Affirmative Action Report: New Hires at Assistant Professor Level, Fall 1989

April 10, 1990

Two years ago I asked the University Planning Office to undertake a study of faculty affirmative action, focusing on the departmental level rather than the school level, and comparing our faculty numbers—particularly our new hires—with the Ph.D.s available in particular fields. A portion of the first study, summarizing the hiring patterns at assistant professor level in relation to national pools as of Fall 1987, was published in *Almanac* May 1, 1989.

We have spent the last several months updating last year's analysis. Our purpose, once again, is to help us understand some of the opportunities for and obstacles to achieving good representation of women and minorities on the Penn faculty. The resultant tables contain information about Penn, information about the pool of available Ph.D.s, and the first estimate of possible faculty composition by race and sex had our new hires strictly reflected the available pool.

The full report, which runs 123 pages, is available for each school in the office of its dean. Copies are also available from the Office of the Provost. The report consists of three tables for each department at Penn. Table A shows the distribution of all standing faculty by rank, race and sex as of Fall 1989, and Table C shows all new hires by rank, 1982-89.

The presentation that follows is summarized from Table B, which consists of several parts. First, we obtained counts, by race and sex, of all assistant professors hired during the period from Fall 1982 to Fall 1989. Like the data in Tables A and C, these were derived from the Deputy Provost's file, with verification of the most recent year by each individual school. Next, we obtained the best information we could about U.S. production of advanced degrees, usually Ph.D.s, in the disciplines most closely associated with each department. Using this "availability" data and the number of new hires during the period, we calculated the hypothetical distribution of the newly-hired faculty by race and sex and compared that with the actual distribution of new assistant professors.

Assume, for example, that there were 1,000 doctorates awarded in a given discipline from 1981 to 1987, of which 300 were earned by women and 700 by men; if Penn's department associated with that discipline hired 20 assistant professors during the period July 1982 to July 1989, our calculations would have expected 6 women (30 percent) and 14 men (70 percent).

While we put a great deal of effort into obtaining, validating, and tabulating the data for these reports, we recognize some inherent shortcomings in our approach. For this reason, we call our estimates "first approximations." We wish to outline some of the strengths and weaknesses of the report that follows, so that you can keep them in mind as you use the tables.

- — Penn faculty data include both U.S. and non-U.S. citizens. In fact, a number of minority faculty, particularly those classified as Asian, are not citizens. The availability data provide racial breakdowns only for U.S. citizens.
- — Clearly, Penn does not hire its young faculty from the entire pool of new Ph.D.s in the U.S. Because it is impossible to obtain data on an institution-by-institution basis, we cannot focus our analysis on those schools, here and abroad, where we tend to recruit faculty in various fields.
- — Departments often recruit new faculty in particular sub-specialties in order to strengthen or round out their existing faculties. The availability data are general, and we cannot assume that the racial and gender distributions of Ph.D.s in sub-specialties are necessarily proportional to the discipline as a whole.
- — Our payroll/personnel records include only those who actually accept appointments at Penn. We have no information about affirmative action efforts in terms of applicants or rejected offers.
- — For some Penn departments we have disciplinary data that are only approximate matches; for example, we use anthropology as a surrogate for Folklore and Folklife. (See page IV for a list of such substitutions.)
- — For some Penn departments, we are unable even to provide an appropriate substitute; these departments are included with "proportional" hiring patterns.
- — In the clinical area of Medicine, our data source provides a distribution of actual M.D.s employed in U.S. medical school faculties in 1988. Even these data are sparse, and hence some clinical areas do not appear separately.

Despite these caveats and exceptions, many of the availability data we provide are useful for understanding the volume of advanced degrees awarded to women and minorities in various fields during the last few years. These should provide an approximate basis for assessing the recent affirmative action efforts of Penn departments.

