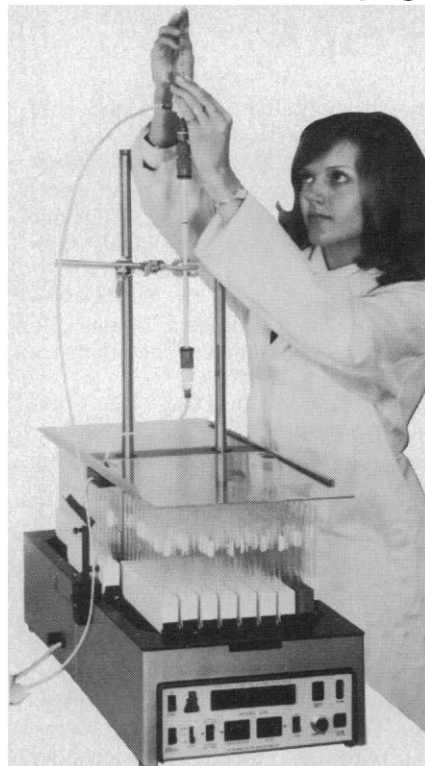


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LETTERS

Research and Public Funds

DeWitt Stetten's editorial (19 Sept., p. 953) and the several letters of comment (24 Oct., p. 324) have neglected a crucial point concerning "Freedom of inquiry." The real issue is not freedom to do research, since few areas of research are prohibited by law, but freedom to use taxpayer funds to conduct research that the taxpayer may not need or want, or may even oppose. Surely there is a major ethical issue here that supersedes any question of knowledge.

No one has seriously suggested that research on genetic contributions to intelligence be outlawed. However, many of us object vigorously to the use of our tax dollars for this purpose. In our view, satisfying the intellectual needs or desires of a few scientists is not an adequate reason for spending public funds.

The comparison between freedom of speech and freedom of research is misleading. I would not suggest that a law be passed prohibiting people from criticizing ethnic groups, but I would object vigorously to giving people federal grants to go around making such criticisms.

Stetten appears to object to political involvement in scientific decisions. I suggest that such political involvement is a necessary safeguard for all of us.

SOLOMON GARB
*American Medical Center at Denver,
Spivak, Colorado 80214*

Are the Data Worth Owning?

Three years ago, in an editorial in *Science* (30 June 1972, p. 1377), J. Ross MacDonald answered this question with an embarrassing and costly "No" for a major fraction of the published scientific and technical data. Since then, slow but steady progress has been made in increasing the reliability of data which is so essential for the orderly conduct of R & D programs. On a national level, the National Bureau of Standards' Office of Standard Reference Data, together with the American Chemical Society and the American Institute of Physics have launched the *Journal of Physical and Chemical Reference Data*. On an international level, CODATA, the Committee on Data for Science and Technology of the International Council of Scientific Unions, has stepped up its efforts to promote international cooperation in data evaluation and dissemination, with continued emphasis on high standards of data quality. CODATA also has broadened its scope to include the life sciences and geo-

sciences in addition to the physical sciences. In recognition of the growing role of CODATA, the National Academy of Sciences has invited CODATA to hold an open international scientific conference in the United States at Boulder, Colorado, in the summer of 1976. Persons working in the physical, life, and earth sciences as well as data handling specialists are urged to attend and discuss their approaches to problems of scientific data evaluation and dissemination. A successful conference of this kind will do much to raise an awareness of the need for greater support of high-quality data compilation, commensurate with the total R & D efforts.

W. DALE COMPTON
*Numerical Data Advisory Board,
National Academy of Sciences,
Washington, D.C. 20418*

Investment in Research

Arthur Kornberg, in his editorial of 22 August (p. 599), based on his 19 April address at the National Institutes of Health alumni reunion, states, "There is no industry based on technology today that spends less than 5 percent of its product [income] on research and development."

The petroleum refining industry, long considered to be a high-technology industry, spends considerably less than 5 percent. Its R & D costs have usually amounted to 1 percent or less of its product sales income.

WILLIAM T. KNOX
*3563 Hamlet Place,
Chevy Chase, Maryland 20015*

Black Ph.D.'s

The method employed by Joseph L. McCarthy and Dael Wolfe in their article "Doctorates granted to women and minority group members" (12 Sept., p. 856) does not give an accurate assessment of the number of doctorates awarded to Blacks for two main reasons: (i) a decreasing percentage of Blacks are obtaining doctorates from Association of American Universities (AAU) member institutions, and (ii) there is a distinct pattern of undergraduate origins of Black Ph.D.'s.

The percentage of science doctorates awarded to Blacks by AAU universities has steadily decreased since the 1930's. I maintain files on the number of science doctorates earned by American-born Blacks and, while my data do not include other degree fields, I am unaware of any significant differences between the institutions awarding science Ph.D.'s to Blacks