GRADUATE EDUCATION

Assessment Flaws Seen in Pending Academy Report

U.S. graduate departments are nervously awaiting a report from the National Research Council (NRC) that will rank them according to the quality of their faculty. More than reputations are at stake: A top billing would be useful when lobbying for more staff or a new building, while a low score could have serious repercussions in tight budget times.

Even though it's not due out for at least a couple of months, making it a year overdue, the 3-year exercise—an update of a 1982 NRC study—is already drawing flak from some research administrators. Neuroscientists are worried that the rankings will cause internecine warfare in their young field. And those in other disciplines are unhappy that the NRC Committee for the Study of Research-Doctorate Programs did not follow two key recommendations in the earlier report: to poll industrial research administrators about the quality of faculty in the academic departments they know, and to follow graduates of the program into the job market to measure the value of their education.

"What you really want to know is, 'What happens to the students?' " says Jules Lapidus, head of the Council of Graduate Programs. "Without that, it's really a survey based on what people think of the faculty. Our hope was that the NRC would take a data-based approach, but my guess is that the rankings will be similar to what appears every year in *U.S. News & World Report*," which does its own, much more limited, annual rankings of U.S. universities.

The report, now under review by NRC officials, was written by an 18-member committee co-chaired by physicist Marvin Goldberger of the University of California, San Diego, and Harvard University psychologist Brendan Maher. It assesses 41 disciplines in 3600 departments at 274 universities, a major jump from the 32 fields and 2700 departments that were included in 1982. Although the new survey retains 25 of the 32 original fields, four engineering specialties have been added, and astronomy and oceanography have joined the physical sciences. The biggest reshuffling affects the biological sciences, with only physiology and biochemistry remaining from the old list, and neuroscience, pharmacology, genetics, and ecology/evolution/behavior appearing for the first time (see list).

The assessment covers more than a dozen aspects of graduate education, from library holdings to time-to-degree, that are not readily available elsewhere. Taken as a whole, panel members say, these data should be very helpful to audiences such as undergraduates hoping to continue their training, university administrators wanting to learn how their programs measure up to the competition, and scholars trying to understand the nature of graduate education.

For many readers, however, the heart of the survey will be the ranking of the quality of the faculty within each department, a number derived from answers to questionnaires sent to thousands of faculty members. Participants were asked to rank some 60 programs in their field, based on their personal knowledge of the faculty, its output, and the quality of the graduate program, and each program was listed on some 300 questionnaires to ensure an adequate sample.

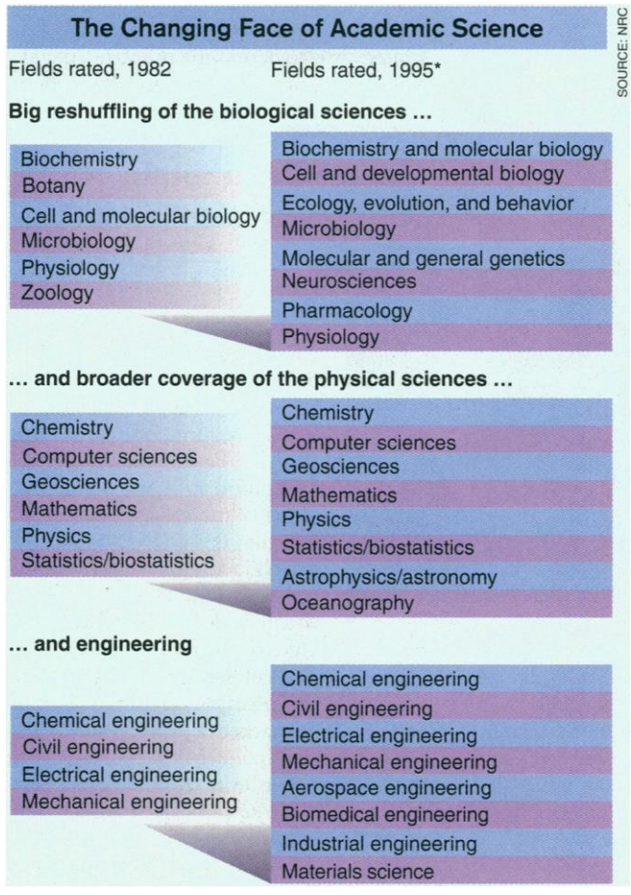
Committee members seem resigned to the fact that the reputational portion will attract more attention than the rest of the survey. "I'll be disappointed but not surprised," says Gardner Lindzey, director emeritus of the Center for Advanced Studies in Behavioral Sciences at Stanford University and a member of both the 1982 and 1995 panels, about the expected focus on the rankings. "That last time we made a point of concealing it, out of concern that it might be taken out of context," but this time, he says, "there's been a deliberate attempt to make it more accessible." In particular, the new report will list programs by rank instead of alphabetically, although programs will be clustered to denote margins of error.

