Table 1. Percentages of Ph.D. holders in various geographic locations at three stages of their careers.

Career stage	Geographic location					
	New England	Middle Atlantic	Middle West	South	West	Foreign
Total, all graduation years covered						
Received doctorate	13.1	22.2	40.4	12.2	12.1	
First job	8.6	20.1	27.6	23.2	14.8	5.5
Present job	7.3	19.7	25.0	24.1	18.2	5.6
1935 and 1940						
Received doctorate	15.4	23.4	42.1	9.8	9.3	
First job	8.8	22.4	30.5	22.8	11.9	3.5
Present job	7.5	21.0	25.8	25.1	16.8	3.8
1945 and 1950						
Received doctorate	14.2	23.2	41.0	10.2	11.4	
First job	9.3	19.5	28.3	22.5	15.3	5.1
Present job	7.3	19.0	25.4	23.6	20.0	4.7
1955 and 1960						
Received doctorate	10.8	20.5	38.7	15.3	14.7	
First job	8.0	19.0	25.1	24.1	16.5	7.2
Present job	7.2	19.3	24.0	23.7	18.4	7.4

in administration than men do, the study shows. And single women, probably because of the greater continuity of their professional careers, do more administrative work than married women—over half of whom, the report says, do none at all. When women who have interrupted their careers return to their professions, it is usually to teaching or research positions, seldom to the teaching-research-administration combination more characteristic of men, or of women whose careers have not been interrupted.

In its treatment of job mobility, the report indicated a tendency for Ph.D.'s to work outside the geographical regions where they earned their degrees. Table 1 gives the U.S. distribution (in percentages of all Ph.D. recipients for a given pair of years) of Ph.D.'s at three stages of their careers—when they received the doctorate, at the time of their first job, and at the present time; it also shows the percentage who are now working abroad.

Besides job mobility, the report covered what it termed "social mobility"—the finding that each new student generation is drawn from a broader social base than its predecessor. Most Ph.D.'s, and most graduate students, still come from families that are above the educational level of the population as a whole and, in a large number of cases, from parents who are in the professions. As education has become more widely available, however, and the educational norm of the population has risen, people from nonprofessional and lower-income families have earned an increasing percentage of the doctoral degrees.

In a discussion of how Ph.D.'s financed their graduate education, the report stated that sources of support have "changed considerably over the past 25 years" and remarked on the "massive growth in federal support." The figures it used to describe this surge, however, seem startlingly low. In the biomedical sciences, for instance, government agencies (apart from the Veterans Administration, which was considered separately in the report because of its special position after World War II) provided, on the average, only 1.2 percent of the support in 1935 and 1940 to Ph.D. recipients in those years. Federal funds provided 13.7 percent of the support to biomedical sciences Ph.D.'s in 1955 and 1960. While this increase can certainly be described as "massive," the figures nonetheless indicate a surprisingly small total of government aid in those years. The same can be said of the increase in support for other fields. For example, federal aid to degree-recipients in the physical sciences grew from 0.4 percent to 16.3 percent during the 25-year period. And aid to mathematics Ph.D.'s increased from 0.2 to 12.8 percent. All the averages, of course, are based on the Ph.D.'s own recollections of how much he received and from whom.

Although the universities were cited as having given most aid, the report pointed out the possibility of a "confusion of sources"—that is, some of the money the recipients received from their schools may in fact have originated in government grants received, disbursed, and administered by the institutions. If there was confusion of this kind—and if it was sufficiently widespread—it probably caused an inaccurate showing of university-versus-government support.

The statistics on postdoctoral training during the 25-year period quite expectedly show a decrease in university support from about 50 percent to 14 percent of the total and a drop in the foundations' share from 30 to 11 percent; these decreases were coupled with a tremendous increase in government aid. Support from the Public Health Service alone increased from 2 to 40 percent, and NSF's contribution jumped from 1 to 15 percent of the total awarded for postdoctoral education. Support from other federal agencies has also grown.

In the final chapter of the report, salaries of doctorate holders are discussed. As one might expect, each new Ph.D. generation starts out with a larger salary, gets raises sooner, and has a higher earning potential than its predecessor. In almost all fields and age groups covered, the Ph.D.'s who spent most of their time teaching received the lowest average salaries, those in administrative jobs were the most highly paid, and those in research or in teaching-research posts were somewhere in between on the salary scale.

—MARION ZEIGER

National Academy: Annual Meeting Includes Elections and Awards

The National Academy of Sciences, during its annual meeting this week in Washington, presented the following awards and medals:

U.S. Steel Foundation award for distinguished research in molecular biology: Norton D. Zinder, Rockefeller University

Public Welfare Medal, for eminence in the application of science to the public welfare: John W. Gardner, Secretary of Health, Education, and Welfare

Alexander Agassiz medal, for original contributions in the science of oceanography: Carl Eckart, University of California, San Diego

James Craig Watson medal, for noteworthy astronomical discoveries or research: Wallace John Eckert, IBM Watson Laboratories

The Kovalenko medal and award, for contributions to medical science, was presented posthumously to Rufus Cole, member emeritus of the Rockefeller University, who died 20 April.

Also during the meeting, Harrison

Brown, professor of geochemistry at California Institute of Technology, was elected to a second 4-year term as Foreign Secretary.

