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ABSTRACT

Reported are manpower data needed by those engaged in science and engineering policy activities. The information is collected from scientists and engineers themselves. The basis of this report is the first survey, in a biennial series, of the Doctoral Roster of Scientists and Engineers, conducted for the National Science Foundation by the Commission on Human Resources of the National Academy of Sciences. Surveys of the Doctoral Roster constitute the data collection mechanism. The main article includes information related to doctoral scientists and engineers in private industry in 1973. Descriptive, tabulated and graphic charts are presented showing such information on the distribution of the doctoral scientists as related to totals, by employment, by field and primary work activity and by those engaged in research and development. Employment characteristics within various sectors of the economy are described. In the appendices such topics as technical note, definitions and detailed statistical tables are presented. (EB)

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Reviews OF DATA ON SCIENCE RESOURCES

NATIONAL SCIENCE FOUNDATION, WASHINGTON, D.C. NSF 76-302 No. 25, April 1976

Doctoral Scientists and Engineers in Private Industry, 1973

Introduction

Recently, considerable attention has been focused on supply and demand considerations affecting the labor market for doctoral scientists and engineers in the United States over the next 10 to 15 years. Although there are variations among specific forecasts and projections with respect to the details of supply and demand imbalances, there is general agreement that employment patterns of doctoral scientists and engineers will undergo significant changes during the next decade. These changes will be due in some measure to a projected slow growth in R&D funding which will result in a lower growth rate in the demand for personnel with advanced R&D capabilities, the traditional strengths of Ph.D. scientists and engineers. Thus, doctorate-level scientists and engineers, particularly those newly entering the job market, will be influenced to consider nontraditional job opportunities. At the same time, it is expected that projected decreases in the number of science and engineering (S/E) enrollments in educational institutions will result in a shift from academic to nonacademic employment. If such a shift is realized in the future, business and industry, the principal center of nonacademic employment of doctoral scientists and engineers, will assume increasing importance in the future utilization of this important human resource in the Nation's scientific enterprise. Thus, it is prudent to understand the characteristics of the doctoral scientists and engineers who are presently employed in the industrial sector of the U.S. economy. The following presentation is directed toward this end.

1973 Labor Force of Doctoral Scientists and Engineers

The population of doctoral scientists and engineers in the United States in the spring of 1973 was 244,900. Slightly more than 6 percent of this population were not seeking employment, gave no report of their employment status, were retired, or otherwise not in the labor force. Thus, the labor force numbered

This publication evolves out of the National Science Foundation's Manpower Characteristics System which was established to provide manpower data needed by many individuals and groups, particularly those engaged in science and engineering policy activities. A characteristic feature of the System is that information is collected from individual scientists and engineers rather than from other sources: e.g., employers, professional societies, etc. Consequently, considerable information on personal and professional characteristics can be obtained which is otherwise not available.

The basis of this report is the first survey, in a biennial series, of the Doctoral Roster of Scientists and Engineers, conducted for the National Science Foundation by the Commission on Human Resources of the National Academy of Sciences. Surveys of the Doctoral Roster constitute the data collection mechanism for one element of the Manpower Characteristics System which, when combined with other elements (i.e., the National Sample of Scientists and Engineers and Surveys of New Entrants to Science and Engineering) provide information on the magnitude and characteristics of the Nation's scientific and engineering human resources.

(Prepared in the Manpower Characteristics Studies Group, Division of Science Resources Studies)

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229,400, including approximately 2,600 individuals who were not employed and seeking employment, giving rise to an unemployment rate of 1.2 percent.

At that time, the employed labor force of doctoral scientists and engineers numbered 226,800. Educational institutions provided the largest sources of employment accounting for almost three-fifths (58 percent) of the total employed. Of the remaining individuals, over one-half were employed by business and industry and slightly less than one-fifth by the Federal Government. The remaining individuals in the employed doctoral S/E labor force, numbering about 26,000, were distributed more or less evenly among other employers. Thus, while nonacademic employment encompassed a variety of employment settings, business and industry provided the principal source of such employment (chart 1).

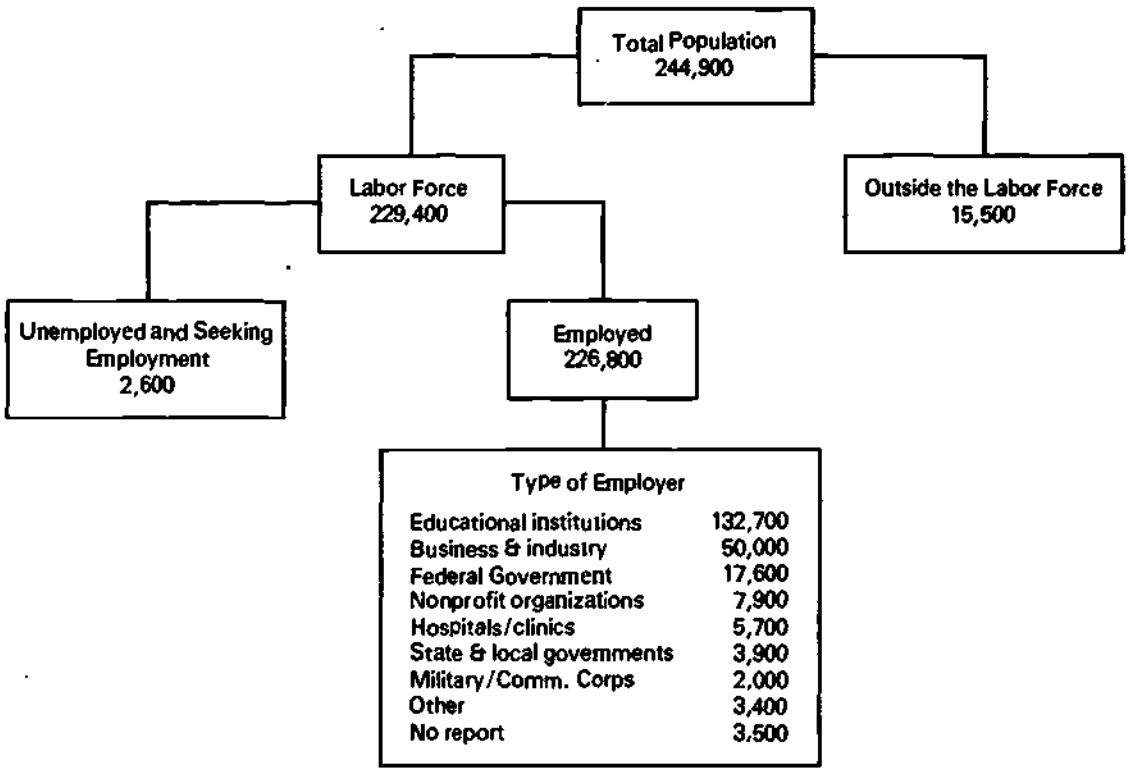
General Characteristics

What are the characteristics of the industrially employed group and how do they differ from those employed elsewhere?

In 1973 the great majority of doctoral scientists and engineers in private industry were white males who were employed full time in S/E-related positions. Of the 50,000 doctoral employees of industry, less than 6 percent held positions not related to science and engineering and only 2 percent were employed on less than a full-time basis. Almost three-fourths were physical scientists and engineers while about the same proportion indicated the performance or management of research and development to be their primary work activity although the extent of involvement in R&D activities was considerably less in some fields (charts 2 and 3 and table B-1).