Like the 1982 report, however, the new assessment leaves out ratings from industry, and it lacks empirical data on how graduates fare in the marketplace. This time around, the panel did begin soliciting the views of commercial "customers" of the graduate programs. But it abandoned the effort after discovering that it was much harder to identify raters from industry with a sufficiently broad view of graduate education and that including the commercial sector would cost more than the NRC had been given for the study. The panel tried unsuccessfully to obtain additional support from private or corporate philanthropies.

"It's an important idea, and I'm still disappointed that we couldn't swing it," says committee member Ernest Smerdon, dean of engineering at the University of Arizona. "I think it would have been informative to say, 'Here's what academia says about our graduates, and here's what industry says.' I think we could learn a lot."

After a heated debate, the panel also decided it had neither the time nor the money for a longitudinal survey to explore which aspects of a graduate program most affect a student's career. As a result, the idea is scheduled to be tested in a pilot study directed by one of the committee members, working independently of the NRC.

"The goal is to see what the students trained in programs assessed in the 1982 survey are doing today and what they think about their education," says Joseph Cerny, gradu-



*Comparative literature and religion were added to the nine fields in the arts and humanities, and there were no changes in the seven fields covering social and behavioral science.

A moving target. The NRC report takes aim at the quality of graduate education in fields now producing the most Ph.D. students.

ate-school dean at the University of California, Berkeley, and head of the $75,000 study, which is being funded by the Mellon Foundation. Cerny hopes to track down some 1500 students who graduated between 1983 and '85 (to link them as closely as possible to the 1982 survey) in five fields spanning the curriculum. "We want to know if they're using their Ph.D. and if the degree prepared them for what they are doing," he says.

While some are upset that the study falls short of a comprehensive assessment, neuroscientists are leery of any rankings at all. In January the heads of the Society for Neuroscience and the Association of Neuroscience Departments and Programs (ANDP) wrote Bruce Alberts, president of the National Academy of Sciences and chair of the NRC, that such ratings are "premature" and that they are "anecdotal rather than based on fact." Because neuroscience graduate programs occupy varied positions in the existing hierarchy of academic departments, it is "very difficult to rank neuroscience programs effectively," the two organizations argued. They were not happy with Alberts' effort to reassure them, nor with his insistence that participation was voluntary (a program can choose not to be included in the survey).

"He basically patted us on the head and said, 'Nice doggy,' " says the University of Minnesota's Robert Miller, immediate past president of ANDP. "What we're trying to achieve is a uniformly high-quality graduate program in neuroscience throughout the country. If we participate in a ranking, we are opening ourselves up for internal warfare."

Co-chair Maher says the panel carefully examined each of the points raised by critics and decided that the academic community would be best served by a modification of the 1982 report that preserved its essential features. But that doesn't mean there's no room for improvement, he adds, especially in more applied fields that would benefit from an examination of how their graduates fare. "While I strongly defend the report," he says, "it's less clear that the interests of industry, notably parts of engineering, are well served by it. I'd like to see an ongoing, field-specific data survey, say every 2 years, that would better reflect the rise and fall of individual programs. The goal is to make this as useful as possible to as many people as possible—students, deans, industry, faculty, and anybody else involved in graduate education."

