

al, auditory or kinesthetic. The report says that while the training "may increase self-confidence," there is "no scientific evidence to support the claim that neurolinguistic programming is an effective strategy for exerting influence."

■ **Parapsychology.** This is the area where the committee draws its "strongest conclusions." It found "no scientific justification from research conducted over a period of 130 years for the existence of parapsychological phenomena." Committee member Ray Hyman, psychologist at the University of Oregon, said at a press conference that the poor quality of psi research was "a

surprise to us all—we believed the work would be of much higher quality than it turned out to be." Work by the Soviets is "even less convincing," he added. Notes the committee: "the very conditions that are specified as being conducive to the appearance of paranormal phenomena are almost always precisely those that are conducive to the successful performance of conjuring tricks." So much for the use of mind rays to befuddle enemy technology.

The upshot of the report is that there are no quick fixes to enhancing human performance: "Effective interventions are those that are continuous and self-regulating and

take account of both context and person." The committee recommends that the Army move "vigorously, yet carefully" to implement techniques known to be of some value. It is quite critical of the Army's evaluation methods, saying it has no guidelines, does not use state-of-the-art methods, and makes little effort to get independent evaluations. "The pilot programs we saw and evaluation materials we read were usually disappointing." The Army Research Institute is advised to "formalize" its methods for getting advice and to set up a committee to ensure scientifically sound evaluation procedures. ■ **CONSTANCE HOLDEN**

Gossip and Peer Review at NSF

Jon Kalb, a Texas geologist, recently won an out-of-court settlement from the National Science Foundation (NSF) in which NSF admits that it gossiped about him in a peer review meeting in 1977, passing along malicious tales from his competitors. NSF then rejected Kalb's request for a grant, favoring his competitors instead with \$600,000 for work in the same area. Kalb was never given a chance to rebut the gossip, which made him out to be an agent of the CIA. (He was not.)

Having failed at an in-house appeal and feeling ill-used, Kalb took the case to Public Citizen, a legal center in Washington, D.C., founded by Ralph Nader. Litigation began a year ago, and on 3 December NSF agreed to a stipulated settlement with Kalb. In it, NSF apologizes for repeating the gossip and promises \$20,000 to cover Kalb's attorney's fees and other costs. The agency denies Kalb's charge that in promoting the gossip it ruined his career.

When this case began, Kalb was an active researcher on African fossils in the field; today he is an unpaid research assistant at the Texas Memorial Museum in Austin. Although he has never received a Ph.D., he was among the early investigators of human fossils in part of the Rift Valley in Ethiopia called the Middle Awash region. Since his loss of NSF support in 1977 and his expulsion from Ethiopia in 1978, Kalb has devoted most of his time to clearing his name.

The trouble began in 1973 and 1974 when Kalb had a dispute with Donald Johanson, discoverer of the early hominid known as "Lucy." The dispute spread within the archeo-anthropological community as associates of Johanson at the University of California at Berkeley took up cudgels against Kalb, repeating the story that he was a CIA agent. According to Kalb, the net effect was to shut him out of the fossil-rich area in Ethiopia where he had been a pioneer investigator. Because of NSF's one-sided handling of the case, Kalb argues, he failed to win a grant in 1977 that could have kept his research going. In 1978, the security forces of the new socialist government in Ethiopia expelled him. Berkeley scientists then took over his research grounds, with NSF's support. Finally, as the dispute simmered on, Ethiopia decided to shut out the Berkeley group as well (*Science*, 14 January 1983, p. 147).

NSF's deputy general counsel, Robert Andersen, claims the agency based its action on the quality of Kalb's work, not on the extensive in-house chatter about his person. The agency apparently was not showing a bias when the head of its anthro-

pology program and chair of the peer review panel, Nancie Gonzalez, announced during a meeting that Kalb was suspected of being a CIA agent. The agency maintains that Gonzalez acted neutrally in passing along rumors from the Berkeley group, although it agrees she ought not to have done so.

The peer reviewers were never asked to reconsider Kalb's proposal after that gossip session. Instead, his application and two from his colleagues were officially set aside while Gonzalez investigated. She was unable to find evidence that Kalb worked for the CIA. She nevertheless rejected the requests, according to NSF, because they were below par.

It is difficult to demonstrate exactly what happened, Kalb says, because the agency has lost some of the paperwork. "NSF destroyed portions of the file, and we've argued back and forth whether this was done intentionally or not." Despite "blanket applications" for material under many provisions of information law, Kalb has been unable to reconstruct a full paper trail of NSF's review. He claims that the CIA gossip was the main topic discussed in the peer panel. But there is no mention of it in the panel's summary report or in the more extensive files kept by Gonzalez. The records of NSF's internal investigation are missing.

"NSF has built a moat around its decision making and calls it the 'peer review process,'" Kalb grumbles. It "protects itself from public scrutiny in innumerable ways." Kalb says that each granting agency uses "peer review" to mean something different. He prefers by far the version used at the National Institutes of Health, which includes what he calls a "full, 100% bona fide appeals process." He thinks applicants are entitled to know when "extra-scientific" information is quoted against them and that they should be given a chance to respond. Furthermore, he says he has learned that gossip has played a crucial part in cases other than his own at NSF. He intends to petition the agency to change its peer review system.

Deputy NSF counsel Andersen does not think the misstep in Kalb's case is representative of an underlying problem. No broad adjustment of procedures is required. This was the "sole instance" in which scholars' gossip has disrupted the peer review system in the agency's 37 years of operation, he says. Asked to explain exactly what went wrong in this case, he responded: "Nothing, except that an individual program officer made a statement to a review panel that was inadvertent and ill advised—nothing more, nothing less." ■ **ELIOT MARSHALL**