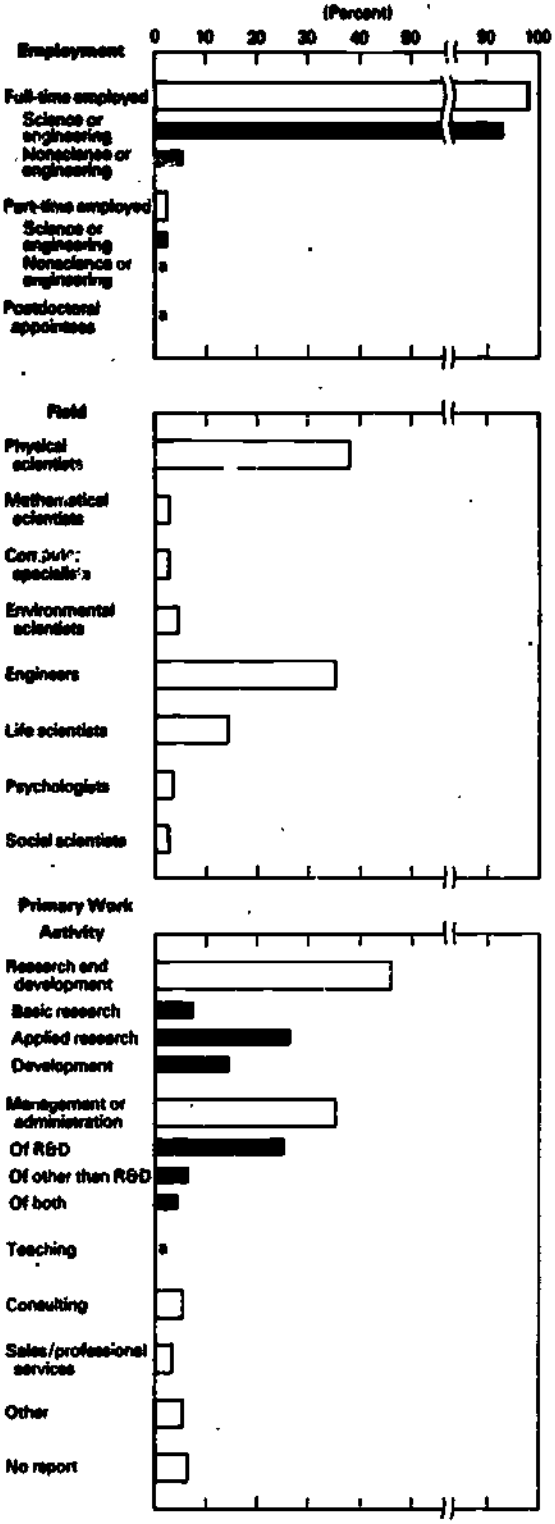
In 1973, doctoral scientists in industry numbered 32,700, an increase of 17 percent over 1970 and 56 percent over 1966, an average annual increase of about 7 percent. In 1966 and 1970, the proportion of physical scientists in the doctorate-holding industrial labor force of scientists remained stable at about 70 percent. In 1973, however, doctorate-holding physical scientists comprised less than 60 percent of the Ph.D. scientists in industry. The relative decline in the number of physical scientists was in contrast with a general

Chart 1. Distribution of doctoral scientists and engineers: 1973



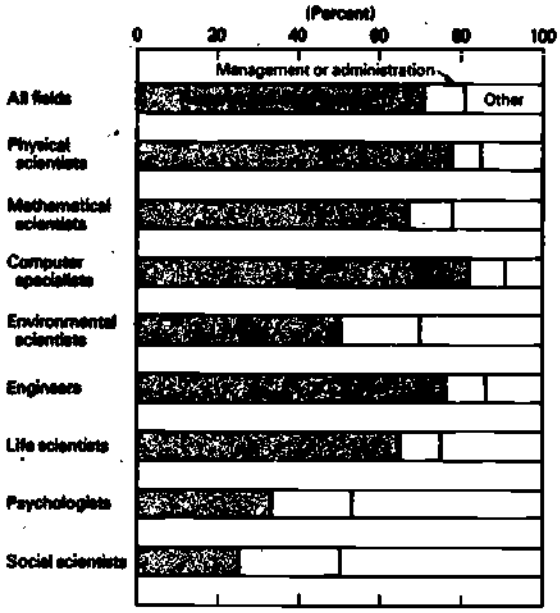
Note: Detail may not add to totals because of rounding.
SOURCE: National Science Foundation.

Chart 2. Distribution of doctoral scientists and engineers in business and industry: 1973



[a]Less than 0.5 percent.
Note: Detail may not add to totals because of rounding.
SOURCE: National Science Foundation.

Chart 3. Distribution of doctoral scientists and engineers in business and industry, by field and primary work activity: 1973

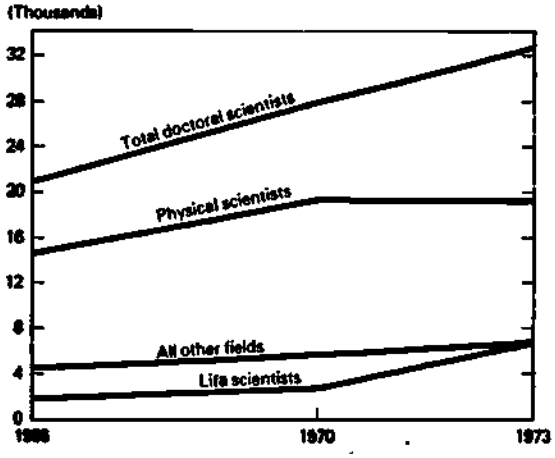


[a]Includes management or administration of R&D.
SOURCE: National Science Foundation.

increase in most other fields, notably, among life scientists, who increased in number from less than 2,000 in 1966 to almost 7,000 in 1973, an average annual increase of about 20 percent (chart 4).

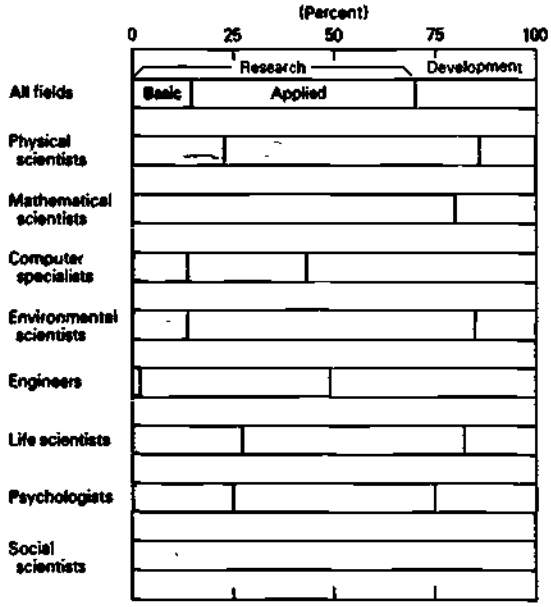
Of the 50,000 Ph.D. scientists and engineers in private industry, almost one-half cited the *performance* (excluding management) of research and development as their primary work activity. More than one-half of this group were engaged primarily in applied

Chart 4. Doctoral scientists employed in business and industry: 1966, 1970, and 1973



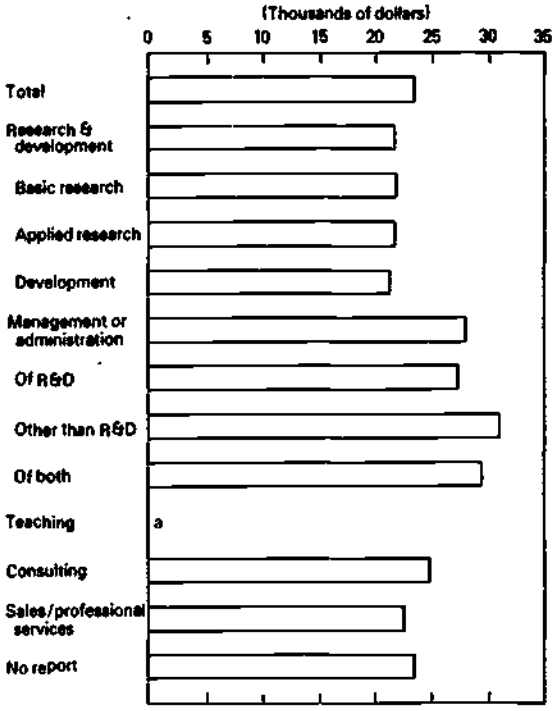
SOURCE: National Science Foundation.

