Letters

Antiwar Statement

The description of what happened at the American Physical Society (APS) banquet in Washington on April 28 (News and Comment, 7 May, p. 544) contains both a false statement and a false implication. Contrary to the assertion in the article, the statement circulated at the meeting was not "threatening to disrupt his [David's] speech." The statement, prepared at an open meeting (following the "Hippocratic Oath" session on 26 April which was reported in your article) and circulated for signatures on 27 and 28 April, reads as follows:

> We protest the increasing use of advanced technologies in the war in Indochina. Such weapons as laser-guided bombs, the electronic battlefield, infrared detectors, defoliants, cluster pellet-bombs, stabilized helicopter platforms, tear gas, napalm, along with the continued use of massive aerial bombardment are being used to replace American troops, while the people of Indochina continue to suffer death and destruction.
>
> In the midst of this situation, the American Physical Society has invited Edward E. David, President Nixon's Science Advisor, to be the honored guest at our banquet. By this action our professional society has implicitly endorsed this policy of waging technological war against rural populations.
>
> In order to voice our protest and to disassociate ourselves from this war policy, we ask equal time to present this issue to Dr. David prior to his speech.

The statement was followed by space for signatures and a request to send or bring the petition to the banquet for group presentation. It was a request for equal time and not a threat of disruption. It was signed by many members of the APS at the meeting. The signed petitions were not presented at the banquet because the agreement negotiated with Serber (president of the APS) did not allow this element of group participation. Instead, it was agreed that Serber would, prior to introducing David, explain that inviting him as the sole speaker at the banquet did not constitute an implicit endorsement of Administration policy, and request the audience to remain for a brief statement by a spokesman from our group at the conclusion of David's speech.

The false implication was that the interruption prior to the start of David's speech was part of the group action. As reported in the Washington *Post*, this was an individual act by a person who is not a member of the APS, and took the form of a demand that David, as a politician, explain his stand on the SST, ABM, and chemical and biological warfare. The false implication is strengthened by the failure to report that, in spite of the fact that my presence on the platform had been explained by the president of the APS, I was strenuously challenged from the floor and delayed at least as long as David before I could present our group statement.

The statement itself, which I will be happy to send to anyone interested, made the point, which has been stressed by Telford Taylor and other prosecution and defense counsel who served at Nuremberg, Tokyo, and Manila, that our past and present civilian and military leadership could be convicted for war crimes under U.S. law. This point was made in the context of the complicity of our own professional society in the waging of technological warfare against rural populations. The statement was not considered newsworthy by Harrison Salisbury and John Van Doorn of the *New York Times* because "it does not advance us very much beyond material that we are seeing and carrying almost daily" (private communication).

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Overpopulation

In his editorial (12 Feb., p. 527), Hardin argues that the presence of too many people is the cause of catastrophic numbers of deaths from floods, cyclones, communicable diseases, and malnutrition. Pursued to its conclusion, this argument states that people die "because they were there" (in terms of Mallory's immortal cliché). The reasoning means that any death from a communicable disease must be attributed to overpopulation because the disease has been transmitted by another human being. Other causes of death from overpopulation must logically include all man-made fatalities, including wars, automobile accidents, and, most of all, procreation. The primary cause of death is, of course, birth, and overpopulation is inseparable from births, except that everyone's definition of overpopulation necessarily is the birth of people other than himself. Hardin's editorial is valuable because it spotlights the misanthropy at the root of the present cult of environmentalism. He leads readers into another trap when he says (with intentional irony) that "the 'need' for more food justifies overfertilization of the land." Where does "overfertilization" start? In this country, was it the first time an Indian buried a fish in a hill of corn?

Hardin asks, "What will we say when the power shuts down some fine summer on our eastern seaboard and several thousand people die of heat prostration?" We should probably say that they died of something else. *Homo sapiens* is capable of withstanding average monthly (July) temperatures of 83°F and occasional (40-year data) maximum temperatures of 110°F. These are the high figures, in any point where official records have been kept, in all of the 15 Atlantic Coast states. A few of us can still remember when there wasn't any air-conditioning.