— Michael Aiken, Provost

University of Pennsylvania Standing Faculty
New Hires at Assistant Professor Rank, 1982-89
National PhD Pool 1982-87: Proportional Representation by Gender and Race

	New Hires 1982-1989		Proportional Representation		New Hires 1982-89				Proportional Representation				U.S. PhD Pool 1981-87
Department	**Men**	**Women**	**Men**	**Women**	**White**	**Hispanic**	**Asian**	**Black**	**White**	**Hispanic**	**Asian**	**Black**	**Total**
Arts & Sciences: Humanities													
American Civilization	1	1	1.3	0.7	1	0	0	1	1.8	0.0	0.0	0.1	1812
Art History	1	3	1.2	2.8	4	0	0	0	3.8	0.1	0.1	0.0	992
Classical Studies	2	0	1.2	0.8	2	0	0	0	2.0	0.0	0.0	0.0	373
English	9	6	6.8	8.2	14	0	0	1	14.3	0.2	0.2	0.3	5125
Folklore & Folklife	2	1	1.6	1.4	2	0	0	1	2.8	0.1	0.1	0.1	2496
German	0	1	0.4	0.6	1	0	0	0	1.0	0.0	0.0	0.0	538
History	3	2	3.4	1.6	3	1	0	1	4.6	0.1	0.1	0.2	4144
Linguistics	5	0	2.5	2.5	4	0	1	0	4.6	0.1	0.2	0.1	1256
Music	4	1	3.4	1.6	4	0	1	0	4.8	0.1	0.1	0.1	3026
Oriental Studies	5	2	4.4	2.6	7	0	0	0	5.9	0.0	1.1	0.0	212
Philosophy	3	1	3.1	0.9	4	0	0	0	3.8	0.1	0.1	0.1	1704
Religious Studies	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	1204
Romance Languages	1	4	1.9	3.1	5	0	0	0	3.8	1.1	0.0	0.1	2061
Slavic Languages	0	1	0.5	0.5	1	0	0	0	1.0	0.0	0.0	0.0	208
South Asia Studies	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	117
Arts & Sciences: Social Sciences													
Anthropology	4	3	3.6	3.4	7	0	0	0	6.5	0.2	0.1	0.2	2496
Economics	23	1	20.2	3.8	20	1	3	0	22.2	0.3	1.0	0.5	5521
History & Sociology of Science	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	164
Political Science	9	1	7.6	2.4	9	0	0	1	9.0	0.2	0.3	0.5	2946
Regional Science	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	110
Sociology	5	5	5.8	4.2	8	0	0	2	9.0	0.3	0.3	0.5	3587
Arts & Sciences: Natural Sciences													
Astronomy	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	335
Biology	6	1	4.8	2.2	7	0	0	0	6.6	0.1	0.2	0.1	8826
Chemistry	5	1	4.9	1.1	5	0	1	0	5.5	0.1	0.3	0.1	10941
Geology	3	0	2.5	0.5	3	0	0	0	2.9	0.0	0.0	0.0	814
Mathematics	10	0	8.5	1.5	8	1	1	0	9.4	0.1	0.4	0.1	3498
Physics	13	1	12.9	1.1	11	0	2	1	13.1	0.1	0.6	0.1	6140
Psychology	5	4	4.7	4.3	9	0	0	0	8.4	0.2	0.1	0.3	19677
Wharton													
Accounting	9	0	6.8	2.2	7	0	2	0	8.3	0.0	0.4	0.3	792
Decision Science	9	1	8.5	1.5	8	0	2	0	9.0	0.1	0.8	0.1	979
Finance	18	0	15.8	2.2	15	0	3	0	15.9	0.1	1.8	0.2	602
Health Care Systems	1	0	0.6	0.4	1	0	0	0	0.9	0.0	0.0	0.1	1389
Insurance	3	1	NA	NA	4	0	0	0	NA	NA	NA	NA	NA
Legal Studies	9	0	8.2	0.8	8	0	0	1	8.6	0.1	0.2	0.1	175
Management	11	4	12.6	2.4	11	0	3	1	14.0	0.2	0.6	0.1	922
Marketing	5	1	4.4	1.6	4	0	2	0	5.5	0.0	0.3	0.1	515
Public Policy & Management	3	0	1.9	1.1	1	0	2	0	2.7	0.1	0.0	0.1	352
Social Systems Sciences	3	0	2.1	0.9	3	0	0	0	2.8	0.1	0.1	0.1	173
Statistics	3	0	2.4	0.6	1	0	2	0	2.7	0.0	0.2	0.0	1001
Engineering													
Bioengineering	3	0	2.6	0.4	2	0	1	0	2.7	0.0	0.2	0.0	477
Chemical Engineering	2	1	2.8	0.2	3	0	0	0	2.6	0.0	0.3	0.0	2756
Computer & Info. Science	11	1	11.0	1.0	6	0	6	0	10.4	0.0	1.5	0.0	481
Systems	3	1	3.8	0.2	2	0	2	0	3.6	0.1	0.3	0.0	2406
Electrical Engineering	4	2	5.8	0.2	3	1	2	0	5.3	0.1	0.6	0.0	4020
Materials Science	2	1	2.6	0.4	3	0	0	0	2.6	0.0	0.3	0.0	1198
Mechanical Engineering	4	0	3.9	0.1	3	0	1	0	3.6	0.0	0.4	0.0	2672
Nursing School	0	29	1.1	27.9	28	0	0	1	27.2	0.3	0.5	1.1	1085

