Letters

OTA Report on Agricultural Research

The Office of Technology Assessment's (OTA's) recently released study, *An Assessment of the United States Food and Agricultural Research System*, unjustly draws fire from Nicholas Wade (News and Comment, 29 Jan., p. 483). He expresses concern that the OTA report dismisses Congress's responsibility for some of the shortcomings of agricultural research and that it considers research quality and the "neglect of fundamental biological research" irrelevant. He uses the 1973 National Academy of Sciences's "Pound report" as his basis for criticism.

When requesting the study, Congress asked OTA to examine the overall structure of the U.S. food and agricultural research system and to provide policy options to improve the system's effectiveness. Thus, the OTA study looks at the problem in a broad context, examining the successes and failures of the national research system and obstacles to its improvement.

OTA, helped by a wide range of technical and public advisers, tackled other issues as well: the benefits and costs of agricultural research, long-range research planning, the role of the different major research participants in the system, the organizational structure to carry out each participant's role, and the adequacy of the system's resources.

One major obstacle identified by the OTA study is the fact that neither Congress nor the agricultural research community has established explicit, well-defined research goals. The report also discusses the political problems encountered in shifting existing research resources and the implications of the autonomous nature of the state and federal research systems.

Quite the contrary to Wade's charges, the OTA report does not consider research quality and neglected fundamental biological research irrelevant. The OTA study restates critical statements in the "Pound report" on agricultural research while pointing out a number of weaknesses in the methodology and review processes used in the Pound study itself. The importance of basic research is highlighted in the OTA report, as well as in previous OTA studies.

Those interested in the report can obtain summaries free from OTA or purchase the full report from the U.S. Government Printing Office.

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Fraud Investigation

I enjoyed William J. Broad's article of 12 February (News and Comment, p. 874). However, it should have been captioned "[Harvard] report absolves Harvard in case of fakery." *Quis custodiet ipsos custodes?*

Upon learning that the dean of the Harvard Medical School had appointed a committee of eight, of whom *five* were members of the Harvard faculty, to investigate the alleged fakery and that this committee was called a "blue-ribbon committee," I was led to wonder what would have been an appropriate name for such a committee had it consisted entirely of *non*-Harvard faculty members?

If he didn't, Aesop should have written a fable telling of the convening of a jury of foxes to pass upon the guilt or innocence of Reynard the Fox after he broke into the henhouse and made off with a couple of fat hens.

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Scientists are quick to demand academic and scientific freedom, as in condemning Admiral Inman's suggestions for classification of certain cryptographic research (News and Comment, 22 Jan., p. 383). Yet one result of unbridled freedom was the academic cover-up of a recent alleged biomedical fraud. Scientists in a democracy should temper their love of individual freedom with recognition and acceptance of their unique responsibilities toward their country and their fellow citizens. As Thomas Paine observed in a different but no less pertinent context, "Those who expect to reap the blessing of freedom must, like men, undergo the fatigue of supporting it."

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Recent allegations of fraud, fabrication, and plagiarism among investigators in the biomedical community raise a disturbing question about biomedical research practices: Is it in the nature of the association between biomedical research and medical education that one may seek the source of the apparent increase in unethical practices?

While the incidents have been well covered in *Science*'s News and Comment columns and the reporters deserve praise for their careful and comprehensive presentations, it is important to remember that they are subject to the constraints imposed by the protective codes observed by the scientists providing the information—codes, incidentally, observed with equal force in the official reports submitted by these same scientists. The "courtesy" displayed toward colleagues, while not deceitful, is surely self-serving. The biomedical research community may not be any less honorable than other professional groups—nor any more so. Shaw (*1*) noted that every profession was a conspiracy against the laity. The appearance of full disclosure may be there, but one can be sure there will always be a bit of *suppressio veri* and/or *suggestio falsi*.