New members elected to the Council of the NAS are:

Herbert E. Carter, head of the chemistry department, University of Illinois

Jesse L. Greenstein, head of the astrophysics department at Caltech, executive officer of the institution's division of physics, mathematics, and astronomy and chairman of faculty, Mt. Wilson and Palomar Observatories

Wallace O. Fenn, physiology professor, University of Rochester school of medicine and dentistry

Katherine Esau, professor emeritus of botany, University of Calfiornia, Santa Barbara

Retiring members of the Council are Arthur Kornberg, professor of biochemistry at Stanford and T. M. Sonneborn, professor of zoology at Indiana University.

The Academy elected 42 new members, "in recognition of their distinguished and continuing achievements in original research." They are:

Paul Berg, biochemistry professor, Stanford medical school

Jacob Bigeleisen, senior chemist, Brookhaven National Laboratory

Ronald Breslow, chemistry professor, Columbia

Bernard Beryl Brodie, chief, laboratory of chemical pharmacology and laboratory of physiology and pharmacology of the autonomic nervous system, National Heart Institute and professorial lecturer in pharmacology, George Washington and Georgetown Universities

Theodore L. Cairns, director of basic sciences, E. I. duPont de Nemours and Company

Elias James Corey, chemistry professor, Harvard

Horace Richard Crane, physics professor, University of Michigan

Kingsley Davis, sociology professor, University of California, Berkeley

Howard Wilson Emmons, mechanical engineering professor, Harvard

Val Logsdon Fitch, physics professor, Princeton

Richard Lawrence Garwin, senior staff member, Watson Scientific Computing Laboratory, IBM Corporation and adjunct professor of physics, Columbia

Norman Henry Giles, genetics professor, Yale

Edward Leonard Ginzton, professor of applied physics and electrical engineering, Stanford and president, Varian Associates

Andrew Mattei Gleason, mathematics professor, Harvard

Clifford Gobstein, biology professor, University of California, San Diego

Jacob George Harrar, president, Rockefeller Foundation

George Keble Hirst, director, Public Health Research Institute of the City of New York and adjunct professor of microbiology, New York University college of medicine

Elvin Abraham Kabat, microbiology professor, Columbia University College of Physicians and Surgeons and microbiologist, Presbyterian Hospital

Arthur Robert Kantrowitz, director of AVCO-Everett Research Laboratory, vice president and director of AVCO Corporation and professor of MIT

Irving Kaplansky, professor and chairman of the mathematics department, University of Chicago

Har Gobind Khorana, co-director of the Institute for Enzyme Research and professor in the life sciences, University of Wisconsin

Edward Fred Knipling, director, entomology research division, agricultural research service, U.S. Department of Agriculture

Daniel Edward Koshland, Jr., biochemistry professor, University of California, Berkeley and affiliate, Rockefeller University

Wilton Marion Krogman, physical anthropology professor, graduate school of medicine and Evans Institute of Dentistry, University of Pennsylvania and director, Philadelphia Center for Research in Child Growth

Robert Benjamin Leighton, physics professor, California Institute of Technology

Philip Levine, director, immunohematology division, Ortho Research Foundation

Vernon Benjamin Mountcastle, professor and director, physiology department, Johns Hopkins medical school

Nathan Mortimore Newmark, professor and head, civil engineering department, University of Illinois

Donald Edward Osterbrock, astronomy professor, University of Wisconsin

Ray David Owen, professor and chairman, division of biological sciences, California Institute of Technology

Francis John Pettijohn, geology professor, Johns Hopkins

George Claude Pimentel, chemistry professor, University of California, Berkeley

Efraim Racker, chief, division of nutrition and physiology, Public Health Research Institute of the City of New York

Floyd Ratliff, associate professor psychology and biophysics, Rockefeller University

Harold Abraham Scheraga, professor and chairman, Chemistry department, Cornell

Jack Steinberger, physics professor, Columbia

Hans Eduard Suess, geochemistry professor, University of California, San Diego

Earl Wilbur Sutherland, Jr., physiology professor, Vanderbilt

Stanislaw Marcin Ulam, research adviser, Director's Office, Los Alamos Scientific Laboratory

Owen Harding Wangensteen, professor of surgery, University Hospitals and director, department of surgery, University of Minnesota

Samuel I. Weissman, chemistry professor, Washington University

Charles Yanofsky, biology professor, Stanford

The new members bring the Academy's total to 745, plus 78 foreign associate members, ten of whom were elected this week:

Hannes Alfven, professor of theoretical electrodynamics and mathematics, Royal Institute of Technology, Stockholm

P. M. S. Blackett, president, The Royal Society, London

John Eccles, physiology professor, Australian National University, Canberra

Manfred Eigen, professor, Max Planck Institute of Theoretical Chemistry, Göttingen, Germany

Ephraim Katchalski, professor, department of biophysics, Weizmann Institute of Science, Rehovoth, Israel

Konrad Lorenz, professor and director, Max Planck Institute for Behavioral Physiology, Bavaria

Jean Piaget, psychology professor, University of Geneva, Switzerland

Bruno Sander, professor emeritus of minerology and petrography, University of Innsbruck, Austria

Pol Swings, professor and director, Institute of Astrophysics, University of Liège, Belgium

Hiroshi Tamiya, professor, Institute of Applied Microbiology, University of Tokyo