

Data Highlights

- The Federal Government is the largest single employer of scientists and engineers in the United States, employing 164 thousand civilian scientists and engineers in October 1969. They were about 9 percent of total employment of scientists and engineers in the United States.
- Scientific and engineering technicians in the Federal Government numbered 111 thousand in 1969, or 68 per hundred scientists and engineers.
- Federal employment of scientists and engineers grew rapidly over the decade 1959-1969, rising from 109,500 in 1959, or by 49 percent. This growth occurred concurrently with a 116 percent increase in Federal funds for intramural research and development, from \$1.64 billion in 1959 to \$3.55 billion in 1969. In both cases the greatest growth occurred between 1959 and 1964—5.5 percent per year for scientists and engineers and 11.6 percent yearly for the R&D funds. The 1964-69 growth rates were 2.7 percent for scientists and engineers, and 4.3 percent in intramural R&D funds. The 1968-69 growth in scientists and engineers and intramural R&D funds was

the smallest over the entire 10-year period—1.7 and 1.6 percent, respectively.

- By occupation, physical scientists were the largest scientist group in 1969, numbering 30.5 thousand. The next largest groups were the biologists—28.0, the mathematicians and statisticians—8.3, and the social scientists—6.9 thousand. Among the 84.1 thousand engineers were 22.9 thousand mechanical and related engineers, 20.9 thousand electrical and electronic engineers, 18.4 thousand civil and related engineers, and 13.9 thousand general engineers. The 110.6 thousand Federal technicians in 1969 were composed as follows: the engineering and allied mechanics group—77.8 thousand, biological science—13.6 thousand, physical science—6.8 thousand, geography and cartography—6.2 thousand, mathematics and statistics—5.9 thousand.
- The largest employing agency of scientists and engineers in October 1969, as in prior years, was the Department of Defense with 46 percent. The Department of Agriculture employed 16 percent. The Department of Interior and NASA each had 9 percent.

- The nearly 7 thousand women scientists and engineers and 10 thousand scientific and engineering technicians were 6 percent of the 1969 total.
- In 1969, 14 percent of the Government personnel in professional scientific and engineering occupations were primarily engaged in the performance of research and 15 percent in development. These two activities were the largest of the functional categories. The next largest functions were design; and data collection, processing and analysis in which 10 and 9 percent, respectively, of the total scientists and engineers were primarily engaged. Natural resource operations, and management of major organizations and programs each occupied 8 percent of the total. Four other categories—installation, operations and maintenance; planning; test and evaluation; and technical assistance and consulting—each accounted for another 5 percent.
- The 5 largest States in numbers of Federal scientists and engineers employed 42 percent of the total. In order of size, there were Maryland (12 percent), District of Columbia (10 percent), California (10 percent), Virginia (6 percent), and Texas (4 percent).

Federal scientists, engineers, and technicians, by occupational group or series and by agency, October 1969
(000)

Occupational group and series	Total, all agencies ¹	Defense	Agriculture	HEW	Interior	NASA	Commerce	Transportation	All other
Total, scientists and engineers	163.5	76.0	25.8	6.1	15.3	13.9	6.3	5.0	15.0
Scientists	79.4	22.2	22.5	5.1	9.9	5.1	5.6	.4	8.5
Physical sciences	30.5	11.9	1.7	2.1	3.8	5.0	3.9	.1	2.1
Mathematics and statistics	8.3	5.1	.6	.6	.1	*	1.0	.1	.7
Biological sciences	28.0	1.3	19.1	1.5	5.1	.1	*	*	1.0
Social sciences	6.9	.6	1.1	.6	.5	*	.5	.1	3.5
Geography and cartography	3.4	2.7	.1	—	.4	*	.2	*	*
Psychology	2.0	.6	*	.3	*	*	*	*	1.1
Urban planning	.2	*	*	*	*	—	*	*	.2
Engineers	84.1	53.8	3.2	1.1	5.4	8.8	.7	4.7	6.5
General	13.9	9.5	.1	.1	.6	1.5	.1	.5	1.5
Civil and related	18.4	9.2	2.2	.6	2.8	*	.1	2.3	1.2
Electrical and electronic	20.9	15.7	.2	.1	.8	1.0	.3	1.3	1.4
Mechanical and related	22.9	14.8	.1	.1	.2	5.9	.1	.5	1.2
Other engineering	8.1	4.6	.7	.2	.9	.3	*	.1	1.2
Total, technicians	110.6	59.2	15.3	2.2	8.8	4.0	4.9	9.3	6.9
Science related	32.8	8.3	11.5	1.8	4.3	.3	3.8	.2	2.6
Engineering and mechanics related	77.8	50.9	3.8	.3	4.5	3.7	1.2	9.1	4.2