Chart 5. Distribution of doctoral scientists and engineers in business and industry engaged in R&D, by field and character of work: 1973



SOURCE: National Science Foundation.

Chart 6. Median annual salaries of doctoral scientists and engineers in business and industry, by primary work activity: 1973



[a]No median computed for groups with fewer than 20 individuals reporting salary.
Note: Median salaries computed only for full-time employed
SOURCE: National Science Foundation.

research. Applied research was, in fact, the dominant R&D activity among industrial doctorate holders in all fields except in the case of computer specialists and engineers who were more heavily involved in development activities. Generally, the performance of basic research assumed a subordinate role in the work of doctoral scientists and engineers engaged in industrial R&D activities. More physical scientists and life scientists, however, were occupied with basic research than with development and two other groups (environmental scientists and psychologists) had approximately the same number working in basic research as there were in development (chart 5).

Salaries of doctoral scientists and engineers in industry were 12 percent higher than the overall median salary of $20,900, although there were substantial differences among industrially employed groups (table B-4). Considered solely by field, for example, economists, the highest paid, reported salaries 31 percent higher than the industrywide median of $23,400, and 38 percent higher than the salaries of industrially employed agricultural scientists, the lowest paid.

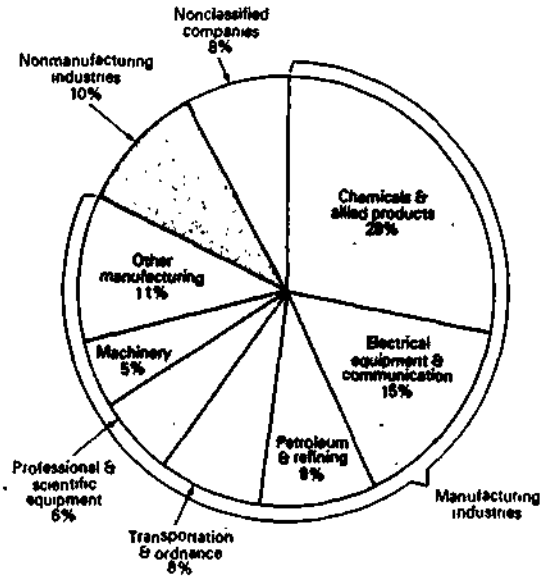
Substantial differences in salaries were also reported by individuals engaged in various work activities (chart 6). As a group, individuals engaged in the performance of research and development were the lowest paid; managers or administrators the highest. Only small differences in the salaries of basic researchers, applied researchers, and developers were noted. R&D managers or administrators, however, were paid substantially less ($3,700 per year) than managers or administrators in non-R&D activities.

Employment Characteristics Within Industry Groups

In 1973 manufacturing organizations employed four-fifths of the doctoral scientists and engineers in business and industry. Six industrial manufacturing groups[1]—chemicals and allied products, electrical equipment and communication, petroleum and refining, transportation and ordnance, professional and scientific equipment, and machinery—employed almost seven-eighths of the doctoral scientists and engineers in manufacturing industries and over two-thirds of the total number in industrial employment. Nonmanufacturing industries and nonclassified companies accounted for the remainder of those industrially employed (chart 7 and tables B-2 and B-3).

[1] For definition of industry groups, see technical notes.

Chart 7. Distribution of doctoral scientists and engineers in business and industry, by industry group: 1973



SOURCE National Science Foundation.

The demand for Ph.D. scientists and engineers in manufacturing industries is not surprising since these industries are considered to be highly "R&D intensive." Yet there was found to be a considerable degree of variability in this demand even among the highly R&D intensive industries. The *chemical* industry, for example, provided the largest relative source of employment for Ph.D. scientists and engineers who numbered 13.2 per 1,000 employees, a ratio about eight times higher than that for the *machinery* industry, in spite of the fact that both of these industries devoted about the same percentage of net sales to research and development. The *petroleum and refining* industry, on the other hand, devoted a smaller percentage of net sales to research and development, yet had a large Ph.D.-to-employee-ratio (8.5 to 1,000—table 1).

TABLE 1.—MEASURES OF RESEARCH AND DEVELOPMENT AND PH.D. INTENSIVENESS: 1973

Manufacturing industry	Percent of net sales devoted to R&D	Ph.D. scientists and engineers per 1,000 employees
Total	3.2	2.9
Chemicals and allied products	3.5	13.2
Electrical equipment and communication	7.1	3.0
Petroleum and refining	.7	8.5
Transportation and ordnance	6.7	1.7
Professional and scientific equipment	5.6	5.8
Machinery	3.8	1.6
Other manufacturing	.7	.9

SOURCE: National Science Foundation

Considered by industry group, only small differences in salary are noted, although doctoral scientists and engineers in nonclassified companies, reported salaries 9 percent higher than the industrywide median. Differences in salaries, by primary work activity, were considerably greater. In general, salary patterns within industry groups, however, did not differ substantially from the overall pattern. Thus, relatively small differences were noted in the salaries of basic researchers, applied researchers, and developers; R&D managers or administrators were paid less than managers or administrators of non-R&D activities (table 2).

Chemicals and allied products—The chemical industry employed the largest number of doctoral scientists and engineers in the private sector, accounting for 35 percent of those in manufacturing activities and over 28 percent of the total in industrial employment. Although chemists comprised the largest single field (58 percent) in this industry, engineers and biological and medical scientists collectively accounted for an additional 35 percent. The performance or management of R&D was cited as the primary work activity by 75 percent of the doctorate holders in this industry as compared with 71 percent among all industrially employed. This increase may be accounted for by the more significant role which basic research assumed in this industry; 11 percent of those in the chemical industry were engaged primarily in basic research as compared with a level of 7 percent in all of private industry.

Electrical equipment and communication—About three-fifths of the doctorate holders in this industry were engineers, who with physical scientists, accounted for nearly seven-eighths of the total. Examination by primary work activity also reveals that seven-eights of the total were primarily engaged in the performance or management of research and development. Only 9 percent of those engaged in R&D performance were in basic research as compared with a level of 15 percent, industrywide.

