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How to Keep Science Moving

RECENT ENTHUSIASM FOR SCIENCE IN THE UNITED STATES IS CAUSE FOR CELEBRATION, BUT it's also food for thought: What can scientists do to build on this new excitement and support? If the U.S. Congress and administration are to continue to advance science research and education and to rely on science in policy-making, then scientists must do much more to show how science works and how scientific research contributes to the nation.

President Obama has made strong statements affirming the value of science and his commitment to it. He has appointed outstanding scientists to leadership positions. And by Executive Order, he has reversed the federal ban on human embryonic stem cell research and directed the Office of Science and Technology Policy to propose methods to ensure that science policies are not twisted for political or ideological purposes. Moreover, the federal stimulus package provides a great infusion of funds for research grants, major equipment, and facilities through the major science funding agencies. While testifying at a recent House Appropriations hearing, I witnessed much goodwill toward science, scientists, and science educators in the bipartisan support for items in the stimulus package. Members of Congress on both sides of the aisle also seemed motivated to improve science education at all levels.

However, Congress needs continual, vigorous contact with science and scientists. Its members support science but also must deal with many other demands for their attention: federal budget deficits; immediate social, physical infrastructure, and military needs; rising unemployment; and turmoil in the industrial and financial sectors. Scientists must do more to demonstrate the value of investing in science. Their first duty, of course, is to do good research while adhering to high ethical standards of openness and honesty. Yet to energize the public and its elected representatives, scientists must talk more with them, both through scientific societies and as individual scientists, person to person. As one example, providing Congress with postdoctoral fellows from scientific and engineering societies has proved to be very valuable for science, Congress, and the fellows involved, opening new career paths and generating critical support for policy-makers from the scientific community.

Encounters at home are often more effective than those in Washington. Former Congressman John Porter, who did so much to double the budget of the U.S. National Institutes of Health, once told me that few of his congressional colleagues had much time for science, but that each and every one of them who had visited a science laboratory in his or her home district emerged as an enthusiast. Scientists should be recruiting deans, presidents, chancellors, alumni associations, and press officers to help them communicate with their local community and business leaders, as well as with members of Congress. They should create opportunities to invite the public into their laboratories, introduce them to their students, and give answers to questions such as: What do your results mean? What could they mean to the public? How does your research complement the work of others? How have you created good research experiences for students? Do you have any research connections with new or established businesses? These positive impacts of research are not always visible from a distance.

The reinvigorated research community must also engage the interests of new science students, so that U.S. science can maintain leadership in certain fields and be a strong, reliable partner in many critical international research efforts. That means becoming more deeply involved in improving science education at all levels, including working with pre-college students and their teachers and exposing many more students to real science and scientists. Such interactions can raise the career aspirations of young people.

Only if scientists do their part will there be the broad and deep public support that is so essential for science to flourish and for the public to engage with science. Scientists have great stories to tell, and many important people want to hear them. So let's get going and tell them.

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