–Jeffrey Mervis

U.K. HEALTH CARE

Will Research Be Priced Out of the Market?

For almost 50 years, Britain's National Health Service (NHS) has been the pride of the country's welfare system, providing free medical treatment for everyone. In 1990, however, the Conservative government sought to improve its efficiency by injecting an element of competition among medical centers, building an "internal market" within the NHS. Whether this change has improved patient care is still hotly debated. But last week, the influential House of Lords' Select Committee on Science and Technology pointed to another hot concern arising from the NHS reforms—the possibility that the competition to cut costs is limiting the ability of NHS hospitals to do basic research.

A report issued last week by the Lords' committee notes that the government has taken some measures to protect research from the pressure of the internal market, but finds that they may not be adequate. The warning has struck a nerve. For example, David Gordon, program director at the Wellcome Trust, Britain's largest private foundation for biomedical research, welcomes the report. Medical funding arrangements, he says, ought to be "simple, transparent, and cover basic as well as applied research." He says it's vital that changes in the NHS maintain these conditions.

The NHS internal market created a split in 1990 between service providers and purchasers—generally, between hospitals and family doctors. Under this system, doctors must "pay" hospitals to treat their patients. As a result, doctors have an incentive to seek the cheapest center, which tends to steer patients away from high-priced research hospitals.

The government did try to safeguard research. In 1991, it launched a health service R&D strategy, prompted by advice from an earlier Lords' advisory panel. The goal of this strategy was to determine priorities, develop a research infrastructure, and forge better links with other government and charitable funding bodies. To manage the new strategy, the government appointed Michael Peckham, former director of the British Postgraduate Medical Federation in London, and set a target of increasing R&D spending from 0.9% ($350 million) of the NHS budget in 1990 to 1.5% by 1995–96. The strategy was widely welcomed, and it helped raise the profile of research. But many of the changes that Peckham tried to introduce were stalled by organizational changes in the NHS and the market reforms themselves.

"It is vital to retain centers of excellence."
—Lord Walton

More serious concerns about research in the NHS arose as the internal market began to hit its stride in 1992 and 1993. Large research hospitals, burdened with teaching and research costs, began to realize that the market system favored smaller regional hospitals.

In an attempt to address this crisis, the government convened a task force in 1993 led by Anthony Culyer, an economics professor at the University of York. The task force proposed radical measures to separate research and treatment costs, allowing the academic centers to compete in the marketplace and still support research. Its principal recommendation was to provide a single funding stream—separate from the internal market—for research, including core funds for facilities and support staff. The Culyer report suggested that the money be divided up among hospitals based on an assessment of research quality—a procedure already employed to carve up funds among Britain's universities. The government wants to begin implementing Culyer's recommendations by next year.

Even with Culyer's remedy in place, the new Lords' report warns, the funds available may not allow all the main academic centers to continue basic research. And if funds are concentrated at key centers, the report observes, it "could mean the end of curiosity-driven research in [other] major university hospitals." But Malcolm Green, current director of the British Postgraduate Medical Federation, says, "If you are going to reward success, some centers are going to be less successful. The key is to choose an appropriate time scale," so that the changes are not too traumatic.

The Lords also expressed concern over the trend for doctors to send patients to "cheaper" regional hospitals. This is starving university hospitals of an essential part of research and training—patients. "It is vital to retain centers of excellence," says Lord Walton, chair of the committee. The Lords urge academic centers to advertise their superior success rates in treatment. In addition, the Lords suggest that the NHS allow academic hospitals to use research funds to improve competitiveness.

It remains to be seen whether the Lords' advice will spur the government to yet further action. "We hope to get a response from them in September," says Walton.

–Nigel Williams