31.5	49.0	26.4	40.0
Administration		15.9	3.2	1.1	7.0	1.1	5.6	2.7	0.9	4.5	4.2	4.2	13.7	5.7	9.4
Prof. Services		15.2	8.1	7.7	20.9	10.0	0.0	8.2	10.6	13.6	12.9	13.0	10.0	5.7	10.5
Other		3.0	6.5	2.2	2.3	2.2	1.4	2.7	5.0	0.0	5.9	5.5	1.8	7.5	3.8
Secondary Activity															
R & D	%	33.5	33.9	20.8	34.9	53.3	29.2	31.8	19.8	27.3	29.0	28.9	39.0	29.2	34.2
Teaching		17.2	9.7	5.5	14.0	10.0	18.1	9.8	15.0	4.5	15.4	14.6	19.3	19.8	17.7
Administration		11.6	14.5	19.1	14.0	5.6	12.5	14.2	13.3	18.2	11.2	11.7	12.0	9.4	11.6
Prof. Services		11.1	9.7	15.3	7.0	6.7	6.9	10.7	9.7	4.5	9.8	9.4	16.0	12.3	13.2
Other		3.8	1.6	3.3	4.7	3.3	2.8	3.1	5.3	0.0	3.1	2.9	2.7	0.9	2.5
No Secondary Activity		19.9	29.0	33.3	23.3	16.7	25.0	27.1	35.4	36.4	27.6	28.2	9.5	24.5	18.0
Activity(ies) Unknown	%	3.0	1.6	2.7	2.3	4.4	5.6	3.3	1.5	9.1	3.8	4.2	1.6	3.8	2.8
Region of Employment After Doctorate§															
New England	%	6.3	9.7	7.7	7.0	6.7	6.9	7.6	5.9	4.5	7.3	7.1	4.9	3.8	5.5
Middle Atlantic		14.7	12.9	18.6	11.6	13.3	12.5	15.1	18.6	36.4	11.2	13.0	14.0	5.7	12.6
East No. Central		14.5	11.3	19.1	20.9	10.0	12.5	15.3	14.2	4.5	14.7	14.0	14.4	11.3	13.9
West No. Central		7.4	3.2	4.9	4.7	8.9	4.2	5.3	5.0	0.0	5.9	5.5	4.9	9.4	5.7
South Atlantic		17.5	17.7	21.3	16.3	16.7	8.3	17.3	13.3	18.2	16.8	16.9	18.8	18.9	18.2
East So. Central		4.9	1.6	2.7	0.0	6.7	1.4	2.9	3.5	0.0	4.9	4.5	5.8	2.8	5.0
West So. Central		8.3	3.2	3.8	7.0	5.6	12.5	5.8	7.1	0.0	8.0	7.5	8.4	4.7	7.6
Mountain		5.8	9.7	4.9	9.3	8.9	4.2	6.7	5.6	0.0	5.6	5.2	6.9	0.9	5.5
Pacific & Insular		12.0	16.1	11.5	14.0	12.2	25.0	14.7	16.5	18.2	11.9	12.3	12.0	10.4	11.9
U.S., Region Unknown		1.4	3.2	1.6	0.0	1.1	1.4	1.6	0.6	4.5	1.4	1.6	0.4	0.0	0.8
Foreign		7.0	11.3	3.8	9.3	10.0	11.1	7.8	9.4	13.6	12.2	12.3	9.5	32.1	13.3
Region Unknown		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences. Refer also to the explanatory note for this table.
*The method of median computation has been revised. See page 62 for more information.
†Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.
‡Includes only recipients with definite employment plans.
§Includes only recipients with definite employment plans. See Table A-3 explanatory note for regional definitions.

APPENDIX TABLE A-3 (Continued)

Psychology	Economics	Anthropology and Sociology	Political Sci./ Internat'l Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. and Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Fields ‖	PROFESSIONAL/ OTHER FIELDS	TOTAL NONSCIENCES
2,207	**226**	**488**	**218**	**375**	**3,514**	**9,269**	**354**	**614**	**365**	**1,211**	**2,544**	**4,179**	**380**	**554**	**19**	**953**	**7,676**
66.1	22.4	53.5	30.3	45.0	51.6	33.0	41.3	60.6	60.3	45.9	49.7	61.7	29.8	47.6	48.7	38.5	53.4
91.5	53.5	77.9	78.9	74.1	84.5	70.9	85.6	88.6	59.2	77.7	78.8	88.9	78.4	78.7		78.3	84.2
3.1	9.7	8.8	6.4	7.7	5.0	10.0	5.1	3.9	20.8	5.9	7.4	2.6	7.1	5.6		6.1	4.6
3.4	35.0	10.9	11.0	14.9	8.1	16.9	7.3	5.9	17.8	13.7	11.5	5.6	12.6	13.4		13.1	8.5
2.0	1.8	2.5	3.7	3.2	2.3	2.2	2.0	1.6	2.2	2.7	2.3	2.9	1.8	2.3		2.5	2.6
49.0	54.0	52.3	49.1	50.7	50.0	51.5	50.6	49.2	52.9	46.7	48.7	56.6	50.5	51.1		50.3	53.2
41.6	39.4	41.0	42.2	37.9	41.0	40.7	43.5	42.7	40.3	44.1	43.1	33.2	42.1	41.7		41.6	37.5
9.3	6.6	6.8	8.7	11.5	9.0	7.9	5.9	8.1	6.8	9.2	8.2	10.1	7.4	7.2		8.2	9.2
33.1	31.7	35.6	33.8	37.8	33.7	32.2	36.0	35.5	34.8	35.4	35.4	44.8	36.7	40.7		39.0	41.3
62.8	60.2	45.9	48.6	16.5	54.5	56.8	50.6	65.1	51.5	50.5	54.2	39.3	36.6	26.9		30.3	43.1
79.9	81.4	91.4	81.2	89.6	82.7	69.3	87.0	88.6	88.8	87.2	87.7	91.5	85.0	93.7		89.5	90.0
9.5	9.2	12.0	10.6	13.3	10.2	9.5	12.0	11.7	11.2	12.3	12.0	20.8	13.0	16.8		15.3	16.9
7.2	6.9	8.7	7.9	7.7	7.4	7.0	8.9	8.3	8.0	8.5	8.5	8.2	7.3	7.9		7.6	8.2
27.5	6.2	13.7	9.2	10.7	21.3	37.7	9.0	5.2	6.8	9.0	7.8	3.4	4.2	4.7		4.7	5.0
18.5	2.7	7.6	4.1	4.0	13.5	21.7	5.6	3.3	3.0	4.8	4.3	1.2	1.8	2.7		2.5	2.4
4.0	2.7	4.1	3.2	4.8	4.0	11.7	1.1	0.7	1.1	1.1	1.0	1.0	0.8	0.4		0.6	1.0
2.8	0.0	0.6	0.0	0.8	1.9	1.4	0.0	0.0	0.5	0.4	0.3	0.3	0.0	0.5		0.3	0.3
2.1	0.9	1.4	1.8	1.1	1.8	2.8	2.3	1.3	2.2	2.7	2.2	0.8	1.6	1.1		1.3	1.3
62.9	88.1	79.1	82.6	78.7	69.7	54.2	83.6	86.8	84.9	81.4	83.5	87.0	87.1	89.0		87.3	85.9
23.4	55.8	52.9	59.2	54.9	35.1	25.6	67.2	71.3	76.2	61.8	66.9	68.4	68.9	58.1		61.7	67.1
14.9	13.3	7.2	5.0	6.7	12.2	14.4	4.0	5.2	2.2	6.3	5.1	5.8	12.1	12.5		12.3	6.4
5.9	7.5	3.9	5.0	2.9	5.4	4.3	1.7	0.5	1.4	0.8	0.9	4.8	1.3	5.1		3.5	3.3
11.7	1.8	5.5	5.0	5.6	9.2	4.7	3.1	0.7	0.8	6.0	3.6	3.9	1.8	6.7		4.7	3.9
7.0	9.7	9.6	8.3	8.5	7.8	5.2	7.6	9.1	4.4	6.5	7.0	4.1	2.9	6.7		5.1	5.2
9.7	5.8	7.2	8.3	10.7	9.1	8.1	7.3	8.0	8.2	9.6	8.7	9.6	8.7	6.3		8.0	9.1
20.5	3.5	8.6	5.0	5.6	15.2	26.8	5.4	2.8	2.7	3.9	3.7	1.8	1.8	2.7		2.6	2.5
6.9	2.7	5.1	4.1	5.1	6.0	10.9	3.7	2.4	4.1	5.1	4.1	1.6	2.4	2.0		2.1	2.5
40.4	64.6	43.6	52.8	50.7	44.3	34.6	52.8	50.2	54.5	49.0	50.6	63.2	63.9	62.5		62.5	58.9
22.5	23.5	35.5	29.8	28.0	25.4	19.6	30.8	36.6	30.4	32.5	32.9	23.8	23.2	26.5		24.8	27.0
892	**146**	**213**	**115**	**190**	**1,556**	**3,210**	**187**	**308**	**199**	**593**	**1,287**	**2,640**	**243**	**346**		**596**	**4,523**
14.0	50.0	26.3	13.9	23.7	20.2	32.6	5.3	3.6	8.0	8.4	6.8	6.1	25.5	9.5		16.1	7.6
19.5	34.9	49.3	66.1	51.6	32.4	33.0	80.7	82.8	83.9	69.6	76.6	41.2	58.0	55.5		56.4	53.3
4.7	0.0	5.2	8.7	11.6	5.5	5.6	2.7	4.2	1.5	5.7	4.3	35.5	6.6	12.4		10.1	23.2
56.7	6.2	11.7	4.3	7.9	36.0	22.6	3.2	3.9	1.5	7.9	5.3	11.8	4.9	16.8		11.7	9.9
2.7	4.8	2.8	3.5	2.6	3.0	3.4	3.7	1.9	2.0	4.7	3.5	2.3	2.1	3.5		3.2	2.8
26.0	35.6	48.4	54.8	46.3	34.6	32.5	63.6	48.4	57.8	45.7	50.8	23.4	51.4	41.9		45.5	34.1
19.3	26.7	19.2	15.7	19.5	19.7	17.3	4.3	8.1	8.5	14.7	10.6	19.1	25.1	20.5		22.1	17.1
14.8	6.8	8.0	6.1	8.9	11.8	12.2	5.3	10.4	7.5	11.8	9.9	12.9	2.5	9.2		6.4	11.2
9.8	7.5	4.7	2.6	7.9	8.1	10.0	3.2	5.2	4.0	6.6	5.4	16.0	6.6	8.4		7.9	11.9
4.9	2.7	2.3	4.3	3.7	4.2	3.7	2.1	4.2	4.5	6.2	4.9	3.3	2.5	4.0		3.5	3.8
22.9	16.4	12.7	13.0	11.1	18.7	21.5	17.1	20.1	14.6	11.5	14.8	22.2	9.1	13.6		12.1	18.8
2.4	4.1	4.7	3.5	2.6	3.0	2.8	4.3	3.6	3.0	3.5	3.6	3.0	2.9	2.3		2.5	3.1
5.8	6.2	8.9	8.7	10.0	7.0	6.6	7.5	8.1	15.1	7.9	9.0	4.6	8.6	5.8		6.9	6.1
21.5	8.2	13.1	18.3	10.5	17.5	16.0	15.0	17.9	15.1	13.8	15.2	12.8	11.9	17.6		15.3	13.8
14.8	6.8	15.5	17.4	12.6	14.1	14.2	17.6	14.0	13.6	15.7	15.2	14.7	14.0	13.0		13.3	14.7
7.1	4.1	4.7	4.3	4.2	5.9	5.7	7.5	8.4	4.0	8.3	7.5	9.1	8.2	9.5		9.1	8.6
14.7	27.4	16.9	15.7	15.8	16.4	16.7	18.2	15.3	16.6	15.0	15.8	19.9	17.7	13.6		15.3	18.1
4.0	4.1	2.3	3.5	6.3	4.0	4.1	5.3	4.5	4.0	3.4	4.0	6.2	4.9	5.8		5.4	5.5
9.8	8.2	8.5	9.6	7.4	9.1	8.0	4.3	7.5	6.0	7.1	6.6	9.6	9.5	6.6		7.7	8.5
6.6	1.4	5.6	4.3	7.4	5.9	5.9	4.3	3.9	8.0	4.9	5.1	6.2	4.1	6.6		5.5	5.8
11.8	11.6	13.6	11.3	15.3	12.4	13.0	13.4	13.0	12.6	11.5	12.3	11.2	10.7	9.0		9.7	11.3
1.7	1.4	1.4	0.0	0.5	1.3	1.2	2.1	2.9	0.5	1.7	1.9	1.4	0.4	1.7		1.3	1.5
2.1	20.5	8.5	7.0	10.0	6.0	8.6	4.8	4.5	4.5	10.6	7.4	4.1	9.9	10.4		10.4	5.9
0.1	0.0	0.9	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.3		0.2	0.1

‖ Statistics are not presented for this group because too few records contained the specific data.

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX TABLE A-4 Statistical Profile of Doctorate Recipients, by Race/Ethnicity and Citizenship, 1996

		Total				American Indian	Asian				Black			
		Total*	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total	Total*	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total*	U.S.	Non-U.S. Perm.	Non-U.S. Temp.
Total Number		**42,415**	**27,741**	**3,765**	**9,610**	**189**	**9,821**	**1,091**	**2,606**	**6,093**	**1,837**	**1,315**	**142**	**364**
Male	%	60.0	53.0	65.9	77.0	54.5	73.4	56.3	68.5	78.5	50.8	40.7	74.6	78.6
Female		40.0	47.0	34.1	23.0	45.5	26.6	43.7	31.5	21.5	49.2	59.3	25.4	21.4
Doctoral Field														
Physical Sciences	%	15.7	12.4	22.3	22.5	7.4	22.5	16.1	25.2	22.6	6.9	5.2	10.6	11.5
Engineering		14.9	9.3	21.0	28.3	7.9	29.6	24.8	23.9	33.0	6.3	4.5	10.6	11.3
Life Sciences		19.5	18.1	27.0	21.2	16.4	23.9	26.5	29.9	20.9	15.7	10.7	23.2	30.5
Social Sciences		16.1	18.7	10.7	10.5	20.1	9.2	11.6	8.7	9.1	17.8	18.8	19.7	13.7
Humanities		12.1	14.3	9.4	6.8	11.1	4.7	8.3	4.9	3.9	9.3	9.0	8.5	10.7
Education		16.0	21.1	5.2	5.0	31.7	4.8	8.4	3.6	4.6	37.0	44.3	19.0	16.8
Professional/Other		5.8	6.0	4.4	5.8	5.3	5.3	4.1	3.9	6.0	7.1	7.5	8.5	5.5
Median Age at Doct.†	Yrs	33.8	34.8	33.6	32.4	38.0	32.7	31.6	33.3	32.4	39.6	40.2	39.6	38.2
Median Time Lapse from Bacc. to Doct.†														
Total Time	Yrs	10.8	11.1	11.4	9.8	12.0	10.3	9.0	11.6	10.0	14.1	15.3	13.5	12.7
Registered Time		7.2	7.3	7.8	6.8	7.2	7.2	7.0	7.9	7.0	7.4	7.7	7.4	6.7
Graduate School Support‡														
GI Bill	%	1.0	1.5	0.0	0.0	2.1	0.1	0.6	0.0	0.0	1.5	2.1	0.0	0.0
Other Federal§		11.7	15.6	5.1	4.3	18.5	5.1	24.9	3.6	2.2	13.4	13.7	5.6	16.2
State Government		1.4	2.0	0.7	0.4	6.3	0.6	1.1	0.7	0.4	2.7	3.5	1.4	0.5
Foreign Government		4.2	0.7	3.9	14.7	1.6	5.5	0.8	2.0	7.8	4.4	0.2	6.3	18.1
National Fellow (nonfed.)		5.0	5.8	3.7	3.9	9.5	2.9	6.0	2.9	2.4	9.7	10.0	3.5	11.5
Univ. Teaching Asst.	%	52.5	53.2	60.6	53.9	43.4	55.0	51.8	60.8	53.3	36.9	34.8	46.5	42.3
Univ. Research Asst.§		53.1	48.4	70.8	66.7	41.8	72.2	62.8	78.3	71.6	37.2	32.9	51.4	48.6
Other University		34.7	38.8	32.8	28.1	37.0	27.5	38.0	30.0	24.7	43.2	47.8	37.3	30.8
Business/Employer		11.0	14.7	5.9	3.7	14.3	4.3	12.2	4.6	2.9	10.9	12.7	9.9	5.2
Self/Family Sources		72.2	82.8	57.3	56.6	82.5	57.0	73.3	50.0	57.2	73.9	79.9	79.6	52.2
GSL (Stafford) Loan	%	23.1	34.2	7.4	0.2	36.0	3.7	24.4	3.6	0.1	30.8	39.3	33.8	0.0
Other Loans		9.0	12.7	3.7	1.8	19.0	2.0	10.4	1.6	0.8	11.3	13.5	14.8	2.2
Other Sources		3.7	4.0	2.1	4.1	3.2	2.5	3.8	1.2	2.8	5.2	3.6	5.6	11.0
Unknown Sources		7.7	5.1	2.8	5.5	6.9	4.3	4.0	2.2	5.0	8.7	8.9	4.2	7.1
Postdoctoral Plans														
Postdoctoral Study	%	26.1	22.4	35.9	36.1	16.4	37.1	36.2	39.2	36.4	17.3	12.8	25.4	30.2
Planned Employment	%	65.1	71.5	59.3	57.3	75.7	57.1	58.2	56.4	57.4	73.3	77.3	69.0	62.9
Educ. Institution ‖		36.3	42.8	25.6	26.2	49.2	22.1	23.4	18.9	23.4	49.1	53.8	45.1	35.7
Industry/Business		16.7	14.5	26.1	21.5	9.0	26.8	24.6	30.4	25.8	7.8	8.1	9.2	6.6
Government		4.7	5.2	2.2	4.8	10.1	3.5	4.1	1.9	4.0	7.3	7.3	2.8	9.3
Nonprofit		3.5	4.5	1.8	1.5	4.8	1.6	2.9	1.8	1.2	3.7	3.8	4.2	3.3
Other & Unknown		4.0	4.5	3.7	3.4	2.6	3.1	3.2	3.4	3.0	5.3	4.4	7.7	8.0
Postdoc. Plans Unknown	%	8.8	6.1	4.8	6.6	7.9	5.8	5.6	4.4	6.2	9.5	9.9	5.6	6.9
Definite Postdoc. Study	%	18.0	16.7	22.8	22.3	11.1	23.3	26.1	25.5	22.0	10.1	8.5	14.8	13.5
Seeking Postdoc. Study		8.0	5.7	13.1	13.8	5.3	13.7	10.1	13.7	14.4	7.2	4.3	10.6	16.8
Definite Employment		43.2	49.6	33.4	34.3	53.4	32.0	36.4	30.5	31.9	48.9	54.3	28.9	39.0
Seeking Employment		21.9	21.9	26.0	23.0	22.2	25.2	21.8	25.9	25.5	24.3	23.0	40.1	23.9
Employment Location After Doctorate#		**18,327**	**13,749**	**1,256**	**3,300**	**101**	**3,138**	**397**	**796**	**1,943**	**899**	**714**	**41**	**142**
U.S.	%	88.5	97.9	89.7	49.0	99.0	69.9	95.2	90.6	56.2	85.9	98.3	80.5	24.6
Foreign		11.4	2.0	10.0	50.8	1.0	29.9	4.5	9.2	43.6	13.8	1.3	19.5	75.4
Unknown		0.2	0.2	0.2	0.2	0.0	0.2	0.3	0.3	0.2	0.3	0.4	0.0	0.0

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix A for a discussion of past changes in the survey question on race/ethnicity.

*Includes individuals who did not report their citizenship at time of doctorate.
†The method of median computation has been revised. See page 64 for more information.
‡In this table a recipient counts once in each source category from which he or she received support. Since students indicate multiple sources of support, the vertical percentages sum to more than 100 percent. (Data on the "primary" source of support for doctorate recipients are presented in the body of the report.)
§Because federal support obtained through the university cannot always be determined, no distinction is made between federal and university research assistants in this table. Both types of support are grouped under "University Research Assistant." Federal loans are counted in the categories for loans.
‖ Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.
#Includes only recipients with definite employment plans.

