Letters

Misinterpretations of Project Themis

Project Themis originated, as Langer indicates (News and Comment, 7 Apr., p. 48), in a presidential memorandum that called upon the federal agencies, including the Department of Defense, to take more cognizance of their responsibilities toward higher educational development, with particular attention to geographical distribution of research funding throughout the country. Extensive Congressional testimony had already revealed the dissatisfactions of "have-not" institutions, particularly those in North Dakota and Oklahoma, not to be confused with Montana.

The response of the DOD was notable for its spark of originality and its "considerable sensitivity to the universities' problems," in Langer's words. That response hardly fits the stereotype perpetuated by the Montana chapter of the American Association of University Professors: "Military activities have traditionally been shrouded in secrecy and half truths. The tradition of academia is just the opposite. Universities have always been the one free agent in society." Presumably this means free to propagate half-truths of their own. Since World War II "tradition" has fostered a legend, perhaps not devoid of truth, that a defense agency, the Office of Naval Research, "saved basic research" in the U.S. during the embarrassing period when Congress dragged its feet on the creation of "civilian agencies" chartered to dispense clean money. It will be sociologically interesting to observe this new racism, which postulates the existence of a subspecies *homo academicus*, born with a white hat and a mandate to exercise moral superiority over *homo militarius* and other lesser breeds. Is there, as Langer's report suggests, "an innate conflict of objectives" between the military and academic establishments? I sincerely hope not, just as I believe that no institution wears the mantle of the "one free agent" in our society. If "civilian agencies" received the $290 million (dispensed, as it happens, almost entirely by civilians) now given annually by Congress through the DOD to universities, ours would be a better and less worldly world.

Meanwhile, back in the real world, it does no good that the Montana savants have misinterpreted the Themis proposed 3-year funding method. Instead of a "trap to divert uncommitted university research funds," Themis is a plot to give unproven performers something for next to nothing, in a way that will guard them against the possible shock of 1-year notice of termination. The 3-year funding scheme was pioneered by NASA and is said to work well. It provides another example of federal agency initiative in constructive bending of the law to the limit allowed by Congress—which loves 1-year funding of everything connected with government. Closer reading of the DOD brochure will reveal that the award of "new grants each year on the same percentage continuum" refers to filling in deficiencies in partial awards made in earlier years, so that approximately level total annual DOD support is maintained in each Themis program at any institution.

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Moral Issues of CB Warfare

Rothschild's letter (14 Apr.) in defense of chemical and biological warfare raises issues that overlap rational and moral thought. In viewing war from a moral standpoint one can ask why new and more effective weapons are often considered repugnant. When Lord Dundonald proposed that sulfur fumes be used against Sevastopol during the Crimean war, why did the British War Office find that "an operation of this nature would contravene the laws of civilized warfare"? More recently, why were many physicists unwilling to develop the atomic bomb until they were persuaded that the enemy was doing so?

Part of the repugnance toward biological and chemical warfare has to do, I believe, with the remoteness of their effect. The man who uses them is not involved physically with the results. It is noteworthy that the killing of large numbers of people in the recent revolution in Indonesia has not been publicized or condemned with the same intensity that was accorded the gas chamber murders in Nazi Germany. Much of this contrast is no doubt political but part has to do with the remoteness of killing by gas on orders from above. Another consideration, pertinent to the fighting in Vietnam, is the moral guilt that attaches to the powerful and sophisticated nation when it is in combat with a much weaker enemy.

If one wishes to introduce a degree of rationality into these moral considerations let individuals and nations aim not at absolute moral behavior but let them be a little less immoral than the adversary. This would mean using biological and chemical weapsons only after the adversary had used them, rather than using them "only when necessary," and then using slightly less rather than more potent kinds.

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The letters published under "Chemical and biological warfare: Is propriety the issue?" (10 Mar.) show a degree of naiveté among scientists and is truly appalling. . . . All the old arguments with which people have sought to justify atrocities in the past are now paraded as if they constituted a new, compelling, and watertight logic. For example: Others did it, the other side is doing it; if we don't do it, we will suffer needless losses.

