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The Paradox of Science in the Universities

Educational institutions are facing severe, unsettling effects as a result of changing patterns in federal funding. Many have concluded that this state of affairs is due to mounting government expenditures arising principally from the Vietnam war. The war has brought us to this confrontation earlier than might have been expected otherwise. Nonetheless it must be recognized that the pace of growth of R and D support over the past 20 years has been far greater than the rate of increase in the gross national product, a situation which could not long endure. An inevitable decline in the rate of growth of funds for science has been accentuated by heavy competition from other claimants on the national budget.

A principal difficulty is that we have arrived at this state of affairs without a clear picture of the proper role or a sound strategy for science, especially for research in the universities. Confusion and what can be called the paradox of science are resulting. We view modern science as one of mankind's most remarkable intellectual attainments. We recognize its contributions to economic growth, national security, health, and general well-being. At the same time, we are bombarded with questions and statements such as: "Is science misshaping our world?" "There is danger in growing technology." "Science, the pursuit of truth, is in serious trouble."

This paradox and the present pattern of government funding of science have come about as a result of many different, and often independent, decisions, not as the intended result of coordinated planning. Mission-oriented agencies needed research support and wanted to maintain contacts with academic laboratories. Funds for education were justified on defense grounds. Fellowship programs were designed to help meet national shortages. We have benefited from a multiplicity of programs, but we have not established priorities or paid sufficient attention to the best means of achieving our primary goals.

It is no longer adequate to ask support for basic research largely on faith. In these troubled times, the less friendly members of Congress look at many types of basic research with suspicion. There is real danger of overreaction. Accordingly we must seek a clearer understanding of the role of basic research as it relates to our present and future priorities.

In making such an assessment one has little difficulty in recognizing that the acquisition of new knowledge is only one of the values of basic research. It also makes important contributions to teaching and especially to the development of trained scientific manpower. Here the needs are great indeed for burgeoning education programs; for public sector programs in health, transportation, environmental control, and many others; and for the maintenance of a strong and viable industrial community, without which there would be no support for any of these activities.

Does this not suggest a need for change in viewpoint as well as in emphasis on the role of research in our educational institutions? The oft-repeated question of recent months, "What is going to happen to my research program?" has not stirred the Congress and is addressed to only one of the values of basic science. On the other hand, it is doubtful if even the most hostile members of Congress would quarrel with the real purposes of education, question our enormous requirements for trained scientific manpower, or argue that research is not essential to the education of future scientists. Is the academic world thinking as well as telling the Congress the right things?—MILTON HARRIS, *Chairman of the Board of Directors, American Chemical Society*, and DAEL WOLFLE