APPENDIX TABLE A-4 (Continued)

White				Puerto Rican	Mexican American				Other Hispanic				Unknown Race		
Total*	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total	Total*	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total*	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total*	U.S.	Non-U.S.
27,166	**23,856**	**829**	**2,392**	**251**	**340**	**282**	**11**	**47**	**1,032**	**417**	**144**	**465**	**1,779**	**343**	**279**
55.4	53.4	58.4	74.1	45.4	61.2	56.4	63.6	89.4	59.0	49.2	54.9	69.0	69.5	66.2	76.3
44.6	46.6	41.6	25.9	54.6	38.8	43.6	36.4	10.6	41.0	50.8	45.1	31.0	30.5	33.8	23.7
14.0	12.7	16.2	25.3	9.2	12.1	9.9	27.3	21.3	13.5	7.7	17.4	17.4	18.2	19.8	18.6
10.2	8.9	16.5	20.7	8.8	12.4	9.2	18.2	29.8	13.1	9.1	6.9	18.3	17.0	11.1	27.2
18.3	18.2	19.4	19.2	17.1	14.4	12.8	0.0	27.7	22.7	17.0	23.6	27.7	16.6	19.8	22.6
18.1	18.8	14.7	12.0	23.9	18.2	19.1	18.2	12.8	20.6	29.0	13.9	15.3	16.1	15.5	16.5
14.8	14.8	20.1	12.1	15.5	13.5	14.5	18.2	6.4	16.1	14.4	27.8	14.0	11.6	14.3	7.2
18.7	20.5	7.4	4.6	20.3	23.2	27.7	9.1	0.0	10.4	18.0	8.3	4.1	14.7	14.3	3.9
6.1	6.1	5.7	6.1	5.2	6.2	6.7	9.1	2.1	3.7	4.8	2.1	3.2	5.7	5.2	3.9
34.3	34.7	33.9	31.7	34.3	34.9	34.5	35.6	36.2	34.6	35.5	34.7	34.1	33.3	34.7	32.7
10.9	11.1	10.4	8.4	10.7	10.4	10.3	10.0	11.0	10.6	11.3	10.6	10.0	10.4	11.3	9.0
7.3	7.3	7.3	6.4	7.7	7.0	7.0	8.1	6.6	6.9	7.5	7.2	6.3	7.0	7.2	6.6
1.3	1.5	0.0	0.1	2.8	1.5	1.8	0.0	0.0	0.1	0.2	0.0	0.0	0.2	0.9	0.0
14.0	15.0	8.3	5.9	22.3	20.6	21.6	27.3	12.8	16.9	24.9	9.0	12.0	3.8	12.8	6.8
1.7	1.9	0.8	0.5	2.4	2.4	2.8	0.0	0.0	1.6	2.9	0.0	0.9	0.3	1.5	0.0
3.2	0.7	7.6	26.1	1.6	10.3	1.4	27.3	59.6	18.1	1.4	8.3	36.1	3.5	0.3	20.8
5.3	5.3	5.2	5.4	12.4	13.8	16.0	0.0	4.3	9.1	8.4	8.3	9.9	1.6	2.6	5.0
55.3	54.8	62.5	59.4	42.6	50.0	49.3	63.6	51.1	53.7	50.1	63.9	54.2	14.0	38.5	33.7
50.1	48.9	54.5	62.4	40.6	52.6	51.1	54.5	61.7	50.9	48.4	52.1	53.3	15.0	36.2	43.0
37.8	38.1	39.0	36.2	53.0	48.2	50.4	54.5	34.0	38.9	47.5	43.1	30.1	9.8	28.3	22.9
14.0	15.1	8.1	4.9	11.2	13.2	13.5	0.0	14.9	9.7	13.9	13.2	4.9	2.3	7.0	4.3
81.2	84.0	74.4	58.2	78.1	79.1	83.7	72.7	53.2	66.6	78.9	70.1	55.3	16.6	47.8	36.2
30.5	34.3	13.6	0.4	43.8	33.8	40.1	18.2	0.0	18.5	39.6	16.7	0.4	4.7	21.0	0.4
11.6	12.5	7.8	4.0	17.1	19.4	22.7	9.1	2.1	9.0	16.3	6.2	3.4	2.6	9.9	2.9
4.2	4.1	4.0	5.9	4.4	3.2	2.8	0.0	6.4	5.1	4.3	4.2	6.2	1.0	1.5	3.6
4.6	4.4	3.9	4.0	6.0	2.1	2.5	0.0	0.0	5.2	5.0	4.9	4.5	75.8	43.1	30.5
24.0	22.4	29.3	38.5	17.1	25.9	26.6	18.2	23.4	27.7	24.9	22.9	32.0	7.2	14.0	26.2
70.4	72.2	65.4	56.3	75.7	72.1	70.9	81.8	76.6	66.6	68.8	71.5	63.7	15.5	40.2	41.2
41.8	43.2	39.2	29.8	51.4	47.9	46.8	54.5	53.2	40.5	41.5	47.2	37.8	8.1	23.0	20.1
14.8	14.7	17.7	15.4	8.4	9.4	8.5	9.1	14.9	13.5	13.4	17.4	12.5	4.3	9.0	12.9
5.1	5.1	2.5	6.1	4.0	6.2	6.0	9.1	6.4	5.8	6.7	3.5	5.8	1.3	3.2	3.6
4.3	4.6	1.4	1.5	8.0	4.4	5.0	0.0	2.1	2.9	3.1	1.4	3.2	0.7	2.3	0.7
4.5	4.6	4.5	3.6	4.0	4.1	4.6	9.1	0.0	3.9	4.1	2.1	4.3	1.2	2.6	3.9
5.6	5.4	5.3	5.2	7.2	2.1	2.5	0.0	0.0	5.7	6.2	5.6	4.3	77.3	45.8	32.6
17.7	16.9	17.1	26.0	11.6	18.5	20.9	9.1	6.4	17.9	17.7	13.9	19.6	4.7	10.2	15.4
6.3	5.5	12.2	12.5	5.6	7.4	5.7	9.1	17.0	9.8	7.2	9.0	12.5	2.5	3.8	10.8
48.7	50.2	40.4	38.1	54.2	52.9	51.4	63.6	59.6	45.6	47.2	47.9	43.9	10.3	28.0	27.6
21.7	22.0	25.0	18.2	21.5	19.1	19.5	18.2	17.0	20.9	21.6	23.6	19.8	5.2	12.2	13.6
13,219	**11,965**	**335**	**912**	**136**	**180**	**145**	**7**	**28**	**471**	**197**	**69**	**204**	**183**	**96**	**77**
94.0	97.9	89.6	44.0	99.3	86.1	98.6	85.7	21.4	66.9	98.0	88.4	29.9	66.7	93.8	33.8
5.9	1.9	10.1	55.8	0.0	13.9	1.4	14.3	78.6	32.9	1.5	11.6	70.1	32.8	5.2	66.2
0.1	0.1	0.3	0.2	0.7	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	0.5	1.0	0.0

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX TABLE A-5 Sources of Graduate School Support for Doctorate Recipients, by Broad Field and Gender, 1996

		Total		Physical Sciences		Engineering		Life Sciences		Social Sciences		Humanities		Education		Prof/Other Fields	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Federal Fellow/ Trainee	N	1,690	1,617	223	105	205	110	808	861	253	287	155	174	29	57	17	23
	V*	7.2	10.3	4.5	8.2	4.0	15.2	18.6	25.5	8.4	8.9	6.5	7.3	1.3	1.5	1.2	2.6
	H*	100.0	100.0	13.2	6.5	12.1	6.8	47.8	53.2	15.0	17.7	9.2	10.8	1.7	3.5	1.0	1.4
GI Bill	N	302	107	27	2	36	5	30	22	59	44	32	8	88	21	30	5
	V	1.3	0.7	0.5	0.2	0.7	0.7	0.7	0.7	2.0	1.4	1.3	0.3	3.8	0.6	2.2	0.6
	H	100.0	100.0	8.9	1.9	11.9	4.7	9.9	20.6	19.5	41.1	10.6	7.5	29.1	19.6	9.9	4.7
Other Federal Support†	N	1,117	751	340	107	281	59	176	185	139	156	94	82	53	129	34	33
	V	4.8	4.8	6.9	8.3	5.5	8.2	4.1	5.5	4.6	4.8	4.0	3.4	2.3	3.4	2.5	3.7
	H	100.0	100.0	30.4	14.2	25.2	7.9	15.8	24.6	12.4	20.8	8.4	10.9	4.7	17.2	3.0	4.4
State Government	N	340	273	50	13	51	9	77	54	61	63	24	26	59	94	18	14
	V	1.4	1.7	1.0	1.0	1.0	1.2	1.8	1.6	2.0	1.9	1.0	1.1	2.5	2.5	1.3	1.6
	H	100.0	100.0	14.7	4.8	15.0	3.3	22.6	19.8	17.9	23.1	7.1	9.5	17.4	34.4	5.3	5.1
Foreign Government	N	1,331	439	211	47	364	29	315	133	185	61	129	98	68	44	59	27
	V	5.7	2.8	4.3	3.7	7.1	4.0	7.3	3.9	6.2	1.9	5.4	4.1	2.9	1.2	4.3	3.1
	H	100.0	100.0	15.9	10.7	27.3	6.6	23.7	30.3	13.9	13.9	9.7	22.3	5.1	10.0	4.4	6.2
National Fellow (nonfed.)	N	1,064	1,063	138	64	136	55	200	200	228	230	284	367	31	91	47	56
	V	4.5	6.8	2.8	5.0	2.6	7.6	4.6	5.9	7.6	7.1	11.9	15.4	1.3	2.4	3.4	6.3
	H	100.0	100.0	13.0	6.0	12.8	5.2	18.8	18.8	21.4	21.6	26.7	34.5	2.9	8.6	4.4	5.3
University Teaching Assistant	N	13,724	8,536	3,870	1,055	2,613	361	1,838	1,507	2,080	2,054	1,893	1,931	612	1,102	818	526
	V	58.5	54.4	78.7	82.0	50.9	49.9	42.4	44.6	69.4	63.5	79.6	81.1	26.4	29.0	59.8	59.5
	H	100.0	100.0	28.2	12.4	19.0	4.2	13.4	17.7	15.2	24.1	13.8	22.6	4.5	12.9	6.0	6.2
University Research Assistant†	N	14,813	7,722	4,006	1,044	4,235	590	3,187	2,336	1,628	1,845	634	608	461	881	662	418
	V	63.2	49.2	81.4	81.1	82.4	81.6	73.4	69.1	54.3	57.0	26.7	25.5	19.9	23.1	48.4	47.3
	H	100.0	100.0	27.0	13.5	28.6	7.6	21.5	30.3	11.0	23.9	4.3	7.9	3.1	11.4	4.5	5.4
University Fellow	N	6,534	4,608	1,307	403	1,131	233	1,213	974	1,050	1,078	1,138	1,119	304	558	391	243
	V	27.9	29.4	26.6	31.3	22.0	32.2	27.9	28.8	35.0	33.3	47.9	47.0	13.1	14.7	28.6	27.5
	H	100.0	100.0	20.0	8.7	17.3	5.1	18.6	21.1	16.1	23.4	17.4	24.3	4.7	12.1	6.0	5.3
Other University	N	2,601	2,640	311	95	345	46	415	410	504	728	531	559	321	671	174	131
	V	11.1	16.8	6.3	7.4	6.7	6.4	9.6	12.1	16.8	22.5	22.3	23.5	13.9	17.6	12.7	14.8
	H	100.0	100.0	12.0	3.6	13.3	1.7	16.0	15.5	19.4	27.6	20.4	21.2	12.3	25.4	6.7	5.0
Business/ Employer	N	2,632	2,031	374	95	669	82	277	306	335	414	253	289	505	698	219	147
	V	11.2	12.9	7.6	7.4	13.0	11.3	6.4	9.1	11.2	12.8	10.6	12.1	21.8	18.3	16.0	16.6
	H	100.0	100.0	14.2	4.7	25.4	4.0	10.5	15.1	12.7	20.4	9.6	14.2	19.2	34.4	8.3	7.2
Own Earnings	N	14,278	11,511	2,131	518	2,552	338	2,208	1,869	2,268	2,609	1,952	1,963	2,114	3,492	1,053	722
	V	60.9	73.3	43.3	40.2	49.7	46.7	50.9	55.3	75.7	80.6	82.1	82.4	91.4	91.7	76.9	81.7
	H	100.0	100.0	14.9	4.5	17.9	2.9	15.5	16.2	15.9	22.7	13.7	17.1	14.8	30.3	7.4	6.3
Spouse's Earnings	N	6,839	6,011	1,026	301	1,012	181	1,278	1,075	1,052	1,392	968	965	949	1,741	554	356
	V	29.2	38.3	20.9	23.4	19.7	25.0	29.4	31.8	35.1	43.0	40.7	40.5	41.0	45.7	40.5	40.3
	H	100.0	100.0	15.0	5.0	14.8	3.0	18.7	17.9	15.4	23.2	14.2	16.1	13.9	29.0	8.1	5.9
Family Support	N	7,610	4,731	1,339	288	1,834	186	1,304	912	1,167	1,271	1,000	949	486	857	480	268
	V	32.4	30.1	27.2	22.4	35.7	25.7	30.0	27.0	39.0	39.3	42.1	39.8	21.0	22.5	35.1	30.3
	H	100.0	100.0	17.6	6.1	24.1	3.9	17.1	19.3	15.3	26.9	13.1	20.1	6.4	18.1	6.3	5.7
Guaranteed Student Loan (Stafford)	N	5,199	4,595	667	175	535	66	861	650	1,202	1,536	938	957	639	930	357	281
	V	22.2	29.3	13.6	13.6	10.4	9.1	19.8	19.2	40.1	47.5	39.4	40.2	27.6	24.4	26.1	31.8
	H	100.0	100.0	12.8	3.8	10.3	1.4	16.6	14.1	23.1	33.4	18.0	20.8	12.3	20.2	6.9	6.1
Perkins Loan (NDSL)	N	1,448	1,332	128	33	126	15	209	113	403	528	345	313	138	256	99	74
	V	6.2	8.5	2.6	2.6	2.5	2.1	4.8	3.3	13.5	16.3	14.5	13.1	6.0	6.7	7.2	8.4
	H	100.0	100.0	8.8	2.5	8.7	1.1	14.4	8.5	27.8	39.6	23.8	23.5	9.5	19.2	6.8	5.6
Other Loans	N	711	762	82	18	98	15	104	95	169	288	112	129	81	164	65	53
	V	3.0	4.9	1.7	1.4	1.9	2.1	2.4	2.8	5.6	8.9	4.7	5.4	3.5	4.3	4.7	6.0
	H	100.0	100.0	11.5	2.4	13.8	2.0	14.6	12.5	23.8	37.8	15.8	16.9	11.4	21.5	9.1	7.0
Other Sources	N	816	771	123	42	119	27	150	201	133	144	117	108	70	186	104	63
	V	3.5	4.9	2.5	3.3	2.3	3.7	3.5	5.9	4.4	4.5	4.9	4.5	3.0	4.9	7.6	7.1
	H	100.0	100.0	15.1	5.4	14.6	3.5	18.4	26.1	16.3	18.7	14.3	14.0	8.6	24.1	12.7	8.2
Unduplicated Total‡		23,454	15,698	4,919	1,287	5,138	723	4,340	3,381	2,996	3,235	2,378	2,382	2,314	3,806	1,369	884

NOTE: In this table a recipient counts once in each source category from which he or she received support. Since students indicate multiple sources of support, the vertical percentages sum to more than 100 percent. (Data on the "primary" source of support for doctorate recipients are presented in the body of the report.) Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix A.

*V denotes vertical percentage; H denotes horizontal percentage.
†Because federal support obtained through a university cannot always be determined, no distinction is made between federal and university research assistants in this table. Both types of support are grouped under "University Research Assistant." Federal loans are counted in the categories for loans.
‡The 3,263 Ph.D.s who did not report sources of support are omitted from this total. Percentages are based only on known responses.

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX TABLE A-6 State of Doctoral Institution of Doctorate Recipients, by Broad Field and Gender, 1996

	Total		Physical Sciences		Engineering		Life Sciences		Social Sciences		Humanities		Education		Prof./Other Fields	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
U.S. Total*	25,470	16,945	5,291	1,384	5,529	776	4,660	3,595	3,300	3,514	2,572	2,544	2,593	4,179	1,525	953
Alabama	322	212	57	14	70	8	83	53	26	31	11	9	53	84	22	13
Alaska	18	10	8	4	0	1	9	4	1	1	0	0	0	0	0	0
Arizona	468	289	111	29	116	14	57	43	43	47	48	32	56	99	37	25
Arkansas	77	70	8	4	14	1	21	14	3	4	0	8	28	36	3	3
California	2,857	1,911	669	169	686	103	465	398	424	519	303	313	187	320	123	89
Colorado	469	290	127	33	132	19	71	77	52	61	33	23	38	58	16	19
Connecticut	377	252	70	20	48	5	80	58	59	49	84	79	20	29	16	12
Delaware	110	62	37	11	37	6	9	9	10	14	6	10	11	12	0	0
Dist. of Columbia	253	212	34	16	37	6	34	37	59	62	41	40	24	34	24	17
Florida	941	752	158	29	159	21	119	82	97	120	56	59	261	384	91	57
Georgia	540	370	91	31	140	31	106	81	64	68	51	42	52	98	36	19
Hawaii	115	71	22	7	6	1	35	14	20	17	23	20	7	10	2	2
Idaho	79	15	22	0	16	1	14	3	1	0	2	1	24	10	0	0
Illinois	1,382	887	321	71	280	40	199	187	245	182	142	141	130	206	65	60
Indiana	705	413	157	41	164	27	118	79	79	95	89	89	53	65	45	17
Iowa	464	234	77	16	107	11	130	57	41	41	41	33	57	64	11	12
Kansas	273	196	46	10	47	2	57	43	44	41	29	22	41	64	9	14
Kentucky	198	143	28	5	26	4	52	35	23	35	22	14	28	43	19	7
Louisiana	307	206	55	17	28	6	82	57	34	38	51	36	24	37	33	15
Maine	36	12	7	0	7	1	13	1	4	3	2	1	3	6	0	0
Maryland	553	401	130	32	127	23	147	146	75	76	44	56	12	55	18	13
Massachusetts	1,366	894	337	93	320	55	222	208	182	181	141	142	76	169	88	46
Michigan	946	613	159	59	261	34	171	131	127	150	98	82	75	123	55	34
Minnesota	524	406	76	24	99	19	121	100	55	55	52	58	76	120	45	30
Mississippi	210	149	27	7	17	1	40	23	23	20	14	13	58	74	31	11
Missouri	448	249	83	19	96	15	67	52	71	47	47	26	38	68	46	22
Montana	38	23	13	6	3	1	14	7	0	4	0	0	8	5	0	0
Nebraska	173	112	27	6	10	1	67	17	23	26	12	14	25	40	9	8
Nevada	46	28	15	2	6	2	8	4	6	5	4	7	7	8	0	0
New Hampshire	63	34	27	6	10	4	16	12	4	4	3	4	3	4	0	0
New Jersey	579	350	147	42	150	28	88	66	74	62	80	91	17	34	23	27
New Mexico	199	111	48	10	46	7	28	15	28	13	11	15	32	47	6	4
New York	2,177	1,689	494	138	392	46	408	308	340	444	280	325	153	339	110	89
North Carolina	603	441	122	46	119	18	168	150	65	70	75	64	34	82	20	11
North Dakota	46	33	15	2	1	0	17	5	6	8	1	2	6	16	0	0
Ohio	1,101	734	217	49	283	21	176	145	106	147	95	95	140	219	84	58
Oklahoma	265	156	42	5	58	8	51	33	27	31	14	18	47	43	26	18
Oregon	263	177	69	15	39	6	81	55	26	26	13	19	25	47	10	9
Pennsylvania	1,314	847	239	54	321	65	183	161	180	155	163	150	123	206	105	56
Puerto Rico	28	29	5	1	1	0	1	0	10	15	3	6	8	7	0	0
Rhode Island	136	106	41	22	28	6	19	21	21	21	24	35	0	0	3	1
South Carolina	227	196	38	13	38	13	59	49	31	32	19	19	30	63	12	7
South Dakota	41	40	2	0	0	1	10	6	2	4	0	0	27	29	0	0
Tennessee	388	291	48	18	72	11	63	45	58	50	44	37	72	118	31	12
Texas	1,740	969	322	77	461	33	321	212	172	206	152	127	171	265	141	49
Utah	285	116	75	12	69	5	48	31	42	33	8	6	29	23	14	6
Vermont	33	27	4	0	6	0	12	8	6	11	0	3	5	5	0	0
Virginia	601	406	129	40	142	18	89	70	70	88	32	31	91	134	48	25
Washington	413	278	91	26	94	12	85	73	57	40	33	57	33	62	20	8
West Virginia	78	41	8	1	18	1	17	7	9	7	7	4	19	21	0	0
Wisconsin	543	366	114	28	114	13	103	98	74	49	69	66	41	84	28	28
Wyoming	52	26	22	4	8	1	6	5	1	6	0	0	15	10	0	0

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix A.

*Includes the 50 states, District of Columbia, and Puerto Rico.