Petroleum and refining—Physical scientists and engineers, representing three-fourths of the doctoral scientists and engineers in private industry in 1973 also accounted for three-fourths of the doctorate holders in this industry group. In addition, the petroleum and refining industry was the principal employer of environmental scientists who accounted for almost one-fifth of the doctorate holders in this industry and two-fifths of the doctorate-holding environmental scientists employed in all of industry. The proportion of individuals engaged in the performance or management of research and development in this industry was commensurate with the industrywide level of 72

TABLE 2.—MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS IN BUSINESS AND INDUSTRY, BY PRIMARY WORK ACTIVITY AND INDUSTRY GROUP: 1973

Primary work activity	Total	Manufacturing industry						Non-manufacturing industries	Non-classified companies
		Chemicals & allied products	Electrical equipment & communication	Petroleum & refining	Transportation & ordnance	Professional & scientific equipment	Machinery		
Total	$23,400	$23,000	$23,700	$23,700	$23,400	$23,800	$23,800	$23,500	$25,400
Research and development	21,700	21,200	22,100	22,100	22,100	22,200	22,500	22,100	20,600
Basic research	21,800	21,200	(1)	22,500	21,100	21,800	24,400	(1)	(1)
Applied research	21,700	21,400	22,100	22,000	22,300	22,300	22,500	23,100	20,800
Development	21,400	20,700	22,000	22,200	22,000	22,300	21,900	20,800	20,600
Management or administration	28,100	27,200	27,700	29,500	27,500	28,500	29,700	28,900	29,400
Of R&D	27,300	26,700	27,400	27,300	27,100	28,100	29,300	29,200	28,400
Other than R&D	31,000	29,000	32,200	33,200	(1)	(1)	31,100	27,900	36,500
Of both	29,400	29,200	29,000	37,000	28,100	(1)	(1)	(1)	25,400
Consulting	24,900	(1)	(1)	(1)	(1)	(1)	(1)	22,100	29,200
Sales/Professional services	22,700	22,800	(1)	(1)	(1)	(1)	(1)	(1)	23,900
No report	23,600	23,900	(1)	23,800	22,700	(1)	(1)	21,100	27,400

[1] No median salary computed for groups with less than 20 individuals reporting salary.
Note: Median salaries computer only for full-time employed.
SOURCE: National Science Foundation.

percent. The number of applied researchers, however, was relatively high, with two-thirds of those performing research and development engaged in this activity, as compared with about one-half industrywide.

Transportation and ordnance—Almost two-thirds of the doctorate holders in this industry group were engineers, who together with physical scientists accounted for 90 percent of the total. Research and development played a predominant role in the activities of Ph.D. scientists and engineers in this industry with 85 percent engaged primarily in R&D performance or management, 14 percentage points higher than the total industry level.

Professional and scientific equipment—Physical scientists accounted for the largest proportion in this industry, outnumbering doctoral engineers about 3 to 1. Collectively, physical scientists and engineers comprised over four-fifths of the doctorate holders in the industry. As in the case of the *electrical equipment and communication* and the *transportation and ordnance* industry groups, the proportion of those engaged in R&D performance or management was substantially higher than the total industry level.

Machinery—One-half the doctorate holders in this industry were engineers, who outnumbered physical scientists almost 2 to 1. R&D performance—the dominant activity of doctoral scientists and engineers in this industry—was accounted for, in great measure, by the large proportion of individuals engaged in development activities; i.e., almost one-half of those in research and development as contrasted with less than one-third industrywide.

Nonmanufacturing—About two-fifths (39 percent) of the doctorate holders in nonmanufacturing industries were engineers, a level of employment higher than might be expected, considering that engineers accounted for only one-third (34 percent) of the doctorate holders in manufacturing industries. This apparent "over-representation" of engineers is offset by a smaller proportion of physical scientists who accounted for only 14 percent in nonmanufacturing industries as compared with 43 percent in manufacturing industries. The extent of involvement in R&D activities on the part of doctorate holders in nonmanufacturing industries was, however, substantially less than that of their peers elsewhere in industry; about one-half were so involved as compared with almost four-fifths in manufacturing industries. The preponderance of Ph.D. scientists and engineers in nonmanufacturing industries were employed by "service" industries, notably computer and other data processing services, medical and other health services, and miscellaneous business and other services. Highest salaries were reported by those individuals employed by finance, insurance and real estate companies (tables 3 and B-2).

TABLE 3.—NUMBER AND MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED IN NONMANUFACTURING INDUSTRIES: 1973

Nonmanufacturing industries	Number	Median annual salary
Total	5,100	$23,500
Agriculture, forestry, and fisheries	400	$20,600
Mining	300	23,000
Contract construction	200	24,400
Wholesale and retail trade	400	19,400
Finance, insurance, and real estate	600	28,500
Services	3,000	23,500
Other	300	—

Note: Detail may not add to totals because of rounding.
SOURCE: National Science Foundation

Employment Characteristics Within Various Sectors of the Economy

In what ways do the characteristics of the industrially employed group differ from those employed elsewhere?

In some respects, little variability is evident as a result of employment affiliation. With respect to age, for example, only minor differences in median age from employer to employer exist; the median age of doctoral scientists and engineers affiliated with 7 of the 10 identified employer groups (accounting for 96 percent of those employed) differed from the overall median age of 41 by one year or less. The lower median age of doctorate-holding scientists and engineers in the military service or in the Commissioned Corps may well reflect fulfillment of a service obligation on the part of young Ph.D's which was incurred as a result of educational support.

TABLE 4.—DOCTORAL SCIENTISTS AND ENGINEERS BY TYPE OF EMPLOYER, PERCENT RACIAL MINORITY, AND MEDIAN AGE: 1973

Type of employer	Total number employed	Racial minorities[1] (percent)	Median age
Total employed	226,800	6.0	41
Business and industry	50,000	7.2	40
Educational institutions	132,700	5.9	41
Hospitals/Clinics	5,700	5.0	40
Nonprofit organizations	7,900	5.6	40
Federal government	17,600	3.9	42
Military/Commissioned Corps	2,000	2.1	36
State government	2,600	6.1	42
Other government	1,300	9.2	40
Other	3,400	2.9	44
No report	3,500	6.9	46

[1] Those not reporting racial status have been redistributed proportionately among racial categories.
Note: Detail may not add to totals because of rounding.
SOURCE: National Science Foundation

Some differences were found among sectors in the employment of racial minorities; business and industry, for example, employed a higher proportion of racial minorities than the average for all employers, whereas the Federal establishment (encompassing both civilian and military personnel) employed a smaller proportion of racial minorities than other employers generally (table 4).

The employment of women doctoral scientists and engineers in different employment settings exhibits greater variability. Table 5 shows that women, who represented less than 1 in 10 of the employed doctoral labor force, accounted for an even smaller proportion employed by business and industry and the Federal Government. In contrast, one-fifth of the doctoral scientists and engineers employed by hospitals/clinics were women. But although the proportion of women employed in industry and the Federal Government was less than in other employment sectors, their salaries were markedly higher. The median annual salaries of women in industry and the Federal Government exceeded the overall median women's salary by 14 percent and 28 percent, respectively.

The median annual salaries of doctorate-holding men and women (combined) shows similar variability. Annual salaries about 12 percent higher than the overall median salary of $20,900 were reported by employees of business and industry and the Federal Government. However, differentially higher salaries were evident among fields, ranging from salaries about 4 percent higher for engineers to salaries more than 33 percent higher for social scientists.

Variability is also evident in the patterns of employment, by field, among employers. From table 5 it is seen that business and industry, which accounted for less than one-quarter of the doctoral scientists and engineers in the employed labor force, provided a major source of employment for physical scientists, computer specialists, and engineers. In fact, physical scientists and engineers, representing about three-eighths of the employed labor force of doctoral scientists and engineers in 1973, accounted for almost three-fourths of those in industry as compared with about one-fourth in nonindustrial settings.

