

Message to Congress

A letter signed by the presidents of 27 technical societies was sent on March 19, 1986 to all members of the budget committees of both houses of the U.S. Congress (about 100 congressmen). The effort to write the letter on very short notice, and see that it reached the Congress before critical committee votes, was led by Robert L. Park of the American Physical Society's Washington, DC office. The text of the letter, intended to stress the likely consequences of cuts to support of basic research, is reprinted below.

The undersigned presidents of societies, whose members comprise the full spectrum of American science, engineering and mathematics, feel compelled to express our concern over the possible consequences of an inadequate investment in research. We are fully aware of the threat posed to the nation by rapidly growing deficits, and we have only the most profound respect for the willingness of Congress to assume the responsibility for reversing this alarming trend. No amount of spending reduction, however, can succeed in reducing the deficit without the revenues produced by a healthy economy. No element is more vital to maintaining that health than investment in fundamental research.

It is sometimes assumed that the practical exploitation of fundamental research results requires many years, and research projects can therefore be deferred without serious consequences. Experience tells us otherwise. Although the practical application of the fruits of basic research may in some instances require many years, they are more frequently exploited almost immediately, as with the discovery of x-rays and nuclear fission. However, when research projects are deferred for even short periods, the effects can and do persist far longer. In the absence of support, researchers must turn elsewhere, and once lost can only be reassembled with great difficulty. Moreover, the unique invention that has kept the United

States at the forefront of world science and technology is the integration of fundamental research with the training of new scientists and engineers. The deferral of research in a given area therefore has an immediate effect on the training of researchers in that field, thus compounding the problem of reestablishing the lost momentum.

Our economic competition will not be idle during the years that are lost. The new reality to which the United States must adjust is the development of a world economy in which emerging nations have become major producers of steel, automobiles, and consumer electronics for a world market. If we are to maintain or improve our standard of living, we are compelled to develop new products. In our impatience for practical results, however, we have allowed the division of resources between research and development to get dangerously out of balance. Regardless of the resources we commit, the pace of development must slacken in the absence of new science—and the budget for basic research in this country is today only about 13.6% of the federal budget for research and development.

We therefore urge Congress to sustain a healthy growth in fundamental research as an essential component of a deficit reduction plan. Any of us would be happy to meet with you and other members of the committee to discuss our concerns.

It is likely that the number of signatures to the letter would have been higher had time been available. This letter followed a direct appeal to members and friends of the American Physical Society (APS) by APS president Sidney D. Drell. It read in part: "I therefore urge that all members and friends of the American Physical Society undertake the responsibility of informing their elected representatives of the need to invest in scientific research—a need that is even greater in times of economic stress. Even as we send that message, we must demonstrate the unity of the scientific community. It would be unfortunate if we appear to be pleading only for those projects in which we have a personal stake. I recommend that in your contacts with members of Congress you stress the value of science rather than of particular projects. The priorities of science are best argued through the merit review process. The time is short. Committee action on the budget must be completed by April 1. We must by then have made clear that the science we love for its beauty is also the foundation of our material well-being."