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX TABLE A-7 Institutions Granting Doctorates, by Major Field, 1996

	1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Math and Computer Sci.	Engineering	Biosciences	Health Sciences	Agricultural Sciences	Psychology	Other Social Sciences	History	Eng. and Amer. Lang. and Lit.	Other Humanities	Education	Professional/ Other Fields
TOTAL ALL INSTITUTIONS*	42,415	1,677	2,148	807	2,043	6,305	5,723	1,324	1,208	3,340	3,474	857	1,013	3,246	6,772	2,478
ALABAMA	534	26	20	2	23	78	77	34	25	39	18	5	10	5	137	35
Alabama A&M University	8	1	0	0	0	0	0	0	4	0	0	0	0	3	0	0
Auburn University	151	4	7	0	6	37	14	5	21	19	9	3	1	0	19	6
United States Sports Academy	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Univ of Alabama-Birmingham	128	6	2	0	5	9	51	28	0	8	1	0	0	0	18	0
Univ of Alabama-Huntsville	41	12	0	2	5	22	0	0	0	0	0	0	0	0	0	0
Univ of Alabama-University	197	3	11	0	7	10	5	1	0	12	8	2	9	2	98	29
Univ of South Alabama	8	0	0	0	0	0	7	0	0	0	0	0	0	0	1	0
ALASKA	28	4	0	7	1	1	8	0	5	1	1	0	0	0	0	0
Univ of Alaska	28	4	0	7	1	1	8	0	5	1	1	0	0	0	0	0
ARIZONA	757	45	31	29	35	130	68	13	19	31	59	15	8	57	155	62
Arizona State Univ	317	11	15	2	20	65	20	3	0	18	25	9	6	22	63	38
Northern Arizona Univ	57	0	0	0	0	0	6	0	0	0	0	0	0	4	47	0
Univ of Arizona	383	34	16	27	15	65	42	10	19	13	34	6	2	31	45	24
ARKANSAS	147	5	4	0	3	15	11	4	20	6	1	0	2	6	64	6
Arkansas State Univ	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
U of Arkansas-Fayetteville	117	5	4	0	3	13	4	4	20	6	1	0	2	6	43	6
U of Arkansas-Little Rock	20	0	0	0	0	2	0	0	0	0	0	0	0	0	18	0
U of Arkansas-Med Sci Campus	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
CALIFORNIA	4,768	214	269	110	245	789	689	125	49	569	374	115	110	391	507	212
Biola Univ	22	0	0	0	0	0	0	0	0	12	0	0	0	0	10	0
Cal Inst of Integral Studies	5	0	0	0	0	0	1	0	0	4	0	0	0	0	0	0
Cal Inst of Technology	164	25	29	12	9	62	24	0	0	0	3	0	0	0	0	0
Cal Sch Prof Psych-Alameda	59	0	0	0	0	0	0	0	0	59	0	0	0	0	0	0
Cal Sch Prof Psych-Alhambra	46	0	0	0	0	0	0	0	0	46	0	0	0	0	0	0
Cal Sch Prof Psych-Fresno	41	0	0	0	0	0	0	0	0	41	0	0	0	0	0	0
Cal Sch Prof Psych-San Diego	72	0	0	0	0	0	0	0	0	72	0	0	0	0	0	0
Claremont Graduate School	101	0	0	0	7	0	0	0	0	7	17	3	2	28	29	8
Fielding Institute	68	0	0	0	0	0	0	0	0	38	11	0	0	1	1	17
Fuller Theological Seminary	38	0	0	0	0	0	0	0	0	22	7	0	0	3	0	6
Golden Gate Baptist Theol Sem	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4
Graduate Theological Union	23	0	0	0	0	0	0	0	0	3	0	0	0	13	0	7
Hebrew Union College	3	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
La Sierra Univ	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Loma Linda Univ	8	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Naval Postgraduate School	9	1	0	2	3	3	0	0	0	0	0	0	0	0	0	0
Pacific Grad Sch of Psych	34	0	0	0	0	0	0	0	0	30	0	0	0	4	0	0
Pepperdine Univ	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0
Rand Grad Sch Policy Studies	6	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0
Research Inst of Scripps Clinic	15	0	8	0	0	0	7	0	0	0	0	0	0	0	0	0
San Diego State Univ	28	0	0	0	0	3	3	2	0	16	0	0	0	0	4	0
Saybrook Institute	22	0	0	0	0	0	0	0	0	21	1	0	0	0	0	0
School of Theology at Claremont	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Stanford Univ	565	34	33	20	34	193	56	1	3	13	50	16	6	47	32	27
U.S. International Univ	56	0	0	0	0	1	0	0	0	21	1	0	0	0	10	23
Univ of California-Berkeley	768	34	62	13	50	182	108	38	15	19	76	22	25	62	34	28
Univ of California-Davis	397	15	26	3	21	76	147	7	25	8	22	6	13	14	14	0
Univ of California-Irvine	183	9	17	1	20	27	36	0	0	12	22	6	6	21	0	6
Univ of Calif-Los Angeles	606	24	24	11	46	64	86	31	1	28	56	32	21	82	73	27
Univ of Calif-Riverside	96	9	4	1	6	0	22	0	4	7	13	9	9	5	7	0
Univ of Calif-San Diego	238	19	20	17	14	40	67	0	0	10	13	7	6	19	0	6
Univ of Calif-San Francisco	90	0	9	0	0	1	48	25	0	1	6	0	0	0	0	0
Univ of Calif-Santa Barbara	221	22	12	11	12	51	15	1	0	11	32	4	9	23	15	3
Univ of Calif-Santa Cruz	92	13	9	11	5	7	20	0	1	5	6	5	4	6	0	0
Univ of La Verne	52	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0
Univ of the Pacific	17	0	0	0	0	0	0	2	0	0	0	0	0	0	15	0
Univ of San Diego	14	0	0	0	0	0	0	4	0	0	0	0	0	0	10	0
Univ of San Francisco	89	0	0	0	0	0	0	0	0	0	0	0	0	0	89	0
Univ of Santa Clara	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Univ of Southern California	445	9	16	8	18	78	41	14	0	30	32	5	9	61	79	45
Wright Institute, The	33	0	0	0	0	0	0	0	0	33	0	0	0	0	0	0
COLORADO	759	37	48	41	34	151	91	31	26	46	67	3	10	43	96	35
Colorado School of Mines	53	1	3	11	2	28	0	0	0	0	8	0	0	0	0	0
Colorado State Univ	196	9	18	15	8	43	40	3	26	9	10	0	0	0	13	2
Univ of Colorado	368	24	25	15	22	78	47	24	0	16	36	3	6	28	23	21
Univ of Denver	75	3	2	0	0	2	3	0	0	16	12	0	4	9	12	12
Univ of Northern Colorado	67	0	0	0	2	0	1	4	0	5	1	0	0	6	48	0
CONNECTICUT	629	19	31	9	31	53	117	15	6	45	63	39	15	109	49	28
Univ of Connecticut	239	6	14	2	9	38	43	6	3	26	13	6	7	10	48	8
Univ of Hartford	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Univ of New Haven	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Wesleyan Univ	13	1	3	0	2	1	5	0	0	0	0	0	0	1	0	0
Yale Univ	366	12	14	7	20	14	69	9	3	19	50	33	8	97	0	11
DELAWARE	172	7	15	17	9	43	13	0	5	7	17	7	5	4	23	0
Univ of Delaware	157	7	15	17	9	43	13	0	5	7	17	7	5	4	8	0
Wilmington College	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix A.
*Includes the 50 states, District of Columbia, and Puerto Rico.

APPENDIX TABLE A-7 (Continued)

	1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Math and Computer Sci.	Engineering	Biosciences	Health Sciences	Agricultural Sciences	Psychology	Other Social Sciences	History	Eng. and Amer. Lang. and Lit.	Other Humanities	Education	Professional/ Other Fields
DISTRICT OF COLUMBIA	465	11	20	1	18	43	63	7	1	45	76	14	5	62	58	41
American Univ	59	3	3	0	2	0	1	0	0	9	30	1	0	0	7	3
Catholic Univ of America	95	7	2	0	0	6	0	6	0	10	6	6	1	30	4	17
Gallaudet Univ	6	0	0	0	0	0	0	0	0	1	0	0	0	0	5	0
George Washington Univ	161	1	3	1	15	32	25	0	0	12	11	4	4	7	37	9
Georgetown Univ	73	0	7	0	0	0	28	0	0	0	11	2	0	25	0	0
Howard Univ	71	0	5	0	1	5	9	1	1	13	18	1	0	0	5	12
FLORIDA	1,693	42	44	36	65	180	121	33	47	143	74	21	33	61	645	148
Barry Univ	8	0	0	0	0	0	0	0	0	1	1	0	0	0	3	3
Caribbean Ctr Adv Stud-Miami	6	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
Florida A&M Univ	4	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0
Florida Atlantic Univ	52	2	0	0	5	16	2	0	0	5	0	0	0	0	16	6
Florida Inst of Technology	29	0	2	3	8	11	2	0	0	0	0	0	0	0	3	0
Florida International Univ	74	0	0	0	2	3	5	0	1	12	3	0	0	0	33	15
Florida State Univ	280	14	6	12	11	6	13	2	1	26	27	15	15	37	53	42
Nova Southeastern Univ	420	0	0	0	16	0	1	0	0	22	2	0	0	0	333	46
Univ of Central Florida	76	2	0	0	5	25	0	0	0	5	0	0	0	0	33	6
Univ of Florida	418	22	29	3	12	76	61	25	44	25	33	5	6	8	46	23
Univ of Miami	115	1	1	9	1	17	19	1	1	22	5	1	1	13	23	0
Univ of Sarasota	71	0	0	0	0	0	0	0	0	0	0	0	0	0	69	2
Univ of South Florida	140	1	6	9	5	25	15	5	0	19	3	0	11	3	33	5
GEORGIA	910	29	40	8	45	171	135	22	30	87	45	14	27	52	150	55
Clark Atlanta Univ	22	0	0	0	0	0	3	0	0	0	11	0	0	1	6	1
Emory Univ	143	2	14	0	4	0	30	2	0	17	14	8	9	38	3	2
Georgia Inst of Technology	252	15	3	3	34	167	9	0	0	10	1	1	0	0	0	9
Georgia Southern Univ	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Georgia State Univ	128	6	2	0	1	0	10	7	0	23	6	4	6	0	49	14
Inst of Paper Sci & Tech	5	0	2	0	0	2	0	0	1	0	0	0	0	0	0	0
Medical College of Georgia	13	0	0	0	0	0	12	1	0	0	0	0	0	0	0	0
Univ of Georgia	343	6	19	5	6	2	71	12	29	37	13	1	12	13	88	29
HAWAII	186	7	4	16	2	7	23	10	16	4	33	7	4	32	17	4
Univ of Hawaii at Manoa	186	7	4	16	2	7	23	10	16	4	33	7	4	32	17	4
IDAHO	94	3	10	2	7	17	6	1	10	0	1	0	3	0	34	0
Idaho State Univ	16	0	0	0	5	1	3	1	0	0	0	0	3	0	3	0
Univ of Idaho	78	3	10	2	2	16	3	0	10	0	1	0	0	0	31	0
ILLINOIS	2,269	105	115	20	152	320	270	68	48	156	271	53	53	177	336	125
DePaul Univ	17	0	0	0	1	0	0	0	0	13	0	0	0	3	0	0
Finch U of Hlth Sci-Chicago Med	12	0	0	0	0	0	9	0	0	3	0	0	0	0	0	0
Illinois Inst of Technology	82	8	1	0	25	27	6	0	0	11	0	0	0	0	0	4
Illinois State Univ-Normal	62	0	0	0	1	0	6	0	0	0	1	1	3	5	45	0
Inst for Clinical Social Work	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Loyola Univ of Chicago	114	0	3	0	0	0	20	3	0	23	2	3	7	5	45	3
Lutheran Sch of Theol-Chicago	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Northern Illinois Univ	102	1	3	2	4	0	4	0	0	9	6	4	7	0	62	0
Northwestern Univ	359	17	25	1	23	91	44	10	0	18	40	4	4	40	7	35
Roosevelt Univ	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
Rush Univ	17	1	0	0	0	0	8	8	0	0	0	0	0	0	0	0
Southern Ill Univ-Carbondale	156	6	5	2	5	9	15	3	0	17	14	1	5	11	47	16
Southern Ill Univ-Edwardsville	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Univ of Chicago	382	23	25	7	22	1	50	1	0	11	117	27	13	57	11	17
Univ of Ill-Chicago	237	7	19	2	13	44	37	34	0	13	28	3	6	6	15	10
Univ of Ill-Urbana/Champaign	699	42	34	6	58	148	71	9	48	38	63	10	8	48	82	34
INDIANA	1,118	47	74	11	66	191	132	24	41	75	99	32	29	117	118	62
Ball State Univ	48	0	0	0	0	0	1	1	0	12	0	0	2	10	22	0
Indiana State Univ	20	0	0	0	0	0	2	0	1	6	0	0	0	0	11	0
Indiana Univ-Bloomington	407	18	23	2	19	1	50	4	0	26	51	23	15	75	64	36
Indiana Univ Sch of Medicine	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
Purdue Univ	507	21	42	9	36	158	64	12	40	24	28	0	9	20	21	23
Univ of Notre Dame	130	8	9	0	11	32	15	1	0	7	20	9	3	12	0	3
IOWA	698	19	45	5	24	118	119	29	39	35	47	12	10	52	121	23
Drake Univ	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
Iowa State Univ	287	12	26	2	7	62	50	6	39	16	25	1	1	1	32	7
Maharishi International Univ	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Univ of Iowa	377	7	19	3	17	51	68	23	0	18	22	11	9	51	62	16
Univ of Northern Iowa	13	0	0	0	0	5	0	0	0	0	0	0	0	0	8	0
KANSAS	469	12	25	3	16	49	50	11	39	53	32	9	11	31	105	23
Kansas State Univ	181	4	6	0	12	18	17	1	39	12	13	1	0	1	52	5
Univ of Kansas	262	8	18	3	1	15	33	8	0	40	19	8	11	30	50	18
Wichita State Univ	26	0	1	0	3	16	0	2	0	1	0	0	0	0	3	0
KENTUCKY	341	5	13	3	12	30	50	12	25	41	17	7	5	24	71	26
Southern Bapt Theol Seminary	22	0	0	0	0	0	0	0	0	0	0	0	0	12	1	9
Spalding Univ	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0
Univ of Kentucky	236	5	12	3	9	21	39	12	25	21	14	7	5	7	39	17
Univ of Louisville	69	0	1	0	3	9	11	0	0	20	3	0	0	5	17	0

APPENDIX TABLE A-7 (Continued)

	1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Math and Computer Sci.	Engineering	Biosciences	Health Sciences	Agricultural Sciences	Psychology	Other Social Sciences	History	Eng. and Amer. Lang. and Lit.	Other Humanities	Education	Professional/ Other Fields
LOUISIANA	513	7	21	7	37	34	81	34	24	33	39	14	20	53	61	48
Grambling St Univ	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
Louisiana St U & A&M College	238	6	13	7	12	17	31	10	24	16	14	9	11	28	26	14
Louisiana St U Med-New Orleans	29	0	0	0	0	0	18	11	0	0	0	0	0	0	0	0
Louisiana St U Med-Shreveport	9	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
Louisiana Tech Univ	12	0	0	0	0	2	0	0	0	0	0	0	0	0	0	10
New Orleans Bapt Theol Seminary	40	0	0	0	0	0	0	0	0	3	0	1	0	17	2	17
Northeast Louisiana Univ	5	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0
Tulane Univ of Louisiana	91	1	3	0	9	8	22	9	0	7	15	4	2	7	0	4
Univ of New Orleans	49	0	4	0	0	0	0	0	0	7	10	0	0	0	25	3
Univ of Southwestern Louisiana	32	0	0	0	16	7	1	0	0	0	0	0	7	1	0	0
MAINE	48	3	1	0	3	8	8	0	6	7	0	3	0	0	9	0
Univ of Maine	48	3	1	0	3	8	8	0	6	7	0	3	0	0	9	0
MARYLAND	954	67	28	14	53	150	183	94	16	42	109	14	16	70	67	31
Baltimore Hebrew Univ	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Johns Hopkins Univ	319	16	10	0	9	57	85	68	1	3	41	8	7	11	3	0
Loyola College in Maryland	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Morgan State Univ	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Peabody Inst of Johns Hopkins	13	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0
Uniformed Serv U of Hlth Sci	16	0	0	0	0	0	14	0	0	2	0	0	0	0	0	0
U of Maryland-Baltimore County	58	4	5	0	10	10	14	0	0	4	7	0	0	4	0	0
U of Maryland-College Park	463	47	11	13	34	83	31	5	15	28	58	6	9	41	61	21
U of Maryland-Eastern Shore	3	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
U of Maryland Sch of Med	72	0	2	0	0	0	37	21	0	0	1	0	0	1	0	10
MASSACHUSETTS	2,260	126	130	40	134	375	363	57	10	112	251	58	37	188	245	134
American Internatl College	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Boston College	110	2	10	0	0	0	5	6	0	16	19	6	2	7	27	10
Boston Univ	300	10	7	1	20	12	55	18	0	29	27	5	7	44	44	21
Brandeis Univ	82	3	11	0	9	0	16	0	0	3	21	3	5	10	0	1
Clark Univ	34	1	3	1	0	1	2	0	0	5	17	1	0	1	2	0
Harvard Univ	527	26	23	4	20	10	118	26	1	9	62	32	9	79	76	32
Mass Coll Pharm & Health Sci	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mass Inst of Technology	553	41	32	28	49	234	71	1	0	4	52	2	0	10	0	29
New England Conserv of Music	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Northeastern Univ	78	9	9	0	7	24	6	0	0	7	13	0	1	0	2	0
Simmons College	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Smith College	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Springfield College	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Tufts Univ	95	4	6	0	3	10	46	0	0	3	17	0	2	3	0	1
Univ of Mass-Amherst	338	20	11	2	20	56	26	4	9	27	19	9	11	32	66	26
Univ of Mass-Boston	19	0	0	3	0	0	3	0	0	9	4	0	0	0	0	0
Univ of Mass-Lowell	74	10	17	1	5	18	4	2	0	0	0	0	0	0	16	1
Univ of Mass-Worcester	9	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
Worcester Polytechnic Inst	13	0	0	0	1	10	2	0	0	0	0	0	0	0	0	0
MICHIGAN	1,559	55	80	21	62	295	199	41	62	149	128	21	34	125	198	89
Andrews Univ	36	0	0	0	0	0	0	0	0	9	0	0	0	4	14	9
Central Michigan Univ	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Eastern Michigan Univ	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Michigan State Univ	479	20	32	1	29	40	65	1	56	44	42	5	18	26	69	31
Michigan Technological Univ	42	5	3	1	0	21	2	0	5	0	1	0	0	3	0	1
Oakland Univ	11	2	0	0	1	6	0	0	0	0	0	0	0	0	1	1
Univ of Detroit Mercy	20	0	0	0	0	1	0	0	0	19	0	0	0	0	0	0
Univ of Michigan	685	24	30	18	22	189	77	31	0	41	67	16	16	88	32	34
Wayne State Univ	225	2	15	0	8	38	55	9	1	24	14	0	0	4	46	9
Western Michigan Univ	55	2	0	1	2	0	0	0	0	10	4	0	0	0	32	4
MINNESOTA	930	22	33	4	41	118	127	55	39	55	55	20	18	72	196	75
Luther Seminary	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
Mayo Graduate School	26	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0
Univ of Minnesota-Minneapolis	724	22	33	4	41	118	101	39	39	44	54	20	18	59	107	25
Univ of St. Thomas	25	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
Walden Univ	150	0	0	0	0	0	0	16	0	11	1	0	0	11	64	47
MISSISSIPPI	359	8	20	2	4	18	32	11	20	33	10	3	10	14	132	42
Delta State Univ	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Jackson State Univ	14	0	0	1	0	0	0	0	0	0	0	0	0	0	12	1
Mississippi State Univ	109	0	8	0	2	12	8	1	20	1	6	2	0	0	34	15
Reformed Theological Seminary	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3
Univ of Mississippi	85	6	3	0	1	6	5	8	0	4	3	1	3	2	26	17
U of Mississippi-Med Center	16	0	0	0	0	0	15	1	0	0	0	0	0	0	0	0
Univ of Southern Mississippi	127	2	9	1	1	0	4	1	0	28	0	0	7	12	56	6
MISSOURI	697	20	37	15	30	111	80	12	27	64	54	10	17	46	106	68
Concordia Seminary	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Midwest Bapt Theol Seminary	25	0	0	0	0	0	0	0	0	0	0	0	0	9	0	16
St. Louis Univ	120	0	0	3	1	0	11	7	0	21	2	0	6	11	38	20
U of Missouri-Columbia	243	4	10	1	8	30	22	1	27	26	19	5	9	8	49	24
U of Missouri-Kansas City	40	0	2	2	7	0	3	1	0	10	1	0	0	6	8	0
U of Missouri-Rolla	64	4	10	3	1	45	1	0	0	0	0	0	0	0	0	0
U of Missouri-St. Louis	25	0	4	0	0	0	2	1	0	5	3	0	0	0	10	0
Washington University	178	12	11	6	13	36	41	2	0	2	29	5	2	11	1	7

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APPENDIX TABLE A-7 (Continued)