University of Pennsylvania Standing Faculty
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National PhD Pool 1982-87: Proportional Representation by Gender and Race

Department	New Hires 1982-1989		Proportional Representation		New Hires 1982-89				Proportional Representation				U.S. PhD Pool 1981-87
	Men	Women	Men	Women	White	Hispanic	Asian	Black	White	Hispanic	Asian	Black	Total
Grad. Sch. of Education	3	9	5.9	6.1	8	0	1	3	10.6	0.3	0.2	0.9	48408
School of Social Work	1	2	1.3	1.7	2	1	0	0	2.6	0.1	0.1	0.3	1504
Annenberg School	0	1	0.6	0.4	1	0	0	0	0.9	0.0	0.0	0.0	1340
School of Fine Arts													
Architecture	3	1	*	*	4	0	0	0	*	*	*	*	*
City Planning	2	0	*	*	2	0	0	0	*	*	*	*	*
Fine Arts	0	0	*	*	0	0	0	0	*	*	*	*	*
Landscape Architecture	1	1	*	*	2	0	0	0	*	*	*	*	*
Law School	8	6	9.8	4.2	14	0	0	0	13.1	0.2	0.2	0.5	748
Medical School: Basic Sciences													
Anatomy	2	0	1.3	0.7	2	0	0	0	1.9	0.0	0.1	0.0	832
Biochem. & Biophysics	5	1	4.2	1.8	4	0	2	0	5.5	0.1	0.3	0.1	4863
Human Genetics	4	2	3.4	2.6	6	0	0	0	5.6	0.1	0.2	0.1	820
Microbiology	4	0	2.6	1.4	4	0	0	0	3.7	0.1	0.2	0.1	1511
Pharmacology	9	0	6.3	2.7	9	0	0	0	8.2	0.1	0.5	0.1	1712
Physiology	2	0	1.5	0.5	1	1	0	0	1.9	0.0	0.1	0.0	1838
Medical School: Clinical Sciences													
Anesthesia	38	17	43.5	11.5	51	1	1	2	45.5	1.2	7.5	0.8	2191
Dermatology	4	4	6.4	1.6	8	0	0	0	7.0	0.3	0.5	0.2	342
Medicine	76	26	88.5	13.5	94	1	3	4	91.2	2.1	7.2	1.5	11777
Neurology	20	1	18.0	3.0	18	1	2	0	19.0	0.4	1.5	0.1	1518
Obstetrics & Gynecology	29	19	38.9	9.1	44	0	1	3	40.7	1.7	3.6	2.0	1953
Ophthalmology	9	3	10.7	1.3	12	0	0	0	10.8	0.3	0.8	0.1	897
Orthopedic Surgery	16	0	15.0	1.0	15	0	1	0	14.8	0.2	0.8	0.2	639
Otorhinolaryngology	6	0	5.2	0.8	5	0	1	0	5.6	0.0	0.3	0.0	486
Pathology	25	8	26.3	6.7	32	1	0	0	28.0	1.1	3.5	0.4	3486
Pediatrics	43	22	46.0	19.0	61	0	2	2	57.0	2.0	4.8	1.2	5016
Physical Medicine	3	2	3.5	1.5	2	0	3	0	4.1	0.1	0.6	0.2	422
Psychiatry	28	4	25.6	6.4	29	0	2	1	28.9	0.9	1.4	0.8	4513
Radiology	23	11	29.0	5.0	30	2	0	2	28.7	1.0	3.8	0.5	3458
Radiation Oncology	21	6	23.0	4.0	23	0	2	2	22.8	0.8	3.0	0.4	3458
Surgery	21	4	23.3	1.7	23	0	2	0	22.8	0.6	1.3	0.4	4562
Dental School: Basic Sciences													
Biochemistry	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	4268
Histology, Embriol., Anatomy	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	1391
Microbiology	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	2242
Pathology	1	0	0.7	0.3	1	0	0	0	0.9	0.0	0.1	0.0	709
Physiology/Pharmacology	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0	3550
Dental School: Clinical Sciences													
Clinical Departments	13	5	*	*	16	1	0	1	*	*	*	*	*
Veterinary School: Basic Sciences													
Animal Biology	3	0	2.5	0.5	3	0	0	0	2.9	0.0	0.1	0.0	170
Pathobiology	5	2	4.9	2.1	5	0	1	1	6.4	0.1	0.4	0.1	709
Veterinary School: Clinical Studies													
New Bolton Center	12	4	*	*	14	0	2	0	*	*	*	*	*
Philadelphia	10	9	*	*	9	0	0	0	*	*	*	*	*

