

COLUMN

The State of Science Funding

Should Sacramento, Albany, and Providence be taking over for Uncle Sam?

IN 2006 THE BUDGET FOR THE NATIONAL INSTITUTES OF HEALTH WAS cut for the first time in 30 years. The rhetorical justification for cuts to areas such as cancer research is Orwellian: “Targeted” shifts in funding must be made to protect the people from imminent threats. So, after four years in the doldrums, smaller NIH coffers will be redistributed. Those who do not work on bioterrorism will be debited to pay those who do.



Welcome to “science federalism,” the transfer of decisions and funding of science from Uncle Sam to Arnold Schwarzenegger.

What does a fractional decrease in federal research money really mean for Joe Scientist? Plenty. Success rates for grants, says the American Association for the Advancement of Science, could dip more than 10% from 31% in 2001.

The shifts in funding are driven not only by economics but also by the most intense antiscience politics in decades. The same activists who would later expend more energy on an attempt to “save” a woman in persistent vegetative state than on full funding for Medicaid devoted their full attention to a ban on stem cell research. The federal debate about stem cell research has turned federal debates about funding science into a circus.

Politicians have devoted more floor and airtime to developmental biology in the past five years than was spent on science from the time the space race began until five years ago. Scientists have watched, shell-shocked, as polls, press conferences, symposia, a blizzard of journal articles, and even the invention of new kinds of “morally acceptable” cells have all fallen flat before a Congress that not only wants to kill stem cell research, but also to wound its parent, the NIH. A debate about “therapeutic cloning” led seamlessly to the sophistic claim that legislators, not scientific peers, are the best judges of national scientific priorities.

So scientists and Congressional constituents are turning to the states. Citizens who kept their states from accepting others’ trash in their landfill once chanted, “not in my backyard.” In 2004, dissatisfied with national policy about stem cell research, Californians marched on Sacramento to ask the cash-strapped state for \$3 billion for stem cell research.

More importantly, some states are debating large programs to fund innovative science in general. For example, New York’s more than half-

billion dollar investment in nanotechnology transformed the state overnight into a competitor not only with other states but also with the US government itself. Michigan put tens of millions of dollars from the proceeds of tobacco lawsuits into giant glass temples of science that rise above Ann Arbor, like new casinos in Nevada. Even tiny Rhode Island is building a fund to attract and retain scientists from a variety of disciplines.

In short, all politics is local. Soon, much more of science may be as well. Scientists find themselves looking over their shoulders to see whether their work will please governors who have veto power over big chunks of funding for their universities. Newly empowered, state-based ethics-review boards have real muscle, too. Funding for biomedical science has shifted with the political winds.

Welcome to “science federalism,” the transfer of decisions and even funding for science from Uncle Sam to Arnold Schwarzenegger. It’s as if the space race had been run not between the United States and Russia but between New Jersey and California. California has yet to award a dime of its \$3 billion stem cell initiative, but a dozen other states have referenda pending on stem cell research.

Legislators in Austin and Providence are no strangers to funding their university systems, but now they will have to run institutes of health. States with the foresight to pursue new scientific initiatives may rescue our best scientists and their best projects. Only a handful of states, however, have well developed state-based research programs. In other states, confusion in funding and regulatory authority could lead to a South Korea in South Dakota.

A new guide to becoming a scientist might include a map that highlights the good states for different kinds of research. But be careful what you wish for: The gold rush going west, young scientist, may very well lead to a mine not as laden with gold, or as safe, as it appears on the map. ■

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