The employment of doctorate-holding physical scientists, computer specialists, and engineers in industry was in marked contrast with their peers in other fields, who were employed principally in nonindustrial settings. For the most part, educational institutions provided the largest source of such employment. Thus, almost three-fourths of the mathematical, life, and social scientists in the employed labor force of doctorate-holding scientists

TABLE 5.—SELECTED CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS, BY TYPE OF EMPLOYER: 1973

Characteristic	Total employed[1]		Business & industry		Educational institutions		Hospitals & clinics		Nonprofit organizations		Federal Government[2]	
	Number	Median annual salary[3]	Number	Median annual salary	Number	Median annual salary	Number	Median annual salary	Number	Median annual salary	Number	Median annual salary
Total	226,800	$20,800	50,000	$23,400	132,700	$19,300	5,700	$19,800	7,800	$22,200	17,800	$23,700
SEX:												
Men	209,400	21,200	49,100	23,500	120,400	19,500	4,500	20,200	7,200	22,500	19,800	(5)
Women	17,300	17,600	800	19,700	12,300	17,100	1,200	17,600	700	17,800	800	22,100
FIELD:												
Physical scientists	49,100	21,200	19,200	23,000	22,000	19,700	300	19,800	1,800	21,700	4,100	23,500
Chemists	30,800	21,300	15,300	22,800	11,600	19,300	200	19,400	800	22,100	1,800	23,800
Physicists/Astronomers	19,300	21,100	3,900	23,800	10,200	19,100	100	(5)	900	21,100	2,500	23,300
Mathematical scientists	12,800	19,300	800	24,200	10,700	19,700	(5)	(5)	200	24,700	600	23,800
Mathematicians	11,100	19,100	700	24,000	9,800	19,600	(5)	(5)	200	25,300	400	23,800
Statisticians	1,600	20,800	200	25,300	1,100	19,800	(5)	(5)	(5)	(5)	100	(5)
Computer specialists	2,800	22,100	1,100	22,700	1,500	21,700	(5)	(5)	100	(5)	100	(5)
Environmental scientists	10,500	20,700	2,000	23,100	5,300	19,800	(5)	(5)	800	20,700	2,000	23,800
Earth scientists	9,700	20,700	1,800	23,100	4,300	19,900	(5)	(5)	300	21,500	1,500	24,100
Oceanographers	1,200	19,400	100	(5)	700	19,800	(5)	(5)	100	(5)	200	23,000
Atmospheric scientists	700	22,800	(5)	(5)	300	21,500	(5)	(5)	100	(5)	300	23,800
Engineers	38,200	22,500	17,300	23,500	13,000	20,800	100	(5)	1,300	22,800	2,700	23,800
Life scientists	59,400	20,000	9,800	23,600	39,800	19,000	1,800	20,700	1,800	20,200	9,800	23,200
Biological scientists	37,400	19,500	3,200	23,100	26,800	19,800	1,000	19,700	1,400	19,100	3,300	22,800
Agricultural scientists	11,100	19,800	1,800	22,300	9,800	19,800	(5)	(5)	100	(5)	1,800	22,700
Medical scientists	10,800	23,000	1,800	25,400	8,000	21,500	1,000	22,800	300	24,800	700	26,800
Psychologists	26,000	20,200	1,500	26,300	19,000	19,300	3,400	19,500	1,200	21,800	1,000	24,900
Social scientists	29,800	20,400	1,200	26,000	24,300	19,800	(5)	(5)	1,200	24,300	1,400	27,300
Economists	8,700	22,300	800	30,700	6,300	20,800	(5)	(5)	300	27,200	700	26,800
Sociologists/Anthropologists	6,800	19,500	100	(5)	6,200	19,400	(5)	(5)	200	19,800	100	(5)
Other social scientists	14,400	19,800	400	25,800	11,800	19,200	(5)	(5)	800	24,100	700	27,800

[1] Includes listed types of employer and all other employers.
[2] Excludes military personnel and those in the Commissioned Corps.
[3] Median annual salary computed only for full-time employed civilians.
[4] Less than 50 individuals.
[5] No median salary computed for groups with less than 20 individuals reporting salary.
[6] Data not available.
Note: Detail may not add to totals because of rounding.
SOURCE: National Science Foundation.

TABLE 6.—NUMBER OF COCTORAL SCIENTISTS AND ENGINEERS, BY PRIMARY WORK ACTIVITY AND TYPE OF EMPLOYER: 1973

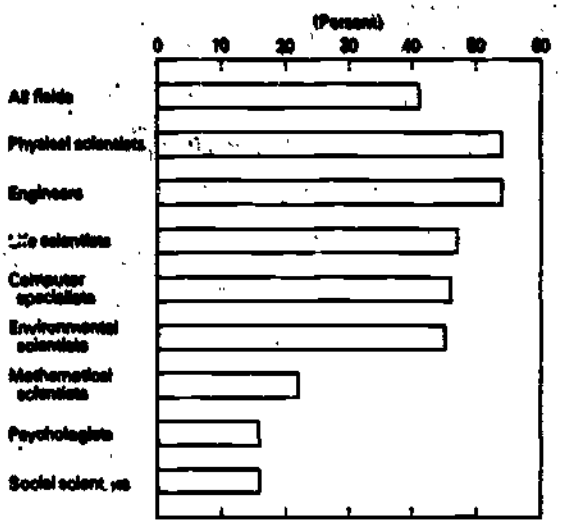
Primary work activity	Total employed	Business and industry	Educational institutions	Hospitals/ clinics	Nonprofit organizations	Federal Government	Other employers
Total	226,800	50,000	132,700	5,700	7,900	17,800	12,800
Research and development	69,500	23,200	29,200	1,000	4,100	9,800	3,100
Basic research	32,300	3,400	20,200	700	2,000	4,700	1,300
Applied research	28,700	12,800	7,400	300	1,800	4,800	1,800
Development	6,500	6,900	700	100	200	500	300
Management or administration	40,400	17,300	11,400	1,200	2,100	5,400	3,100
Of R&D	22,500	12,500	3,300	300	1,200	3,800	1,400
Of other than R&D	12,100	3,000	5,700	500	600	800	1,300
Of both	5,800	1,800	2,400	300	300	800	400
Teaching	87,700	100	80,100	200	100	200	800
Consulting	4,000	2,300	500	100	200	100	800
Sales/professional services	9,200	1,400	1,900	2,500	300	300	1,900
Other	6,900	2,500	1,800	200	500	800	1,100
No report	15,900	3,200	8,800	600	500	800	1,900

and engineers were employed by educational institutions. The employment of environmental scientists, on the other hand, was distributed more evenly among employers, although even in this case, over one-half were employed by educational institutions.

As would be expected, a very large proportion of the individuals engaged primarily in basic research and teaching were employed by educational institutions. But in other R&D areas, industry provided the dominant employment source. Thus, industry, which employed only 22 percent of the doctoral scientists and engineers in the employed labor force accounted for about one-half of those engaged primarily in applied research and in R&D management or administration, and over four-fifths of those engaged primarily in development activities (table 6).

The concentration of physical scientists and engineers in industry reported earlier, is in consonance with the pronounced involvement of those individuals in R&D activities. Chart 8 shows that about two-fifths of all employed doctoral scientists and engineers were engaged primarily in R&D activities. Among physical scientists and engineers, however, well over one-half cited the performance or management of research and development as their primary work activity. Psychologists, mathematical, and social scientists, who were less involved in R&D activities, were also less extensively employed by industry.

Chart 8. Distribution of employed doctoral scientists and engineers engaged primarily in the performance or management of R&D, by field (all employers): 1978



SOURCE: National Science Foundation.

