NSF faring better in Congress

Congressional supporters of the National Science Foundation were caught by surprise last year by the onslaught of criticism that first surfaced as charges of sponsoring "silly" research (SN: 3/15/75, p. 165) and eventually led to passage of the so-called "Bauman amendment," which would have required prior Congressional approval of all NSF grants (SN: 4/19/75, p. 253). After a long, tedious summer of debate, the amendment was finally defeated (SN: 8/9/75, p. 87), following elimination of some controversial programs. This year, the defenders were better prepared.

At the heart of the controversy is dissatisfaction among some conservatives over the choice of specific projects for funding—especially programs in the social sciences that appear to them to have a liberal bias. Leading the opposition has been Rep. John B. Conlan (R-Ariz.). Last week Conlan offered an amendment cutting all funds ($1.4 million) for precollege curriculum development, testing and evaluation. (No funds had been proposed for course implementation, pending further NSF reorganization.)

Two ongoing projects would be affected by the March 25 proposal: the Individualized Science Instruction System (ISIS), a set of minicourses on the physical sciences; and the Human Sciences Program (HSP), a social science series for the middle grades. Conlan charged ISIS would give "unfair advantage in the commercial marketplace" to the company chosen to market it. As for HSP, he called it "a sophisticated and lethal assault on Judaic-Christian family values, privacy of students and their families, and the mental health and developments of young adolescents." By instructing youngsters to interview family and friends and discuss their attitudes in class, HSP would "turn classrooms into gigantic gossip mills where everyone's personal attitudes and behavior are recorded in school files for open discussion and dissemination."

Supporters of the original authorization argued ISIS was being turned over to a private company in accordance with long-established procedure, through competitive bidding. They responded to criticism of HSP with a detailed analysis of the course objectives and the favorable report of a broadly based review committee. Apparently convinced, the House defeated Conlan's amendment, 232 to 160.

A new amendment by Rep. Robert E. Bauman (R-Md.) was similarly dispatched. Rather than again asking that every grant be subjected to prior congressional review, he proposed that individual congressmen should have the authority to demand documentation relating to all "activities, programs, grants or contracts" of NSF. Opponents argued that such authority already resides in the appointed oversight committees and that to allow individuals to essentially conduct private investigations of NSF not only would disrupt its operation but also would probably be unconstitutional. The amendment was defeated, 257 to 136.

The House action left NSF with authorization to spend $811 million in fiscal 1977—about $1 million less than the President had requested but still up 11 percent over last year. Some $9 million has been cut from the originally proposed research budget and added to the science education budget. Speaking for the Science and Technology Committee, Chairman Olin E. Teague (D-Tex.) and Rep. James W. Symington (D-Mo.) said the revised budget would still stem the downward trend in support of basic research (now some 20 percent below 1967 levels, in terms of purchasing power) and demonstrate the committee's concern over recent indications that Americans are becoming "illiterate" in technical matters.

In the Senate, however, Sen. Edward M. Kennedy (D-Mass.) is proposing a total NSF budget increase to $851.4 million. His bill would provide funds for both curriculum development *and* implementation, new aid to science students and intensified efforts to increase women and minorities in science. Thus, NSF has apparently weathered its year-long congressional crisis and may even be in line for new support as a result of a perceived decline in national science literacy. □

Quote of the week

In the course of what may be his last debate on an NSF appropriations bill (see accompanying article), Rep. Charles A. Mosher (R-Ohio), the retiring ranking minority member of the House Science and Technology Committee, rose to reply to media reports about "silly" research. A reporter, editor and publisher for 34 years before entering politics, Mosher spoke "an indictment of my own news profession" as he condemned uncritical publication of a list of funny-sounding grants.

"The fact that the news media, hundreds of editors throughout the country, picked up that list from a propaganda source and published it without questioning the facts behind it is, to me, a supreme example of irresponsibility and demagoguery on the part of some lazy newspaper editors and lazy reporters. . . . Any editor worth his salt would at least investigate the validity of that list before he published it."

He defended specifically two research projects now taking a drubbing in the press: a study of how men get distracted by girl-watching while driving and a project involving rat copulation, which has already gone on nine years. The first, he noted, is only one small part of a large study of human aggression; the latter may provide "the basis for the eradication of this scourge of rats which has beset human beings now for centuries." □

Witchcraft in Salem: A fungus in the rye

The first arrests were made in February, and by June the jails for miles around were crowded with prisoners awaiting trial. By September, 19 men and women had been sent to the gallows, and one man had been pressed to death. This grisly chain of events, generally known as the Salem Witch Trials, shook Massachusetts in 1692. But not until now has there been a comprehensive explanation of what may have caused the witch hunt. According to Linnda R. Caporael of the University of California at Santa Barbara, it was not Satan but ergot, a fungus with LSD-like properties, that bewitched eight young Salem girls.

In December 1691, the eight girls were all afflicted with unknown "distempers." Their behavior was characterized by disorderly speech, odd postures and gestures and convulsive fits. Local physicians could find no explanation for the illness, but in February, one doctor finally suggested that the girls might be bewitched. Shortly thereafter, explains Caporael in the April 2 SCIENCE, the girls made accusations of witchcraft against several women in the village. A flood of accusations followed.

Repeated attempts to explain the ghastly goings on in Salem have failed. Fraud, politics, Freudian psychodynamics, clinical hysteria and even the existence of witchcraft have all been proposed, but no one explanation has been able to account for all of the facts as well as Caporael's ergot hypothesis does.

Ergot grows on rye, a well-established cereal crop in 17th-century New England, and ergotism (long-term ergot poisoning) was once a common condition resulting from eating contaminated rye bread. The symptoms of ergotism include crawling sensations of the skin, tingling in the fingers, vertigo, buzzing in the ears, hallucinations and convulsions. All these symptoms were mentioned in the trials and blamed on witchcraft. Caporael's research points out that growing conditions were favorable for ergot just prior to the outbreak, and that the girls could easily have eaten contaminated bread (with 10 percent the activity of LSD).

"The utmost caution is necessary in assessing the physical and mental states of people dead for hundreds of years," Caporael warns, but her physiological explanation certainly answers more questions than does either demonic possession or witchcraft. □