* Because the figures in these areas are both limited and inconsistent with those which comprise the national pools reflected in the bulk of this report, we have not made similar calculations for proportional representation. See notes, page IV.

National Pool Sources and Substitutions

Because the disciplines represented in some Penn departments are omitted from the National Research Council Reports, we have substituted data for related disciplines. We understand that these substitutions may not fully capture the academic direction of departments at Penn. Schools and departments listed below include only those for which substitutions have been made. Unless otherwise indicated, the availability data source for all departments is: *Summary Report, National Research Council (1982-87).*

School of Arts & Sciences

Penn Department	Department Used from Availability Data
Folklore & Folklife	Anthropology
Oriental Studies	Chinese, Japanese, Hebrew, Arabic
Regional Science	Demography
South Asia Studies	Chinese, Japanese (1983-86 only)

Wharton School

Penn Department	Department Used from Availability Data
Decision Sciences	Information Science and Systems, Operations Research
Health Care Systems	Health Care, Health Care & Epidemiology, Public Policy Studies
Legal Studies	Law, Jurisprudence
Social Systems	Social Sciences, general

School of Engineering

Penn Department	Department Used from Availability Data
Systems	Systems Engineering, Civil Engineering

Graduate School of Fine Arts

Availability Data Source (used in appendix to the full report):: *Digest of Education Statistics: 1987, 1988;* U.S. Department of Education. Figures reflect both master's as well as doctoral degree recipients to account for the variations in departmental hiring requirements.

Penn Department	Department Used from Availability Data
Architecture	Architecture, for degrees by gender (1983-86)
	Architecture and Environmental Design for degrees by race (1981, 1985)
City Planning	City, Community and Regional Planning
Fine Arts Grad. Studies	Fine Arts, including Fine Arts General, Fine Arts Other & Painting

Dental School

Availability Data Source for Clinical Departments (used in appendix to the full report): *Supplement 2 to the Annual Report 88/89,* American Dental Association. Figures reflect enrollees in Advanced Dental Education Programs, 1983 to 1988

Penn Department	National Data
Clinical Departments include:	
Dental Auxiliary	Dental Public Health
Dental Care	Endodontics
Endodontics	Oral Pathology
FFMS	Oral and Max. Surgery
Oral Medicine	Orthodontics
Oral Surgery	Pedodontics
Orthodontics	Periodontics
Periodontics	Prosthodontics
Restorative Dentistry	

Law School

Availability Data Source: Association of American Law Schools Teaching Registry. The figures reflect students who register with this Association and thereby express an interest in the teaching of law. by race.

Medical School

Penn Department	Department Used from Availability Data
Human Genetics	Human and Animal Genetics
Microbiology	Epidemiology, Parisitology, Bacteriology (1983-1986)
	Microbiology/Bacteriology & Parasitology (1981-1982)
Pharmacology	Human and Animal Pharmacology
Physiology	Human and Animal Physiology

Veterinary School

Availability Data Source for Clinical Departments (used in appendix to the full report): *Comparative Data Summary Reports, 1981-88,* American Veterinary Medical Association. Figures reflect graduates from veterinary medical school programs, 1981 to 1988.

Penn Department	Department Used from Availability Data
Animal Biology	Animal Breeding and Genetics (Animal Husbandry, 1981 and 1982)
Pathobiology	Human and Animal Pathology