not gotten around to thoroughly examining Darsee's work in progress.

Braunwald says he has no doubts about anything that has been published. "The *PNAS* paper in November or any other paper that bears his name, I have total confidence in," he told *Science*. The nagging question, in light of the slow pace of the investigation done in areas such as the AMPIM study, is how much weight to put on these assertions. Perhaps only a detailed audit will be able to resolve the issue.

Had the situation been addressed with vigor right at the start, perhaps such outside advice might not have been necessary. "These things have to be dealt with in a forthright way," says David Dressler, a member of the Harvard biochemistry department who in the early 1970's coauthored several papers with a junior researcher who later admitted cheating. The papers were promptly withdrawn. "To have this thing circle back from the NIH raises questions of institutional behavior. In my own case, I never thought about handling it through the university but informed the scientific community right away. . . . The idea of somebody coming down to see the original data, implying that papers had been sent off based on work the senior researcher had never looked at, is quite amazing to me."

A major mandate of the blue-ribbon committee* is to pass judgment on Harvard's handling of the affair. But the chairman of the committee, Richard S. Ross, dean of Johns Hopkins School of Medicine, has already expressed some views on the issue. Said Ross, after the committee held its first meeting: "The Harvard people have been anxious to do it the way they've done it, to avoid letting it smoulder like it did at New Haven. I mean they've come clean, and they've got some external people to look at it. The idea is that we are going to do it vigorously and let the chips fall where they may."

Late in December, NIH decided it too will investigate the Darsee affair. A panel of five or six outside experts will travel to Boston on behalf of NIH during the early part of 1982, according to Green. "It is virtually certain that we will tell Harvard to go ahead and repeat the [AMPIM] study at no cost to the government, but not until the investigations are over."

The Darsee affair is but one of several such incidents that have emerged with apparently increasing frequency during the past few years. One who has addressed the question of why such a trend may be occurring is Robert H. Ebert, former dean of Harvard Medical School and currently president of the New York–based Milbank Memorial Fund. "I don't condone this behavior," he says, "but certain things in our culture disturb me about all this. One is the enormous importance that is attached to the number of publications by committees that consider people for promotion. . . . And I don't want to be critical of any individual in this current affair, but I think that with the pressure to produce, the pressure for publication, I'm not sure the supervision is as close as it should be." Ebert also believes that such incidents are far more frequent than is often acknowledged. "There is a borderline falsification that is more common than anybody knows, in which you are anticipating the results you are going to get when you put in an abstract. That whole environment is bad. There should be such a great value put on accuracy that it would never occur to anybody to do that. It is kind of a moral issue of our times."

Perhaps Ebert is correct, and supervision is not what it has been in the past. The fellows in the lab at the Brigham were suspicious of Darsee's prodigious output, having sat next to him day after day. Their contentions of widespread fakery, however, at first met with a fair amount of skepticism. Perhaps, if senior investigators Kloner and Braunwald had been closer to the actual happenings in the lab, they too would have been more immediately concerned. Clearly, it was Braunwald's hope that Darsee would succeed at Harvard in a spectacular way. But such hopes are best fulfilled in an atmosphere of oversight and intellectual sharing that lies at the heart of the relationship between master and apprentice. As has been demonstrated in cases of dishonesty at other universities, a lack of guidance can cause such hopes to come crashing down in ruin. The various groups investigating the Darsee affair have a challenging mandate. They need to find not only why the incident at Harvard occurred, but how such episodes might be prevented in the future.—WILLIAM J. BROAD

A second story will report the conclusions of the blue ribbon committee investigating the Harvard affair.

*Also on the committee are A. Clifford Barger, professor of physiology at Harvard; Baruj Benacerraf, a professor of comparative pathology at Harvard and president of the Sidney Farber Cancer Institute; Burton S. Dreben, professor of philosophy at Harvard; Saul J. Farber, dean for academic affairs and professor and chairman, department of medicine, New York University School of Medicine; Gerald Frug, professor of law at Harvard; Robert I. Levy, dean of Tufts University School of Medicine; and Joseph B. Martin, professor of neurology at Harvard.

Nonprofit Journals Share Mail Rate Boost

Nonprofit organizations lost much of their preferred status at the post office when their special mail rates were sharply increased effective 10 January. Rates for seven classes of so-called preferred users were boosted unceremoniously as a result of a cutback in federal funding. Scholarly journals published by nonprofits are affected by the increases. The average cost of mailing a copy of *Science*, for example, rose from 6.6 cents to 11.3 cents, up about 70 percent.

The rate increases resulted from a reduction from $800 to $614 million in the federal subsidy for preferred rates to the U.S. Postal Service. The 10 January rate rise reflected the acceleration of a planned step-by-step increase of preferred rates aimed at ultimately making the Postal Service revenues sufficient to cover the costs of handling preferred mail. The levels mandated for 10 January had been scheduled to take effect in 1987.

The increases affect second-class mail used for scholarly journals; third class, used for bulk mailings; and fourth class, used heavily by libraries. Colleges and universities will find it considerably more costly to mail catalogs and recruiting material.

