BUDGET RESOLUTION

Senate Panel Backs Large NIH Increase

In the first clear indication of how Congress views President Clinton's 1999 request, a Senate panel last week called for a whopping 11% increase for the National Institutes of Health (NIH) and expressed support for basic research at a few other agencies.

The resolution, backed by Senator Pete Domenici (R–NM) and approved by the Senate Budget Committee, offers an outline of how appropriators should allocate their funding and marks a first step in a tortuous process leading to agency budgets this fall. Even as the Senate panel was debating the resolution, however, the White House was trying to win over the scientific community in the rancorous debate over the use of tobacco money to fund some of its proposed increases in R&D. There were also signs of growing unease about NIH's favored budget status.

Although the NIH number, $15.1 billion, is $300 million above Clinton's request for 1999, advocates for biomedical research are lobbying for more. Enlisting actors Mary Tyler Moore and Christopher Reeve for a Capitol Hill rally on 19 March, they urged legislators to double the NIH budget over the next 5 years. The second sure winner in the Senate Budget Committee's resolution is the Department of Energy's (DOE's) stockpile stewardship program, which would receive the $4.5 billion requested by the Administration. It's a Domenici favorite, given the presence of two national labs in his state.

The outlook for other R&D programs under the plan is far less certain. Domenici's resolution "assumes an increase" for the National Science Foundation and "continues strong funding for basic research activities of the federal government, especially those activities within NSF and DOE." It does back the $157 million requested by DOE to begin construction of the Neutron Spallation Source at Oak Ridge National Laboratory in Tennessee, but the senator has warned that it must compete with politically powerful water projects. The resolution also dismisses new spending for technology to reduce U.S. greenhouse emissions. Republicans argue that such spending is tied to Senate approval of the international agreement reached in Kyoto, Japan, last December, which is unlikely this year. But Administration officials insist the increases are warranted even if the treaty is stalled.

The Senate bill also reveals the deep split among lawmakers over how to fund any increases for research, including those for NIH. Although Domenici and some Republicans prefer to pay for those boosts out of the existing pot for domestic discretionary programs, the White House, Democrats, and some Republicans look for help from additional revenues from the tobacco industry. Clinton's science adviser, Jack Gibbons, met with about 100 scientists and science lobbyists last week at the White House to urge them to back the Administration's R&D request, which would draw heavily on tobacco revenues. "This injects us into the middle of a highly politicized debate," complains one university lobbyist. Although the community wants to avoid taking sides in the debate, in private some officials express concern over the Administration's strategy. "I'd prefer to fund [the increases] through discretionary funding at the end of year rather than tobacco," says another lobbyist. "Tobacco is a much riskier bet."

Meanwhile, NIH's favored status in Congress is causing resentment among those seeking increases for other research programs. Democrats on the House Science Committee urged the House Budget Committee to assign "some small portion" of NIH's proposed increases for coming years to other research agencies. "We are concerned that the aggressive funding ramp for NIH will lead to inefficiencies in the management of those funds," the lawmakers say, adding that starving other disciplines could also could hinder progress in biomedical research. Although the science committee has no jurisdiction over biomedical spending, staffers say the Democratic warning reflects growing resentment within the R&D community over NIH's success.

The House is not likely to approve its own budget resolution until May, and then the two bodies must reconcile any differences. Still, Domenici's plan highlights the precarious fate of some parts of the federal R&D effort. "The message is that NIH is protected like no one else," says Michael Davey of the Congressional Research Service. "Everyone else may be in trouble."

–Andrew Lawler

HISTORY OF SCIENCE

Darwin's House: A Monument to a Theory

LONDON—After more than 100 years of varying levels of care and neglect, the house and grounds where Charles Darwin spent the last 40 years of his life—and where he drew together his crucial theoretical work on evolution—have gone through an evolutionary change themselves. Down House, in the secluded village of Downe in Kent, has been the subject of a $4 million conservation program designed to provide an insight into Darwin's mingling of science and domestic life. The restored house opens to the public next month with a new exhibition on the upper floor explaining Darwin's earlier life and the significance of his theory of natural selection, which shook the foundations of 19th century society and transformed biological thinking. The project is managed by English Heritage, which looks after the country's key monuments and buildings. "It's a first for us, because what's primarily important at Down is the occupant and not the building. We've got to try to convey the life of a scientist," says curator Julius Bryant.

Darwin and his family moved to Down House from central London in 1842. Darwin sought a quiet country house to continue his work not too far from London, where he had already won considerable acclaim for his biological and geological studies following his worldwide tour on board the *Beagle*. Although only 20 kilometers from the city center, Down House was then, and remains today, a remarkably remote and tranquil spot, situated in the deep folds of the chalk hills of north Kent and accessible only by narrow, winding lanes. Darwin was not overly enthusiastic about the building at first. "House ugly, looks neither old nor new," Darwin wrote to a friend. But he came to relish his life deep in the countryside.

Down House has had a checkered history since Darwin's day. Following his death in 1882, it remained in the family until 1917, when it was sold and turned into a school. It was then bought in 1927 by a wealthy surgeon as a gift to the nation and opened 2 years later as a museum, with many of its original contents,

DAVID MANSELL

Where evolution evolved. Darwin's study, where he worked on the theory of natural selection.

particularly those from Darwin's study, donated by his family. In 1993, the management of the house was taken over by London's Natural History Museum, but a survey quickly revealed a serious state of disrepair. In 1995, the museum mounted a campaign to raise $5 million and won a grant of $1 million from the Wellcome Trust, the biomedical research charity, as well as funds from the National Lottery. This secured the building and 15 hectares of land under the protection of English Heritage.