	1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Math and Computer Sci.	Engineering	Biosciences	Health Sciences	Agricultural Sciences	Psychology	Other Social Sciences	History	Eng. and Amer. Lang. and Lit.	Other Humanities	Education	Professional/ Other Fields
MONTANA	61	6	6	1	6	4	16	0	5	4	0	0	0	0	13	0
Montana State Univ	44	6	5	0	5	4	12	0	3	0	0	0	0	0	9	0
Univ of Montana	17	0	1	1	1	0	4	0	2	4	0	0	0	0	4	0
NEBRASKA	285	8	12	1	12	11	39	7	38	29	20	0	16	10	65	17
Creighton Univ	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Univ of Nebraska-Lincoln	261	8	12	1	12	11	21	3	38	29	20	0	16	9	64	17
Univ of Nebraska-Med Center	20	0	0	0	0	0	15	4	0	0	0	0	0	1	0	0
Univ of Nebraska-Omaha	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
NEVADA	74	2	6	9	0	8	12	0	0	6	5	2	7	2	15	0
Univ of Nevada-Las Vegas	18	1	0	0	0	2	1	0	0	0	0	1	4	0	9	0
Univ of Nevada-Reno	56	1	6	9	0	6	11	0	0	6	5	1	3	2	6	0
NEW HAMPSHIRE	97	8	15	6	4	14	26	0	2	6	2	1	4	2	7	0
Dartmouth College	46	4	7	3	3	10	19	0	0	0	0	0	0	0	0	0
Univ of New Hampshire	51	4	8	3	1	4	7	0	2	6	2	1	4	2	7	0
NEW JERSEY	929	62	43	19	65	178	137	4	13	55	81	30	32	109	51	50
Drew Univ	20	0	0	0	0	0	0	0	0	2	0	0	2	11	0	5
Fairleigh Dickinson Univ	14	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0
New Jersey Inst of Technology	40	0	0	2	8	30	0	0	0	0	0	0	0	0	0	0
Princeton Theol Seminary	16	0	0	0	0	0	0	0	0	0	0	1	0	8	0	7
Princeton Univ	287	40	17	5	20	52	29	0	0	4	41	14	10	51	0	4
Rutgers St U-New Brunswick	395	17	22	12	28	73	61	3	12	12	31	15	20	39	31	19
Rutgers St U-Newark	40	0	3	0	0	0	11	1	1	1	9	0	0	0	0	14
Seton Hall Univ	43	0	1	0	0	0	1	0	0	21	0	0	0	0	20	0
Stevens Inst of Technology	39	5	0	0	9	23	0	0	0	1	0	0	0	0	0	1
Univ of Med & Dent of NJ	35	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0
NEW MEXICO	310	20	17	13	8	53	30	4	9	22	19	5	6	15	79	10
New Mexico Inst of Mining & Tech	13	1	2	5	0	5	0	0	0	0	0	0	0	0	0	0
New Mexico State Univ	80	7	3	0	4	23	6	0	9	5	1	0	0	0	16	6
Univ of New Mexico	217	12	12	8	4	25	24	4	0	17	18	5	6	15	63	4
NEW YORK	3,866	177	195	53	207	438	566	79	71	402	382	73	125	407	492	199
Adelphi Univ	49	0	0	0	1	0	0	12	0	30	0	0	0	0	0	6
Albany Medical College	12	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0
Alfred Univ	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
City U of NY-Grad Sch/U Ctr	302	17	14	3	25	15	33	5	0	50	46	7	20	46	2	19
Clarkson Univ	22	2	3	0	1	14	2	0	0	0	0	0	0	0	0	0
Columbia Univ	429	20	24	16	22	45	59	18	0	32	52	24	11	71	11	24
Columbia U-Teachers College	193	0	0	0	0	0	0	0	0	0	0	0	0	0	193	0
Cornell Univ	516	34	36	4	27	91	90	3	67	10	60	13	14	46	6	15
Cornell Univ Medical Campus	43	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0
Fordham Univ	110	0	0	0	0	0	4	0	0	32	7	0	3	12	45	7
Hofstra Univ	52	0	0	0	0	0	0	0	0	34	0	0	0	0	18	0
Jewish Theol Sem of America	6	0	0	0	0	0	0	0	0	0	0	1	0	3	1	1
Juilliard School, The	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0
Long Island U-Brooklyn Campus	18	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0
Manhattan School of Music	15	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0
New School for Social Research	45	0	0	0	0	0	0	0	0	20	23	0	0	2	0	0
New York Medical College	15	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0
New York Univ	350	11	6	1	23	0	40	18	0	34	24	8	18	70	59	38
Pace Univ	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Polytechnic Univ	59	1	10	0	7	41	0	0	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Inst	145	9	18	4	17	85	1	0	0	0	2	0	0	3	0	6
Rockefeller Univ	25	1	1	0	0	0	23	0	0	0	0	0	0	0	0	0
St. John's Univ-Queens	41	0	0	0	0	0	4	2	0	25	0	0	3	0	7	0
State Univ of NY-Albany	172	11	5	6	10	0	13	4	0	25	30	0	2	14	33	19
State Univ of NY-Binghamton Univ	80	0	9	2	6	16	5	0	0	5	18	2	7	8	1	1
State Univ of NY-Buffalo	349	5	26	1	14	57	49	9	0	24	30	5	23	20	69	17
State Univ of NY-Stony Brook	263	26	14	12	28	18	49	0	0	26	28	6	16	39	1	0
SUNY Coll-Envirn Sci & Forestry	15	0	3	1	0	0	5	1	4	0	1	0	0	0	0	0
SUNY College of Optometry	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
SUNY-Hlth Sci Ctr-Brooklyn	16	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0
SUNY-Hlth Sci Ctr-Syracuse	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Syracuse Univ	172	5	7	0	15	21	9	3	0	13	28	1	2	13	32	23
Union College	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Union Theological Seminary	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Univ of Rochester	259	35	19	3	11	26	51	2	0	9	33	5	6	40	14	5
Yeshiva Univ	21	0	0	0	0	0	0	0	0	15	0	1	0	0	0	5
Yeshiva U-Einstein Coll of Med	37	0	0	0	0	0	36	1	0	0	0	0	0	0	0	0
NORTH CAROLINA	1,044	31	57	26	54	137	218	53	47	48	87	20	41	78	116	31
Duke Univ	231	10	17	8	14	23	59	1	1	10	25	8	13	33	0	9
East Carolina U-Sch of Med	20	0	0	0	0	0	11	0	0	0	0	0	0	0	9	0
North Carolina St U-Raleigh	328	12	8	8	20	109	45	7	46	10	11	0	0	0	49	3
U of N Carolina-Chapel Hill	364	9	26	10	20	5	83	41	0	20	41	12	23	36	20	18
U of N Carolina-Greensboro	78	0	0	0	0	0	3	4	0	8	10	0	5	9	38	1
Wake Forest Univ	23	0	6	0	0	0	17	0	0	0	0	0	0	0	0	0
NORTH DAKOTA	79	1	10	3	3	1	8	0	14	14	0	1	1	1	22	0
North Dakota State Univ	33	1	6	1	3	1	7	0	14	0	0	0	0	0	0	0
Univ of North Dakota	46	0	4	2	0	0	1	0	0	14	0	1	1	1	22	0

APPENDIX TABLE A-7 (Continued)

	1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Math and Computer Sci.	Engineering	Biosciences	Health Sciences	Agricultural Sciences	Psychology	Other Social Sciences	History	Eng. and Amer. Lang. and Lit.	Other Humanities	Education	Professional/ Other Fields
OHIO	1,835	68	120	21	57	304	222	64	35	140	113	36	45	109	359	142
Air Force Inst of Technology	31	3	0	0	0	28	0	0	0	0	0	0	0	0	0	0
Bowling Green State Univ	90	0	2	0	6	0	2	0	0	20	10	3	5	18	10	14
Case Western Reserve Univ	174	8	12	0	3	52	39	12	0	7	6	6	5	3	1	20
Cleveland State Univ	39	0	7	0	1	7	5	0	0	0	4	0	0	0	5	10
Hebrew Union College	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Kent State Univ	139	12	5	3	2	0	8	2	0	18	8	2	7	5	46	21
Medical College of Ohio-Toledo	24	0	0	0	0	0	22	2	0	0	0	0	0	0	0	0
Miami Univ	44	0	4	3	0	0	3	0	0	10	5	2	5	1	11	0
Ohio State Univ	708	29	27	13	39	111	83	26	34	32	61	12	7	46	149	39
Ohio Univ	132	4	6	0	4	7	10	1	0	7	1	4	4	7	47	30
Univ of Akron	131	8	28	0	0	27	4	1	0	23	8	3	0	0	29	0
Univ of Cincinnati	225	4	18	2	0	53	33	15	1	15	10	1	9	27	29	8
Univ of Dayton	18	0	0	0	0	12	0	0	0	0	0	0	0	0	6	0
Univ of Toledo	69	0	11	0	1	7	6	5	0	8	0	3	3	1	24	0
Wright State Univ	8	0	0	0	1	0	7	0	0	0	0	0	0	0	0	0
Youngstown State Univ	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
OKLAHOMA	421	6	14	12	15	66	45	9	30	32	26	4	15	13	90	44
Oklahoma State Univ	207	3	4	3	7	20	13	2	30	15	12	1	9	1	62	25
Univ of Oklahoma	182	3	10	7	5	31	28	7	0	11	14	3	4	12	28	19
Univ of Tulsa	32	0	0	2	3	15	4	0	0	6	0	0	2	0	0	0
OREGON	440	21	17	21	25	45	64	21	51	13	39	3	10	19	72	19
Oregon Graduate Inst of Sci & Tech	34	1	0	4	6	19	4	0	0	0	0	0	0	0	0	0
Oregon Health Sciences Univ	20	0	0	0	0	0	14	5	0	0	1	0	0	0	0	0
Oregon State Univ	205	11	10	13	9	24	34	11	51	1	12	0	0	0	27	2
Portland State Univ	35	0	0	2	1	2	0	0	0	0	12	0	0	0	11	7
Univ of Oregon	146	9	7	2	9	0	12	5	0	12	14	3	10	19	34	10
PENNSYLVANIA	2,161	68	106	18	101	386	253	74	17	138	197	44	60	209	329	161
Bryn Mawr College	21	0	0	0	0	0	2	0	0	4	0	0	1	12	0	2
Carnegie-Mellon Univ	192	8	8	0	30	91	11	0	0	6	16	9	0	6	0	7
Drexel Univ	51	1	5	0	1	23	6	0	0	0	1	0	0	0	0	14
Duquesne Univ	34	0	3	1	0	0	1	2	0	4	0	0	3	14	0	6
Hahnemann Univ	23	0	0	0	0	0	10	1	0	12	0	0	0	0	0	0
Indiana Univ of Pennsylvania	44	0	0	0	0	0	0	0	0	0	5	0	18	6	15	0
Lehigh Univ	92	4	3	2	5	46	6	0	0	7	1	2	4	0	10	2
Med College of Pennsylvania	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
Pennsylvania State Univ	527	11	24	12	21	144	58	8	17	25	30	5	13	37	102	20
Phila Coll of Pharm & Sci	10	0	3	0	0	0	4	3	0	0	0	0	0	0	0	0
Temple Univ	283	8	7	0	6	1	22	5	0	47	21	8	8	42	87	21
Thomas Jefferson Univ	28	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0
Univ of Pennsylvania	452	18	34	1	25	45	64	12	0	9	90	16	6	56	31	45
Univ of Pittsburgh	356	18	18	2	13	36	31	38	0	24	33	4	7	31	63	38
Villanova Univ	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Westminster Theol Seminary	11	0	0	0	0	0	0	0	0	0	0	0	0	5	0	6
Widener Univ	26	0	0	0	0	0	0	5	0	0	0	0	0	0	21	0
PUERTO RICO	57	2	1	3	0	1	1	0	0	25	0	1	0	8	15	0
Caribbean Ctr for Adv Studies	18	0	0	0	0	0	0	0	0	17	0	0	0	1	0	0
Inter Amer U PR-Metro Campus	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Univ of Puerto Rico	26	2	1	0	0	0	1	0	0	8	0	1	0	7	6	0
Univ of Puerto Rico-Mayaguez	4	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0
RHODE ISLAND	242	15	10	16	22	34	32	4	4	19	23	8	8	43	0	4
Brown Univ	156	12	8	4	18	20	19	0	0	2	22	6	4	41	0	0
Providence College	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Salve Regina Univ	3	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0
Univ of Rhode Island	82	3	2	12	4	14	13	4	4	17	0	0	4	1	0	4
SOUTH CAROLINA	423	3	23	11	14	51	65	33	10	20	43	6	11	21	93	19
Clemson Univ	117	1	10	1	7	42	19	0	10	0	14	0	0	0	9	4
Medical Univ of South Carolina	24	0	2	0	0	0	22	0	0	0	0	0	0	0	0	0
South Carolina State Univ	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
Univ of South Carolina	267	2	11	10	7	9	24	33	0	20	29	6	11	21	69	15
SOUTH DAKOTA	81	0	2	0	0	1	10	1	5	4	2	0	0	0	56	0
S Dakota Sch of Mines & Tech	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
South Dakota State Univ	17	0	2	0	0	0	7	1	5	0	2	0	0	0	0	0
Univ of South Dakota	63	0	0	0	0	0	3	0	0	4	0	0	0	0	56	0
TENNESSEE	679	12	29	5	20	83	87	16	5	56	52	14	20	47	190	43
East Tennessee State Univ	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
Geo Peabody Coll for Teachers	40	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
Meharry Medical College	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Mid-America Bapt Theol Sem	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
Middle Tennessee State Univ	14	0	1	0	0	0	0	0	0	0	5	0	1	1	6	0
Tennessee State Univ	33	0	0	0	0	0	0	0	0	0	0	0	0	0	32	1
Tennessee Technological Univ	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
Univ of Memphis	113	0	8	2	5	4	4	2	0	19	3	4	0	7	44	11
Univ of Tennessee-Knoxville	273	8	16	3	7	44	26	11	5	25	29	4	12	14	42	27
Univ of Tennessee-Memphis	23	0	0	0	0	0	22	1	0	0	0	0	0	0	0	0
Vanderbilt Univ	145	4	4	0	8	26	28	2	0	12	15	6	7	24	7	2

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front on Appendix A.

APPENDIX TABLE A-7 (Continued)

	1996 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Math and Computer Sci.	Engineering	Biosciences	Health Sciences	Agricultural Sciences	Psychology	Other Social Sciences	History	Eng. and Amer. Lang. and Lit.	Other Humanities	Education	Professional/ Other Fields
TEXAS	2,709	93	127	69	110	494	356	108	69	193	185	32	54	193	436	190
Baylor College of Medicine	32	0	0	0	0	0	31	1	0	0	0	0	0	0	0	0
Baylor Univ	40	1	1	1	3	0	2	0	0	0	0	0	2	11	19	0
Dallas Theological Seminary	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
East Texas State Univ	54	0	0	0	0	0	0	0	0	1	0	0	0	0	53	0
Lamar Univ	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Rice Univ	117	8	11	8	14	34	13	0	0	7	7	2	5	8	0	0
St. Mary's Univ	4	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0
Sam Houston State Univ	6	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0
Southern Methodist Univ	55	0	0	0	5	26	5	0	0	6	12	0	0	1	0	0
Southwestern Bapt Theol Sem	60	0	0	0	0	0	0	0	0	1	0	1	0	33	0	25
Stephen F Austin St Univ	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Texas A&M Univ-College Station	569	10	47	29	22	142	70	10	61	30	46	5	7	0	63	27
Texas A&M Univ-Kingsville	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Texas Christian Univ	22	2	3	0	0	0	0	0	0	7	0	3	3	4	0	0
Texas Southern Univ	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
Texas Tech Univ	149	4	10	3	4	26	14	0	6	21	6	1	4	12	22	16
Texas Woman's Univ	81	0	0	0	0	0	3	23	0	17	9	0	1	2	23	3
Univ of Dallas	5	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0
Univ of Houston	203	3	13	1	5	32	8	5	0	26	12	4	6	6	59	23
Univ of North Texas	183	2	5	0	17	0	7	0	0	29	11	5	10	14	63	20
Univ of North Texas-Hlth Sci Ctr	6	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
Univ of Texas-Arlington	86	6	5	0	8	37	4	0	0	2	1	1	0	3	0	19
Univ of Texas-Austin	744	46	28	16	29	181	55	32	0	26	57	10	16	92	108	48
Univ of Texas-Dallas	61	7	4	9	3	8	1	2	0	2	13	0	0	5	0	7
Univ of Texas-El Paso	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
U Tex-Hlth Sci Ctr-Houston	99	0	0	0	0	0	66	32	0	0	1	0	0	0	0	0
U Tex-Hlth Sci Ctr-San Antonio	18	3	0	0	0	0	14	1	0	0	0	0	0	0	0	0
U Tex-Med Branch-Galveston	27	0	0	0	0	0	25	2	0	0	0	0	0	0	0	0
U Tex-Southwestern Med Ctr	52	1	0	0	0	5	32	0	0	14	0	0	0	0	0	0
UTAH	401	15	42	7	23	74	53	15	11	42	33	3	1	10	52	20
Brigham Young Univ	84	5	9	0	4	8	5	0	0	20	8	1	0	2	22	0
Univ of Utah	241	9	32	7	16	50	37	15	0	13	16	2	1	8	16	19
Utah State Univ	76	1	1	0	3	16	11	0	11	9	9	0	0	0	14	1
VERMONT	60	0	4	0	0	6	20	0	0	17	0	0	0	3	10	0
Middlebury College	4	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0
Univ of Vermont	56	0	4	0	0	6	20	0	0	17	0	0	0	0	9	0
VIRGINIA	1,007	38	50	24	57	160	89	35	35	89	69	19	16	28	225	73
College of William & Mary	49	5	4	4	1	0	0	0	0	0	0	3	0	3	28	1
George Mason Univ	85	0	0	2	16	3	4	5	0	20	13	0	0	0	17	5
Old Dominion Univ	63	8	0	5	7	16	6	5	0	2	3	0	0	0	2	9
Presbyterian Sch of Christian Ed	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Regent Univ	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Union Theological Seminary	10	0	0	0	0	0	0	0	0	0	0	0	0	2	0	8
Univ of Virginia	324	21	14	5	13	45	29	10	0	34	28	15	16	23	67	4
Virginia Commonwealth Univ	97	2	13	0	0	0	27	10	0	17	2	0	0	0	11	15
Virginia Polytech Inst & St U	375	2	19	8	20	96	23	5	35	16	23	1	0	0	98	29
WASHINGTON	691	32	27	26	32	106	89	28	41	33	64	14	26	50	95	28
Gonzaga Univ	17	0	0	0	0	0	0	0	0	0	0	0	0	0	16	1
Seattle Pacific Univ	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Seattle Univ	23	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
Univ of Washington	495	25	22	23	27	90	68	25	20	21	41	9	22	48	38	16
Washington State Univ	150	7	5	3	5	16	21	3	21	12	23	5	4	2	12	11
WEST VIRGINIA	119	0	6	0	3	19	19	3	2	9	7	7	4	0	40	0
Marshall Univ	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
West Virginia Univ	116	0	6	0	3	19	16	3	2	9	7	7	4	0	40	0
WISCONSIN	909	43	44	11	44	127	141	23	37	40	83	38	19	78	125	56
Marquette Univ	55	0	3	0	0	11	2	0	0	3	1	2	3	14	11	5
Medical College of Wisconsin	16	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0
Univ of Wisconsin-Madison	752	37	34	10	41	112	115	19	37	30	75	36	8	60	99	39
Univ of Wisconsin-Milwaukee	86	6	7	1	3	4	8	4	0	7	7	0	8	4	15	12
WYOMING	78	1	7	9	9	9	9	0	2	6	1	0	0	0	25	0
Univ of Wyoming	78	1	7	9	9	9	9	0	2	6	1	0	0	0	25	0

APPENDIX TABLE A-7 Institutions Granting Doctorates, by Major Field, 1996

Top 50 Doctorate-Granting Institutions, 1996

1. Univ of California-Berkeley	768	26. Rutgers State Univ-New Brunswick	395
2. Univ of Wisconsin-Madison	752	27. Univ of Arizona	383
3. Univ of Texas-Austin	744	28. Univ of Chicago	382
4. Univ of Minnesota-Minneapolis	724	29. Univ of Iowa	377
5. Ohio State Univ	708	30. Virginia Polytech Inst & State Univ	375
6. Univ of Illinois-Urbana/Champaign	699	31. Univ of Colorado	368
7. Univ of Michigan	685	32. Yale Univ	366
8. Univ of California-Los Angeles	606	33. Univ of North Carolina-Chapel Hill	364
9. Texas A&M Univ-College Station	569	34. Northwestern Univ	359
10. Stanford Univ	565	35. Univ of Pittsburgh	356
11. Massachusetts Inst of Technology	553	36. New York Univ	350
12. Harvard Univ	527	37. State Univ of New York-Buffalo	349
13. Pennsylvania State Univ	527	38. Univ of Georgia	343
14. Cornell Univ	516	39. Univ of Massachusetts-Amherst	338
15. Purdue Univ	507	40. North Carolina State Univ-Raleigh	328
16. Univ of Washington	495	41. Univ of Virginia	324
17. Michigan State Univ	479	42. Johns Hopkins Univ	319
18. Univ of Maryland-College Park	463	43. Arizona State Univ	317
19. Univ of Pennsylvania	452	44. City U of NY-Grad Sch/Univ Ctr	302
20. Univ of Southern California	445	45. Boston Univ	300
21. Columbia Univ	429	46. Princeton Univ	287
22. Nova Southeastern Univ	420	47. Iowa State Univ	287
23. Univ of Florida	418	48. Temple Univ	283
24. Indiana Univ-Bloomington	407	49. Florida State Univ	280
25. Univ of California-Davis	397	50. Univ of Tennessee-Knoxville	273

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX B: Trend Tables, 1986-1996

Appendix B includes the following two tables:

B-1 Number of Doctorate Recipients, by Subfield, 1986-1996
B-2 Number of Doctorate Recipients, by Gender, Race/Ethnicity, and Citizenship, 1977, 1981, and 1986-1996

TABLE B-1: Table B-1 presents data for the most recent decade by subfield of doctorate. In general, the subfields correspond to the fields on the questionnaire's Specialties List located at the back of this report; some, however, do not appear on the current Specialties List because they are no longer included in the survey taxonomy. A dash (-) in a column indicates that the field was not on the Specialties List for that year.

