

Briefings

edited by CONSTANCE HOLDEN

Ph.D. Squeeze

The Association of American Universities (AAU) has seen the future and decided it does not work. In the late 1990s, according to a report published this week,* too few Ph.D.'s will be emerging from graduate schools to meet growing demands.

Universities, which will be getting more new students just as a wave of faculty retirements begins to hit, will be looking for an unprecedented number of new teachers. And the private sector, which has been stepping up its recruitment of Ph.D.'s, will add to the demand. The AAU predicts a shortfall of 7500 Ph.D.'s in science and engineering alone early in the next century.

The report urges the federal government to resume the role it played in the 1960s, when a variety of programs were launched to support graduate students. Many of these efforts petered out in the 1970s. By 1987, doctoral recipients re-

ceived only 11% of their support from Uncle Sam. Some new programs have been started in recent years, and the feds are now providing about \$200 million a year in fellowships, traineeships, and

*The Ph.D. Shortage: The Federal Role (AAU, Washington, D.C., January 1990).

Clearing Brush in Academe's Groves

How do you define faculty incompetence? Very carefully, say professors at the University of California in Los Angeles, who worry that a definition proposed by their Berkeley colleagues might threaten academic freedom.

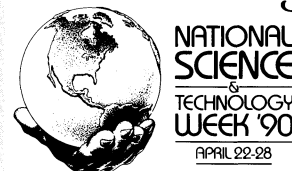
The Berkeley faculty last year decided to sharpen up the procedures for dismissing nonproductive professors. Concern over faculty deadwood has been spurred by the anticipated expiration, in 1993, of mandatory retirement for university professors at age 70.

UC laws allow tenure to be revoked for "good cause," but Berkeley people say that's too vague. Their solution was to provide a definition of the "grossly incompetent" professor as one who has "ceased (or virtually ceased) to engage in serious scholarship" and whose teaching "is so inadequate that it is a disservice to students to permit the faculty member to continue to teach." They called for a scheme of periodic review aimed at identifying faculty freeloaders, an assistance program for those who want help, and a plan for dismissal as a last resort.

Most of the nine UC campuses didn't bother to comment on the proposal, but the UCLA faculty balked at the definition of incompetence. UCLA philosophy professor David Kaplan believes the "good cause" clause is quite ad-



Worth Saving.



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"Think globally. . . Act locally" is the slogan of the National Science Foundation's annual "national science and technology week," 22 to 28 April. An educational gesture the agency cooked up 6 years ago, the week is supported by about \$300,000 in corporate contributions which will go mainly to developing and distributing educational materials to elementary and middle school students. This year's theme is the environment, in honor of the 20th anniversary of Earth Day.

equate and worries that the Berkeley wording might be turned into a weapon against professors who promote unpopular ideologies.

A statewide committee will try to iron out a compromise plan. Its chairman, UC Davis chemistry professor Charles Nash, said some features of the Berkeley plan, such as better defined dismissal procedures, may be adopted.

Monkey Saga Continues

The story of the famous "Silver Spring monkeys" continues to drag on as animal activists have taken a new tack in their campaign to get as much publicity as possible over the 6 monkeys remaining of the 15

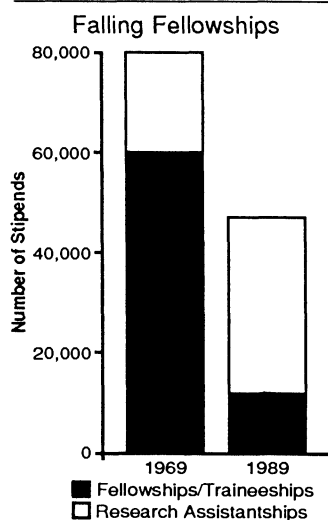
originally seized by police in 1981 from the laboratory of investigator Edward Taub, following allegations of animal cruelty.

Last year, activists succeeded in getting a court in New Orleans to issue a restraining order to prevent euthanasia of the monkeys, which have spent the last 3 years at Tulane University's Delta Regional Primate Center. The monkeys have been in deteriorating health, having had their arm nerves severed for research aimed at helping stroke victims.

When a Louisiana appeals court ruled on 11 January that the university could go ahead and conduct a final experiment, followed by euthanasia, on one of the monkeys, activists switched their strategy. Abandoning their objection to euthanasia, they are claiming, in a suit filed at the U.S. District Court in Washington, that proposed experiments on the remaining monkeys amount to gross scientific misconduct. They have also filed a formal complaint to that effect with the National Institutes of Health's Office of Scientific Integrity.

At a sparsely attended press conference on Capitol Hill, the Physicians Committee for Responsible Medicine, an animal rights group, denounced the research protocol as rotten science and accused NIH of violating its promise that no "invasive" research would be performed on the monkeys. Researchers plan to insert electrodes in the monkeys' brains prior to euthanasia to see what affect denervation of their arms has had on cortical functions.

Delta chief Peter N. Gerone agrees that the procedure is invasive but argues that since it is a terminal one it does not violate the spirit of the agreement. According to Gerone, neuroscientists regard the research as an unparalleled opportunity to explore new theories about brain plasticity that did not even exist when Taub was doing his research. Evidence from Billy, the animal that was sacrificed in



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early January, indicates that cortical areas that used to get signals from the denervated arms seemed to have been getting signals from other parts of the body. Researchers want to replicate the experiment with the remaining monkeys.

