Letters

Effective Science Advising

I have followed with interest the articles in *Science* on the process of advising the President on scientific matters. Abelson's editorial (23 Aug., p. 651) indicates that Congressman McCormack (D–Wash.) may be in favor of a cabinet post for science and technology. I believe this proposal should be adopted. Readers of *Science* would generally agree on the increasingly technical nature of the problems facing the political process. The crucial question is what organizational structure will be the most effective in providing rational decision-making on scientific questions.

The cabinet department has much to recommend it over any other possible advisory system. A department of the government would have staff support far in excess of any advisory council. This would allow the proposed agency to undertake studies and to monitor the activities of other agencies to a much greater extent than could an advisory committee. The proposed department would also be an ongoing enterprise more capable of providing a degree of continuity to federal support of scientific activities.

Some practical examples bear out the contention that agencies with administrative powers are more effective than advisory committees. Who has had more real impact on the direction and scope of the nation's space program, the National Aeronautics and Space Council or NASA? Who is actually responsible for the success or failure of the pollution abatement efforts, the Council on Environmental Quality or the Environmental Protection Agency? And who is more likely to more effectively direct our country's response to the energy crisis, a department of the government or yet another council? Does an advisory committee or a cabinet department have a better chance of bringing rationality to research funding?

The need for effective leadership on scientific questions grows more urgent every day. I hope that the scientific community is not mislead into thinking that a committee "with the ear of the President" is a viable alternative to effective administrative control.

JOHN NORDIN
1805 Virginia Drive,
Manhattan, Kansas 66502

The current lack of a science and technology advisory capacity within the Executive Office of the President is a serious failing that should be remedied as President Ford sets up and organizes his Administration. Currently, the director of the National Science Foundation (NSF) serves as the President's science adviser. This arrangement creates a serious built-in conflict of interest for the NSF director. In this respect I can do no better than to quote from a recent report published by the National Academy of Sciences entitled *Science and Technology in Presidential Policy-making* (*1*). The report states:

> It is not merely that an Advisor outside the White House and the Executive Office has a different status than one who is within it. It is also the untenable position of one who is at the same time both applicant to the OMB [Office of Management and Budget] and counselor to it, who must at the same time battle for the prerogatives of science and technology and weigh those prerogatives against the demands of others who make competing claims on resources.

The ad hoc committee which wrote this report recommended that the President's science adviser be reconstituted in the form of a three-man council, preferably established by law, whose members would be chosen by the President with the advice and consent of the Senate and supported by a staff of sufficient size and appropriate expertise. The committee made several other suggestions concerning how the council should function, with which executive agencies it should have close working relationships, and the need for expert support from outside the Executive Office. These are sound proposals, worthy of serious consideration. In my own judgment, however, the essential element of success will rest in the choice of the individual advisers—they must be men and women who command universal respect among their professional peers, and in whom President Ford feels complete confidence.

We all know (sometimes to our sorrow when they are misused) of the enormous power and potential of modern science and technology. Within just the past year, the long-term problems of worldwide food and protein shortages, nonrenewable natural resources management, climate change, and energy conservation and resource development, have taken on frightening new dimensions. These have to be added to the more familiar list of problems which depend vitally on science and technology for their solution: national defense and international arms control, health care and its delivery, urban development, and many more. The list is awesome in its breadth and consequence. The search for wise solutions will require that the President of the United States have at his right hand, directly and intimately in his service, the best scientific and engineering advice he can find (*2*).

MORRIS K. UDALL
House of Representatives,
Congress of the United States,
Washington, D.C. 20515

References and Notes

1. Ad Hoc Committee on Science and Technology, *Science and Technology in Presidential Policy-making* (National Academy of Sciences, Washington, D.C., 1974).
2. This letter is adapted from a personal communication sent to President Ford on 22 August in which I set forth similar recommendations.

Drought Prediction

This summer's "drought" in the Great Plains has renewed interest in the possibilities of long-range climatic prediction. In 1938, C. G. Abbot, then director of the Smithsonian Institution's Astrophysical Observatory, published the following (*1*, p. 48).

> Records have been kept of the levels of the Great Lakes of North America regularly since 1860. In addition, partial records exist which fairly indicate the levels of some of the lakes since 1837. . . . [G]reat depressions [in lake levels] following years 1838, 1885, and 1929 were each associated with disastrous droughts in the Northwestern States and adjacent regions of Canada. There is much reason to expect a recurrence of such a drought beginning about 1975.