

AAAS Colloquium on R&D Policy

19–20 June 1980
The Shoreham Hotel
Washington, DC

This highly successful Colloquium, sponsored by the AAAS Committee on Science, Engineering, and Public Policy, will bring together leaders in government, industry, and the scientific and technical communities to address issues relating to R&D and public policy making in an inflationary environment. Topics will include:

- *Federal R&D Issues in the FY 1981 Budget* • the original FY 1981 budget and the budget revision • impact of inflation;
- *Industry R&D and the Economy* • problems of R&D in industry • implementing federal policies on innovation • coping with inflation;
- *Science and Research at Universities* • outlook for federal funding of research • impact of demographic changes on university needs and capabilities • federal policies and priorities • public accountability;
- *State and Local Interests in R&D* • federal R&D and state and local needs • state and local funding of R&D • technology transfer.

RESEARCH AND DEVELOPMENT: AAAS REPORT V, by Willis H. Shapley, Albert H. Teich, Gail J. Breslow, and Charles V. Kidd, will be provided to Colloquium registrants. The *Report* covers R&D in the federal budget and other topics relating to R&D and public policy. Registrants will also receive the published proceedings of the conference.

For program and registration information, write:

R&D Colloquium
AAAS Office of Public Sector
Programs
1776 Massachusetts Ave., NW
8th Floor
Washington, DC 20036

LETTERS

The Pentagon's Computers

The article "Computers and the U.S. military don't mix," by William J. Broad (News and Comment, 14 Mar., p. 1183) contains significant errors. For example, Broad states that the National Military Command Center in the Pentagon is totally dependent on commercial sources of power. This is not true. Diesel emergency generators for the command center are on hand and are regularly exercised. In addition to backup generators, uninterrupted power supplies, that is, floating batteries, prevent disturbance to key systems. Broad also states that the computers at NORAD "go down whenever nearby commercial power lines are struck by lightning." Again, this is wrong. NORAD has backup generators in a protected location and has excellent protection against outside disturbances such as lightning. These two instances are only examples of a multitude of errors, misunderstandings, and misinterpretations in the article.

The World Wide Military Command and Control System (WWMCCS) is often confused with a small portion of that system, the automatic data processing equipment that supports certain parts of the system. Further, the automatic data processing equipment is composed of subsystems, one of which, WWMCCS ADP, has a subsystem, the WWMCCS Intercomputer Network (WIN). The article begins with a lurid description of an alleged "computer-generated crisis" involving our missile warning system on 9 November. WIN is not used in any way in that system.

Broad quotes the General Accounting Office as saying that, at many bases, "a separate . . . computer was used for each security level of data being processed" and that "multilevel security within the single . . . system" is one answer, but that the "Honeywell computers cannot do this." No computer or system available today, nor any way now known in which our government has confidence, can provide multilevel security. We are hopeful that research under the Defense Advanced Research Projects Agency may lead to such capability, but it is now beyond the state-of-the-art of all computers, including Honeywell's.

Such errors in a respected publication may result in an unwarranted decrease in public confidence in our national defense capabilities.

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Peanut Butter Test

McCullam's letter (2 May, p. 446) suggesting that peanut butter is a solvent for *Science* ink prompted us to search out the responsible agent(s). We tested the ingredients in one brand of commercial chunky peanut butter to determine the speed with which it removes ink from the pages of *Science*.

Agent	Time (sec)
Peanuts (dry roasted)	53.6
Dextrose*	15.2
Partially hydrogenated vegetable oil	58.4
Salt†	7.5
Sugar‡	10.3
Peanut butter	17.9
Peanut butter with oil removed‡	9.1

*Since dextrose was not handy, we substituted fudge. †Aqueous solution. ‡Oil extracted with acetone.

Contrary to McCullam's observations, it appears that any of several ingredients other than grease is the root of the problem. A weak saline solution is even speedier than peanut butter, obliterating McCullam's own letter in 4.6 seconds.

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Peer Review: An Experiment

Walter Stumpf (Letters, 22 Feb., p. 822) asks: "Why do scientists provide and accept anonymous reviews of grant applications and journal manuscripts? In an *open review system*, merits and weaknesses would be assessed more thoughtfully and criticisms would be made more responsibly."

A unique opportunity to compare the merits of anonymous peer review and open peer commentary has been provided by a scientific communication project, *The Behavioral and Brain Sciences*. *BBS* [modeled after *Current Anthropology* (1)] uses anonymous peer review to assess acceptability for publication and then publishes with the articles open peer commentary from 20 or more investigators (including the referees).

This project allows the process of "creative disagreement" in science to be directly examined. The indications so far are that anonymous peer review and open peer commentary can be *complementary* mechanisms, rather than substitutes for one another (2). In re-