Field groupings in this table may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates (SED); see inside the back cover for a description of field groupings as reported in these tables. The "general" field categories—for example, "chemistry, general"—include individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The "other" field categories—for example, "chemistry, other"—include individuals whose specified doctoral discipline was not among the specialty fields.

The seven tables in Appendix A present additional information on the most recent cohort of Ph.D.s by field of doctorate.

TABLE B-2: Table B-2 displays, by gender and citizenship, data on the race/ethnicity of doctorate recipients for 1977, 1981, and the past decade. Table B-2 contains three panels, each displayed on a separate page. The first panel includes all doctorates; the others disaggregate the data by gender.

The reader should note that numbers in Table B-2 have been revised since publication of* Summary Report 1995. *Because of late questionnaire returns and responses to follow-ups for missing information, data are subject to revision in the year after survey closure. New follow-up procedures implemented in 1990 and later years have increased coverage of several variables, including citizenship and race/ethnicity. One result has been greater postsurvey adjustment to racial/ethnic data than in earlier years. (Note: The greatest adjustment was to the numbers of black Ph.D.s in 1990 and 1991—an increase of about 7.5 percent each year.) Updates to 1995 racial/ethnic data are shown in Table B-2 in this year's report.

The racial/ethnic question has undergone several revisions over the years. In 1977 it was modified to correspond to a standard question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget

(OMB) for use in federally sponsored surveys; an explanation of the effect of these changes is detailed on page 13 of *Summary Report 1977*. (Note: Changes in the OMB guidelines prompted the moving of persons having origins in the Indian subcontinent from the white category to the Asian category.) In 1980 the item was further revised in two ways: (1) the Hispanic category was subdivided into Puerto Rican, Mexican American, and other Hispanic to provide more detail for users of the racial/ethnic data, and (2) respondents were asked to check only one racial category. (Before 1980 doctorate recipients could check more than one category to indicate their race.) The item was modified again in 1982 to separate the questions on race and ethnicity. Since then respondents have been asked to first check one of the four racial group categories (American Indian, Asian, black, or white) and then indicate whether or not they are Hispanic. In Table B-2, *Ph.D.s who reported Hispanic heritage, regardless of racial designation, are counted as Hispanic*. The remaining survey respondents are then counted in their respective racial groups. (Note: Doctorate recipients who checked the category "American Indian or Alaskan Native" are identified as American Indian in this report.)

Tables A-2 and A-4 in Appendix A present additional information on the most recent cohort of Ph.D.s by race/ethnicity.

APPENDIX TABLE B-1 Number of Doctorate Recipients, by Subfield, 1986-1996

	Year of Doctorate										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
TOTAL ALL FIELDS	31,902	32,370	33,500	34,327	36,067	37,534	38,890	39,801	41,034	41,743	42,415
PHYSICAL SCIENCES	4,807	5,030	5,309	5,455	5,859	6,280	6,502	6,496	6,822	6,808	6,675
MATHEMATICS	729	740	749	859	892	1,039	1,058	1,146	1,118	1,190	1,122
Applied Mathematics	135	131	142	158	185	193	213	188	206	211	230
Algebra	46	57	54	50	39	72	69	84	78	82	78
Analysis and Functional Analysis	81	86	76	103	90	132	105	105	107	99	100
Geometry	38	30	44	47	42	66	45	44	35	45	72
Logic	23	18	20	12	19	23	28	19	29	35	16
Number Theory	20	15	26	23	26	30	25	42	37	35	42
Mathematical Statistics	141	143	152	167	157	206	217	228	205	205	178
Topology	34	41	27	37	50	57	58	54	38	51	55
Computing Theory and Practice	10	14	12	12	12	19	12	18	16	14	18
Operations Research	29	22	29	22	29	16	22	37	26	36	21
Mathematics, General	125	137	134	177	191	180	209	276	269	305	233
Mathematics, Other	47	46	33	51	52	45	55	51	72	72	79
COMPUTER SCIENCE	399	450	515	612	705	800	869	880	903	997	921
Computer Science	355	384	442	519	612	720	791	825	833	913	837
Information Sciences and Systems	44	66	73	93	93	80	78	55	70	84	84
PHYSICS AND ASTRONOMY	1,187	1,237	1,302	1,274	1,393	1,411	1,537	1,544	1,692	1,652	1,677
Astronomy	52	46	66	49	52	50	55	76	66	89	84
Astrophysics	57	54	64	64	76	75	79	69	78	84	108
Acoustics	15	17	16	15	21	13	18	27	20	18	19
Chemical and Atomic/Molecular	70	79	77	74	87	76	85	95	140	110	129
Electron	2	6	2	4	2	1	-	-	-	-	-
Elementary Particles	147	159	174	135	163	182	153	170	176	183	175
Fluids	6	21	17	14	17	14	17	19	12	18	21
Nuclear	89	74	88	81	73	66	86	82	90	91	87
Optics	58	50	65	78	76	85	94	96	104	98	129
Plasma and High-Temperature	61	72	65	61	42	58	65	62	79	46	48
Polymer	11	15	20	7	11	17	17	29	29	23	33
Solid State and Low-Temperature	280	287	252	296	306	372	408	336	388	371	364
Physics, General	222	238	271	269	323	247	297	340	343	355	324
Physics, Other	117	119	125	127	144	155	163	143	167	166	156
CHEMISTRY	1,903	1,975	2,015	1,970	2,100	2,194	2,214	2,137	2,257	2,162	2,148
Analytical	257	314	301	289	293	304	304	286	334	317	346
Inorganic	260	240	250	256	242	260	268	237	262	258	249
Nuclear	18	13	7	6	13	14	7	8	10	5	5
Organic	511	511	531	511	452	538	512	518	544	483	506
Medicinal/Pharmaceutical	58	65	73	64	48	83	69	99	102	96	96
Physical	293	302	318	310	325	364	398	336	334	338	300
Polymer	72	96	81	78	81	111	83	107	117	116	121
Theoretical	41	46	50	46	55	45	59	53	52	40	57
Chemistry, General	289	297	310	312	524	400	449	431	447	458	396
Chemistry, Other	104	91	94	98	67	75	65	62	55	51	72
EARTH, ATMOS., & MARINE SCI.	589	628	728	740	769	836	824	789	852	807	807
Atmospheric Physics and Chemistry	21	24	19	15	18	20	36	13	27	27	22
Atmospheric Dynamics	16	17	25	16	20	21	23	23	27	16	21
Meteorology	27	17	35	27	20	31	28	34	32	25	35
Atmos. Sci./Meteorology, General	7	16	14	14	23	26	27	22	37	44	33
Atmos. Sci./Meteorology, Other	7	13	10	15	2	10	6	7	6	18	14
Geology	118	114	144	165	166	192	166	197	194	186	162
Geochemistry	37	31	46	39	56	64	62	50	59	42	49
Geophysics and Seismology	89	75	83	87	91	117	108	101	106	93	101
Paleontology	16	21	24	17	21	24	25	21	17	20	14
Mineralogy, Petrology	17	24	19	36	26	36	29	9	21	19	23
Stratigraphy, Sedimentation	14	22	30	24	25	29	23	28	27	16	12
Geomorphology and Glacial Geology	11	18	9	10	14	18	12	16	13	11	11
Applied Geology	4	5	7	6	6	1	-	-	-	-	-
Geological & Related Sci., General	12	18	8	19	31	30	18	15	18	21	27
Geological & Related Sci., Other	12	29	31	28	28	33	31	17	24	22	22
Environmental Science	35	29	58	68	50	35	57	68	61	81	83
Hydrology and Water Resources	16	18	24	24	13	16	29	25	30	24	31
Oceanography	78	73	81	87	89	85	82	98	91	83	107
Marine Sciences	22	38	28	26	39	27	32	27	34	32	27
Misc. Physical Sciences, Other	30	26	33	17	31	21	30	18	28	27	13
ENGINEERING	3,376	3,712	4,187	4,543	4,894	5,214	5,438	5,698	5,822	6,008	6,305
Aerospace, Aeronautic. & Astronautic.	118	142	150	178	192	207	234	228	230	252	287
Agricultural	52	74	70	102	101	83	84	86	89	73	104
Bioengineering and Biomedical	67	75	114	115	129	149	147	171	173	189	220
Ceramic Sciences	25	42	30	35	43	58	42	42	39	39	41
Chemical	476	527	624	625	561	621	607	624	630	602	681
Civil	387	441	488	498	505	509	540	563	602	572	599
Communications	23	26	24	25	35	21	30	22	33	29	32
Computer	77	62	100	117	131	178	175	167	202	189	208
Electrical, Electronics	706	691	886	995	1,110	1,206	1,278	1,354	1,438	1,513	1,500
Engineering Mechanics	94	113	105	110	111	113	132	128	132	108	105
Engineering Physics	13	13	9	16	16	23	25	21	17	17	37
Engineering Science	30	26	32	27	37	42	51	55	46	56	52

NOTE: Dash (-) indicates that the field was not on the questionnaire's Specialties List that year. Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix B.

APPENDIX TABLE B-1 (Continued)

	Year of Doctorate										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Environmental Health Engineering	42	36	43	40	48	66	54	61	82	84	98
Industrial/Manufacturing	101	120	127	162	151	165	196	236	228	284	258
Materials Science	187	238	252	257	307	361	365	416	433	476	470
Mechanical	442	544	610	650	773	762	855	902	883	917	947
Metallurgical	93	112	92	88	90	70	78	77	67	73	61
Mining and Mineral	22	27	17	33	39	38	26	24	23	19	31
Naval Architecture, Marine Eng.	9	7	9	9	8	5	-	-	-	-	-
Nuclear	98	84	104	86	114	107	120	108	85	105	113
Ocean	14	24	21	20	17	21	21	24	29	21	26
Operations Research	54	51	44	68	46	76	56	56	47	48	74
Petroleum	18	23	33	29	49	28	54	52	42	48	52
Polymer/Plastics	37	34	28	58	48	42	64	61	53	58	65
Systems	33	47	44	30	51	48	37	57	51	47	47
Engineering, General	55	54	49	61	75	78	64	47	39	60	60
Engineering, Other	103	79	82	109	107	137	103	116	129	129	137
LIFE SCIENCES	5,734	5,754	6,164	6,342	6,605	6,933	7,115	7,395	7,739	7,918	8,255
BIOLOGICAL SCIENCES	3,807	3,839	4,111	4,116	4,328	4,650	4,799	5,092	5,203	5,376	5,723
Biochemistry	576	573	612	669	678	765	715	846	804	824	794
Biomedical Sciences	-	-	-	-	-	-	-	-	-	93	140
Biophysics	72	86	97	87	103	100	125	103	123	155	142
Biotechnology Research	-	-	-	-	-	-	-	8	14	4	6
Bacteriology	12	13	7	11	15	11	13	14	18	13	16
Plant Genetics	20	26	26	18	31	23	33	41	30	35	41
Plant Pathology	28	33	30	22	37	50	32	41	40	32	38
Plant Physiology	52	62	74	47	51	65	68	48	70	55	73
Botany, Other	121	106	112	117	104	105	107	105	117	102	105
Anatomy	86	92	88	80	70	77	75	76	66	64	47
Biometrics and Biostatistics	30	37	47	46	47	59	63	74	72	67	81
Cell Biology	130	127	118	133	145	149	188	231	237	236	233
Ecology	183	158	155	161	166	189	180	177	201	203	245
Developmental Biology/Embryology	9	6	7	10	22	37	48	57	62	64	96
Endocrinology	17	19	21	21	24	33	27	16	26	20	24
Entomology	170	123	133	139	147	138	139	114	123	121	136
Biological Immunology	146	136	179	152	153	177	181	169	161	190	238
Molecular Biology	298	303	364	413	413	481	527	582	598	617	651
Microbiology	326	301	333	340	335	372	377	433	423	426	444
Neuroscience	120	153	163	181	192	238	238	276	284	309	404
Nutritional Sciences	122	141	127	128	118	106	132	134	147	136	142
Parasitology	25	16	20	20	13	20	17	17	22	14	22
Toxicology	104	115	108	111	91	86	105	100	120	126	138
Human and Animal Genetics	91	113	118	112	153	160	142	172	203	202	212
Human and Animal Pathology	91	127	112	105	101	122	114	130	128	109	135
Human and Animal Pharmacology	245	234	252	242	244	266	279	274	259	278	316
Human and Animal Physiology	240	248	225	272	278	272	266	271	289	262	275
Zoology, Other	155	139	167	132	122	125	134	114	117	145	100
Biological Sciences, General	213	229	256	231	333	278	315	305	288	348	291
Biological Sciences, Other	125	123	160	116	142	146	159	164	161	126	138
HEALTH SCIENCES	770	800	882	974	956	1,041	1,112	1,197	1,296	1,330	1,324
Speech-Lang. Pathology & Audiology	82	107	93	91	93	90	82	98	95	106	94
Environmental Health	39	29	52	35	38	38	44	38	51	51	58
Health Systems/Services Admin.	-	-	-	-	-	-	-	35	53	62	60
Public Health	103	96	121	129	123	132	157	153	142	152	156
Epidemiology	80	86	97	107	102	115	108	120	168	153	149
Exercise Physiology/Sci., Kinesiology	-	-	-	-	-	-	-	-	87	118	105
Nursing	216	218	247	308	261	325	338	373	336	354	354
Pharmacy	104	133	95	111	116	115	160	146	148	144	145
Rehabilitation/Therapeutic Services	-	-	-	-	-	17	25	36	43	20	26
Veterinary Medicine	41	31	48	48	70	56	63	61	56	55	65
Health Sciences, General	27	12	29	19	36	28	30	38	41	35	22
Health Sciences, Other	78	88	100	126	117	125	105	99	76	80	90
AGRICULTURAL SCIENCES	1,157	1,115	1,171	1,252	1,321	1,242	1,204	1,106	1,240	1,212	1,208
Agricultural Economics	160	139	156	164	145	168	141	137	162	173	169
Agricultural Business & Management	-	-	0	2	2	1	0	1	0	3	2
Animal Breeding and Genetics	25	23	27	23	22	18	23	18	17	19	12
Animal Nutrition	65	82	54	67	54	57	41	52	58	50	54
Dairy Science	-	-	12	16	20	19	14	11	11	14	9
Poultry Science	-	-	10	11	17	13	22	16	21	11	12
Fisheries Science and Management	31	32	42	34	42	39	26	38	48	49	46
Animal Sciences, Other	91	76	86	95	90	92	97	74	86	85	90
Agronomy and Crop Science	159	143	141	140	143	117	123	104	143	114	110
Plant Breeding and Genetics	78	70	83	64	87	69	82	68	81	72	63
Plant Pathology	85	76	46	63	64	90	63	58	55	52	90
Plant Protection-Pest Management	-	-	1	6	4	2	-	-	-	-	-
Plant Sciences, Other	22	20	23	15	23	17	29	28	24	30	21
Food Sciences	121	131	16	1	-	-	-	-	-	-	-
Food Distribution	-	-	0	0	0	0	0	0	1	-	-
Food Engineering	-	-	6	11	10	12	14	9	16	7	7
Food Sciences, Other	-	-	119	147	141	137	151	141	152	135	142
Soil Sciences	103	74	18	-	-	-	-	-	-	-	-
Soil Chemistry/Microbiology	-	-	33	28	27	24	24	26	21	27	29
Soil Sciences, Other	-	-	62	75	91	78	63	59	69	72	78
Horticulture Science	60	71	61	75	101	78	65	62	65	67	73

NOTE: Dash (-) indicates that the field was not on the questionnaire's Specialties List that year. Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix B.

APPENDIX TABLE B-1 (Continued)

	Year of Doctorate										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Wildlife Management	20	23	3	-	-	-	-	-	-	-	-
Forestry Science	88	100	15	-	-	-	-	-	-	-	-
Forest Biology	-	-	21	22	27	17	29	18	20	24	19
Forest Engineering	-	-	3	1	2	2	2	3	0	4	0
Forest Management	-	-	18	21	14	22	16	17	17	20	22
Wood Sci. & Pulp/Paper Tech.	-	-	7	16	16	16	21	20	26	26	18
Conservation/Renewable Nat. Res.	-	-	7	12	16	19	9	13	21	24	13
Forestry and Related Sci., Other	-	-	35	57	62	45	62	55	59	71	56
Wildlife/Range Management	-	-	36	52	58	59	55	54	52	50	64
Agricultural Sciences, General	4	5	9	7	5	3	9	10	4	6	5
Agricultural Sciences, Other	45	50	21	27	38	28	23	14	11	7	4
SOCIAL SCIENCES (INCL. PSYCH.)	5,893	5,790	5,781	5,961	6,093	6,152	6,216	6,545	6,613	6,635	6,814
Anthropology	381	352	325	325	324	341	320	342	384	375	396
Area Studies	28	17	16	17	22	24	33	36	34	27	28
Criminology	24	29	43	32	42	35	37	39	41	44	60
Demography/Population Studies	15	26	19	22	20	28	17	22	23	15	11
Economics	834	796	825	872	836	861	885	906	913	952	979
Econometrics	25	25	27	26	26	24	25	24	26	27	29
Geography	120	111	129	105	131	108	111	137	146	150	165
Human/Individual & Family Develop.	-	-	-	-	-	-	-	-	129	150	151
International Relations/Affairs	76	82	77	94	97	88	76	102	112	73	99
Political Science and Government	414	404	392	430	462	434	513	507	589	600	621
Public Policy Analysis	81	83	73	79	87	111	107	98	94	93	104
Sociology	491	423	449	436	428	465	495	513	525	540	516
Statistics	65	49	47	69	69	31	29	48	46	48	48
Urban Affairs/Studies	50	72	86	62	67	90	86	123	132	103	106
Social Sciences, General	36	30	28	26	23	36	33	32	21	35	26
Social Sciences, Other	127	118	171	158	178	226	186	196	148	124	135
PSYCHOLOGY	3,126	3,173	3,074	3,208	3,281	3,250	3,263	3,420	3,250	3,279	3,340
Clinical	1,173	1,214	1,095	1,259	1,337	1,305	1,309	1,373	1,285	1,291	1,325
Cognitive and Psycholinguistics	70	80	83	79	76	94	101	104	129	104	128
Comparative	14	9	7	8	8	7	2	5	8	4	3
Counseling	449	486	482	501	466	497	507	488	497	470	464
Developmental and Child	184	200	176	148	159	155	170	202	179	152	188
Experimental	147	146	135	146	143	142	154	143	139	151	128
Educational	106	89	103	105	98	110	91	91	69	74	92
Family and Marriage Counseling	-	-	-	-	-	-	-	-	-	57	52
Industrial and Organizational	110	107	118	104	126	142	138	159	137	155	162
Personality	16	25	18	28	20	13	17	22	19	16	24
Physiological/Psychobiology	73	69	85	62	46	45	55	85	93	92	80
Psychometrics	11	9	11	6	8	9	5	9	5	10	11
Quantitative	23	13	12	11	15	7	10	16	17	13	19
School	116	93	115	107	82	82	88	95	84	91	82
Social	141	133	140	128	145	147	139	125	153	155	170
Psychology, General	309	343	368	364	371	324	295	306	280	306	279
Psychology, Other	184	157	126	152	181	171	182	197	156	138	133
HUMANITIES	3,461	3,500	3,555	3,552	3,822	4,099	4,444	4,482	4,744	5,061	5,116
History, American	197	198	209	206	211	251	277	269	310	344	355
History, Asian	-	-	-	-	-	-	-	-	-	43	54
History, European	121	121	127	107	151	127	176	162	180	185	187
History/Philosophy of Sci. & Tech.	24	25	22	20	26	27	28	37	27	41	37
History, General	83	94	103	85	111	121	102	116	140	148	101
History, Other	138	148	142	120	113	137	141	142	144	128	123
Classics	51	55	56	51	58	55	58	61	84	62	72
Comparative Literature	101	121	139	103	97	150	163	153	163	191	164
Linguistics	189	199	166	188	167	227	266	214	221	201	230
Speech and Rhetorical Studies	30	37	37	35	38	86	98	111	142	139	155
Letters, General	19	25	16	13	19	17	18	18	22	43	28
Letters, Other	37	39	43	60	52	44	38	37	25	34	61
American Studies	68	75	70	76	72	92	81	101	88	94	115
Archeology	28	31	23	26	22	33	33	38	34	35	21
Art History/Criticism/Conservation	126	143	134	145	135	125	154	158	182	181	176
Music	476	499	504	521	572	587	641	613	685	713	699
Philosophy	248	233	222	270	243	285	279	274	302	298	369
Religion	182	182	217	215	219	187	231	257	252	248	317
Drama/Theater Arts	88	82	92	79	106	91	95	91	102	80	103
LANGUAGE AND LITERATURE	1,164	1,112	1,147	1,152	1,308	1,350	1,465	1,524	1,537	1,718	1,618
American	215	190	186	192	229	253	291	293	296	327	314
English	504	478	531	528	567	599	612	655	647	752	699
French	102	103	101	106	123	100	124	137	129	151	142
German	79	77	76	73	78	71	96	105	67	93	88
Italian	15	21	14	20	25	32	20	19	32	35	24
Spanish	122	133	137	134	173	173	179	179	212	209	196
Russian	28	19	13	13	19	25	28	28	38	28	37
Slavic	8	5	5	7	7	14	15	13	10	16	11
Chinese	13	13	12	9	16	19	20	21	25	20	29
Japanese	9	9	6	13	9	7	12	11	12	7	10
Hebrew	11	13	12	10	14	11	20	15	10	11	12
Arabic	9	8	14	6	7	4	12	10	4	8	6
Other Language and Literature	49	43	40	41	41	42	36	38	55	61	50
Humanities, General	23	23	25	19	28	29	21	30	32	25	39
Humanities, Other	68	58	61	61	74	78	79	76	72	110	92

