

Electroshock Experiment at Albany Violates Ethics Guidelines

Albany, New York. In what is believed to be the first case of its kind, the State University of New York at Albany (SUNYA) has been charged with massive violations of federal and state regulations requiring that all research on human beings be approved by an institutional ethics committee before any experimentation begins.

At a public hearing convened on 7 October by the New York State health department, attorneys for the university admitted that nonfederally funded research in the school's psychology department had not been submitted for review to the university's Human Research Review Committee. The university also admitted that proper consents were not obtained from participants in three experiments, and that the participants were not given a fair explanation of risks. One of the experiments involved 45 women who were subjected to electric shocks with a machine that the health department said was malfunctioning and could have administered a lethal shock.

After the hearing, the health department made public a list of 52 alleged violations of the state's Protection of Human Subjects law, involving 43 experiments conducted under the supervision of at least 13 psychology teachers at the school. At least three other departments of the university now are under investigation for similar violations, and the school has been ordered to clear all research involving human subjects with the health department while the inquiry is under way. The university could be fined by the state up to \$1000 for each of the violations—meaning each participant in an experiment that was not in compliance with the law—and the commissioner of health is said to be considering a fine in the “hundreds of thousands of dollars.”

Meanwhile, Donald Chalkley, the director of the Office for the Protection of Research Risks at the National Institutes of Health (NIH), has asked the school for an assurance that the violations will not occur again, and members of the New York State legislature have proposed that a special subcommittee be set up to look into general compliance with the state law among both public and private schools in New York. The case al-

ready has reverberated on at least one other state university campus—where teachers are said to have had their “consciousness quickly raised”—and allegations have been received by the health department that similar violations have occurred elsewhere.

The series of events that led to disclosure of the university's non-compliance with the state and federal regulations began last June, when Brock Kilbourne—who had been dismissed from SUNYA's graduate psychology program in May for what the department chairman contends was inadequate and incomplete academic work—contacted Roger Herdmann, the deputy commissioner for preventive services, research, and development in the state health department. Kilbourne also contacted Chalkley, at NIH, and after some inquiry about state and federal requirements, sent both men a series of allegations about violations of law in the psychology department, plus some documents to back up the allegations.

Specifically, Kilbourne charged that the department had set up its own Ethics Review Committee to monitor research involving human subjects, in violation of requirements that such a committee be approved by HEW or the state and not consist entirely of members of a single professional group. He also alleged that participants in the electric shock experiment, which had been reviewed by this department committee, and not by the approved, university-wide committee, had not been informed of the risks.

Kilbourne told *Science* that the shock experiment, which he had conducted under the supervision of his graduate adviser, James Tedeschi, was a test of the “suffering-leading-to-liking” hypothesis in social psychology, which suggests that if someone exerts more energy to reach a desired goal, they will ascribe more positive attributes to the goal. In the experiment—conducted with women because the hypothesis has not been proved for men—shocks of 0.4 and 0.8 milliampere were administered for 20 seconds to different subjects as an “initiation ritual” to join a fictitious sensitivity group. After receiving the shocks, the women (SUNYA undergraduates) were asked to rate the group they were to join, based

on a taped discussion of the group. Presumably, women who were administered the higher shocks gave a more positive rating to the group discussion.

After Kilbourne conducted the experiment, he took the shock generator to Robert Zeh, an electrical engineer at the university. In a note dated 21 March to Kilbourne's adviser, Tedeschi, Zeh said the machine was unsafe for use on humans because it was not fused, could not properly limit the electrical current, had no quick turn off, and had a broken meter. Two of the four controls on the machine were inoperable, Zeh said, and in a statement read at the hearing added that the machine could have administered a fatal shock. Lawyers for the health department said that an experiment using the shock generator would never have been conducted if proper review procedures had been followed.

In his letter, Kilbourne also charged that introductory psychology students had been coerced into participation in the shock experiment and in other experiments by a rule that students choose between four hours of participation or else write a term paper. Gordon Gallup, the psychology department chairman, admitted to *Science* that the paper usually required more than four hours to complete, and that fewer than 15 percent of the psychology students chose that option.