MIT Pushes Minority Education

The Massachusetts Institute of Technology has weighed in with a plan for reforming public education that makes minority education its top priority.

MIT's Quality Education for Minorities (QEM) project, a 2-year endeavor funded by the Carnegie Corporation, has produced a set of 58 recommendations to reduce the "glaring gap between minority and nonminority educational achievement" which "remains essentially unbridged" since school desegregation 35 years ago.*

The project was directed by Shirley McBay, MIT's dean for student affairs, and chaired by former labor secretary Ray Marshall, now at the University of Texas. "No major, national education reform effort to date... has focused on the educational needs of minorities," asserts McBay.

The proposals are based on a somewhat paradoxical concept—namely that "all children can excel." The report reiterates calls that are the stock in trade of every education report these days—such as for upgrading teachers, eliminating tracking, getting parents more involved, individualizing instruction, and establishing core competencies. But it also has a few more hard-nosed ideas. They include a requirement that every student do community service work in order to graduate from high school and lengthening of both school days and school years—plus a requirement for year-round schooling at least once

*The report, "Education That Works: An Action Plan for the Education of Minorities," can be obtained for the price of postage (\$2.40) from the QEM Project, MIT, 77 Massachusetts Avenue, Room 26-157, Cambridge, MA 02139.

every 3 years.

The QEM project also favors putting additional pressure on colleges and universities. Among recommendations are that both faculty promotion decisions and institutional accreditation standards be linked to efforts to recruit minority students, faculty, and staff.

The next step will be a series of regional meetings throughout this year to discuss the report. The project will be sustained by a newly formed QEM Network which will have offices in Washington, D.C.

Animal Rightists Threaten Researcher

The Animal Liberation Front has taken credit for a 14 January break-in at the University of Pennsylvania office of Adrian Morrison, a sleep researcher

and veterinarian who has been outspoken in his defense of the use of animals in research. In addition to stealing files, slides, and data, ALF left a message threatening Morrison to "Stop defending what is not defensible, or you will get a taste of your own medicine." No animals were taken.

Morrison has incurred the enmity of animal rights activists for his defense of the use of animals in research, especially for his efforts on behalf of Edward Taub's work on the Silver Spring monkeys, as well as research on cats conducted by John Orem at Texas Tech. Morrison is chairman of the Society of Neuroscience committee on animals in research.

Frederick Goodwin, head of the Alcohol, Drug Abuse and Mental Health Administration, said the break-in escalated the attacks by animal rights activ-

ists to a new level. Instead of protesting a specific research program, Goodwin said the action was directed at an individual for his views. That, said Goodwin, is "antithetical to the concept of social discourse." He vowed that the Department of Health and Human Services would in the future be taking a more active role in defending the use of animals in research.

Data Too Cheap to Meter

The age of the digital library is dawning. And the Harvard-Smithsonian Center for Astrophysics appears to be in the vanguard: at the recent Washington meeting of the American Astronomical Society, center astronomers were giving away free a set of three compact disks containing a complete catalog of images from the Einstein x-ray satellite that flew in the late '70s.

"It cost us \$2000 to master the disks," explains astronomer Daniel E. Harris of the center, which managed the Einstein project for NASA. But it only cost \$2 per disk for duplicates, so NASA, which funded the catalog, decided not to charge anything. About 300 sets were given away at the meeting.

The catalog project was begun 3 years ago in response to continuing requests for the 10-year-old data. Because no other x-ray observatory of comparable power has gone aloft since, x-ray astronomers have had to get very clever at extracting new insights from reanalyses of the existing data.

The decision to release the information on CDs was a natural, says Harris. "With your own software, or the software we can provide, you can look at an image, massage it, and put it together with radio and optical data in various ways."

The center is also thinking of releasing a printed version of the catalog for libraries. But that will require seven volumes and a total of 4000 pages.

Environmentalism Shakeup at State

The Bush Administration has removed the State Department's top two policy-makers on environmental issues, virtually on the eve of an international meeting in Washington D.C., on global warming.

Fred Bernthal, assistant secretary for the bureau of oceans and international environmental and scientific affairs, a hold-over from the Reagan Administration, was not reappointed

by President Bush. He is expected to leave the agency next month to replace John H. Moore as deputy director of the National Science Foundation. The Administration wants Curtis Bohlen, senior vice president of the World Wildlife Fund, to succeed Bernthal.

The other departure from State is that of William Nitze, deputy assistant secretary for environment, health, and natural resources, who was fired in mid-December. Nitze is looking for a job and hopes to remain active in environmental issues. No replacement has been announced.

Both Nitze and Bernthal have reportedly urged the Administration to take firmer action to address global warming. Nitze was a particularly strong advocate, which brought him in conflict with top Administration officials including White House chief of staff John Sununu.

The State Department has urged the President to address the upcoming United Nations Intergovernmental Panel on Climate Change to demonstrate U.S. leadership on climate change issues, but no decision has been made as yet. The meeting begins 5 February.



NSF's No. 2. Frederick M. Bernthal.

U.S. State Department