APPENDIX TABLE B-1 (Continued)

	Year of Doctorate										
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
EDUCATION	6,649	6,454	6,362	6,281	6,510	6,454	6,677	6,689	6,708	6,649	6,772
Curriculum and Instruction	794	762	815	841	839	807	900	856	819	896	896
Educational Admin. and Supervision	1,637	1,686	1,749	1,633	1,663	1,428	1,290	1,340	1,207	1,086	1,170
Educational Leadership	1	1	0	0	1	485	694	783	792	889	989
Educ./Instruct. Media Design	79	68	67	76	55	73	62	96	111	121	107
Educ. Stat./Research Methods	58	73	51	59	59	80	61	64	68	63	76
Educ. Assess., Test., & Meas.	47	37	55	42	40	32	45	23	28	19	32
Educational Psychology	330	320	323	301	323	323	346	290	311	297	309
School Psychology	92	95	98	85	87	90	88	86	97	71	114
Social/Phil. Found. of Educ.	124	114	122	110	86	109	101	109	140	130	125
Special Education	273	248	257	259	225	226	260	277	241	254	278
Counseling Educ./Couns. & Guidance	316	315	325	264	301	270	259	288	284	268	277
Higher Educ./Evaluation & Research	612	570	399	373	424	344	381	357	428	457	481
Pre-elementary/Early Childhood	87	73	83	63	42	85	98	97	91	70	81
Elementary Education	94	105	93	99	110	73	73	65	71	61	46
Junior High Education	0	1	1	-	-	-	-	-	-	-	-
Secondary Education	86	65	67	53	56	40	28	33	24	24	34
Adult and Continuing Education	223	203	229	236	211	210	208	233	215	235	210
TEACHING FIELDS	1,142	1,065	989	970	922	973	1,008	943	960	924	863
Agricultural Education	39	39	32	35	38	49	43	54	52	35	32
Art Education	43	52	42	39	44	28	46	38	33	39	41
Business Education	50	36	44	40	34	32	16	27	25	21	20
English Education	79	72	57	51	52	58	61	53	56	60	57
Foreign Languages Education	37	37	53	33	31	46	50	48	54	60	44
Health Education	81	91	86	100	95	78	98	83	97	99	90
Home Economics Education	17	17	17	19	10	21	12	14	11	15	13
Technical/Industrial Arts Education	20	24	11	17	17	13	11	16	20	15	11
Mathematics Education	72	74	56	69	65	73	62	69	74	92	100
Music Education	94	109	76	97	78	96	96	80	89	96	91
Nursing Education	40	36	34	29	24	18	29	19	24	18	23
Physical Education and Coaching	210	192	184	176	191	185	167	161	139	104	101
Reading Education	134	94	74	95	82	102	121	95	97	85	66
Science Education	65	63	67	48	72	72	73	73	85	73	96
Social Science Education	22	17	23	13	11	19	19	9	10	14	12
Speech Education	5	5	5	1	5	1	-	-	-	-	-
Technical Education	-	-	13	28	15	25	35	21	30	20	24
Trade and Industrial Education	86	68	67	47	18	17	11	24	24	13	12
Teacher Ed./Spec. Acad. & Voc., Other	48	39	48	33	40	40	58	59	40	65	30
Education, General	355	368	358	414	535	428	443	411	484	429	353
Education, Other	299	285	281	403	531	378	332	338	337	355	331
PROFESSIONAL/OTHER FIELDS	1,982	2,130	2,142	2,193	2,284	2,402	2,498	2,496	2,586	2,664	2,478
BUSINESS AND MANAGEMENT	902	981	1,033	1,067	1,036	1,163	1,248	1,281	1,283	1,327	1,276
Accounting	157	160	175	186	172	172	180	183	179	168	156
Banking/Financial Support Services	126	156	148	151	134	172	172	170	134	163	114
Business Admin. and Management	222	225	265	245	277	204	241	324	319	340	393
Business/Managerial Economics	28	26	27	27	21	19	21	33	40	37	38
International Business	-	-	-	-	-	-	-	-	22	23	36
Mgmt. Info. Sys./Business Data Proc.	-	-	-	-	-	72	103	102	117	111	94
Marketing Management and Research	110	113	126	130	120	134	139	166	167	153	153
Business Statistics	3	8	6	15	10	5	-	-	-	-	-
Operations Research	46	64	50	52	46	58	67	63	54	59	64
Organizational Behavior	57	66	74	95	64	72	81	73	102	100	108
Business Mgmt./Admin. Serv., General	56	75	75	57	70	123	112	87	87	92	67
Business Mgmt./Admin. Serv., Other	97	88	87	109	122	132	132	80	62	81	53
COMMUNICATIONS	258	309	247	306	323	332	330	321	371	380	389
Communications Research	79	90	72	85	87	72	45	33	40	40	60
Journalism	18	7	21	15	21	7	-	-	-	-	-
Mass Communications	-	-	-	-	-	68	85	117	156	121	137
Radio and Television	13	16	12	29	17	6	-	-	-	-	-
Communication Theory	-	-	-	-	-	25	47	41	45	53	37
Communications, General	75	102	70	79	86	70	76	69	68	77	81
Communications, Other	73	94	72	98	112	84	77	61	62	89	74
OTHER PROFESSIONAL FIELDS	796	778	812	766	858	836	880	867	891	931	774
Architectural Environmental Design	27	33	31	43	41	67	60	54	67	55	61
Home Economics	88	67	58	55	74	29	58	57	31	31	28
Law	31	29	33	26	34	23	20	29	33	37	26
Library Science	57	48	57	60	42	52	51	70	42	47	49
Parks/Recreation/Leisure/Fitness	-	-	-	-	-	-	-	44	37	54	29
Public Administration	88	78	92	97	88	107	108	117	135	128	104
Social Work	235	214	241	206	246	240	248	237	272	303	256
Theology/Religious Education	240	254	251	232	271	273	292	243	262	273	213
Professional Fields, General	0	1	2	0	3	3	1	1	1	1	2
Professional Fields, Other	30	54	47	47	59	42	42	15	11	2	6
OTHER FIELDS	26	62	50	54	67	71	40	27	41	26	39

NOTE: Dash (-) indicates that the field was not on the questionnaire's Specialties List that year. Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table. Refer also to the explanatory note about this table in front of Appendix B.

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX TABLE B-2 Number of Doctorate Recipients, by Gender, Race/Ethnicity, and Citizenship, 1977, 1981, and 1986-1996

Total All Doctorates

	Year of Doctorate												
	1977	1981	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
TOTAL MEN AND WOMEN	31,716	31,356	31,902	32,370	33,500	34,327	36,067	37,534	38,890	39,801	41,034	41,743	42,415
U.S. Citizens	26,119	25,060	23,086	22,984	23,290	23,401	24,905	25,573	26,010	26,449	27,147	27,740	27,741
Permanent Visas	1,368	1,281	1,433	1,578	1,622	1,626	1,698	1,857	1,980	2,259	3,747	4,319	3,765
Temporary Visas	3,448	3,940	5,276	5,612	6,195	6,648	8,093	9,311	9,953	9,932	9,406	8,810	9,610
Unknown Citizenship	781	1,075	2,107	2,196	2,393	2,652	1,371	793	947	1,161	734	874	1,299
Total Known Race/Ethnicity	29,476	29,149	28,946	29,229	30,354	30,955	33,878	35,780	37,193	38,284	39,834	40,330	40,636
U.S. Citizens	25,019	24,009	22,674	22,514	22,907	23,025	24,531	25,085	25,657	26,217	26,893	27,437	27,398
Permanent Visas	1,291	1,258	1,357	1,509	1,545	1,564	1,637	1,796	1,906	2,225	3,699	4,278	3,733
Temporary Visas	3,053	3,759	4,838	5,144	5,840	6,297	7,557	8,788	9,535	9,675	9,114	8,544	9,363
Unknown Citizenship	113	123	77	62	62	69	153	111	95	167	128	71	142
American Indians	70	85	100	116	94	94	98	132	152	121	146	149	189
U.S. Citizens	65	85	99	115	94	94	97	130	149	120	143	149	186
Permanent Visas*	1	0	0	0	0	0	0	2	0	0	0	0	1
Temporary Visas*	4	0	1	1	0	0	1	0	2	1	3	0	2
Unknown Citizenship	0	0	0	0	0	0	0	0	1	0	0	0	0
Asians	2,056	2,711	3,730	4,129	4,780	5,192	6,293	7,528	8,290	8,671	9,367	9,708	9,821
U.S. Citizens	339	465	533	543	614	633	641	789	848	891	950	1,140	1,091
Permanent Visas	571	608	528	625	621	635	665	742	916	1,126	2,596	3,169	2,606
Temporary Visas	1,118	1,564	2,645	2,935	3,518	3,907	4,931	5,949	6,505	6,604	5,799	5,378	6,093
Unknown Citizenship	28	74	24	26	27	17	56	48	21	50	22	21	31
Blacks	1,450	1,491	1,277	1,221	1,267	1,247	1,354	1,466	1,434	1,615	1,683	1,825	1,837
U.S. Citizens	1,113	1,013	830	771	818	822	901	1,010	971	1,111	1,101	1,309	1,315
Permanent Visas	78	97	126	139	152	141	149	156	145	169	178	168	142
Temporary Visas	247	372	313	305	291	273	291	293	311	322	389	337	364
Unknown Citizenship	12	9	8	6	6	11	13	7	7	13	15	11	16
Hispanics	736	936	1,056	1,054	1,048	1,063	1,228	1,319	1,402	1,431	1,534	1,541	1,623
U.S. Citizens	437	466	572	617	595	582	721	731	778	834	884	919	950
Permanent Visas	52	63	107	91	98	112	116	136	131	139	146	142	155
Temporary Visas	236	391	372	338	349	363	386	446	482	454	502	472	512
Unknown Citizenship	11	16	5	8	6	6	5	6	11	4	2	8	6
Whites	25,164	23,926	22,783	22,709	23,165	23,359	24,905	25,335	25,915	26,446	27,104	27,107	27,166
U.S. Citizens	23,065	21,980	20,640	20,468	20,786	20,894	22,171	22,425	22,911	23,261	23,815	23,920	23,856
Permanent Visas	589	490	596	654	674	676	707	760	714	791	779	799	829
Temporary Visas	1,448	1,432	1,507	1,565	1,682	1,754	1,948	2,100	2,235	2,294	2,421	2,357	2,392
Unknown Citizenship	62	24	40	22	23	35	79	50	55	100	89	31	89
Unknown Race/Ethnicity	2,240	2,207	2,956	3,141	3,146	3,372	2,189	1,754	1,697	1,517	1,200	1,413	1,779
U.S. Citizens	1,100	1,051	412	470	383	376	374	488	353	232	254	303	343
Permanent Visas	77	23	76	69	77	62	61	61	74	34	48	41	32
Temporary Visas	395	181	438	468	355	351	536	523	418	257	292	266	247
Unknown Citizenship	668	952	2,030	2,134	2,331	2,583	1,218	682	852	994	606	803	1,157

NOTE: See explanatory note about this table in front of Appendix B.

*In most cases, non-U.S. American Indians are citizens of Canada or Latin America.

APPENDIX TABLE B-2 (Continued)

Doctorates: MEN

	Year of Doctorate												
	1977	1981	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
TOTAL MEN	23,858	21,464	20,595	20,938	21,681	21,814	22,961	23,661	24,454	24,679	25,215	25,329	25,470
U.S. Citizens	19,155	16,359	13,638	13,574	13,724	13,396	14,165	14,388	14,519	14,517	14,735	14,967	14,700
Permanent Visas	1,106	973	1,068	1,117	1,164	1,139	1,190	1,224	1,293	1,471	2,637	2,909	2,483
Temporary Visas	3,009	3,387	4,414	4,722	5,134	5,444	6,632	7,517	7,963	7,863	7,330	6,858	7,395
Unknown Citizenship	588	745	1,475	1,525	1,659	1,835	974	532	679	828	513	595	892
Total Known Race/Ethnicity	22,092	19,896	18,443	18,676	19,410	19,404	21,339	22,363	23,177	23,548	24,334	24,308	24,233
U.S. Citizens	18,307	15,604	13,348	13,250	13,448	13,117	13,899	14,032	14,261	14,345	14,566	14,754	14,473
Permanent Visas	1,040	957	1,004	1,064	1,097	1,094	1,150	1,177	1,237	1,446	2,603	2,885	2,460
Temporary Visas	2,659	3,227	4,038	4,314	4,822	5,143	6,174	7,080	7,615	7,654	7,101	6,634	7,205
Unknown Citizenship	86	108	53	48	43	50	116	74	64	103	64	35	95
American Indians	47	56	59	63	52	49	52	74	82	61	74	82	103
U.S. Citizens	43	56	58	62	52	49	52	74	82	60	71	82	102
Permanent Visas*	0	0	0	0	0	0	0	0	0	0	0	0	0
Temporary Visas*	4	0	1	1	0	0	0	0	0	1	3	0	1
Unknown Citizenship	0	0	0	0	0	0	0	0	0	0	0	0	0
Asians	1,716	2,223	3,042	3,350	3,845	4,163	5,031	5,880	6,428	6,617	7,070	7,112	7,205
U.S. Citizens	251	315	349	369	414	446	427	483	531	553	591	670	614
Permanent Visas	488	499	417	455	456	459	482	489	605	734	1,878	2,199	1,784
Temporary Visas	955	1,341	2,258	2,506	2,957	3,245	4,077	4,872	5,274	5,292	4,582	4,228	4,783
Unknown Citizenship	22	68	18	20	18	13	45	36	18	38	19	15	24
Blacks	992	924	709	702	699	685	733	788	771	842	891	881	933
U.S. Citizens	682	499	325	318	317	328	351	421	396	441	411	490	535
Permanent Visas	70	80	106	118	126	125	128	131	123	138	142	125	106
Temporary Visas	234	339	275	261	251	222	243	232	246	252	330	261	286
Unknown Citizenship	6	6	3	5	5	10	11	4	6	11	8	5	6
Hispanics	580	658	665	677	678	662	760	806	860	875	866	911	931
U.S. Citizens	320	275	302	332	321	307	380	370	410	423	438	460	478
Permanent Visas	36	47	71	50	64	69	69	88	72	94	80	79	86
Temporary Visas	214	322	289	288	288	283	309	344	371	357	346	369	363
Unknown Citizenship	10	14	3	7	5	3	2	4	7	1	2	3	4
Whites	18,757	16,035	13,968	13,884	14,136	13,845	14,763	14,815	15,036	15,153	15,433	15,322	15,061
U.S. Citizens	17,011	14,459	12,314	12,169	12,344	11,987	12,689	12,684	12,842	12,868	13,055	13,052	12,744
Permanent Visas	446	331	410	441	451	441	471	469	437	480	503	482	484
Temporary Visas	1,252	1,225	1,215	1,258	1,326	1,393	1,545	1,632	1,724	1,752	1,840	1,776	1,772
Unknown Citizenship	48	20	29	16	15	24	58	30	33	53	35	12	61
Unknown Race/Ethnicity	1,766	1,568	2,152	2,262	2,271	2,410	1,622	1,298	1,277	1,131	881	1,021	1,237
U.S. Citizens	848	755	290	324	276	279	266	356	258	172	169	213	227
Permanent Visas	66	16	64	53	67	45	40	47	56	25	34	24	23
Temporary Visas	350	160	376	408	312	301	458	437	348	209	229	224	190
Unknown Citizenship	502	637	1,422	1,477	1,616	1,785	858	458	615	725	449	560	797

NOTE: See explanatory note about this table in front of Appendix B.

*In most cases, non-U.S. American Indians are citizens of Canada or Latin America.

APPENDIX TABLE B-2 (Continued)

Doctorates: WOMEN

	Year of Doctorate												
	1977	1981	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
TOTAL WOMEN	7,858	9,892	11,307	11,432	11,819	12,513	13,106	13,873	14,436	15,122	15,819	16,414	16,945
U.S. Citizens	6,964	8,701	9,448	9,410	9,566	10,005	10,740	11,185	11,491	11,932	12,412	12,773	13,041
Permanent Visas	262	308	365	461	458	487	508	633	687	788	1,110	1,410	1,282
Temporary Visas	439	553	862	890	1,061	1,204	1,461	1,794	1,990	2,069	2,076	1,952	2,215
Unknown Citizenship	193	330	632	671	734	817	397	261	268	333	221	279	407
Total Known Race/Ethnicity	7,384	9,253	10,503	10,553	10,944	11,551	12,539	13,417	14,016	14,736	15,500	16,022	16,403
U.S. Citizens	6,712	8,405	9,326	9,264	9,459	9,908	10,632	11,053	11,396	11,872	12,327	12,683	12,925
Permanent Visas	251	301	353	445	448	470	487	619	669	779	1,096	1,393	1,273
Temporary Visas	394	532	800	830	1,018	1,154	1,383	1,708	1,920	2,021	2,013	1,910	2,158
Unknown Citizenship	27	15	24	14	19	19	37	37	31	64	64	36	47
American Indians	23	29	41	53	42	45	46	58	70	60	72	67	86
U.S. Citizens	22	29	41	53	42	45	45	56	67	60	72	67	84
Permanent Visas*	1	0	0	0	0	0	0	2	0	0	0	0	1
Temporary Visas*	0	0	0	0	0	0	1	0	2	0	0	0	1
Unknown Citizenship	0	0	0	0	0	0	0	0	1	0	0	0	0
Asians	340	488	688	779	935	1,029	1,262	1,648	1,862	2,054	2,297	2,596	2,616
U.S. Citizens	88	150	184	174	200	187	214	306	317	338	359	470	477
Permanent Visas	83	109	111	170	165	176	183	253	311	392	718	970	822
Temporary Visas	163	223	387	429	561	662	854	1,077	1,231	1,312	1,217	1,150	1,310
Unknown Citizenship	6	6	6	6	9	4	11	12	3	12	3	6	7
Blacks	458	567	568	519	568	562	621	678	663	773	792	944	904
U.S. Citizens	431	514	505	453	501	494	550	589	575	670	690	819	780
Permanent Visas	8	17	20	21	26	16	21	25	22	31	36	43	36
Temporary Visas	13	33	38	44	40	51	48	61	65	70	59	76	78
Unknown Citizenship	6	3	5	1	1	1	2	3	1	2	7	6	10
Hispanics	156	278	391	377	370	401	468	513	542	556	668	630	692
U.S. Citizens	117	191	270	285	274	275	341	361	368	411	446	459	472
Permanent Visas	16	16	36	41	34	43	47	48	59	45	66	63	69
Temporary Visas	22	69	83	50	61	80	77	102	111	97	156	103	149
Unknown Citizenship	1	2	2	1	1	3	3	2	4	3	0	5	2
Whites	6,407	7,891	8,815	8,825	9,029	9,514	10,142	10,520	10,879	11,293	11,671	11,785	12,105
U.S. Citizens	6,054	7,521	8,326	8,299	8,442	8,907	9,482	9,741	10,069	10,393	10,760	10,868	11,112
Permanent Visas	143	159	186	213	223	235	236	291	277	311	276	317	345
Temporary Visas	196	207	292	307	356	361	403	468	511	542	581	581	620
Unknown Citizenship	14	4	11	6	8	11	21	20	22	47	54	19	28
Unknown Race/Ethnicity	474	639	804	879	875	962	567	456	420	386	319	392	542
U.S. Citizens	252	296	122	146	107	97	108	132	95	60	85	90	116
Permanent Visas	11	7	12	16	10	17	21	14	18	9	14	17	9
Temporary Visas	45	21	62	60	43	50	78	86	70	48	63	42	57
Unknown Citizenship	166	315	608	657	715	798	360	224	237	269	157	243	360

SOURCE: National Research Council, Survey of Earned Doctorates.