In pressing the charge of coercion at the hearing, health department officials noted HEW and state regulations that bar “any element of force, fraud, deceit, duress, or other form of constraint or coercion” from the process of consent and that require subjects to be informed of their freedom to withdraw from an experiment “without prejudice.” Gallup and Tedeschi counter that research participation is required by most universities, and that studies show college students are used as subjects in 70 to 85 percent of all published research in social psychology. If the health department's objection to requiring this participation were to be upheld by a court of law, Tedeschi said, the ready “subject pool” of students would be seriously endangered and the quality of research would decline.

Finally, Kilbourne's letter alleged that SUNYA research had been conducted in Albany public schools, some of it involving kindergarteners, without the approval of the state health commissioner or the informed consent of the children's parents. When the health department made this public, it prompted widespread local criticism of the Albany school board for permitting the experiments, although none resulted in any ob-

vious harm to the children. One of the tests, for example, was a replication of the "forbidden toy paradigm," wherein 30 children in kindergarten through third grade each were told not to touch one of several toys placed in front of them. The researcher—in this instance, it was again Kilbourne—left the room and observed surreptitiously whether or not the children touched the forbidden toy. The test was designed to assess the moral development of the children.

After reviewing Kilbourne's allegations, both Herdmann and Chalkley demanded an explanation from the university, in letters they sent on 29 July and 15 August. Although Louis Salkever, SUNYA's vice president for research, replied to Chalkley with promises that the university would reform its review procedures by 1 October, he told Herdmann only that the second or third week in September would be "a convenient meeting date." This, university officials

now acknowledge, was a tactical blunder. According to Herdmann, "We had no idea whether or not hazardous research was continuing at the university, we had no indication that they were treating our inquiry seriously, and we had several members of the state legislature—which had gotten wind of this—asking us what we were doing to see that it was stopped." A meeting with Salkever and an assistant on 20 September apparently did little to change the health

Briefing

New Coalition Still Is More of a Courtship than a Marriage

Teach-ins, the crash courses in dissent of the 1960's, are being revived this fall by a new organization that links antiwar groups with opponents of nuclear power. Called Mobilization for Survival, the organization is a coalition of religious, peace, antinuclear, environmental, women's, and other public interest groups formed primarily to promote grassroots action on issues of common interest. Its aims are indicated by the slogan on its letterhead: "Zero Nuclear Weapons, Ban Nuclear Power, Stop the Arms Race, Fund Human Needs."

Up to now the attitude of antinuclear power groups to the Mobilization can be described as cautious interest. A spokesman for Critical Mass, the antinuclear power group based in the Ralph Nader organization, for example, notes that the separate constituencies have never cooperated before, that, inevitably, there are differences in approach and that the effort at cooperation is "a learning experience for both sides."

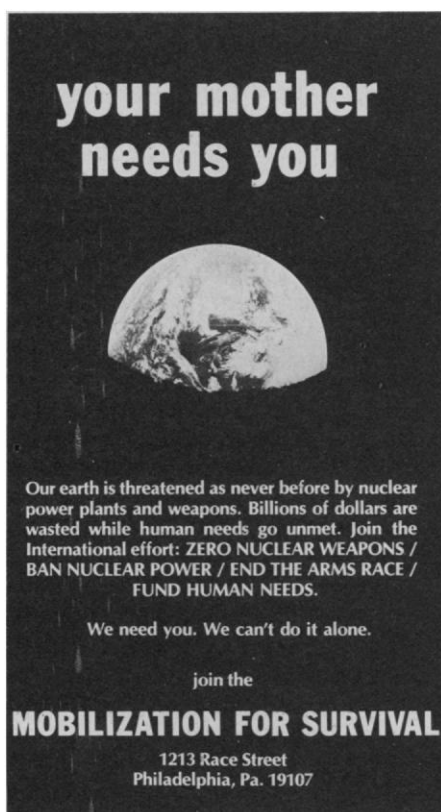
However, the interests of the two main components of the coalition coincide in their concern about development of the breeder reactor, since the breeder's plutonium fuel can be used to make nuclear weapons. The implications for proliferation of nuclear arms and for terrorist diversion, therefore, appear to provide the coalition's strongest common bond. There are also signs that antinuclear groups are growing disenchanted with what they regard as the infirmity of federal regulation of nuclear power development and are interested in developing a broader public base for action.