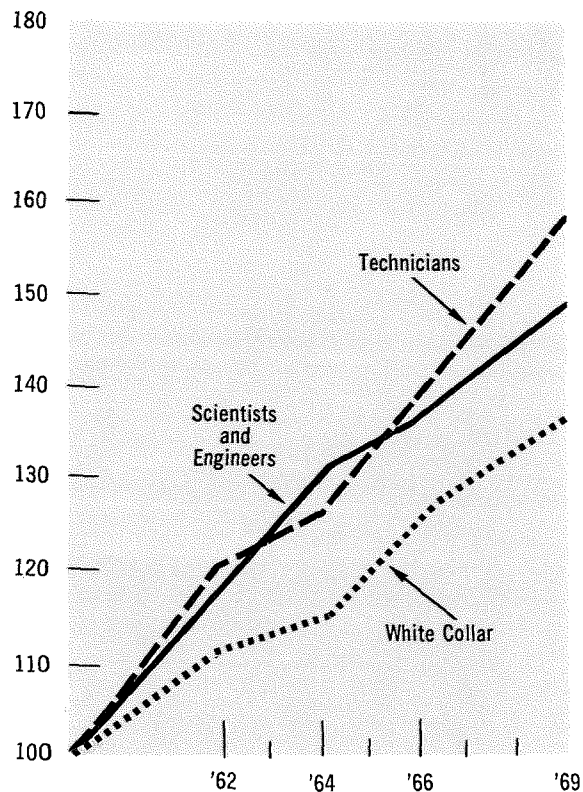
¹ Detail may not add to total because of rounding.

* Less than 50.

Source: National Science Foundation, from U.S. Civil Service Commission data.

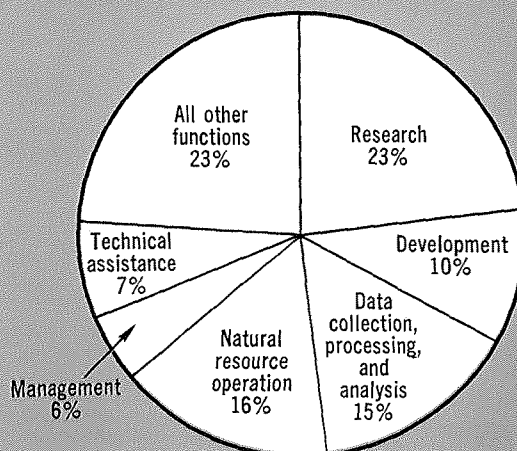
Federal scientists and engineers, technicians, and total white collar employment *

INDEX 1959 = 100

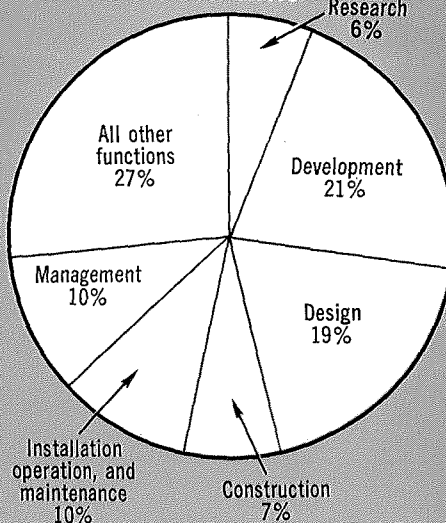


Scientists and engineers in the Federal Government, by selected function, October 1969 *

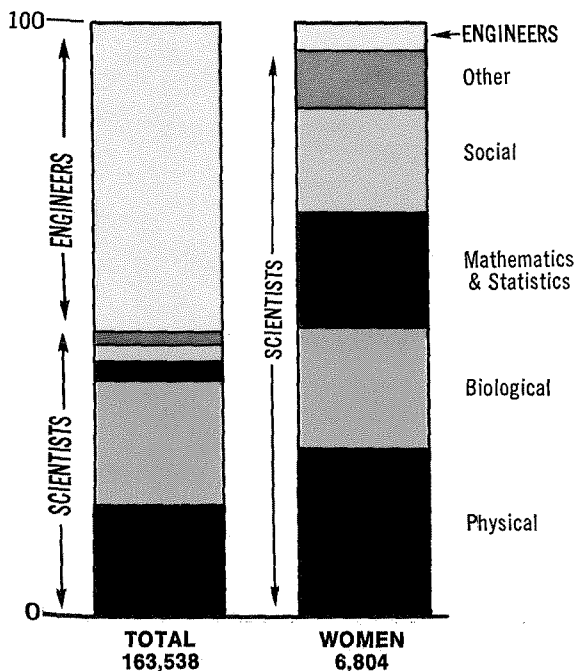
SCIENTISTS



ENGINEERS



Percent distribution of total and women scientists and engineers in the Federal Government, October 1969 *



THE BACK COVER:

Electron microphotograph showing transversely sectioned spermatid nuclei of the caddisfly *Neoronia* enlarged X 12,000.

Photo, David M. Phillips, Washington University, St. Louis, Mo.

The back cover of each issue of *Mosaic* will be devoted to a photograph of unusual aesthetic or visual impact resulting from the use of the camera as a tool of scientific research. Photographs for consideration are solicited. The photographer will be credited.

* Source: National Science Foundation, from U.S. Civil Service Commission data.