

of the Stalin era, trials that the Soviet government itself eventually exposed as shams.

Formal agreements on scientific cooperation are doomed to failure if leading scientists choose not to participate. If the Soviet government is genuinely eager to cultivate scientific ties and to engage the cooperation of scientists in the world at large, it must foster a climate free of political, ethnic, and racial prejudice and persecution.

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Research Subjects:

Rights and Regulations

It is stated in the article "Proposals for ethics boards stir debate" (News and Comment, 20 July, p. 285) that "In July, HEW [Department of Health, Education, and Welfare] will require compensation to subjects for injuries suffered in HEW grant research"; and further, "individual institutions and their IRB's [Institutional Review Boards] are to foot the bill." Let me say flatly that no consideration is being given to issuing final regulations requiring compensation to individuals injured in the course of HEW-supported research.

HEW has been considering the feasibility of requiring that compensation be provided for subjects injured in the course of HEW-supported research. However, no issuance of proposed rules (NPRM) is contemplated in the near future; and not until the publication of a NPRM and consideration of public comment on the notice, will HEW consider issuing final regulations. Further, every alternative mechanism that has been considered by HEW would provide federal funds for the operation of any compensation program. No institution or IRB would be required to "foot the bill."

At this time, the compensation proposals made by the HEW Secretary's Task Force on the Compensation of Injured Research Subjects (1) are being re-

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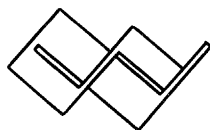
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viewed to determine if the HEW Ethics Advisory Board (EAB) would be an appropriate forum for the study of the compensation issue and development of a feasible mechanism for implementing the program. In light of this possible assignment, the EAB tentatively scheduled, on the agenda for its September meeting (2), a discussion of the compensation issues. Interested parties would be welcome at this public meeting of the EAB.

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References and Notes

1. *HEW Secretary's Task Force on the Compensation of Injured Research Subjects*, Publication No. OS-77-003, (National Institutes of Health, Bethesda, Md., January 1977); *ibid*, Publication No. OS-77-004, Appendix A; *ibid*, Publication No. OS-77-005, Appendix B. Available from the National Institutes of Health, OD/OPRR, Room 3A18, Westwood Building, 5333 Westbard Avenue, Bethesda, Md. 20205.
2. To be held at 9:00 a.m. on 14 and 15 September in Room 800, Hubert Humphrey Building, 200 Independence Avenue, SW, Washington, D.C.

Camaraderie, Not Animosity

The pages of *Science* have recently contained statements by knowledgeable scientists that attempt to dissociate science as an enterprise from its applications (News and Comment, 20 July, p. 281). The fear is that the public may become upset with science because of the Skylab reentry, the DC-10 engine mounts, the Three Mile Island incident, and other areas in which the fallibility of science is so obvious. National Academy of Sciences President Philip Handler says he resents the "smearing" of science with the tar of engineering failures and that science and technology should not be used as though they were one word. Amitai Etzioni says that scientists are not identified with these problems—rather it is engineers and corporate executives who are blamed.

Such disclaimers are meaningless to the lay public as well as to most scientists, whether they are more closely identified with the basic or the applied poles of our profession. There is no dividing line between pure and applied science; one merges smoothly into the other. We depend on each other, and we must help and defend rather than alienate each other. Basic understanding is the stuff of application, but history reveals that technological advance may just as often precede advances in basic science.

Perhaps this attempted false separa-

tion is borne of a realization that financial support is today more often given in the applied areas than in the basic. Perhaps it is also viewed as a way to enhance the aura of the basic at the expense of the applied. The goal of our enterprise and its pervasive impact that has created modern Western civilization is one of making the lives of humans better, that is, applying science; this is the reason why industries, governments, and ordinary people support our enterprise at all. Otherwise, we would be supported about to the extent that a local symphony orchestra is, and our current standing in public confidence as second only to that of physicians (who also serve people through the application of science) would surely plummet.

Basic scientists made no such efforts of dissociation during the manned space flight program that so thrilled the lay public and which seemed to be so frequently billed by the media as a great scientific advance. "Scientists" then did a wonderful job of designing spacecraft to take men to the moon. But it was "engineers" who designed the DC-10. We must be done with these sorts of inaccurate and mutually offensive and destructive attitudes.

Perhaps, as a chemical engineer, I am overly sensitive to such antagonistic attitudes, for chemical engineering so beautifully blends basic chemistry with engineering. The academic degrees held by a first-class faculty are typically one-third to one-half in pure chemistry rather than in engineering chemistry. It is this blend, the interaction, the interfaces, that are important. We can best meet the more overriding goal of service if we seek such collaborations all along the spectrum rather than point accusing fingers. Both the problems of our society and our concern for our professional well-being demand more—much more—of this constructive interaction.

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Erratum: In the Research News article "New testing methods could boost air safety" (6 July, p. 29), Tony Mucciardi of Adaptronics, Inc., was incorrectly referred to as Tom Mucciardi.

Erratum: In the article by W. V. Ligon, Jr., entitled "Molecular analysis by mass spectrometry" (13 July, p. 151), the sentence beginning on line 10, column 3, p. 157, read "The total sample weighed more than 100 micrograms." The sentence should have read "The total sample weighed less than 100 micrograms."

Erratum: In the article entitled "Submarine thermal springs on the Galápagos Rift" by J. B. Corliss *et al.* (16 Mar., p. 1073), the sentence on p. 1078 beginning in column 1, line 34, reads "Data for iron give a range of values equivalent to iron to manganese ratios of from three to several hundred." It should read "... manganese to iron ratios of from three to several hundred."