The Mobilization, which has an office in Philadelphia, is not expected to become a national superlobby, but rather to serve a loose coordinating and information

function, fostering activities on which member organizations can agree. The teach-ins—about 50 are already scheduled both on and off campuses—are designed to begin a process of public education and grassroots organization leading up to a major effort in connection with the scheduled United Nations special session on disarmament in May and

about a surge in the arms race caused by the advent of new weapons systems like the neutron bomb, MX missile, and B-1 bomber. Some veterans of the antiwar movement of the 1960's and early 1970's see the issues in the arms race as serious enough to revive the kind of activism kindled by the Vietnam war.

One aim of the Mobilization is to reach new constituencies—local and state officials, for example—by demonstrating that an acceleration of the arms race would preempt public funds which could otherwise be spent for more constructive public purposes. There is also some interest in exploring the possibility of reviving large public demonstrations and perhaps using civil disobedience techniques in working for the coalition's aims. The big public demonstration against nuclear power at Seabrook, New Hampshire, in May was taken as an indication that the public mood may be right for a return to such tactics. And the alumni of the antiwar movement have the know-how. But, while the member groups of the coalition seem generally pleased by the way the teach-ins are taking off, it is still not clear how well the new allies will agree on goals and strategy and tactics. Some clues on that should appear when the Mobilization has its first big meeting in Chicago in early December.



June of next year when international mass demonstrations opposing the arms race are being planned.

Initiative to form the coalition was taken mainly by antiwar groups such as the American Friends Service Committee, War Resisters League, and Women's International League for Peace and Freedom. They attribute the favorable response to their call to broad concern

A Whale of a Problem for the Administration

The question of whether Alaskan Eskimos will be legally permitted to continue hunting the bowhead whale is giving the government fits. By 24 October a decision must be made on whether or not to accept an International Whaling Commission (IWC) order for a moratorium on Eskimo hunting of the bowhead. The big arctic whale is protected against com-

department's impression that the university was not about to reform itself quickly. "They showed up one hour late, and were one mass of equivocation about what the university had done or would do," Herdmann said.

Three days later, on 23 September, the health department ordered the university to discontinue its research involving human subjects immediately, and set the date for the first of several public hearings on the affair. Recently, as a result of

information provided in the hearings, the health department broadened its investigation to include SUNYA's neurobiological research center, sociology department, and criminal justice institute. "Although we believe these departments only failed, as did the psychology department, to have 'internally' funded research reviewed by the university-wide committee, we want to assure ourselves that there are no qualitatively different violations, and get a reasonable

impression of the magnitude of this thing," Herdmann said. Additional hearings are scheduled for 26 and 27 October.

Meanwhile, the health department is receiving allegations of violations on other campuses, which it may investigate next. Arthur Smith, provost for graduate studies and research at the State University of New York at Binghamton, said that after learning of the SUNYA incident, their psychology department temporarily froze its nonfederally funded

Briefing

mercial whaling, but an exemption for aboriginal whaling has been allowed.

The dilemma exists because the majestic bowhead is an endangered species, but is, at the same time, a mainstay of the diet and linchpin of the culture of the coastal Eskimos (*Science*, 26 August). There are fears that if the government files an objection to the moratorium—which would allow the Eskimos to continue whaling activities—the U.S. position as an effective champion of the cause of protection of all whales would be undercut.

If an objection is filed, protocol directs that it be formally done by the Secretary of State in consultation with the Secretary of Commerce. No policy statement has yet been forthcoming from either agency. However, the Interior Department, under Secretary Cecil D. Andrus, decided to recommend filing of an objection. Noting that he and other Interior officials had "agonized" over the issue, Andrus cited Interior's "responsibility to our indigenous population." He was quoted as saying, "We have reluctantly concluded that the most constructive position is to immediately object to the ban and at the same time come forth with an effective self-regulating program for reducing the take. . . ."

The Commerce Department has been expected to recommend acceptance of the moratorium. Commerce is charged with responsibility for administering legislation protecting marine mammals, and its officials represent the United States on the IWC. The department has been identified with the view that U.S. credibility as a partisan of the protection of whales would be badly compromised if an objection to the bowhead order were filed.

Environmental and conservation groups have mobilized on the issue, and the State Department reports receiving some 30,000 letters on the issue, most of them in favor of the moratorium. A split in

the ranks of environmental groups, generating considerable tension, occurred when Friends of the Earth took a position which, in effect, favored an extension of the exemption plus strict controls on Eskimo hunting. Most other groups stuck to the view that the United States should honor the moratorium rather than risk being inconsistent in its protection of whales generally.