For nonprofit publishers, no across-the-board increase in costs can be estimated because of the complex formula used to establish rates for individual publications. Because the decision to raise the rates was made just before Christmas and given little publicity, most nonprofits are still assessing the implications of the rise for their budgets. Among nonprofit publishers of periodicals, the increases will apparently hit weeklies harder than monthlies or quarterlies because of a relatively large increase in the so-called piece rate charged for handling individual copies of periodicals. E. G. Sherburne, publisher of *Science News*, a nonprofit weekly with modest advertising income, said that the rate increases would force a rise in *Science News* subscription rates.

Mailing costs for individual publications are set according to a complicated formula which imposes differing rates based on weight of pages devoted to editorial text and to advertising,

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zone charges calculated according to distance to destination, and piece rates for sorting. Fortuitously, despite the 70 percent boost, *Science*'s new mailing costs are somewhat lower than they might otherwise have been because the magazine's computerized addressing system has made it possible to take advantage of a discount offered for sorting and bundling measures that make delivery easier.

The new rates narrow the differential between costs for commercial and nonprofit publications. Rates for the latter had been substantially lower. Under the new rates, a commercial magazine with the same balance of editorial and advertising content would cost an estimated 13.9 cents per copy to mail compared to 11.3 cents for *Science*.—***John Walsh***

France Toughens Position on Reactor for Iraq

The French government of François Mitterrand has decided to replace the nuclear reactor in Iraq that was destroyed last June by Israel, but only on the condition that it be powered by a special fuel of little value in an illicit program to build nuclear bombs.

The exact terms of the sale have not been agreed upon, but French Foreign Minister Claude Cheysson told his country's senate on 8 January that "It is obvious that Franco-Iraqi cooperation will take into account the possibilities offered by the most recent technology, including the use of fuel, so as to assure that the use of this reactor is exclusively peaceful."

Cheysson was alluding to a uranium fuel of French invention known as "Caramel," which is insufficiently enriched for diversion to a weapons program yet adequate for legitimate power needs (*Science*, 3 July 1981, p. 125). Iraq has refused to accept the special fuel in the past, insisting instead on highly enriched uranium, which could be used in weapons directly.

Although acceptance of the fuel would allay some concerns about Iraqi intentions, weapons-grade plutonium could still be created by the replacement reactor France is planning to sell. The procedure entails exposure of natural uranium, which Iraq already has on hand, to the reactor's neutron flux. The French claim it would be difficult to hide so long as their personnel are on the site, a matter also being negotiated.

—***R. Jeffrey Smith***

Another Look at Agricultural Research

The Office of Technology Assessment, a research arm of Congress, has produced a lackluster report on the agricultural research system.* The report offers a sketchy analysis of the problems, and has little to offer by way of solution except more money and another reshuffling of boxes on organization charts.

"Many people, including Congress, have voiced concern that little, if any, overall planning and coordination of research exist, especially at top levels of administration," observes the report, but its authors do not pause to ask the reasons for this odd circumstance. One is Congress. Whenever a USDA administrator wants to mount a significant new research effort, he has to shift existing resources away from a state or commodity. The affected parties complain to their congressmen, and often the plan is blocked. Change is not impossible but it is difficult—witness the fact that the USDA and state agricultural research systems are still playing somewhat of a minor role in genetic engineering and its application to agriculture.

The age structure of scientists in the USDA system reflects a serious failure to recruit new blood. In 1976, a mere 2 percent of USDA scientists were aged 30 or less, compared with 25 percent at the National Institutes of Health. For scientists 50 or over, the figures were 39 percent (USDA) and 15 percent (NIH).

Another obstacle to change is that the United States is blessed by not one but a pair of largely autonomous agricultural research systems. One is run by the states, the other by the federal government, the theory being that the state system concentrates on local problems, the federal on national issues. But the two systems "appear to be working on seemingly indistinguishable problems," notes the OTA report. Further, "There is no satisfactory long-term process for evaluating research activities, research opportunities and the development of research priorities."

A report issued by the National Academy of Sciences in 1972 (the Pound report) severely criticized the agricultural research system for its neglect of fundamental biological research and its performance of "a shocking amount of low quality research." The OTA report cites these charges but only to dismiss them as irrelevant. "It is generally meaningless for a group of scientists working in basic research to evaluate the quality

of those working in the applied area and vice versa. While quality is important, it can be measured only in a very narrow sense. . . . And by any measurement, U.S. agriculture has been extremely productive."

But the productivity of U.S. agriculture is no defense by which to avoid discussion of the quality of agricultural research. The two may be linked, but in ways that the OTA report only hints at. Since agriculture is so productive and chronic surpluses have long been a problem, the Office of Management and Budget has been asking why government should increase its outlays for research and why the private sector should not do more of its own. The OTA report rests its plea for increased funding on the need to feed the world's hungry and sustain the structural basis of domestic production. These are long-term fundamental problems that require a high-quality basic research effort. That was the issue addressed by the Pound report, and for some strange reason declared irrelevant by the OTA.

—***Nicholas Wade***

*"An Assessment of the United States Food and Agricultural Research System" (Office of Technology Assessment, Washington, D.C., 1982).