TABLE A-1.—SPECIALTIES LIST USED IN 1973 DOCTORAL ROSTER SURVEY

MATHEMATICAL SCIENCES

000 - Algebra
010 - Analysis & Functional Analysis
020 - Geometry
030 - Logic
040 - Number Theory
052 - Probability
055 - Math. Statistics (see also 544, 670, 725, 729)
060 - Topology
080 - Computing Theory & Practice
082 - Operations Research (see also 477)
085 - Applied Mathematics
089 - Combinatorics & Finite Mathematics
091 - Physical Mathematics
096 - Mathematics, General
099 - Mathematics, Other*

ASTRONOMY

101 - Astronomy
102 - Astrophysics

PHYSICS

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

CHEMISTRY

List A	List B
Fields used to classify academic degrees. Use for Item 9 on questionnaire. Also see note below.	Fields used to classify present professional employment. Use for Item 17 on questionnaire. Also see note below for the doctoral field in Item 9.
200 - Analytical	205 - Analytical Chemistry
210 - Inorganic	215 - Synthetic Organic & Organometallic Chemistry
220 - Organic	225 - Synthetic, Inorganic & Natural Products
230 - Nuclear	235 - Nuclear Chemistry
240 - Physical	245 - Quantum Chemistry
250 - Theoretical	255 - Structural Chemistry
260 - Agricultural & Food	265 - Thermodynamics & Material Properties
270 - Pharmaceutical	275 - Polymers
298 - Chemistry, General	285 - Chemical Dynamics
299 - Chemistry, Other*	

NOTE. Please use List B fields to classify your doctoral degree in Item 9. This is a classification which is requested in addition to the field chosen from List A. Print the List B field beside the doctoral code number from List A.

EARTH, ENVIRONMENTAL & MARINE SCIENCES

301 - Mineralogy, Petrology
305 - Geochemistry
310 - Stratigraphy, Sedimentation
320 - Paleontology
330 - Structural Geology
340 - Geophysics (Solid Earth & Atmospheric)
350 - Geomorph., Glacial Geology
360 - Hydrology
370 - Oceanography
380 - Meteorology
388 - Environmental Sciences, General
389 - Environmental Sciences, Other*
391 - Applied Geology, Geol. Engr., Econ. Geol.
397 - Marine Sciences, Other*
398 - Earth Sciences, General
399 - Earth Sciences, Other*

ENGINEERING

400 - Aeronautical & Astronautical
410 - Agricultural
415 - Biomedical
420 - Civil
430 - Chemical
435 - Ceramic
440 - Electrical
445 - Electronics
450 - Industrial, Manufacturing
455 - Nuclear
460 - Engineering Mechanics
465 - Engineering Physics
470 - Mechanical
475 - Metallurgy & Phys. Met. Engr.
477 - Operations Research, Systems (see also 082)
479 - Fuel Technology, Petrol Engr.
480 - Sanitary/Environmental
486 - Mining
497 - Materials Science Engr.
498 - Engineering, General
499 - Engineering, Other*

AGRICULTURAL SCIENCES

500 - Agronomy
501 - Agricultural Economics
502 - Animal Husbandry
504 - Fish & Wildlife
505 - Forestry
506 - Horticulture
507 - Soils & Soil Science
510 - Animal Sciences
511 - Phytopathology
517 - Food Science & Technology (see also 573)
518 - Agriculture, General
519 - Agriculture, Other*

MEDICAL SCIENCES

520 - Medicine & Surgery
522 - Public Health
523 - Veterinary Medicine
524 - Hospital Administration
527 - Parasitology
534 - Pathology
536 - Pharmacology
537 - Pharmacy
538 - Medical Sciences, General
539 - Medical Sciences, Other*

BIOLOGICAL SCIENCES

540 - Biochemistry
542 - Biophysics
543 - Biomathematics
544 - Biometrics, Biostatistics (see also 055, 670, 725, 729)
545 - Anatomy
546 - Cytology
547 - Embryology
548 - Immunology
550 - Botany
560 - Ecology
562 - Hydrobiology
564 - Microbiology & Bacteriology
566 - Physiology, Animal
567 - Physiology, Plant
569 - Zoology
570 - Genetics
571 - Entomology
572 - Molecular Biology
573 - Food Science & Technology (see also 517)
574 - Behavior/Ethology
578 - Biological Sciences, General
579 - Biological Sciences, Other*

PSYCHOLOGY

600 - Clinical
610 - Counseling & Guidance
620 - Developmental & Gerontological
630 - Educational
635 - School Psychology
641 - Experimental
642 - Comparative
643 - Physiological
650 - Industrial & Personnel
660 - Personality
670 - Psychometrics (see also 055, 544, 725, 729)
680 - Social
698 - Psychology, General
699 - Psychology, Other*

SOCIAL SCIENCES

700 - Anthropology
703 - Archeology
708 - Communications*
709 - Linguistics
710 - Sociology
720 - Economics (see also 501)
725 - Econometrics (see also 055, 544, 670, 729)
729 - Social Statistics (see also 055, 544, 670, 725)
740 - Geography
745 - Area Studies*
750 - Political Science, Public Admin.
755 - International Relations
770 - Urban & Reg. Planning
775 - History & Phil. of Science
798 - Social Sciences, General
799 - Social Sciences, Other*

ARTS & HUMANITIES

841 - Fine & Applied Arts (including Music, Speech, Drama, etc.)
842 - History
843 - Philosophy, Religion, Theology
845 - Languages & Literature
848 - Other Arts and Humanities*

EDUCATION & OTHER PROFESSIONAL FIELDS

938 - Education

882 - Business Administration
883 - Home Economics
884 - Journalism
885 - Speech and Hearing Sciences
886 - Law, Jurisprudence
887 - Social Work
891 - Library & Archival Science
898 - Professional Field, Other*

899 - OTHER FIELDS*

11

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

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APPENDIX A
Technical Notes

In the spring of 1973 the Commission on Human Resources of the National Academy of Sciences-National Research Council (NAS-NRC) conducted a survey of U.S. doctoral scientists and engineers under the sponsorship of the National Science Foundation (NSF).[1] The population sampled consisted of individuals in the United States who either held science or engineering doctorates, or had received doctorates in other fields but were employed in science or engineering. Included in the population were individuals who received their doctorates between January 1, 1930 and June 30, 1972, inclusive. Results of the Doctoral Roster survey can be found in reports issued by NAS[2] and NSF.[3]

Definitions

The following definitions are provided to permit the effective use of data presented in this report.

Field of science and engineering—The data on *field* were derived from the Specialties List reproduced in table A-1. Respondents were asked to identify the specialty most closely related to their principal employment. The grouping of specialties to form *fields* was accomplished in conformance with the scheme presented in table A-2.

This *field* definition, which is used in this report, differs from the *field* definitions used by the Commission on Human Resources in their report[4] based on this survey. Care should therefore be exercised in comparing data from these sources.

Type of employer—Respondents were asked to identify, from a list of categories, the type of organization of their principal employer. *Educational institutions* included junior colleges, 2-year colleges, technical institutions, medical schools, 4-year colleges or universities, and elementary or secondary schools. *Business or industry* was listed as separate and distinct from other nonprofit employer categories which included: *hospital or clinic; U.S. military service or Commissioned Corps; U.S. Government, civilian employee; State government; local or other government; international agency; and nonprofit organization*, other than hospital, clinic, or educational institution.

Primary work activity—This item refers to that activity which respondents considered to be primary in relation to their position. The term "development" includes the development or design of equipment, products, systems or data; "sales/professional services" includes sales, marketing, purchasing, estimating and professional services to individuals but *excludes* consulting which is treated as a separate work activity; the category "other" includes report or other technical writing or editing, production, quality control, and inspection and testing.

Salaries—Salary data are derived from information regarding an individual's annual salary before deductions for income tax, social security, retirement, etc., but excluding bonuses, overtime, summer teaching or other payment for professional work. Salaries reported are median annual salaries, rounded to the nearest $100 and computed for full-time employed civilian scientists and engineers only. Differences between calendar-year salaries (11 to 12 months) and academic-year salaries (9 to 10 months) for scientists and engineers employed in educational institutions have been accommodated by multiplying academic-year salaries by 11/9 to adjust to a calendar-year scale.

