RANDOM SAMPLES

edited by CONSTANCE HOLDEN

The End of Physics?

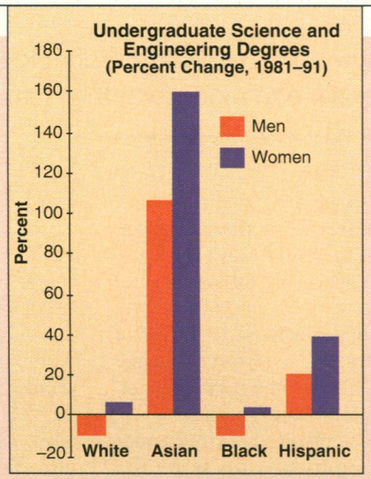
If your dream is to become a physicist, you might want to steer clear of James Madison University (JMU) in Harrisonburg, Virginia. Last month the school stunned students and faculty by announcing that it was eliminating its physics major as well as all the positions of its 10 tenured physics faculty.

The decision, part of a major budget-driven restructuring of the state-supported school, came as a shock to most on campus. "We had no idea it was coming. The extreme measure was a total surprise," says physics department head Kent Moore. Although the university has a faculty committee to advise it on restructuring, that committee wasn't consulted on the physics decision, according to Moore and other JMU faculty.

The department, which averages only seven physics majors a year, had been criticized as overstaffed in comparison with more popular departments like biology. But JMU professors are appalled at what they see as an end run around faculty consultation, says physics professor Dorn Peterson. Indeed, Peterson and others wonder if the abrupt move was, in part, aimed at getting rid of Peterson himself, a critic of the administration who until recently headed the Faculty Senate. Peterson thinks it's "more than a coincidence" that the announcement came the day after the senate had objected to school president Ronald Carrier naming his son as a provost without consulting the faculty.

Doug Brown, an associate vice president for academic affairs at JMU, dismisses this connection as absurd. He says that paring down physics was a painful but necessary step, and "to increase faculty involvement even more would have prolonged the agony." Brown adds that some physics courses will continue to be taught, and the school will now make a "good-faith effort" to redeploy the physics faculty to other departments.

But it may not be easy to quell the growing furor on the JMU campus. Students have written letters protesting the elimination of the physics major. And on 24 January, 305 out of 502 JMU faculty voted that they had no confidence in Carrier's leadership.



Uneven Progress

The National Science Foundation (NSF) releases its seventh biennial report on underrepresented groups in the sciences this week. Entitled "Women, Minorities, and Persons with Disabilities in Science & Engineering," it charts an obstacle-laden path of scientific careers from elementary school to tenure. Colleges and universities were awarding 10% more S&E bachelor's degrees to underrepresented groups at the end of the study decade than at the beginning. But growth was uneven. Asian women got nearly 180% more degrees in both computer science and the biological sciences, for instance, but black men earned 37% fewer degrees in the physical sciences.

In 1991 women accounted for 44% of all S&E degrees awarded. They dominated psychology—getting 73% of the degrees—but shunned engineering, taking only 15%. For a copy of the report fax a request to 703-306-0510, or e-mail mgolladay@nsf.gov.

New Head for London Clinical Center

Hoping to stabilize the political future of its flagship clinical research facility, the Clinical Sciences Center (CSC) at Hammersmith Hospital in London, the U.K.'s Medical Research Council last week appointed pediatrics and child health professor Alexander McNeish as director.

Last May, plans to develop CSC into a world-class center for gene-therapy research were thrown into disarray when Director Kay Davies, an Oxford geneticist, resigned. Davies complained that the job carried too heavy a burden of political and administrative tasks associated with a government-mandated reorganization of the London hospitals and medical schools (*Science*, 13 May 1994, p. 895).

Instead of replacing Davies with another basic scientist, the MRC chose McNeish, formerly dean of medicine at the University of Birmingham, for his considerable experience dealing with health bureaucracies. McNeish says he's ready to enter the political fray, and his aim is "to create an environment in which top-class science is done. ... My research interests are secondary."

McNeish

The CSC comprises groups of clinicians and scientists from the Hammersmith Hospital and the Royal Postgraduate Medical School next door, and is headquartered in a new £21 million building at the same site that so far houses 65 scientists. Research areas currently represented are gene therapy, medical imaging, and immunology and transplants.

McNeish, who starts work on 1 April, will be steering CSC through the hospital reorganization while at the same time presiding over recruitment of three more research groups for the new building. The Wellcome Trust will also be recruiting 40-odd staff for its own independently funded floor in the center.

Kaiko Takes the Plunge Once More

A year after its aborted attempt to reach the deepest spot on Earth, *Kaiko*, the world's deepest diving submersible, is finally ready to go back to sea. Last March, the Japanese remotely operated vehicle was dispatched to the bottom of the Challenger Deep of the Marianas Trench near Guam, some 11,000 meters at its deepest point. But when Kaiko reached 10,909 meters—just a couple of meters shy of the record set by the U.S. bathyscaph *Trieste* in 1960—the video connection with the support ship was lost (*Science*, 8 April 1994, p. 199). *Kaiko* had to be hauled back to shore, where it took 6 months of testing and analysis to get to the root of the problem.

That problem, engineers found, was a cable connection in the two-part vehicle, which is made up of a launcher and a tethered sea-floor rover. The glitch was in the 250-meter cable that connects the launcher to the rover, which contains electrical wires for power and optical fibers for data and control signals. It was designed to allow seawater to flow into the outer rubber sheath, balancing the inner and outer pressure. What happened, engineers decided after months of testing, is that not enough water was flowing in. Thus the outer water pressure pinched the cable tight, ultimately creating a kink in one of the optical fibers that blocked the video signals.

Engineers have now substituted a lubricating gel for water in the cable. And last week, the 3-meter-long rover was scheduled for a series of test dives. Scientists hope that these will culminate next month in another go at Challenger Deep.