APPENDIX C: Technical Notes

SURVEY RESPONSE RATES*

Year	Self-Report Rate	Year	Self-Report Rate
1965	97.4	1981	95.7
1966	96.3	1982	95.3
1967	97.3	1983	95.5
1968	97.6	1984	95.1
1969	96.6	1985	94.8
1970	98.1	1986	93.5
1971	97.5	1987	93.1
1972	97.3	1988	92.9
1973	97.5	1989	92.3
1974	94.2	1990	93.6
1975	97.3	1991	94.6
1976	97.2	1992	95.1
1977	96.6	1993	94.7
1978	96.3	1994	94.6
1979	96.4	1995	94.1
1980	96.2	1996	92.8

* The rates for 1965-1995 reflect late responses. The rate for 1996 may increase slightly in the next year if additional questionnaires are received after survey closure. Self-report rates for 1980-1996 are determined from the "source of response" indicator in the doctorate records. Because this indicator was not coded prior to 1980, survey forms for 1965-1979 are assumed to be self-reported if "month signed" or "marital status" is present. "Marital status" is not available from sources other than the doctorate recipient.

As shown above, 92.8 percent of all doctorate recipients in 1996 completed survey forms; this percentage is referred to as the "self-report" rate. For the remaining 7.2 percent of recipients, "skeletal" forms were created with information from doctorate-granting institutions or commencement programs. Whether or not individuals completed the survey questionnaire, the following four data items are available for all recipients: gender, Ph.D. institution, Ph.D. field, and Ph.D. year.

This report presents data obtained from *all* survey forms, both self-reported and skeletal. Readers should note that nonresponse in a tabulation varies according to the *combination* of selected variables. Higher nonresponse rates occur when any of the four variables mentioned above are cross-tabulated with another variable (e.g., educational debt) because the universe consists of the entire doctoral cohort. In other words, the 7.2 percent of Ph.D.s who did not respond to the survey are included even though their records contain minimal information. Nonresponse is generally lower when citizenship or race/ethnicity is cross-tabulated with a variable such as debt because the population is restricted to a group (e.g., U.S. citizens) that is largely drawn from self-reported forms

and thus more likely to have responses to the debt question. To be more precise, information on debt was not available for only 5.7 percent of U.S. citizens in 1996; nonresponse was low because data on both citizenship and debt were obtained mostly from self-reported forms. Nonresponse was higher for the entire 1996 cohort (8.9 percent) because it included the 7.2 percent of forms that were only partially filled in by institutions or staff of the National Research Council. The same was true for men (9.1 percent) and women (8.5 percent) because gender was known even for Ph.D.s who did not complete a survey form. Cross-tabulating debt with field of doctorate would yield similarly high nonresponse rates because Ph.D. field is available for all recipients.

The percentages shown in the tables and figures in the body of this report are based only on the number of doctorate recipients who *responded* to the applicable survey questions.[1] Appendix C presents nonresponse rates for the variables included in these tables and figures; it also provides descriptive explanations of the data as needed. For additional technical information, please contact:

Doctorate Data Project
National Opinion Research Center
1155 East 60th Street
Chicago, IL 60637

Phone: (773) 753-7500
Fax: (773) 753-7886
E-mail: 4800-sed@norcmail.uchicago.edu

[1] Note that the percentages in Appendix Tables A-3 and A-4 are based on the total doctoral cohort because categories for "unknown" responses are included. See the notes in front of Appendix A for further explanation of these data.

Baccalaureate Institutions of U.S. Minorities

Table 9 is restricted to U.S. minority Ph.D.s (native and naturalized citizens) from 1992 to 1996 who earned baccalaureates at institutions *located in the United States*. Because this population constitutes only 89.0 percent of all U.S. minority Ph.D.s in this period, the totals shown in Table 9 for each group are not all inclusive. Another 9.2 percent—mostly naturalized Asians and Hispanics—received baccalaureates from foreign institutions, and the remaining 1.8 percent either did not earn a baccalaureate degree or did not report this information. The totals for all U.S. minority Ph.D.s regardless of baccalaureate status are: 4,920 Asians (56.9 percent naturalized); 5,807 blacks (8.4 percent naturalized); 4,365 Hispanics (20.0 percent naturalized); and 747 American Indians (0.8 percent naturalized).

Country of Citizenship (for non-U.S. Ph.D.s)

Country of citizenship (if missing) was first followed up in the 1990 survey. Consequently, nonresponse has been much lower in recent years than prior to 1990. Nonresponse was only 1.5 percent in 1996, compared to 9.9 percent in 1989. Table 13 presents data on country of citizenship.

Postgraduation Plans

Postgraduation status: The question on postgraduation status asks recipients to indicate whether they have made a "definite" commitment, are in the process of "negotiating" with one or more organizations, or are seeking a position but have no specific prospects. Because Ph.D.s sometimes complete the survey form months ahead of graduation, it is not possible to determine the final plans of all recipients. It is quite likely that some individuals who check "negotiating" or "seeking" have obtained positions by the time of graduation. Tables 20 and 21 compare the proportion of Ph.D.s with "definite" plans and those still "seeking." Other data on postgraduation plans in this report are restricted to the group of Ph.D.s who reported "definite" plans.[2]

Definite commitments: Tables 22 through 27 include only those Ph.D.s who reported definite post-graduation commitments and therefore do not reflect the entire Ph.D. population.

Postdoctoral location: Revisions to the survey form have resulted in significant increases in response rates for postdoctoral location during the past few years. Doctorate recipients can now check a box for "U.S." or "non-U.S." instead of providing the name and exact location of the organization with which they will be affiliated after the doctorate. This explains the much lower nonresponse since 1995 than in earlier years shown in Tables 24 through 27. See chart of item nonresponse rates for details.

---

[2] Comparisons with the longitudinal Survey of Doctorate Recipients (SDR) show the data on "definite" postgraduation plans to be a reasonable indicator of the actual employment status of new Ph.D.s in the first year or so following receipt of the doctorate. (The SDR, also conducted by the National Research Council, is a follow-up employment survey of a sample of doctorate recipients in science, engineering, and humanities fields.)

NONRESPONSE RATES FOR ITEMS IN TABLES

Data Item	Tables	1966	1971
Baccalaureate Institution (for U.S. minorities)	Table 9	x	x
Citizenship	Tables 7-14, 16, 17, 19, 21, 23-27	2.4	1.6
Country of Citizenship (for non-U.S. citizens)	Tables 12, 13	x	x
Debt Status	Tables 18, 19	x	x
Doctorate Field	Tables 4, 5, 7, 8, 11, 15-18, 20, 22, 25, 26	0.0	0.0
Doctorate Institution	Table 10, 14	x	x
Doctorate Year	All tables	0.0	0.0
Gender	Tables 5, 6, 16, 17, 19, 21, 23, 27	0.0	0.0
Postdoctoral Location (for definite commitments)			
Non-U.S. citizens (any type of plans)	Tables 24, 25	x	x
U.S. citizens & permanent visas (employment plans)	Tables 26, 27	x	x
Temporary visas (employment plans)	Table 27	x	x
Postdoctoral Plans (e.g., definite employment vs. study)	Tables 22, 23, 25-27	x	x
Postdoctoral Sector (for definite employment in U.S.)			
U.S. citizens & permanent visas	Tables 26, 27	x	x
Temporary visas	Table 27	x	x
Postdoctoral Status (e.g., definite vs. seeking)	Tables 20-27	x	x
Primary Source of Graduate School Support	Table 17	x	x
Race/Ethnicity			
U.S. citizens	Tables 7-10, 16, 17, 19	x	x
U.S. citizens & permanent visas	Tables 21, 23, 27	x	x
Registered Time to Doctorate (computed)	Tables 15, 16	x	7.4
Total Time to Doctorate (computed)	Tables 15, 16	x	1.7

NOTE: In 1996, 92.8 percent of new doctorate recipients completed the survey form. The item nonresponse rates in this table include the 7.2 percent of recipients who were not self-reporting. Because missing information is sometimes obtained from the doctorate-granting institutions or commencement programs, nonresponse rates for the following variables may be lower than the survey's 7.2 percent rate of nonresponse: citizenship, gender, race/ethnicity, baccalaureate institution, and total time to doctorate (derived from baccalaureate year). Field, institution, and year of doctorate are available for all recipients, as is gender.

x = Year not shown in tables and figures.

NONRESPONSE RATES FOR ITEMS IN TABLES (Continued)

1976	1981	1986	1991	1996	1992-1996	Data Item
x	x	x	x	x	1.8	Baccalaureate Institution (U.S. minorities)
2.0	3.4	6.6	2.1	3.1	2.5	Citizenship
x	x	x	2.0	1.5	x	Country of Citizenship (for non-U.S. citizens)
x	x	x	x	8.8	x	Debt Status
0.0	0.0	0.0	0.0	0.0	x	Doctorate Field
x	x	x	x	0.0	x	Doctorate Institution
0.0	0.0	0.0	0.0	0.0	0.0	Doctorate Year
0.0	0.0	0.0	0.0	0.0	x	Gender
						Postdoctoral Location (for definite commitments)
3.7	5.9	8.3	3.1	0.4	x	Non-U.S. citizens (any type of plans)
2.6	5.0	6.3	1.0	0.2	x	U.S. citizens & permanent visas (employment plans)
3.6	6.1	8.0	3.2	0.4	x	Temporary visas (employment plans)
0.8	0.3	0.5	0.4	0.2	x	Postdoctoral Plans (e.g., definite employment vs. study)
						Postdoctoral Sector (for definite employment in U.S.)
0.5	0.6	1.0	1.0	0.6	x	U.S. citizens & permanent visas
0.0	0.0	0.0	0.6	0.4	x	Temporary visas
5.6	8.1	9.2	8.5	9.1	x	Postdoctoral Status (e.g., definite vs. seeking)
x	x	x	x	12.1	x	Primary Source of Graduate School Support
						Race/Ethnicity
4.0	4.2	1.8	1.9	1.2	1.1	U.S. citizens
4.5	4.1	2.0	2.0	1.2	x	U.S. citizens & permanent visas
9.2	11.9	15.3	16.0	19.9	x	Registered Time to Doctorate (computed)
1.9	3.4	7.2	4.5	5.3	x	Total Time to Doctorate (computed)

x = Year not shown in tables and figures.

Postdoctoral employment commitments in the U.S.: To be included in Tables 26 and 27, Ph.D.s must have reported definite commitments for employment. Foreign locations and employers are excluded. For temporary residents a U.S. location must have been reported. For U.S. citizens and permanent residents, unknown locations are assumed to be in the United States because of the high "stay" rates for both groups. Based on actual responses to the 1996 survey, 97 percent of U.S. citizens with employment or study commitments intended to remain in the United States, as did 92 percent or more of permanent residents.

Primary Source of Graduate School Support

In 1995 the response rate to the question on primary sources of financial support was 74.8 percent. In 1996 the response rate jumped to 87.9 percent. This increase in response was due to a revision of the questions on sources of support. In 1995 and earlier years the questionnaire asked the respondent to identify *and* rank their sources in one question. The 1996 questionnaire asked the respondent to identify all sources of support in one question and in a separate question asked them to indicate their primary and secondary sources. The new separate question on primary/secondary sources also provided the opportunity to denote that the doctorate recipient had no primary or secondary source of support.

Race/Ethnicity

Adjustments to numbers: Readers should keep in mind that fluctuations in numbers for a racial/ethnic group reflect to some degree any upward or downward change in both overall survey response and response to the racial/ethnic item. Since 1990 response to race/ethnicity has shown great improvement—a result of new procedures for following up missing information. Race/ethnicity was not followed up prior to 1990.

All follow-up responses received before survey closure are included in the data presented in the *Summary Report* for that survey. Responses arriving after closure are included in the next year's report. The extension of survey closure dates in the past four years has allowed most follow-up responses to be received in time to be included in the *Summary Reports* for those surveys. Postsurvey adjustments were greatest for 1990 and 1991 data, much less for 1992, and minimal for 1993. In 1994 response to the racial/ethnic item reached 97 percent by survey closure—the highest rate ever. Any postsurvey adjustments for 1996 data will be included in next year's report, but they are expected to be very slight because of the extended closure. Updated numbers for all recent years appear in Appendix Table B-2 in this report.

History of the racial/ethnic question: Although this item was first introduced to the Survey of Earned Doctorates in 1973, over 25 percent of recipients in 1973 and about 13 percent in 1974 either completed earlier questionnaires or provided unusable responses. Since 1975 the racial/ethnic data have been more reliable, with response rates ranging from 90.1 to 97.1 percent (the latter in 1994). The information on race/ethnicity presented in this report is limited to the period 1977 to 1996.

The racial/ethnic question has undergone several revisions over the years. In 1977 it was modified to correspond to a standard question format recommended by the Federal

Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use in federally sponsored surveys; an explanation of the effect of these changes is detailed on page 13 of *Summary Report 1977*. (Note: Changes in the OMB guidelines prompted the reclassification of persons having origins in the Indian subcontinent from the white category to the Asian category.) In 1980 the question was further revised in two ways: (1) the Hispanic category was subdivided into Puerto Rican, Mexican American, and other Hispanic, and (2) respondents were asked to check only one racial category. (Before 1980 doctorate recipients could check more than one category to indicate their race.) The item was modified again in 1982 to separate the questions on race and ethnicity. Since then, respondents have been asked to first check one of the four racial group categories (American Indian, Asian, black, or white) and then indicate whether or not they are Hispanic. *In this report, Ph.D.s who reported Hispanic heritage are classified as Hispanic regardless of their racial designations*; the remaining Ph.D.s are then counted in the respective racial groups. (Note: Doctorate recipients who checked the category "American Indian or Alaskan Native" are identified as "American Indian" in this report.)

Time to Doctorate

Total time to degree (TTD): TTD measures the total elapsed time between the baccalaureate and the doctorate (including time not enrolled in school). TTD can be computed only for individuals whose baccalaureate year is known. Baccalaureate year is often obtained from commencement programs or doctorate institutions when not reported by the recipient. *Months are now included in the computation (see note below).*

Registered time to degree (RTD): RTD gauges the time in attendance at colleges and universities between receipt of the baccalaureate and the doctorate. Enrollment may include years of attendance not related to a recipient's doctoral program. RTD can only be computed for individuals who have provided all years of college attendance after the baccalaureate. *Months are now included in the computation (see note below).*

Note about medians: *The method of computing medians has been revised. Beginning with* Summary Report 1994, ***months*** *(of birth, baccalaureate, and doctorate) are included in the calculations whenever available; if months are missing, only years are used in the calculations. (However, medians are not computed for years prior to 1969 because doctorate month is unavailable for all Ph.D.s.) Medians presented in previous* Summary Reports *were based only on years. Some medians would be the same regardless of the method of computation, but the new method generally computes slightly different results. While differences are small (usually one- or two-tenths of a year), readers should consider these differences when comparing medians presented in this report with those in earlier reports.*

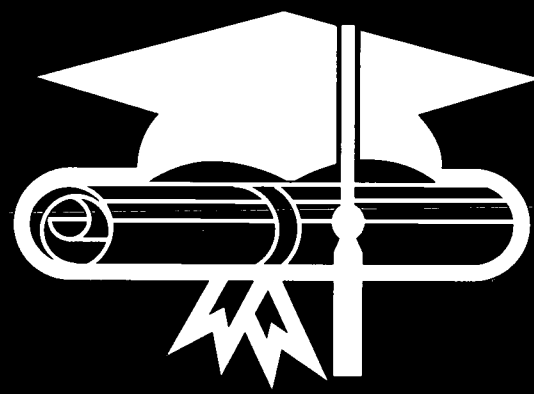
APPENDIX D

Survey of Earned Doctorates Questionnaire, 1995-96

Please print your name in full:

Last Name | Suffix (e.g., Jr.) | First Name | Middle Name

Cross reference: Maiden name
or former name legally changed _____



Survey of Earned Doctorates

July 1, 1995 to June 30, 1996

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. **All information you provide will be treated as confidential** and used only for research or statistical purposes by your doctoral institution, the survey sponsors, their contractors, and collaborating researchers for the purpose of analyzing data, preparing scientific reports and articles, and selecting samples for a limited number of carefully defined follow-up studies. Your social security number is also solicited under the NSF Act of 1950, as amended. Providing it is also voluntary. It is used for survey quality control, program evaluation, and for matching with other data bases. Any information publicly released (such as statistical summaries) will be in a form that does not personally identify you. Your response is voluntary and failure to provide some or all of the requested information will not in any way adversely affect you.

The time needed to complete this form varies according to individual circumstances, but the average time is estimated to be 20 **minutes.** If you have comments regarding this time estimate, you may write to the National Science Foundation, 4201 Wilson Blvd., Arlington, VA 22230, Attention: NSF Reports Clearance Officer.

Conducted by
The National Research Council
for
The National Science Foundation
The National Institutes of Health
The National Endowment for the Humanities
The U.S. Department of Education
The U.S. Department of Agriculture

OMB No.: 3145-0019
Approval Expires 6/30/97

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230

To the Doctorate Recipient:

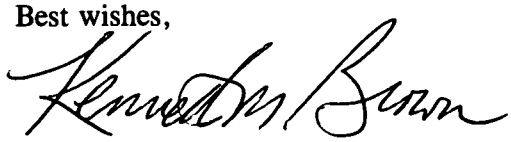
Congratulations on earning a doctoral degree! This is an important accomplishment for you. Your accomplishment is also significant for both this nation and others, as the new knowledge generated by research doctorates enhances the quality of life in this country and throughout the world. Because of the importance of persons earning research doctorates, several Federal agencies — listed on the cover — sponsor this Survey of Earned Doctorates.

The basic purpose of this survey is to gather objective data about doctoral graduates. These data are important in improving graduate education both at your home institution and beyond. Often, decisions made by governmental and private agencies to develop new programs, or to support present ones, are based in part on the data developed from this survey.

This form is distributed by the Graduate Deans and is filled out by all persons who have completed the requirements for a research doctoral degree. Please print your name on the cover if you have not already done so, and then complete this questionnaire and return it to the Graduate Dean. The confidentiality of the information you provide is carefully protected.

On behalf of the sponsoring Federal agencies and the National Research Council, I thank you for your participation in this survey.

Best wishes,



Dr. Kenneth M. Brown
Director, Division of Science Resources Studies

INSTRUCTIONS

Thank you for taking the time to complete this important questionnaire. Directions are provided for each question. Because not all questions will apply to everyone, you may be asked to skip certain questions.

- If you have not already done so, please print your name on the front cover.
- Either a pen or pencil may be used.
- When answering questions that require marking a box, please use an "X."
- If you need to change an answer, please make sure that your old answer is either completely erased or clearly crossed out.
- On pages 8 and 9 (inside the back cover) is a Specialties List for classifying your field(s) of specialization in Questions A2, A10, B5, and B9.

Thanks again for your help; we really appreciate it.

PART A - Education

A1. What is the title of your dissertation?

Please mark (X) this box if the title below refers to a performance, project report or a musical or literary composition required instead of a dissertation

Title

A2. Using the Specialties List (pages 8-9), please write the name and number of the field of your dissertation research.

Name of field

Number of field

A3. After receiving your first bachelor's degree (or equivalent), and including the period spent on your dissertation, how many years were you a full-time student ?

Years (whole numbers)

A4. Please check the category that most fully describes your employment or study status during the year immediately before the award of the doctorate.

Mark (X) one

0	Full-time employed → *GO to A5*	
1	Held fellowship	*SKIP to A6*
2	Held assistantship	
3	Part-time employed	
4	Not employed	
5	Other - *Specify*	

A5. *(IF FULL-TIME EMPLOYED)* What type of position did you hold?

Mark (X) one

6	College or university, faculty
7	College or university, non-faculty
8	Elementary or secondary school, teaching
9	Elementary or secondary school, non-teaching
11	Industry or business
12	Other - *Specify*

A6. In what state or country was the high school/ secondary school that you last attended?

State (if U.S.)

OR

Country (if not U.S.)

A7. When did you graduate from high school/ secondary school?

Month Year

19

A8. Please name the department (or interdisciplinary committee, center, institute, etc.) of the university that supervised your doctoral program.

Mark (X) box if none

Department/Committee/Center/Institute/Program

A9. Please name the school or college within the university that supervised your doctoral program.

