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EDITORIAL

Science and the American Dream

The American dream is about opportunities, aspirations, and a better quality of life. Science has provided an important pathway to that dream, but whether this will continue to be true is an open question. During the Cold War, one primary goal of the American dream was to preserve our freedom while securing our safety from annihilation. Generous funding of science helped us reach that goal, but also provided many other benefits, such as improved health, safer work environments, and a higher standard of living for more people.

Today, circumstances are dramatically different and call for different kinds of leadership. Global communications and transportation have made the world a village, and global markets have made it an intensely competitive circle of highly productive participants. In our own country, neglected social problems have become festering national issues. The ballooning of the federal budget deficit in the 1980s, along with the economic drain from interest on the federal debt, have energized the electorate to demand greater accountability from all government investment, including that made in science and technology.

In this new environment, leadership from the science and engineering community requires a much more public and civic persona. More than ever, scientists and engineers need to be visible and vocal in the greater community. Today, science can be funded only if the taxpayers and their elected representatives are convinced of its value and contribution. This understanding and the explanations it requires are not well suited to crash efforts in times of budgetary crisis; they need to be routine parts of community discourse on the goals and values of the nation's current and future investments. Only then can we be assured that science and technology's contributions will be inherently valued in the current climate of accountability. Without this understanding among citizens and policy-makers, science and the American dream may be only a memory of the past.

I believe that the new leadership needed from those of us in the research community—particularly from individual scientists and engineers active in research—is to carry our understanding of science and its value into the lives of all Americans. Whether in classrooms, boardrooms, or clubrooms, this leadership can help propel America toward investments that are vital to a vibrant 21st-century American dream. Science and technology provide an open door to understanding of the mysteries of the universe, the human mind, the planet's climate, the potential of computer and communications technology, and the list goes on. The current push for spending cuts should not preclude possible healthy increases in R&D at some future time. Much of what happens will be determined by our engagement as individual scientists and engineers in a dialogue with the American electorate.

In essence, this nation is getting ready to run an experiment it has never done before—to see if we can reduce the federal investment in nondefense R&D by one-third (as the AAAS has estimated*) and still be a world leader in the 21st century. Nobody knows with certainty what the outcome will be, but it seems like a rather risky experiment. There is an old adage: "Good judgment comes from experience, and experience comes from bad judgment." In these times of budgetary train wrecks and government shutdowns, we are gaining lots of experience. Hopefully, it will lead to some good judgment.

This is not a call for short-term visibility but for long-term leadership—the kind that only the science and engineering community can deliver. We have a civic role to play for the nation. Science and technology are integral to the lives of all citizens; perhaps so integral that they are often taken for granted, like sunlight or rain. However, nobody understands better what it takes to build a strong science and technology presence than we who are scientists. If we thought about it, we would also realize how vulnerable that capacity can become in just a brief time. Leadership from the research community—a national stronghold of intellect, creativity, and dogged determination—is essential to ensuring that science and the American dream will be a promise for the future, not just a legacy of the past.

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*A. H. Teich, S. D. Nelson, B. B. Cassidy, K. Koizumi, *Interim Report on Congressional Appropriations for R&D in FY 1996* (AAAS, Washington, DC, 1995), p. 6.