Considerable concern has been directed toward the increasing number of bowheads struck and lost by Eskimo whalers in recent years. The Eskimos have now established their own whaling commission to monitor the hunt and also are implementing changes in whaling methods designed to cut the struck and lost rate.

The signs of departmental division on the issue have encouraged assumptions that the final decision will have to be made by President Carter. When the issue lands on his desk Carter may feel like a man suddenly transported aboard the *Pequod* in the last chapter of *Moby Dick*.

Would You Buy a Rocket from This Agency?

It just hasn't been a good year for the partnership between NASA and the European Space Agency (ESA). On 13 September, the Delta rocket carrying ESA's Orbital Test Satellite (OTS) malfunctioned with the result that the \$17 million launcher and \$25 million test telecommunications satellite were blown to smithereens. It was the second serious NASA-ESA disappointment of the year. In April, a NASA-launched, ESA-owned GEOS scientific satellite designed to carry out magnetosphere and plasma studies was put into a wrong orbit—an elliptical orbit, not the geostationary orbit intended. Although the mission was not a

total scientific loss, the Europeans are hardly overjoyed.

The recent OTS mishap is being attributed to trouble in one of the nine solid fuel boosters affixed to the side of the Delta liquid-fueled rocket. The OTS launch had been delayed in June when the rocket was on the pad and one of the boosters fell off, damaging the first stage of the rocket. The Delta, to give it its due, has had a very good reliability record over the years—it's been dubbed the "NASA workhorse," and has performed well in several previous NASA-ESA ventures. But with back-to-back acts of nonfeasance by Delta vehicles the Europeans might be pardoned for not being consoled by percentages, although they appear to accept the incidents stoically as part of the space game.

The Delta is not the only rocket which has given NASA trouble recently. On 29 September an Atlas-Centaur launcher carrying an Intelsat communications satellite aloft exploded soon after liftoff, ending the \$50 million mission unhappily and giving Cape Canaveral two unwelcome fireworks displays in a row.

The OTS was an experimental satellite for use in broadcasting, telephone communications, and newspaper printing. It was to be a forerunner of a European telecommunications satellite system. A second OTS is available as a backup, and there are plans for another launch attempt early next year after NASA has completed its rigorous investigation of the failure and taken whatever corrective steps are indicated.

Financially, the first OTS was not a complete write-off since ESA had insured the cost of the launcher and of integration of the rocket and satellite. This will cover some \$29 million of the roughly \$42 million which went up in smoke. The mission was carried out on terms under which costs of the launcher are totally reimbursable by ESA. NASA is sorry, of course, but as they say, there is no free launch.

John Walsh

research to insure that it was in compliance with the state law. "Since the word was passed, many more research proposals are being submitted to our institutional review board," Smith said. "Previously, these requirements may have been taken lightly, but teachers have had their consciousness quickly raised."

At SUNYA itself, all university-connected research involving human subjects, "sponsored and unsponsored," will henceforth be approved by the university-wide committee, officials said. To facilitate and monitor compliance, the university also appointed a Human Subjects Research Officer, Gino Danese.

According to one instructor, the university has been weathering a number of crises recently, and it is hoped that these actions will mitigate whatever penalty the health department may impose that would affect its research. (The school recently lost academic accreditation for its doctoral programs in chemistry, history, and English.)

The specific federal and state regulations that the university has admitted violating were enacted in 1974 and 1975, respectively. Officials at NIH say that this is the first incident they are aware of in which a research institution has promised to abide by the laws in effect regarding experiments with human subjects, and then not complied with those laws. Specifically, SUNYA provided assurances to NIH and the state health department in July and December 1975 that the risks of experiments would be explained to participants, that proper consents would be obtained, and that all research involving the use of human subjects "conducted at or sponsored by this university"—meaning both federally and nonfederally funded research—would be reviewed by a university-wide Committee on Investigations Involving Human Subjects.

Assurances of compliance are explicitly required by NIH under a provision of the National Health Research Act of 1974 that applies to every institution receiving research grants from NIH or other agencies of the Public Health Service. However, provisions included in other legislation governing HEW regarding review procedures for experiments on humans refer specifically and only to activities supported by grants and contracts from HEW—leading to what HEW officials admit may have been an initial ambiguity about the relevance of the review requirement to research that it does not fund. SUNYA, in its initial response to the NIH inquiry about the psychology experiments, said that

it had misunderstood the requirements.