Mark (X) box if not applicable

School or College within University

A10. **Please list below, chronologically, all colleges (including 2-year) and graduate institutions you have attended and each degree earned (if any). Be sure to give the years attended for ALL institutions attended. Include your doctoral institution(s) and degree at the end.**

Mark (X) box if bachelor's degree (or equivalent) was never received

Mark (X) box if master's degree (or equivalent) was never received

EXAMPLE

Institution and Location	Years Attended: From	To	Field of Study (Use Specialties List, pages 8-9): Field Name	Number	Degree (if any): Title	Granted: Mo.	Yr.
Institution: Indian Institute of Technology; Branch or City: Madras; State or Province: ; Country (if not U.S.): India	83	85	Mechanical Engineering	345	—	—	—
Institution: University of California; Branch or City: Berkeley; State or Province: CA; Country (if not U.S.):	85	87	Mechanical Engineering	345	B.S.	6	87

Institution and Location	Years Attended: From	To	Field of Study (Use Specialties List, pages 8-9): Field Name	Number	Degree (if any): Title	Granted: Mo.	Yr.
Institution: ; Branch or City: ; State or Province: ; Country (if not U.S.):							
Institution: ; Branch or City: ; State or Province: ; Country (if not U.S.):							
Institution: ; Branch or City: ; State or Province: ; Country (if not U.S.):							
Institution: ; Branch or City: ; State or Province: ; Country (if not U.S.):							
Institution: ; Branch or City: ; State or Province: ; Country (if not U.S.):							
Institution: ; Branch or City: ; State or Province: ; Country (if not U.S.):							

If you have attended more than six institutions of higher education, please continue this list on the back cover. Be sure to include your doctoral institution.

A11. This question is about your sources of support during graduate school. Did you receive support from the following sources?

Mark (X) Yes or No for each	Yes	No
OWN/FAMILY RESOURCES		
01 Own Earnings	1	2
02 Spouse's Earnings	1	2
03 Family Contributions	1	2
UNIVERSITY-RELATED		
10 Teaching Assistantship	1	2
11 Research Assistantship	1	2
12 University Fellowship	1	2
14 College Work-Study	1	2
19 Other - *Specify*	1	2
FEDERAL RESEARCH ASSISTANTSHIP		
22 NIH	1	2
32 NSF	1	2
52 USDA	1	2
62 Other Federal - *Specify*	1	2
OTHER FEDERAL SUPPORT		
21 NIH Traineeship/Fellowship	1	2
29 Other HHS	1	2
33 NSF Fellowship	1	2
40 Patricia Roberts-Harris Fellowship-formerly G*POP (Department of Education)	1	2
44 Title VI Foreign Language	1	2
49 Other Dept. of Education	1	2
53 USDA Fellowship	1	2
55 NEH	1	2
60 Veterans Administration	1	2
61 Fulbright Fellowship	1	2
69 Other Federal - *Specify*	1	2
U.S. NATIONALLY COMPETITIVE FELLOWSHIPS (NON-FEDERAL)		
70 Ford Foundation	1	2
71 Rockefeller Foundation	1	2
73 Mellon Foundation	1	2
78 Other Fellowship - *Specify*	1	2
STUDENT LOANS		
80 Guaranteed Student Loan (Stafford Loan)	1	2
81 Perkins Loan - formerly NDSL	1	2
89 Other Loan - *Specify*	1	2
OTHER SOURCES		
90 Business/Employer	1	2
91 Foreign (Non-U.S.) Government	1	2
92 State Government	1	2
99 Other - *Specify*	1	2

A12. Which TWO sources gave you the most support?

From A11, enter numbers of primary and secondary sources

a. __ Primary source of support

Mark (X) if no primary source

b. __ Secondary source of support

Mark (X) if no secondary source

A13. When you receive your doctoral degree, how much money will you owe that is directly related to your undergraduate and/or graduate education (tuition and fees, living expenses and supplies, transportation to and from school)?

0 None
1 $5,000 or less
2 $5,001 - $10,000
3 $10,001 - $15,000
4 $15,001 - $20,000
5 $20,001 - $25,000
6 $25,001 - $30,000
7 $30,001 or more

PART B - Postgraduation Plans

B1. How definite are your immediate postgraduate plans?

Mark (X) one

0 Am returning to, or continuing in, predoctoral employment
1 Have signed contract or made definite commitment for other work or study

→ *GO to B2, page 5*

2 Am negotiating with one or more specific organizations
3 Am seeking position but have no specific prospects
4 Other - *Specify*

→ *SKIP to B3, page 5*

B2. Please name the organization and geographic location where you will work or study.

Name

City | State (if U.S.) | Country (if not U.S.)

SKIP to B4

B3. In what state or country do you intend to live after graduation?

Mark (X) one

0 in U.S. → State _____

1 not in U.S. → Country _____

B4. What best describes your immediate postgraduate plans?

Mark (X) one

0 Postdoctoral fellowship
1 Postdoctoral research associateship
2 Traineeship
3 Other study - *Specify*

4 Employment (other than 0,1,2,3)
5 Military service
6 Other - *Specify*

SKIP to B7

B5. Please use the Specialties List (pages 8-9) to enter the name and number of your postdoctoral field.

Name of field _____

Number of field _____

B6. What will be the main source of financial support for your postdoctoral study/research?

Mark (X) one

0 U.S. Government
1 College or university
2 Private foundation
3 Nonprofit, other than private foundation
4 Other - *Specify*

6 Unknown

SKIP to C1, page 6

B7. For what type of employer will you be working?

Mark (X) one

EDUCATION
a U.S. 4-year college or university other than medical school
b U.S. medical school
c U.S. junior or community college
d Elementary or secondary school
e Foreign institution

GOVERNMENT
f Foreign government
g U.S. federal government
h U.S. state government
i U.S. local government

PRIVATE SECTOR
j Nonprofit organization
k Industry or business
l Self-employed

OTHER
m Other - *Specify*

B8. From the list below, please indicate what your primary and secondary work activities will be by entering the numbers of your selections in the appropriate boxes:

Enter numbers from below:

a. Primary Activity

b. Secondary Activity

0 Research and development
1 Teaching
2 Administration
3 Professional services to individuals
5 Other - *Specify*

B9. Please use the Specialties List (pages 8-9) to enter the name and number of the field in which you will be working.

Name of field _____

Number of field _____

PART C - Background Information

C1. Are you -

1 Male
2 Female

C2. What is your marital status?

Mark (X) one

0 Single, never married
1 Married
2 Separated, divorced, widowed

C3. Not including yourself, how many dependents do you have - that is, how many others receive at least one half of their support from you?

_____ Number

C4. What is the highest educational attainment of your mother and father?

Mark (X) one for each parent	Mother	Father
Less than high school/ secondary school	1	1
High-school/secondary-school graduate	2	2
Some college	3	3
Bachelor's	4	4
Master's	5	5
Professional	6	6
Doctorate	7	7

C5. What is your place of birth?

State (if U.S.)

_____

OR

Country (if not U.S.)

_____

C6. What is your date of birth?

Month _____ Day _____ Year 19 _____

C7. What is your citizenship status?

Mark (X) one

United States Citizen:

0 United States, native
1 United States, naturalized

Non-United States Citizen:

2 Permanent Resident of United States (Immigrant)

_____
(Specify country of present citizenship)

3 Temporary Resident of United States (Non-immigrant)

_____
(Specify country of present citizenship)

C8. Are you a person with a disability?

1 Yes
2 No → *SKIP to C10*

C9. *(IF YES)* Which of the following categories describes your disability?

1 Visual
2 Orthopedic (mobility)
3 Auditory (hearing)
4 Vocal
5 Other - *Specify* _____

C10. Are you Hispanic?

1 Yes → *GO to C11, page 7*
2 No → *SKIP to C12, page 7*

C11. *(IF YES TO C10)* **Which of the following describes your Hispanic origin or descent?**

Mexican American
Puerto Rican
Other Hispanic - *Specify* —

C12. What is your racial background?

Mark (X) one

0 American Indian or Alaskan Native
1 Asian or Pacific Islander
2 Black
3 White

C13. Please provide a permanent address through which you could always be reached:

Care of (if applicable)

Number and Street

City/Town | State or Province | Zip Code or Postal Code

Country (if outside U.S.)

C14. Please fill in your U.S. Social Security Number: ____ - ____ - ____

C15. Please sign and date.

Signature | Date

Mark (X) box if you would like a summary of the results of this survey (available as funding permits)

Did you remember to put your name on the front cover?

Please turn to the back cover to make any additional comments you may have about this survey.

SPECIALTIES LIST

INSTRUCTIONS: The following field listing is to be used in responding to items A2, A10, B5, and B9. If you choose a field marked with an asterisk (*), please write in your field of specialization in the space provided in those items.

AGRICULTURAL SCIENCES

000 Agricultural Economics
002 Agricultural Business & Mgmt.
005 Animal Breeding & Genetics
010 Animal Nutrition
012 Dairy Science
014 Poultry Science
055 Fisheries Sci. & Management
019 Animal Sciences, Other*
020 Agronomy & Crop Science
025 Plant Breeding & Genetics
030 Plant Pathology (See also 120)
039 Plant Sciences, Other*
043 Food Engineering
044 Food Sciences, Other*
046 Soil Chemistry/Microbiology
049 Soil Sciences, Other*
050 Horticulture Science
066 Forest Biology
068 Forest Engineering
070 Forest Management
072 Wood Sci. & Pulp/Paper Tech.
074 Conserv./Renewable Natural Res.
079 Forestry & Related Sci., Other*
080 Wildlife/Range Management
098 Agricultural Sci., General

BIOLOGICAL SCIENCES

100 Biochemistry
103 Biomedical Sciences
105 Biophysics
107 Biotechnology Research
110 Bacteriology
115 Plant Genetics
120 Plant Pathology (See also 030)
125 Plant Physiology
129 Botany, Other*
130 Anatomy
133 Biometrics & Biostatistics
136 Cell Biology (See also 154)
139 Ecology
142 Developmental Bio./Embryology
145 Endocrinology
148 Entomology
151 Biological Immunology
154 Molecular Biology
157 Microbiology
160 Neuroscience
163 Nutritional Sciences
166 Parasitology
169 Toxicology
170 Genetics, Human & Animal
175 Pathology, Human & Animal (See also 120)
180 Pharmacology, Human & Animal
185 Physiology, Human & Animal
198 Biological Sciences, General
199 Biological Sciences, Other*

HEALTH SCIENCES

200 Speech-Lang. Pathology & Audiology
210 Environmental Health
212 Health Systems/Service Admin.
215 Public Health (See also 133)
220 Epidemiology
222 Exercise Physiology/Sci., Kinesiology
230 Nursing
240 Pharmacy
245 Rehabilitation/Therapeutic Services
250 Veterinary Medicine
298 Health Sciences, General
299 Health Sciences, Other*

ENGINEERING

300 Aerospace, Aeronaut. & Astronaut.
303 Agricultural
306 Bioengineering & Biomedical
309 Ceramic Sciences
312 Chemical
315 Civil
318 Communications
321 Computer
324 Electrical & Electronics
327 Engineering Mechanics
330 Engineering Physics
333 Engineering Science
336 Environmental Health Engineering
339 Industrial & Manufacturing
342 Materials Science
345 Mechanical
348 Metallurgical
351 Mining & Mineral
357 Nuclear
360 Ocean
363 Operations Research (See also 465, 930)
366 Petroleum
369 Polymer & Plastics
372 Systems
398 Engineering, General
399 Engineering, Other*

COMPUTER AND INFORMATION SCIENCES

400 Computer Science
410 Information Science & Systems*

MATHEMATICS

420 Applied Mathematics
425 Algebra
430 Analysis & Functional Analysis
435 Geometry
440 Logic (See also 785)
445 Number Theory
450 Mathematical Statistics
455 Topology
460 Computing Theory & Practice
465 Operations Research (See also 363, 930)
498 Mathematics, General
499 Mathematics, Other*

PHYSICAL SCIENCES

Astronomy
500 Astronomy
505 Astrophysics

Atmospheric Sci. and Meteorology
510 Atmospheric Physics & Chemistry
512 Atmospheric Dynamics
514 Meteorology
518 Atmos. Sci./Meteorol., General
519 Atmos. Sci./Meteorol., Other*

Chemistry
520 Analytical
522 Inorganic
524 Nuclear
526 Organic
528 Medicinal/Pharmaceutical
530 Physical
532 Polymer
534 Theoretical
538 Chemistry, General
539 Chemistry, Other*
(See 100 Biochemistry)

Geological & Related Sciences
540 Geology
542 Geochemistry
544 Geophysics & Seismology
546 Paleontology
548 Mineralogy & Petrology
550 Stratigraphy & Sedimentation
552 Geomorphology & Glacial Geology
558 Geolog. & Related Sci., General
559 Geolog. & Related Sci., Other*

Physics
560 Acoustics
561 Chemical & Atomic/Molecular
564 Elementary Particle
566 Fluids
568 Nuclear
569 Optics
570 Plasma & High-Temperature
572 Polymer

SPECIALTIES LIST (continued)

574 Solid State & Low-Temperature
578 Physics, General
579 Physics, Other*

Miscellaneous Physical Sciences
580 Environmental Science
585 Hydrology & Water Resources
590 Oceanography
595 Marine Sciences
599 Misc. Physical Sciences, Other*

PSYCHOLOGY

600 Clinical
603 Cognitive & Psycholinguistics
606 Comparative
609 Counseling
612 Developmental & Child
615 Experimental
618 Educational (See also 822)
620 Family & Marriage Counseling
621 Indust. & Organiz. (See also 935)
624 Personality
627 Physiological/Psychobiology
630 Psychometrics
633 Quantitative
636 School (See also 825)
639 Social
648 Psychology, General
649 Psychology, Other*

SOCIAL SCIENCES

650 Anthropology
652 Area Studies
658 Criminology
662 Demography/Population Studies
666 Economics
668 Econometrics
670 Geography
672 Human/Indiv. & Family Devlpmt.
674 International Relations/Affairs
678 Political Sci. & Government
682 Public Policy Analysis
686 Sociology
690 Statistics (See also 450)
694 Urban Affairs/Studies
698 Social Sciences, General
699 Social Sciences, Other*

HUMANITIES

History
700 History, American
703 History, Asian
705 History, European
710 History/Philosophy of Sci. & Tech.
718 History, General
719 History, Other*

Letters
720 Classics
723 Comparative Literature
729 Linguistics
732 Literature, American
733 Literature, English
734 English Language
736 Speech & Rhetorical Studies
738 Letters, General
739 Letters, Other*

Foreign Languages and Literature
740 French
743 German
746 Italian
749 Spanish
752 Russian
755 Slavic (other than Russian).
758 Chinese
762 Japanese
765 Hebrew
768 Arabic
769 Other Languages & Literature*

Other Humanities
770 American Studies
773 Archeology
776 Art History/Criticism/Conserv.
780 Music
785 Philosophy (See also 440)
790 Religion (See also 984)
795 Drama/Theater Arts
798 Humanities. General
799 Humanities, Other*

EDUCATION

800 Curriculum & Instruction
805 Educational Admin. & Supervision
807 Educational Leadership
810 Educ./Instruct. Media Design
815 Educ. Stat./Research Methods
820 Educ. Assess./Test./Meas.
822 Educ. Psychology (See also 618)
825 School Psychology (See also 636)
830 Social/Phil. Found. of Education
835 Special Education
840 Couns. Educ./Couns. & Guid. Serv.
845 Higher Education/Eval. & Research

Teacher Education
850 Pre-elementary/Early Childhood
852 Elementary
856 Secondary
858 Adult & Continuing

Teaching Fields
860 Agricultural Education
861 Art Education
862 Business Education
864 English Education
866 Foreign Languages Education
868 Health Education
870 Home Economics Education
872 Tech. & Indust. Arts Education
874 Mathematics Education
876 Music Education
878 Nursing Education
880 Physical Education & Coaching
882 Reading Education
884 Science Education
885 Social Science Education
887 Technical Education
888 Trade & Industrial Education
889 Teacher Educ., Specific Acad. & Voc. Prog., Other*

Other Education
898 Education, General
899 Education, Other*

PROFESSIONAL FIELDS

Business Management and Administrative Services
900 Accounting
905 Banking/Financial Support Serv.
910 Business Admin. & Management
915 Business/Managerial Economics
916 International Business
917 Mgmt. Info. Sys./Bus. Data Proc.
920 Marketing Management & Research
930 Operations Research (See also 363, 465)
935 Organiz. Behavior (See also 621)
938 Bus. Mgmt./Admin. Serv., Gen.
939 Bus. Mgmt./Admin. Serv., Other*

Communications
940 Communications Research
947 Mass Communications
957 Communication Theory
958 Communications, General
959 Communications, Other* (See also 736)

Other Professional Fields
960 Architec. Environ. Design
964 Home Economics
968 Law
972 Library Science
974 Parks/Rec./Leisure/Fitness
976 Public Administration
980 Social Work
984 Theol./Religious Education (See also 790)
988 Professional Fields, General
989 Professional Fields, Other*

999 **OTHER FIELDS***

Comments About This Survey

Thank you for completing the questionnaire. Please return it to the GRADUATE DEAN for forwarding to The Office of Scientific and Engineering Personnel, National Research Council, TJ 1019, 2101 Constitution Avenue, N.W., Washington, D.C. 20418. Should you need to call us, our number is 1-800-242-5674.

The appendix tables present data according to the following field classifications. Appendix Tables A-1 and A-2 and Appendix Table B-1 display all subfields that are on the survey Specialties List. Appendix Tables A-4, A-5, and A-6 show data by seven broad fields only. Appendix Tables A-3 and A-7 include the additional field groupings indicated below.

SCIENCES

Physical Sciences (400-599)
- Physics and Astronomy (500-505, 560-579)
- Chemistry (520-539)
- Earth, Atmospheric, and Marine Sciences (510-519, 540-559, 580-599)
- Mathematics (420-499)
- Computer Sciences (400-410)

} Combined in Table A-7

Engineering (300-399)

Life Sciences (000-299)
- Biological Sciences (100-199)
  - Biochemistry (100)
  - Other Biological Sciences (103-199)
- Health Sciences (200-299)
- Agricultural Sciences (000-099)

Social Sciences (600-699)
- Psychology (600-649)
- Economics and Econometrics (666, 668)
- Anthropology and Sociology (650, 686)
- Political Science and International Relations (674, 678)
- Other Social Sciences (652-662, 670, 672, 682, 690-699)

} Combined in Table A-7

NONSCIENCES

Humanities (700-799)
- History (700-719)
- English and American Language and Literature (732-734)
- Foreign Languages and Literature (740-769)
- Other Humanities (720-729, 736-739, 770-799)

} Combined in Table A-7

Education (800-899)

Professional and Other Fields (900-999)
- Business and Management (900-939)
- Other Professional Fields (940-989)
- Other Fields (999)

NOTE: Doctorate recipients indicate their fields of specialty. Their choices may differ from departmental names.

TITLES OF RESEARCH DEGREES INCLUDED IN THE SURVEY OF EARNED DOCTORATES

DA/DAT	Doctor of Arts/Arts in Teaching
DArch	Doctor of Architecture
DAS	Doctor of Applied Science
DBA	Doctor of Business Administration
DChem	Doctor of Chemistry
DCJ	Doctor of Criminal Justice
DCL	Doctor of Comparative Law/Civil Law
DCrim	Doctor of Criminology
DED	Doctor of Environmental Design
DEng	Doctor of Engineering
DEnv	Doctor of Environment
DESc/ScDE	Doctor of Engineering Science
DF	Doctor of Forestry
DFA	Doctor of Fine Arts
DGS	Doctor of Geological Science
DHL	Doctor of Hebrew Literature/Letters
DHS	Doctor of Health and Safety
DHS	Doctor of Hebrew Studies
DIT	Doctor of Industrial Technology
DLS	Doctor of Library Science
DM	Doctor of Music
DMA	Doctor of Musical Arts
DME	Doctor of Musical Education
DMin/DM	Doctor of Ministry
DMiss	Doctor of Missiology
DML	Doctor of Modern Languages
DMM	Doctor of Music Ministry
DMSc	Doctor of Medical Science
DNSc	Doctor of Nursing Science
DPA	Doctor of Public Administration
DPE	Doctor of Physical Education
DPH	Doctor of Public Health
DPS	Doctor of Professional Studies
DrDES	Doctor of Design
DRE	Doctor of Religious Education
DRec/DR	Doctor of Recreation
DSc/ScD	Doctor of Science
DScD	Doctor of Science in Dentistry
DScH	Doctor of Science and Hygiene
DScVM	Doctor of Science in Veterinary Medicine
DSM	Doctor of Sacred Music
DSSc	Doctor of Social Science
DSW	Doctor of Social Work
EdD	Doctor of Education
JCD	Doctor of Canon Law
JSD	Doctor of Juristic Science
LScD	Doctor of Science of Law
PhD	Doctor of Philosophy
RhD	Doctor of Rehabilitation
SJD	Doctor of Juridical Science
STD	Doctor of Sacred Theology
ThD	Doctor of Theology

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