Industry groups—The classification of industrial organizations to form industry groups was accomplished in conformance with the Enterprise Standard Industrial Classification (Enterprise SIC) codes listed by the Securities and Exchange Commission.[5] Industrial organizations cited by respondents as their principal employer were

[1] This survey was based on a sample of doctoral scientists and engineers included in the Doctoral Roster, a part of the NSF's Manpower Characteristics System

[2] National Academy of Sciences, *Doctoral Scientists and Engineers in the United States-1973 Profile*, (Washington, D.C.), 1974.

[3] National Science Foundation, *Characteristics of Doctoral Scientists and Engineers in the United States, 1973* (NSF 75-312) (Washington, D.C. 20402: Superintendent of Documents, U.S. Government Printing Office), 1975; *Detailed Statistical Tables: Characteristics of Doctoral Scientists and Engineers in the United States, 1973* (NSF 75-312-A) (Washington, D.C. 20550), 1975, and *Reviews of Data on Science Resources*, No. 24, "Work Activities of Employed Doctoral Scientists and Engineers in the U.S. Labor Force, July 1973" (NSF 75-310) (Washington, D.C. 20402 Superintendent of Documents, U.S. Government Printing Office), June 1975.

[4] See footnote 2.

[5] Securities and Exchange Commission, *Directory of Companies Filing Annual Reports with the Securities and Exchange Commission* (Washington, D.C. 20402: Superintendent of Documents, U.S. Government Printing Office), December 1972.

TABLE A-2.—SCIENCE AND ENGINEERING FIELD CLASSIFICATION OF SPECIALTIES—1973 DOCTORAL ROSTER SURVEY

FIELD	Specialty code
All fields	000 to 799
Physical scientists	101 to 299
Chemists	200 to 299
Physicists and astronomers	101 to 199
Mathematical scientists	000 to 080, 082 to 099
Mathematicians	000 to 052
	060, 082 to 099
Statisticians	055
Computer specialists	080
Environmental scientists	301 to 399
Earth scientists	301 to 360
	388,399,301
	388,399
Oceanographers	370,397
Atmospheric scientists	380
Engineers	400 to 499
Life scientists	500 to 579
Biological scientists	540 to 579
Agricultural scientists	500 to 519
Medical scientists	520 to 539
Psychologists	600 to 699
Social scientists	700 to 799
Economists	720,725
Sociologists/anthropologists	700,710
Other social scientists	703,708,709,
	726,740 to 799
Out of scope	841 to 899

TABLE A-3.—CLASSIFICATION OF INDUSTRY GROUPS

Industry group	Enterprise SIC code
MANUFACTURING:	
Chemicals and allied products	281-289
Electrical equipment and communication	363-369,481-489
Petroleum and refining	291-299,131-139
Transportation and ordnance	346,371-379
Professional and scientific equipment	381-387
Machinery	351-359
Other manufacturing	201-275,301-345, 349,391-399
NONMANUFACTURING:	
Agriculture, forestry, and fisheries	011-021
Mining	100-120,140
Constract Construction	150-171
Wholesale and retail trade	501-599
Finance, insurance and real estate	601-679
Services	701-899
Other	400-478,491-499
NONCLASSIFIED:	
All other companies	991

classified by the assigned industry codes which were then combined to form industry groups. Table A-3 presents the classification scheme which was used to form the industry groups identified in this report.

Sampling errors—The statistics presented in this report reflect random errors introduced due to sampling. Detailed tables of sampling errors are available upon request from the Division of Science Resources Studies.

APPENDIX B
Detailed Statistical Tables

TABLE B-1.—GENERAL CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED BY BUSINESS AND INDUSTRY: 1973

	Number	Percent	Median salary[1]
Total	50,000	100	$23,400
Sex:			
Men	49,100	98	23,500
Women	900	2	19,700
Field:			
physical scientists	19,200	38	23,000
Chemists	15,300	31	22,800
Physicists/astronomers	3,900	8	23,800
Mathematical scientists	900	2	24,200
Mathematicians	700	1	24,000
Statisticians	200	(2)	25,300
Computer specialists	1,100	2	22,700
Environmental scientists	2,000	4	23,100
Earth scientists	1,900	4	23,100
Oceanographers	100	(2)	(4)
Atmospheric scientists	(2)	(2)	(4)
Engineers	17,300	35	23,500
Life scientists	6,800	14	23,500
Biological scientists	3,200	6	23,100
Agricultural scientists	1,800	4	22,300
Medical scientists	1,800	4	25,400
Psychologists	1,500	3	28,300
Social scientists	1,200	2	28,000
Economists	800	2	30,700
Sociologists/anthropologists	100	(2)	(4)
Other social scientists	400	1	25,900
Age:			
24 or under	(2)	(2)	(4)
25-29	2,000	4	17,700
30-34	11,900	24	20,300
35-39	10,200	20	22,800
40-44	8,100	16	24,700
45-49	6,400	13	27,500
50-54	5,700	11	26,500
55-59	3,400	7	26,100
60-64	1,600	3	28,600
65-69	500	1	29,300
70 or over	200	(2)	(4)
No report	100	(2)	(4)
Primary Work Activity:			
Research and development	23,200	46	21,700
Basic research	3,400	7	21,600
Applied research	12,600	26	21,700
Development	6,900	14	21,400
Management or administration	17,300	35	28,100
of R&D	12,500	25	27,300
of other than R&D	3,000	6	31,000
of both	1,800	4	29,400
Teaching	100	(2)	(4)
Consulting	2,300	5	24,900
Sales/professional services	1,400	3	22,700
Other	2,500	5	(4)
No report	3,200	6	23,600
Federal Support Status:			
Receiving support	11,600	23	23,900
No support	37,400	75	23,300
Status unknown	600	1	21,400
No report	400	1	24,500
Citizenship:			
USA	46,400	93	23,600
Foreign	3,500	7	21,000
No report	100	(2)	(4)
Race:			
White/Caucasian	43,900	88	23,600
Black/Negro	300	1	22,700
American Indian	(2)	(2)	(4)
Asian	3,100	6	21,300
Other	100	(2)	(4)
No report	2,700	5	23,600
Employment status:			
Full-time employed	49,000	98	23,400
Science or engineering	46,300	93	23,300
Nonscience or engineering	2,700	5	26,400
Part-time employed	1,000	2	(2)
Science or engineering	900	2	(2)
Nonscience or engineering	100	(2)	(2)
Postdoctoral appointees	100	(2)	(4)

[1] Median salaries computed only for full-time employed
[2] Less than 50 individuals.
[3] Less than 0.5 percent
[4] No median computed for groups with less than 20 individuals reporting salary.
[5] Data not available.

Note: Detail may not add to totals because of rounding
SOURCE: National Science Foundation

TABLE B-2.—NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS IN BUSINESS AND INDUSTRY, BY FIELD, PRIMARY WORK ACTIVITY, AND INDUSTRY GROUP: 1973