Chalkley, who monitors compliance with the regulations for NIH, said however that "we've been extremely tight on this issue. In 1974, all institutions that previously had sent us general assurances of compliance with the rules were told that the assurances would have to be renegotiated based on the new [1974] law." He also pointed out that SUNYA had promised to follow the new guidelines in its only response to this instruction, even using the exact phrasing of the new law in its promise. In a letter to Louis Salkever at SUNYA, Chalkley said, "The identity . . . [of the promise] with the language of the National Research Act leaves little doubt that SUNYA was aware of this provision and of the necessity for compliance." (HEW assumes control over research that it does not fund under a "foot-in-the-door" concept, according to Chalkley. "If a university has a contract for any purpose with the federal government, then it is generally subject to federal government policies, whether the policy is affirmative action in hiring or human subjects research review.") Both Kilbourne and Tedeschi maintain that the university never informed them of the research review requirements.

Additional assurances are required by the law in New York State. Ironically, the state law does not apply to human research that is subject to, and in compliance with federal government regulations; the effect of SUNYA's violation of federal rules was to make it subject not only to identical provisions in the state law, but to additional requirements that exist *only* in the state law. These include the necessity of obtaining voluntary, informed consent in writing from research participants, obtaining certification by the human research review committee that the researchers conducting the experiments are qualified and competent, and obtaining the permission of the state commissioner of health for every experiment involving minors.

"What the incident at SUNYA demonstrates," says Herdmann, "is that a substantial group of scientific researchers is unaware of society's interest in and concern for human research. These rules are not meant to be treated only as trivial paper exercises, and the problem is that when they are, there is a real chance of bureaucrats entering the university to do the monitoring—whether it be recombinant DNA research or research on human beings. That would be a mistake, but it's a mistake that can happen if scientists cannot regulate themselves."

—R. JEFFREY SMITH

APPOINTMENTS

Aaron Wildavsky, dean, Graduate School of Public Policy, University of California, Berkeley, to president, Russell Sage Foundation. . . . **Raymond P. Mariella**, dean, Graduate School, Loyola University, to executive director, American Chemical Society. . . . **R. Bruce McMillan**, archeologist and assistant director, Illinois State Museum, to director of the museum. . . . **Charles C. Edwards**, former U.S. Assistant Secretary of Health, Education, and Welfare, to president, Scripps Clinic and Research Foundation. . . . **Robert E. Cooke**, vice-chancellor for health sciences, University of Wisconsin, to president, Medical College of Pennsylvania. . . . **Neal A. Vanselow**, dean, College of Medicine, University of Arizona, to chancellor, University of Nebraska Medical Center, Omaha. . . . **Henry O. Hooper**, chairman of physics and astronomy, University of Maine, Orono, to dean of the Graduate School at the university. . . . **George Keulks**, professor of chemistry, University of Wisconsin, Milwaukee, to graduate dean at the university. . . . **William H. Matchett**, chairman of botany, Washington State University, to dean, Graduate School, New Mexico State University, Las Cruces. . . . **A. R. Schrank**, zoologist and acting dean, College of Natural Sciences, University of Texas, Austin, to dean of the college. . . . **Ellis H. Dill**, chairman of aeronautics and astronautics, University of Washington, to dean, College of Engineering, Rutgers University. . . . **Carter L. Marshall**, chairman of community medicine, Morehouse College, to director, office of primary health care, New Jersey Medical School, College of Medicine and Dentistry of New Jersey. . . . **O. P. Bahl**, director, cell and molecular biology division, State University of New York, Buffalo, to chairman of biological sciences at the university. . . . **Samuel Krimm**, professor of physics, University of Michigan, also to chairman, biophysics research division, Institute of Science and Technology at the university. . . . **Friedrich Deinhardt**, professor of microbiology, Rush University, to chair of hygiene and medical microbiology, Ludwig-Maximilians University, Munich. . . . **Oscar M. Reinmuth**, professor of neurology, University of Miami, to chairman of neurology, University of Pittsburgh School of Medicine. . . . **Howard Brenner**, professor of chemical engineering, University of Rochester, to chairman of chemical engineering at the university.