

there is a creep event, one of our guys is on the phone to the Geological Survey within 10 minutes," says Tocher. "It is standard practice for our people to go to EML and read their data, which is included in our reports, and vice versa," Eaton states. He adds: "Some people in the organization may feel competitive, and it is quite possible that individuals on our side or NOAA's have complained that they could not get data. But if they had put their request through me or through Tocher, they would have had no trouble." The principal area of sensitivity between the two agencies is that of funding, Eaton says. "But most of that goes on well over the heads of the people working here. Both agencies are desperate to get funds for work in the field. One of the real deterrents has been this low-level sniping."

Wasteful duplication or a parallel approach engendering fruitful competition—which is the more accurate description? Two University of California seismologists consulted by *Science* are inclined to see a measure of truth in both views. According to Bruce A. Bolt, director of the seismographic station at Berkeley, "There has been overlap in the sense of having redundant sensors and there was not very close liaison, but this has improved in the last year." There has also been redundancy between the two federal agencies and Berkeley. Traditionally, Caltech has been responsible for seismology in southern California, and Berkeley for central and northern California. "The federal agencies came in on top of this system and went their own way," Bolt says.

Another senior seismologist at the University of California, who declines to be named, believes that the argument of nonoverlap is weak. "You cannot have two instrument networks in the same area without having duplication of maintenance, storage, and so forth. But I think this is a hell of a tempest in a teapot because the amount of money involved is so little. To the extent that competition is good, this situation is meritorious, and I believe in the free enterprise system. But I don't think I would have located the two laboratories in the same area. San Francisco is a nice place to live, but southern California is more important scientifically." (Both EML and NCER grew out of installations already in existence on their respective sites. Eaton explains that the San Andreas fault system, being simpler than the situation

in southern California, seemed more likely to produce answers about how earthquakes work.)

The same University of California scientist sees the overlap between NOAA and the Survey as the result of the recent convergence of seismology and geology, the respective disciplines in which each agency has traditionally been strongest. "The friction between the two agencies has led to a pox-on-both-your-houses reaction. I would like to put it the other way around. This would not have happened if the directors of NOAA and the Survey hadn't been aggressively pushing their two agencies along." As for the two laboratories, "the case for their being independent is weaker than the case for their merging, but I'm not sure what I mean by merging."

According to Bolt, expenditures, which he estimates at hundreds of thousands of dollars, could have been avoided if NOAA and the Survey had gotten together at an earlier stage. "But I am not against having two groups working in the same area," he says. "My general solution would be to rationalize the capital expenditures of the two laboratories but maintain their integrity as separate institutions."

Why was the possibility of overlap between EML and NCER not foreseen? According to Gilman F. Blake of the Office of Science and Technology (OST), the expenditures of the two laboratories have been small (NCER had a budget of \$1.8 million, EML \$350,000, in fiscal 1972) and below the level that would ordinarily reach the OST's attention. "The OST doesn't usually delve that deeply into program details—this was not a problem at policy level."

As for the GAO's complaint that there is no national earthquake research program, the OST believes this omission has now been remedied by the definition of program goals in the statement of the fiscal 1973 budget. Redefinition of the responsibilities of the various agencies involved in earthquake research may result from a study now being undertaken by the Office of Management and Budget (OMB). The study, which is to be completed before the preparation of the 1974 budget, will apparently not be made public. This is a pity, because the alleged duplication of research between the two earthquake laboratories, and the OMB's rationale for resolving it, raise important issues about the organization of research.—NICHOLAS WADE

APPOINTMENTS

Thomas F. Zimmerman, assistant to the director, medical education division, American Medical Association, to dean, School of Associated Medical Sciences, University of Illinois Medical Center Campus. . . . **Bruno A. Boley**, chairman, theoretical and applied mechanics department, Cornell University, to dean, Technological Institute, Northwestern University. . . . **Peter D. Lax**, professor of mathematics, New York University, to head, all-university mathematics department. . . . **Robert D. Dripps**, chairman, anesthesiology department, University of Pennsylvania School of Medicine, to vice president for health affairs at the university. . . . **James J. Ferguson, Jr.**, professor of biochemistry, University of Pennsylvania School of Medicine, to chairman, biochemistry department at the university. . . . **Francis Hunter**, acting chairman, biological sciences department, College of Pacific, University of the Pacific, appointed chairman. . . . **George A. Condouris**, acting chairman, pharmacology department, College of Medicine and Dentistry of New Jersey—New Jersey Medical School, appointed chairman. . . . **Alfred Stracher**, acting chairman, biochemistry department, Downstate Medical Center, State University of New York, Brooklyn, appointed chairman. . . . **Leon M. Lessinger**, professor of education, Georgia State University, to dean, College of Education, University of South Carolina. . . . **Howard K. Suzuki**, acting dean, College of Health Related Professions, University of Florida, Gainesville, appointed dean. . . . **Leo F. Van Hoey**, associate professor of sociology, Lehigh University, to chairman, sociology and anthropology department, Lake Forest College. . . . At the University of Texas: **W. Rea Keast**, former president, Wayne State University, to director, center for higher education; and **David C. Glass**, professor of psychology, New York University, to chairman, psychology department. . . . **Frank M. Shepard**, associate professor of pediatrics, University of Virginia, to chairman, pediatrics department, Creighton University. . . . **Pryse H. Duerfeldt**, head, psychology department, University of Portland, to head, psychology department, Northern Michigan University. . . . **Carl W. Borgmann**, former president, University of Vermont, to dean, Graduate School, University of Colorado.