As a consequence, I believe that a full and forthright examination of these problems in all their complexity is in order and that such an examination must be overseen by a nonscientist. I argue from analogy with situations in which an outside prosecutor is selected when an elected official is to be investigated.

The competition for place and status that now preoccupies workers in the field deserves much more questioning and justification if it is to be continued. The shameful scrambling for space and grants in the face of dwindling research funds and increasing numbers of investigators has an almost Malthusian ring! Clearly, something is amiss in the structure of biomedical research. Can it be that a relationship we have taken for granted over the past 50 years is flawed? The sociological studies of Barber *et al.* (*2*) indicate that the perversion of ethics in research is a result of competition. And Relman (*3*) acknowledges the influence of an industrial value system on the

medical establishment, although he carefully avoids inculpating medical education and its research-oriented goals.

Let there be a national review, and let us not overlook the possibility of separating biomedical research from medical education, thereby restoring traditional ethical qualities to both.

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References

1. G. B. Shaw, *Doctor's Dilemma* (Brentano's, New York, 1911), Act 1.
2. B. Barber, J. J. Lally, J. Makarushka, D. Sullivan, *Research on Human Subjects* (Russell Sage Foundation, New York, 1973).
3. A. S. Relman, *New Engl. J. Med.* **303**, 963 (1980).

Haig's Image

The demeanor of Alexander Haig has sometimes seemed more appropriate for a Secretary of War of a bellicose state than for what he is, the Secretary of State of the United States—whose citizens, by and large, long for continued world peace. Now even in *Science* Haig is mistakenly called the Secretary of Defense (News and Comment, 12 Feb., p. 878). Maybe it's time that President Reagan considered changing Haig's title to something more consistent with his public image.

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Nonsexist Mnemonics

I very much enjoyed the article by M. Mitchell Waldrop (Research News, 5 Feb., p. 647) on the Orion Nebula. However, in an era when we are finally encouraging more women to go into astronomy (and E. Margaret Burbidge is president of the AAAS), we really should stop perpetuating the old-fashioned (and some would say sexist) mnemonic he cites for the spectral types of stars.

Some years ago, at the suggestion of Owen Gingerich at Harvard, the Astronomical Society of the Pacific ran a contest to find a new mnemonic (*1*). The most popular suggestion was just a small change in the traditional version, to "*O*h *B*e *A F*ine *G*irl (or *G*uy), *K*iss *M*e." Another good prospect, at least for those in academic environments, was "*O*h *B*oy, *A*n *F G*rade *K*ills *M*e." Among the other noteworthy entries was one which seemed self-referencing, "*O*dd *B*all *A*stronomers *F*ind *G*enerally *K*ooky *M*nemonics."

Our favorites for the longer version, OBAFGKMRNS, included: "*O*bese *B*alding *A*stronomer *F*ound *G*uilty: *K*illed *M*any *R*eluctant *N*onscience *S*tudents"; "*O*h *B*ring *A*nother *F*ully *G*rown *K*angaroo: *M*y *R*ecipe *N*eeds *S*ome"; and "*O*nce *B*eer *A*ges, *F*lavor *G*ives *K*ind *M*en *R*ather *N*aughty *S*miles."

Perhaps *Science* readers will have additional suggestions.

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Reference

1. See *Mercury* **6** (No. 4), 21 (July/August 1977).

Successful Conference

With reference to the briefing "Israeli denied visa for conference in India" (News and Comment, 17 July, p. 312), we are pleased to report that the International Conference on the Applications of the Mössbauer Effect, which was postponed until 14 to 18 December, has taken place in Jaipur, India. All scientists who wanted to attend were granted admission.

The conference was attended by about 175 Indian scientists and about 150 from other countries and was very successful. The large number of Indian scientists attending reflects the widespread research in India using Mössbauer spectroscopy techniques.

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Erratum: The correct price for *The Grant Swinger Papers* (News and Comment, 26 Feb., p. 1081) is $4.95 including postage and handling.