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COVER: A detail from the 1968 work "Adam and Eve" shows woman evolving—flirtatious personality complete—from man's rib. Man of the future is depicted as skull in mushroom cloud above and left of Adam's head. Arkansas State University's Evan Lindquist has attempted to show that if the biblical account of creation is assumed to be symbolic, there need not be a conflict between creation and evolution. See p. 44. (Evan Lindquist, "Adam and Eve" etching, 609 x 392 mm., 1968, all rights reserved by the artist.)

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Silencing Science for Security

During the next decade, scientists may face greater restrictions on the dissemination of research results, said Admiral Bobby R. Inman, deputy director of the Central Intelligence Agency, last week. Inman suggested that one solution to the problem of balancing the needs of national security and science lay in including within the peer review process the question of potential harm to the nation.

The threat to scientific freedom may come from growing congressional and public awareness that the bulk of the new technology used in the buildup of Soviet defense capability was acquired from the United States or its allies, said Inman. "It is not easy to create workable and just solutions that will simultaneously satisfy the wide-ranging needs of national security and science, but I believe it is necessary before significant harm does occur, which could well prompt the federal government to overreact," he warned.

Inman presented his personal views during a panel discussion at the annual meeting of the American Association for the Advancement of Science. He said this symposium is an appropriate place to "remember that national security and scientific interests can best be advanced through a joint effort."

However, many scientists have been concerned about possible restrictions on publication of their results. The day after the symposium, the Council of the AAAS adopted the following resolution as policy: "Whereas freedom and national security are best preserved by adherence to the principles of openness that are a fundamental tenet of both American society and of the scientific process, be it resolved that the American Association for the Advancement of Science opposes governmental restrictions on the dissemination, exchange, or availability of unclassified knowledge."

Leonard M. Rieser, chairman of the AAAS Committee on Scientific Freedom and Responsibility, told SCIENCE NEWS, "What we see is the risk of stifling the scientific and technological community, with a certain objective in mind, and through the process weakening that community and weakening national security."

At the symposium, panelist Peter J. Denning, president of the Association for Computing Machinery, said that if the United States lessens its free flow of scientific information, economic losses will greatly outweigh reductions in national security risks. "The export control laws are an attractive vehicle for extending the government's protective influence because it is easy to argue that publication in international journals is a form of export," he said.

The administration is very concerned about the loss of technology to the Soviet Union, and the matter is being addressed by a number of departments and agencies, said George A. Keyworth II, presidential science adviser. "There is no consideration being given to any mandatory program of government review of scientific papers," he said.

As a model of a "reasonable and fair" approach to the problem, Inman gave the example of the voluntary review of cryptologic research (SN: 10/17/81, p. 252) that was established while he was director of the National Security Agency (NSA). Researchers working in the area of cryptology send manuscripts to the NSA for pre-publication review. So far, 25 papers have been submitted, and none has caused the NSA any security concerns.

Scientific societies should follow the lead of the American Council on Education, which proposed the Public Cryptography Study Group, Inman suggested, and establish dialogues with pertinent government agencies to define problem areas. He listed examples of other fields where publication of technical information could affect national security in a harmful way: computer hardware and software, other electronic gear and techniques, lasers, crop projections and manufacturing procedures. He added that basic research has rarely presented problems for national security like those posed by applied science.

Rieser, however, was concerned "about the way one thing leads to another and finally develops into inappropriate scientific censorship." He said it is very difficult to keep scientific breakthroughs secret, and worried about the tendency to lump science and technology together.

Legislated solutions are likely to be more, rather than less, restrictive than the suggested voluntary review systems, Inman said.

One example of restrictive legislation is H.R. 109, a bill introduced a year ago in the U.S. House of Representatives that amends the Arms Export Control Act to authorize the Secretary of Defense to prescribe regulations that specify information to be protected from disclosure. The Council of the Association for Computing Machinery argued that the legislation would threaten to silence or inhibit research and development of computing technologies.

Mary M. Cheh, a George Washington University law professor, concluded her presentation on the issue: "Suppression generates hostility and mistrust, invites legal challenge, and neglects a broader conception of national security which recognizes that unfettered scientific research benefits us all." —I. Peterson