English Heritage has restored all the main ground floor rooms to reflect how they looked during Darwin's life. His study contains his library, microscope, and many other personal artifacts. Also on display is his well-worn chair, whose wooden legs Darwin sawed off and replaced with iron bed legs on wheels so he could move while seated. Alongside is the board Darwin used to place over the armrests of his chair to hold the manuscript of *The Origin of Species* as he wrote. Curtained off in the corner is Darwin's "sick bay," where he retreated during his many bouts of illness.

Around the house are reminders of the endless experiments Darwin carried out with enthusiastic help from his children. In the drawing room, two plant pots sit on top of the piano. Darwin wanted to know which notes caused earthworms to rise to the surface, and captives in the pots were subjected to a family assault by piano and bassoon in an effort to find out. Says Bryant, "We hope to inspire people about science and show them how with Darwin it fitted in with family life."

The garden underlines this point. The remains of one experiment, called the "wormstone," can still be seen. Seeking constantly to find evidence of gradual change to bolster his evolutionary ideas, Darwin and his son Horace sank two metal rods 2.5 meters through the clay and into the underlying chalk. They placed a flat stone with a hole in it over the ends of the rods in an effort to measure sinking over time due to the activity of worms below. "Darwin knew that he would be dead before any result could be obtained, and it was 10 years after his death before Horace found that the stones, measured against the rods anchored well below worm activity, had begun to sink," says Randell Keynes, one of Darwin's descendants.

Visitors can also walk Darwin's "thinking path," called the sand walk, through woods at the edge of the garden. "Darwin took this walk every day, and during it he would think over the mounting implications of his work," says Nick Bidden, the garden curator appointed by English Heritage to restore the grounds to their state in Darwin's time.

Although Down House was remote, Darwin benefited from Britain's new national postal service. This allowed him to keep in touch efficiently by mail with a vast range of fellow scientists and correspondents. "It was the World Wide Web of its day. Without it Darwin could never have carried out what he did at Down House," says Bryant.

–Nigel Williams

PUBLIC UNDERSTANDING

Report Deplores Science-Media Gap

A communications gap between scientists and journalists is preventing the public from learning about scientific discoveries and their impact on society, according to a recent survey of 1400 professionals in both fields. The results of the survey are part of a new report* that recommends narrowing the gap by training scientists to be more media-savvy and by giving reporters better access to databases and to scientific spokespersons.

"This report examines an attitude of ignorance by journalists, and arrogance by scientists, that stand in the way of public understanding of science and the need to bring those worlds closer together," says John Seigenthaler, a former newspaper executive and founder of the First Amendment Center at Vanderbilt University in Nashville, Tennessee, which funded the study. The survey is the sixth in an annual series on the relationship between journalism and other sectors such as the military, religion, and the economy. "Of all the studies, the distance is greatest here," says Seigenthaler. "There is a clear alienation between the two worlds."

The survey was carried out by television journalist Jim Hartz, a former co-host of *The Today Show*, and former NASA space scientist and astronaut Rick Chappell, now at Vanderbilt. "Our motivation [in writing the report] is not to lobby for science, but to help find ways to tell the story about what is happening in U.S. science," says Chappell, who directs a new undergraduate program in science writing that features an equal mix of courses in science and communications.

The survey provides strong evidence of the current strained relationship between the two professions. Some 72% of scientists want the public to know about their work, but 41% are afraid of being embarrassed by what news stories might report. Among journalists, 39% rarely or never seek independent verification for a science story they are writing, and only 15% find scientists to be very accessible as sources. To bridge the gap, Chappell proposes that scientists write a clear, nontechnical summary of each paper that includes a ranking of its importance, and that journalists ask scientists to review their stories before they are published.

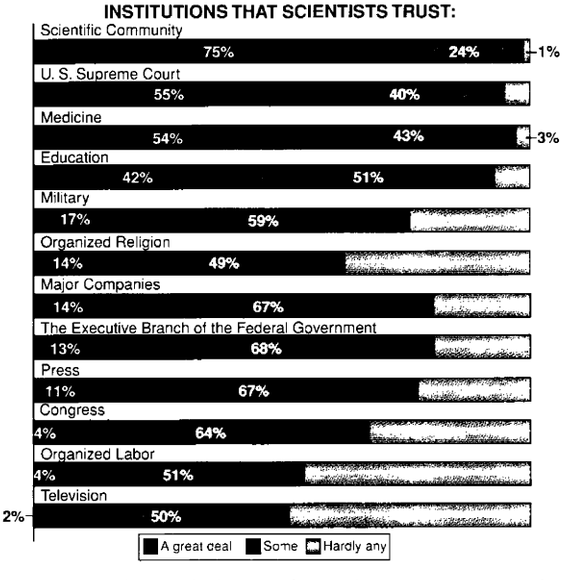
The study reported a 34% response rate among scientists, and the typical respondent was a white, male physical scientist over the age of 50 doing basic research. The typical journalist was a white male editor, 35 to 49, working for a newspaper.

–Jeffrey Mervis

PERCENTAGE OF SCIENTISTS WHO THINK* THAT:	
The U.S. public is gullible [and] believes in miracle cures or easy solutions.	82%
The media do not understand statistics well enough to explain new findings.	82%
The public doesn't understand the importance of federal funding for research.	80%
Research produces contradictory findings that confuse the public.	78%
The media are more interested in sensationalism than scientific truth.	76%
The U.S. public is cynical about the benefits of science and technology.	39%
Scientists who agree to be interviewed are just seeking publicity.	13%

* Percentages include those who "strongly" or "somewhat" agree.

SOURCE: *WORLDS APART*, VANDERBILT UNIVERSITY, 1998



Big challenge. Scientists don't trust the media to convey their message to a confused public, new survey finds.

* *Worlds Apart: How the Distance Between Science and Journalism Threatens America's Future*, 1998.