The basic fallacy in this thinking is that the technology and politics of war are totally distinct concepts and can be discussed without relation to each other. As any intelligent military commander knows, the aim of war is not to humiliate and degrade the enemy but rather to offer him reasonable alternatives to fighting to the last man. In this respect the peace marchers' slogan, "Would napalm convert you to democracy?" is as pertinent as one could possibly wish. Failure to see this means adopting the philosophy of "The end justifies the means," though, since politics are taboo among scientists, the ends are never discussed; and thus one tacitly assumes, as your

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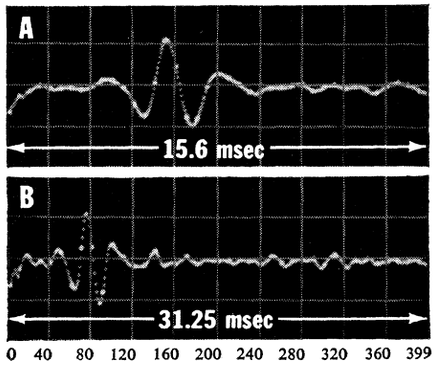

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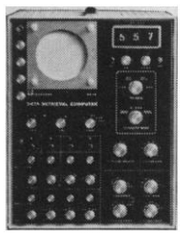

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correspondents have, that the ends are unquestionable without recognizing precisely what they happen to be.

The scientist cannot, any more than others, claim immunity from moral responsibility. The letters quoted above are very disheartening and seem to presage new and more frightful developments in an attempt to justify all those errors of judgment which so far have gone into this shameful affair. I hope that no one, besides their authors, is going to be fooled by these efforts at "objectivity."

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. . . What is apparently overlooked and totally ignored by these petitioners is that this [the war in Vietnam] is not an academic exercise divorced from life and death. It is a very real exercise in how to achieve a goal, however distasteful, with a minimum of casualties among our own combat personnel. I believe that any technique, weapon, tactic, or strategy that will minimize casualties among our combat personnel is right, and any technique, tactic, or strategy that preserves the combat effectives of our opponent is wrong.

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Rothschild cites such nonlethal diseases as Venezuelan equine encephalomyelitis, Q-fever, and dengue fever, and implies that biological weapons of this kind might humanize warfare. Unhappily, the developers of biological weapons do not limit their attention to diseases with low mortality. Although the Army's microbiological laboratory at Fort Detrick has conducted considerable research on Venezuelan equine encephalitis virus, it is also interested in organisms a good deal less cuddlesome, including *Pasteurella pestis* (plague) and *Bacillus anthracis* (anthrax). The reason for this interest in highly virulent pathogens is perfectly obvious. The logic of military necessity requires that an enemy be destroyed, not given a case of sniffles. The military would be betraying its own responsibilities if it ignored this necessity.

There is, however, a crucial qualitative distinction between conventional explosive weapons and biological weapons, a distinction which underlies the concern expressed in the CBW petition. Conventional weapons can, at least in principle, be *aimed*. Even aerial bombardment can be carried out with a considerable degree of precision. With conventional weapons it is therefore possible to discriminate to a large extent between combatants and noncombatants. Such discrimination is demanded, not only by the humane principles which are supposed to justify our society's reasons for engaging in warfare, but also by a body of international law ranging from the Hague Convention Rules of Land Warfare to the United Nations Genocide Convention of 1948.

But biological weapons cannot, in general, be used with such discrimination. There is no pathogen which is host-specific for military personnel. Crop destruction by plant pathogens (or, for that matter, by herbicides) is injurious to all, military and civilian, who require food. This unique aspect of biological warfare evidently escaped Silverman (Letters, 10 Mar.), who asks: "Why is it more horrible to be ill (even acutely ill for a period of time) than to be mangled or dead for all time?" First of all, this question conceals the assumption, as groundless here as in Rothschild's letter, that biological warfare will eschew lethal diseases. Secondly, the relative charms of being victimized by a bomb or by an aerosol of *P. pestis* is not the point at issue. The point is that bombs can be aimed at military targets, while the dissemination of a plague among a whole population would be genocide.

Those of us who are concerned about CBW are not necessarily pacifists, any more than were the framers of the Hague Convention. Our concern is with the philosophy of our society. Rothschild points out, somewhat paradoxically, that "the amount of damage a nation will execute upon civilians . . . is defined by the philosophy of the nation using the weapons." Precisely.

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Congressional Witnesses

Marvin's letter, "Pesticides: Overstated dangers" (7 Apr.), mentions an investigation conducted by the House Appropriations Subcommittee on Agriculture, chaired by Congressman Jamie L. Whitten (Mississippi), in which