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Man and the Biosphere

At its 1970 session, the General Conference of Unesco decided to launch a long-term intergovernmental and interdisciplinary program on "Man and the Biosphere" and established an International Coordinating Council consisting of 25 member nations of Unesco, including the United States. This council is responsible for planning the program, defining its priorities, and making the necessary proposals for coordinating it with programs conducted by all the other international organizations concerned.

The program will focus on the general functioning and structure of the biosphere, the changes brought about by man on the biosphere and its resources, and the effects of those changes on man himself.

The General Conference will review the situation at its 17th session in the fall of 1972. This review will take account of the results of the United Nations Conference on the Human Environment in Stockholm and discussions of relevance to the General Assembly and the work of the International Coordinating Council.

Thirty-one research themes in four groups have been proposed: (i) those related to the natural environment that is little modified by man; (ii) those related to the rural environments used primarily for agriculture, forestry, and other uses not involving major technological transformation of the landscape; (iii) those related to urban environments or subject to major technological modification by urban-industrial society; and (iv) those concerned with the effects of pollution and related phenomena on the biosphere. Relevant research by nongovernmental agencies may be supported.

The "Man and the Biosphere" program will encourage member nations to identify and develop institutions necessary for its implementation. With its sister program, "Man and His Environment," it will undertake to promote and stimulate educational activities in environmental sciences at all levels.

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Science for Nonscientists

I would like to second the plea made by Palmedo in his letter of 23 April for greater attention to the teaching of science to nonscience majors in college. In all of my own 7 years in college, even as a science major, only one course, an elective not even recommended by my department, concentrated on such questions as: How did science evolve as a human endeavor? In what older traditions does it have its roots? Why is it thought of as "Western"? How is an individual in a culture with a scientific tradition different from one living in the tenth or first century A.D.? How does the discipline of a "scientist" differ from that of a lawyer, judge, inventor, gambler, painter, poet, cook, and so forth?

Teaching sections of art students bitter about having to take my required science course has convinced me that these most refractory and frequently brightest of my students eagerly seek real understanding of science and its cultural impact, how it affects and is a part of their own time and their own humanity. To the nonscience students, science taught as a discipline may possibly be intriguing, like the rules of winning chess, but it is irrelevant. How can we be surprised that a young artist or writer . . . resents being taught how properly to shuffle electrons and wired mathematical symbols in his chemistry or physics course? He never sees his own interest there; why does it surprise us when the products of his mature hand ignore or denigrate science?

Palmedo's proposal for an organized effort toward upgrading college science education for nonscientists is well made. Many excellent courses and syllabi have already been worked out, but they are ignored or not well known. Reluctance of biologists, physicists, chemists, and the like, who are our college science educators, to go beyond the borders of their prized but narrow specialties is a powerful force against widespread adoption of the interdisciplinary approach Palmedo advocates. Perhaps a prestigious committee's report and recommendations would provide impetus to a wider recognition of the need for effective science education of the nonscientist.

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Palmedo's analysis of the problem of science courses for nonscientists is satisfactory, but his proposed solution has been tried many times (*1*). Giving prestige and other emoluments to the calling will do more than any committee, however exalted. Science for nonscientists can be raised higher in the academic pecking order by simply giving it departmental status equal to that enjoyed by classical subjects. An interdisciplinary operation or one within a department is now the rule and is evidently not doing the job, else Palmedo and others (*2*) would not be so concerned.

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References

1. E. J. McGrath, *Science in General Education* (Brown, Dubuque, Iowa, 1948); M. Correll and A. Strassenburg, Eds., *The Proceedings of the Boulder Conference on Physics for Nonscience Majors* (Commission on College Physics, College Park, Md., 1965).
2. F. Reif, *Science* **164**, 1032 (1969).