

was published 9 months later, but it was printed on unnumbered pages and hence was difficult to tie to the original article in databases. Furthermore, the retraction did not repudiate the article's contents and failed to explain how Freeman's piece had appeared in the *CJP* to begin with. In January 1992, York University faculty members, led by cell biologist Selma Zimmerman, submitted a petition to the NRC asking it to republish the entire September 1990 issue of the *CJP* without Freeman's article. They received no response, until the affair was reported in the 28 February issue of *Science* (page 1065). At that point, Morris Wolfe of the *Toronto Globe and Mail* told last month's conference, "The Freeman affair became an international story. It was now clear, even to the NRC, that something had to be done."

But what? NRC's Willis told *Science*, "I was stunned by the diversity of the suggestions.... Reactions we received ranged from do nothing to find each issue and burn it." In mid-March, Willis invited Zimmerman and Rose Sheinin, vice rector, academic, of Concordia University in Montreal and chair of the Women in Scholarship Committee of the Royal Society of Canada, to discuss possible responses. In April, the two met with Willis and two other NRC officials. Two ideas emerged from the meeting. One was the recent conference. The other was a special issue of the *CJP* including letters about Freeman's article, critical reviews by three social scientists, and a statement by the NRC. Willis had promised that the special volume would be on the registration desk at the ethics conference.

But conference attendees were startled to find that no such issue was available. When the absence was questioned, Willis came to the microphone to explain that, while the retraction would be reprinted on a numbered page, there would be no special issue. Charges flew that political pressures had been brought to bear on the NRC; that the NRC was afraid of legal action; and that the organization was continuing its insensitivity to the issues affecting working women and female scientists generally. Willis denies political pressure was a factor but acknowledges concern over possible lawsuits. "We wanted to take a responsible position," he says. "But yes, we wanted to be careful that our legal i's were dotted and t's crossed. That process," he says, "took much longer than we anticipated." Since the issue was keyed to the conference, he adds, when it couldn't be produced in time "the idea of going ahead with its publication as conceived didn't make a lot of sense." (The conference proceedings are, however, scheduled to be published in the July issue of *Scholarly Publishing*, published by the University of Toronto Press.)

The meeting itself produced an outpouring of criticism of virtually everybody in-

involved in the affair. Even *Science*'s 28 February 1992 article was deconstructed for alleged sexist bias. Mary Guinan, assistant director for evaluation at the Centers for Disease Control and Prevention in Atlanta, examined the verb use of the article, observing that *Science* had written that Freeman's article had "slipped" into the *CJP*—a verb that suggests "naughtiness rather than error." She said this reflected a "light tone" in covering the story, "trivializing" it and making *Science* an implicit collaborator in the perpetuation of sexist practices, and possibly guilty of misconduct in publishing.

By now, Freeman's article is probably the most widely read paper the *CJP* has ever published. Freeman himself continues to propound his views wherever he can, and most recently was invited to address an interfaith religious symposium on family models. Utterly unfazed by the controversy, he calls the paper "one of my best." But nearly everyone else has been quite discomfited by the interplay of ethical, institutional, scientific, political, gender, and career-related motives in the Freeman case. As Guinan says, "I think a little soul-searching is required here."

—Robert Crease

ATMOSPHERIC RESEARCH

Mourning the Plight of the Condor



Endangered species. The big bird's one prototype in an early test flight.

Like everyone else, atmospheric scientists know they can't always get what they want. Now they are learning that they can't even get it when it already exists and no one else wants it. The object of their unrequited desire is the aptly named Condor, an unmanned reconnaissance plane that was developed for the Department of Defense (DOD) at a cost of \$400 million in the 1980s and is now in danger of going extinct within the month.

The Condor has a 200-foot wingspan, a ceiling of 73,000 feet, and a range of 19,000 nautical miles. DOD mothballed the single prototype in November 1989, but researchers at the National Oceanic and Atmospheric Administration (NOAA) have no trouble picturing new uses for it—studying ozone depletion in the Antarctic, for example. The Condor could take off from New Zealand carrying an instrument package weighing more than 1000 kilograms and criss-cross the ozone hole for 5 days before returning. As former NOAA administrator John Knauss wrote in late January, the plane has a "unique capability" for investigating atmospheric processes and "offers the possibility for large advances in environmental understanding." But DOD is eager to begin dismantling it to save the \$150,000 a month it costs to store and maintain the craft.

Atmospheric researchers' hopes had been raised last October, when Congress asked

DOD, with NOAA and the National Aeronautics and Space Administration's help, to explore the feasibility of using the Condor for atmospheric research. NOAA's response—which included Knauss' letter—was enthusiastic about the plane's potential. But there was a catch: NOAA and Boeing, the plane's builder, estimated it would cost \$70 million to \$80 million to refurbish the Condor for atmospheric studies. "Certainly NOAA is not funded to undertake anything like that," says Roger Morris, who is on NOAA's program development and coordination staff. NOAA asked for more time to study the cost-effectiveness of refurbishing the plane.

Meanwhile, DOD's congressional overseers agreed that the plane should be disposed of. According to a Boeing spokesman, DOD is set to begin destroying data systems for the Condor early this month.

As Adrian Tuck, head of NOAA's aeronomy lab, told *Science*, researchers now have only a few weeks to see if the Condor can be saved. He hopes a recent flurry of publicity, including a story in *The New York Times*, will rally supporters. "All sorts of researchers are interested in what this thing can do," he says. "It would be an act of criminal vandalism to saw that thing up, when there's so clearly a scientific need for it."

—Gary Taubes