		Manufacturing industry									
	Total	Total	Chemicals & allied products	Electrical equipment & communication	Petroleum & refining field	Transportation & ordnance	Professional & scientific equipment	Machinery	Other manufacturing	Nonmanufacturing industries	Non-classified companies
FIELD											
Total	50,000	40,600	14,200	7,300	4,300	4,100	2,800	2,800	5,400	5,100	4,300
Physical scientists	18,200	17,800	8,400	1,800	1,500	1,100	1,700	700	2,200	700	800
Chemists	15,300	14,300	8,200	800	1,400	400	1,200	300	2,100	400	800
Physicists/astronomers	3,800	3,200	200	1,200	100	700	500	400	100	300	300
Mathematical scientists	900	600	100	200	(1)	100	(1)	100	100	100	100
Computer specialists	1,100	900	100	300	100	100	100	300	(1)	100	100
Environmental scientists	2,000	1,300	200	100	800	100	(1)	100	200	300	300
Engineers	17,300	14,000	2,000	4,300	1,700	2,800	600	1,300	1,800	2,000	1,400
Life scientists	6,800	5,400	3,500	200	100	(1)	300	100	1,100	800	700
Biological scientists	3,200	2,600	1,600	200	100	(1)	200	100	500	300	300
Agricultural scientists	1,800	1,200	500	(1)	(1)	(1)	(1)	(1)	600	400	200
Medical scientists	1,800	1,500	1,300	(1)	(1)	(1)	100	(1)	(1)	100	100
Psychologists	1,500	500	100	200	(1)	100	(1)	100	100	400	500
Social scientists	1,200	500	100	100	100	100	(1)	(1)	100	500	300
PRIMARY WORK ACTIVITY											
Total	50,000	40,600	14,200	7,300	4,300	4,100	2,800	2,800	5,400	5,100	4,300
Research and development	23,200	20,600	6,700	4,300	2,100	2,400	1,500	1,800	2,000	1,500	1,000
Basic research	3,400	3,100	1,500	400	300	200	300	200	200	100	100
Applied research	12,800	11,500	3,800	2,300	1,400	1,400	800	800	1,300	800	500
Development	6,800	6,100	1,400	1,600	500	800	400	700	600	400	300
Management or administration	17,300	14,600	5,200	2,500	1,500	1,400	1,000	700	2,400	1,800	1,000
Of R&D	12,500	10,800	4,000	2,000	1,000	1,100	800	400	1,700	1,000	500
Of other than R&D	3,000	2,200	800	200	400	100	100	100	500	800	300
Of both	1,800	1,500	400	200	200	200	100	100	300	100	200
Consulting	2,300	500	200	100	100	(1)	(1)	100	100	800	1,100
Sales/professional services	1,400	700	400	(1)	100	(1)	(1)	(1)	100	100	500
Other	2,500	1,800	700	100	300	100	100	100	400	500	300
No report	3,200	2,300	1,000	100	300	200	100	100	400	600	500

[1] Less than 50 individuals.

Note. Detail may not add to totals because of rounding.

SOURCE: National Science Foundation.

TABLE B-3.—NUMBER OF DOCTORAL SCIENTISTS AND ENGINEERS IN BUSINESS AND INDUSTRY, BY FIELD AND PRIMARY WORK ACTIVITY: 1973

Field	Total	Research and development				Management or administration				Teaching	Consulting	Sales/ professional services	Other	No report
		Total	Basic research	Applied research	Develop-ment	Total	Of R&D	Other than R&D	Of both					
Total	50,000	23,200	3,400	12,800	6,800	17,300	12,500	3,000	1,800	100	2,300	1,400	2,500	3,200
Physical scientists	19,200	9,800	2,300	6,200	1,400	6,400	5,000	800	600	(1)	300	400	900	1,200
Chemists	15,300	7,400	1,700	4,600	1,100	5,400	4,200	800	500	(1)	200	400	800	1,100
Physicists/astronomers	3,900	2,500	600	1,600	300	1,000	800	100	100	(1)	100	100	100	100
Mathematical scientists	900	500	(1)	400	100	200	100	(1)	(1)	(1)	100	(1)	(1)	(1)
Mathematicians	700	400	(1)	300	(1)	200	100	(1)	(1)	(1)	100	(1)	(1)	(1)
Statisticians	200	100	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Computer specialists	1,100	700	100	200	400	300	200	100	(1)	(1)	(1)	(1)	(1)	(1)
Environmental scientists	2,000	700	100	500	100	700	300	200	200	(1)	200	(1)	200	100
Earth scientists	1,900	700	100	500	100	700	300	200	200	(1)	200	(1)	200	100
Oceanographers	100	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Atmospheric scientists	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Engineers	17,300	8,700	200	4,000	4,400	6,200	4,400	1,100	700	(1)	800	200	700	700
Life scientists	6,800	2,200	600	1,200	400	2,800	2,200	400	300	(1)	300	400	400	800
Biological scientists	3,200	1,200	400	600	100	1,200	900	100	100	(1)	100	200	200	400
Agricultural scientists	1,800	500	(1)	300	100	800	600	100	100	(1)	100	100	200	200
Medical scientists	1,800	500	100	300	100	800	700	100	100	(1)	(1)	100	100	200
Psychologists	1,500	300	100	200	100	400	200	200	100	(1)	300	200	100	100
Social scientists	1,200	200	(1)	200	(1)	400	100	200	100	(1)	200	100	200	100
Economists	600	200	(1)	100	(1)	300	100	100	(1)	(1)	100	100	100	100
Sociologists/anthropologists	100	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Other social scientists	400	100	(1)	(1)	(1)	100	(1)	100	(1)	(1)	100	(1)	100	(1)

[1] Less than 50 individuals.

Note: Detail may not add to totals because of rounding.

SOURCE: National Science Foundation.

TABLE B-4.—MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS IN BUSINESS AND INDUSTRY, BY FIELD AND PRIMARY WORK ACTIVITY: 1973

Field	Total	Research and development				Management or administration				Teaching	Consulting	Sales/ professional services	No report
		Total	Basic research	Applied research	Develop-ment	Total	Of R&D	Other than R&D	Of both				
Total	$23,400	$21,700	$21,800	$21,700	$21,400	$28,100	$27,300	$31,000	$29,400	(1)	$24,900	$22,700	$23,600
Physical scientists	23,000	21,600	21,900	21,500	21,400	27,500	26,800	29,600	32,100	(1)	26,100	22,300	23,600
Chemists	22,800	21,200	21,600	21,000	21,200	27,100	26,300	29,400	33,100	(1)	(1)	22,400	23,800
Physicists/astronomers	23,800	22,700	22,800	22,800	22,200	29,100	28,900	(1)	(1)	(1)	(1)	(1)	22,600
Mathematical scientists	24,200	23,400	(1)	23,400	(1)	30,800	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Mathematicians	24,000	23,500	(1)	23,300	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Statisticians	25,300	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Computer specialists	22,700	21,500	(1)	22,800	20,500	27,700	27,500	(1)	(1)	(1)	(1)	(1)	(1)
Environmental scientists	23,100	21,200	(1)	21,400	(1)	27,000	26,500	28,300	24,600	(1)	24,900	(1)	(1)
Earth scientists	23,100	21,200	(1)	21,500	(1)	27,100	26,600	28,300	24,500	(1)	25,400	(1)	(1)
Oceanographers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Atmospheric scientists	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Engineers	23,500	21,800	22,400	21,900	21,800	28,500	27,700	30,100	29,400	(1)	24,100	21,200	23,100
Life scientists	23,500	20,500	20,200	20,800	19,400	27,200	27,200	29,400	25,400	(1)	22,000	23,300	24,100
Biological scientists	23,100	20,800	20,600	20,900	(1)	27,100	27,300	(1)	(1)	(1)	(1)	(1)	24,200
Agricultural scientists	22,300	18,500	(1)	18,900	(1)	25,500	25,200	(1)	(1)	(1)	(1)	(1)	22,000
Medical scientists	25,400	21,800	(1)	22,600	(1)	29,300	29,100	(1)	(1)	(1)	(1)	(1)	27,200
Psychologists	28,300	25,700	(1)	26,000	(1)	36,400	32,500	38,600	(1)	(1)	26,100	26,100	28,800
Social scientists	28,000	24,100	(1)	26,100	(1)	38,300	(1)	42,500	(1)	(1)	35,900	(1)	(1)
Economists	30,700	28,000	(1)	28,100	(1)	38,200	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Sociologists/anthropologists	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Other social scientists	25,900	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

[1] No median computed for groups with less than 20 individuals reporting salary.

Note: Median salaries computed only for full-time employed.

SOURCE: National Science Foundation.