COMMENTS
by Readers

The conference of representatives of about a hundred American scientific societies in Washington on February 23 brought about a hopeful renewal of action toward the establishment of a National Science Foundation. However, let no one be deceived into thinking that the goal is actually within reach. The 80th Congress still needs to be convinced of the necessity to the public welfare of a measure which will contribute to its difficulties in making its promised economies and tax relief. It is extremely unlikely that a National Science Foundation Act will be passed by this Congress without very strong pressures from aroused voters "back home."

There is little doubt now that the great majority of American scientists will pull together for the enactment of the best bill that the Inter-Society Committee can get Congressional leaders to accept. There is much doubt that the American public is sufficiently aware of the implications of the problem to be able or willing to exert the necessary influence upon the Congress to get action.

It seems unnecessary to explain further to scientists why a National Science Foundation is needed. The present problem is that of getting the lay public interested, informed, and active. This is an assignment that calls for a quality and quantity of civic responsibility on the part of scientists which they have rarely been willing to assume. Certain small numbers of scientists have always accepted their responsibilities as citizens, especially well informed in certain areas of public importance, but there has been and still is prevalent among scientists a feeling of repugnance against dirtying their hands by exposure to public, and therefore political, problems. The consequence has been that most scientists are silent on public problems, even those directly affecting and affected by science.

American scientists must realize that forces of circumstance beyond their control have thrust them into the maelstrom of modern politics. It is useless to complain that it is unfortunate, because it is a *fait accompli*. Our government, and every other government in proportion to its means, is already pouring hundreds of millions of dollars annually into science laboratories, and has thus already, in plain words, taken them over to a very large degree. The question today is no longer one of whether scientists want government subsidy and control, but simply one of what kind of governmental subsidy and control they will get.

To sit back and be silent while the future of American democratic society is at stake is escapism of a very low order indeed. As a group of citizens, scientists have in general no more rights, privileges, or duties than any other group. But each group in society has its special duty to the Nation as a whole to educate other citizens about those aspects of its own field that concern the general interest. Frequently in American political life we have been treated to the spectacle of special interest groups conniving for their own self-betterment. It would, of course, be a tragedy if American scientists were to follow such a pattern. But the need for a National Science Foundation is not primarily related to the welfare of scientists or even of science. Only a public need can justify the creation of it. Scientists generally agree that an urgent public need exists. As citizens, they have, therefore, a special obligation to educate their nonscientist fellow citizens concerning the basic facts of the problem.

A National Science Foundation serving the interests of the people is unlikely to be set up unless scientists do recognize that fact and begin now in an organized way to inform the American voter. Modern science sets standards of living and wins or loses modern wars, and the advancement and control of it may well be the deciding factor in keeping the peace. Scientists as citizens can, therefore, without much doubt determine the fate of the western democratic world by their action or inaction in the days ahead. (MAURICE B. VISSCHER, *University of Minnesota.*)

Dr. Pilcher's reply (*Science*, February 7, p. 160) to my earlier comment on the establishment of an organized program for cancer research presents a number of admirable arguments for a *coordinated* program on a national scale. I do not believe that my note (*Science*, November 22) contained any matter which was opposed to such an idea. My opposition—and that only on a very mild scale—was to a rigidly *directed* program, rather than to a well-organized one. I believe that the distinction between these approaches is quite clear. Whereas the former is apt to be held down to a certain degree in respect to versatility, the second type of approach is something to be highly desired. Certainly, such a program should be pushed through by all means available.

In the matter of penicillin development, Dr. Pilcher very aptly points out that 11 years were lost between the discovery and the beginning of real work on the problem. I wonder how much of that was due to the fact that even as late as 1929 the real implications of possibilities of scientific research were not at all clear to those who controlled the purse strings? It is unquestionably true that unless the funds are forthcoming, such work is apt to stagnate. The impact of the A-bomb surely served a very loud notice on the world in this respect. (G. M. KOSOLAPOFF, *Monsanto Chemical Company, Dayton, Ohio.*)

Although there are many reasons for attending scientific meetings, the major one for most scientists remains that of hearing original work described in person by those who performed the experiments. In this connection, and in view of my belief that one of the worst aspects of many papers is the use of lantern slides, may I suggest that (a) the only material put on the screen be that which is to be specifically referred to during the talk; (b) long columns of figures, while necessary in a published paper, be omitted from the slides; (c) slides be made with the smallest possible amount of material on each one, so that the observer is conscious of having absorbed their content before the next slide is shown; and (d) a typewritten sheet of paper subsequently photographed to make a slide usually renders the image too small and should be avoided. (G. H. BENHAM, *Illinois Institute of Technology, Chicago.*)