

and students close together through informal encounters, college committee work, and relatively small classes. Some large lecture sections exist, but more than half of all the classes conducted at Santa Cruz up through the spring of 1969 had fewer than 16 students—although classes of such small size will become rarer as student-faculty ratios

continue to increase. Independent study is encouraged here, and last fall nearly 80 students were abroad studying or doing fieldwork and another 50 were carrying out field projects in the United States. A Merrill College student specializing in Third World studies may be out, say, with some migrant workers in California or teaching in a pri-

mary school in Upper Volta or Peru.

Credit requirements here are the same as those at other University of California campuses, but, with the advice of the college faculties, Santa Cruz students can devise their own interdisciplinary majors. Considerable student interest is evident in the new interdisciplinary program in environ-

## Visitors Ask M.I.T. Faculty to Renounce Military Research

*Cambridge, Massachusetts.* Eight members of the New York chapter of Scientists and Engineers for Social and Political Action (SESPA) piled into two cars on 8 January and drove up to Cambridge, to demonstrate in front of the Massachusetts Institute of Technology. SESPA is a national organization of about 3000 scientists and engineers, devoted to ending military research projects.

The 5-hour demonstration was small and subdued in the 20-degree Cambridge weather, but the issue it sought to dramatize is crucial to politically active members of the scientific community at M.I.T. and elsewhere. The key question is whether antimilitary groups at M.I.T. and around the nation will continue to focus primarily on efforts to dissuade the government from sponsoring military research projects or whether they will redirect their efforts inward, urging scientists themselves to refuse to conduct such research.

Leaflets passed out by the SESPA demonstrators asked M.I.T. students and faculty to sign a pledge, "That I will not participate in war research or weapons production. I further pledge to counsel my students and colleagues to do the same." The pamphlet said that SESPA was there "To remind you of your moral responsibility for your own profession and work place. M.I.T. is probably the most important military research center in the United States. SESPA aims to get the weaponeers to abandon their work. We try to assist all those committed to this change to find other work."

Since World War II, M.I.T. has been a major center of military and space research. Its affiliated "special laboratories," the Instrumentation Laboratory and the Lincoln Laboratories, had reached a combined budget of more than \$120 million a year, or half the total M.I.T. budget. After a buildup of internal criticism about 2 years ago, the M.I.T. administration began shifting emphasis in the special labs away from military research.

The demonstrators were led by Seymour Melman, professor of industrial engineering at Columbia University. Melman is a leading proponent of converting scientific facilities and personnel from weapons research to more peaceful activities. "M.I.T. has done nothing about the problem of conversion," Melman said. He faulted liberal faculty members and students at M.I.T. for "avoiding responsibility for the professional character of your institution; doing nothing; public relations circuses instead of relevant professional action; saying that Pentagon control of research doesn't matter if you are pure in heart and try to do your own thing with the money."

The main target of the SESPA demonstration was the M.I.T.-based Union of Concerned Scientists (UCS), a peace action group concerned with putting pressure on the government to end the war and curb research on such projects as MIRV development. UCS does not support the SESPA pledge or attempt to bring any pressure on scientists to leave their weapons research jobs. Lee Grodzins, professor of physics at M.I.T. and chairman of the UCS, explained his group's opposition to the SESPA approach: "Absolute things like this pledge don't interest us," he said. "The defense problem is not such a cut and dried affair. I suspect no one in the UCS would work on MIRV, but as to the ABM, for instance, that depends on what kind of ABM. Probably about nine-tenths of us would work on a laser ABM." He characterized the UCS as "an essentially establishment organization."

Underlying the UCS-SESPA conflict is the problem of converting scientific resources and personnel from weapons research to peacetime activity. Melman feels that if institutions like M.I.T. would make the effort, they would find that such conversion is possible. He cited his own efforts at the New York Riverside Research Labs as an example. "We have been picketing in front of Riverside for a year now and have placed 18 to 20 of their engineers in new jobs." The job market for scientists is, of course, tight, but Melman feels that with the leadership of M.I.T. peaceful jobs could be found for thousands of scientists and engineers now employed in weapons research. "In areas like urban engineering the needs are great," he said, "but so far the institutions here have done nothing to convert their training programs."

SESPA's reception at M.I.T. was as cool as the Cambridge weather. "These are rigid, uptight, frightened people," Melman said. "Some of them were even afraid to take our leaflets."

There were, however, a few encouraging signs for Melman and his band of stalwarts. Noam Chomsky, professor of linguistics at M.I.T., said that he supported the demonstration, and Grodzins agreed to circulate the SESPA leaflets among the members of the UCS. In any case, SESPA members say they will continue to pressure their M.I.T. colleagues to take the pledge.

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