

ELECTIONS RING IN NEWTONIAN AGE, WITH FATE OF R&D IN QUESTION

The historic political turn that took place on 8 November has been characterized by pundits, politicians and the press in geophysical terms, such as seismic upheaval, earthquake, tectonic shift, and *tsunami*. In its opening line on the election, *Congressional Quarterly* magazine, for instance, claimed to have witnessed an “electoral meteorite that slammed into the American landscape.” Thus, after 40 years in the penumbra of Democrats in Congress, Republicans have emerged in control of the House and Senate, and, if all goes according to the strategy set forth by House Republican leaders in their “Contract with America” and statements made since, they will attempt to steer public policies and Federal budgets in more conservative and less costly directions. What this will mean in the 104th Congress for science, technology and education is still in question, but some trends seem clear enough.

“The message sent by House Republicans is that there will be more pain than pleasure for the research community,” says a House staffer on the Budget Committee. “But it shouldn’t be forgotten that even if Democrats were running the show during the next two years, civilian R&D would suffer from the crunch of tighter budget caps. Call it a ‘reality check’ or ‘high noon,’ reducing the deficit and shrinking the government are going to cause a whole lot of shivers out there.”

It is now certain that President Clinton's budget proposals for science, technology and almost everything else will be declared "dead on arrival" when they reach Capitol Hill later this month, just as were most of the Reagan and Bush budget requests sent to Congresses dominated by Democrats. Indeed, leaders of the incoming majority have publicly declared that some of the Clinton Administration's heavyweight "investments" are targeted for extinction. High on the hit list are programs advancing industrial policy, such as the Commerce Department's Advanced Technology Program, run by the National Institute of Standards and Tech-



nology, and the Energy Department's technology transfer collaborations involving national labs, academic institutions and private companies.

In fact the House's new Republican leaders propose to introduce a rescission bill to invalidate funds appropriated to such programs in the fiscal 1995 budget by the Democrat-dominated 103rd Congress. "Al Gore wants to reinvent government, while we want to reduce it," says Robert Livingston, the Louisiana Republican who is now chairman of the House Appropriations Committee. And in a rambling address to his giddy colleagues on 5 December, the day he was elected House Speaker, Representative Newt Gingrich of Georgia spoke repeatedly about the "power of the purse," fiscal discipline and budget reduction as the best ways to challenge the White House and its programs. "We don't have to de-authorize [programs]," he said. "We simply have not to pay for them. Under our Constitution . . . the budget is the transformational document. When you change the budget, you've really changed government. And until you change the budget, you've just talked about changing government."

Democrats say voters did not repudiate the President's policies and programs on science and technology; Republicans argue that science was not an issue in the midterm election

but that government funding of Clinton's industrial policy amounts to "picking winners and losers" and, as such, favors one industry or company over others. "We oppose that on principle," says Gingrich.

While the Republican's "Contract with America" lists ten bills to be debated and decided in Congress during the first 100 days of the new session, none of the items involves science and technology, except perhaps number six, which speaks of strengthening the country's defense. Arizona Republican Jon Kyl, a member of the House Armed Services Committee who was elected in November to the Senate seat held by retiring Democrat Dennis DeConcini, favors resurrecting Reagan's "Star Wars" ballistic missile defense. Both Kyl and Gingrich call for the US to back out of the Anti-Ballistic Missile Treaty of 1972. "I would rather rely on engineers than diplomats for security," Gingrich recently told *Aviation Week & Space Technology*. "With the rise of Iran, North Korea, Iraq, Syria and China," he said, "we should be rapidly developing a capacity to defeat a limited missile threat [say] of 10 or 15 or 20 missiles. In the absence of that kind of a defense, the scale of horror that an outlaw regime could rain on the United States if one missile got through is unimaginable."

Accompanying the contract was a list of "illustrative" budget cuts that originated with the Republican staff of the House Budget Committee, which had attempted in the last three years to pare down or rip out dozens of domestic programs. The list includes items that had been defeated in Congress, such as amendments to cut back planned budget increases for the National Science Foundation, to impose a spending freeze on the National Oceanic and Atmospheric Administration, to abolish the US Geological Survey and the National Biological Survey, to lower by several percentage points the rate that universities would be able to charge the government to recover overhead expenses on Federal research grants and to reduce the Administration's investment package—which covers increases for research programs ranging from global warming mitigation and high-performance supercomputers to biomedicine and environmental management—by about \$4 billion.

The election results—with 8 new Republican members of the Senate, where the party has a 3-vote majority, and 73 new Republicans in the House, giving them a 13-vote ascendancy—suggest that most if not all of the contract agenda will pass the House. But Senate Republicans have never embraced the contract formally and are likely to view the budget committee's list more skeptically than do House members. What's more, as the Republicans themselves skillfully demonstrated in the past two years, the opposition party has plenty of opportunities to block legislation—and for the next two years Democrats have one of their own in the White House with the power to veto bills. Staffers from both parties say Congress is most likely to place its mark on the agencies through the budget process, but if House Republicans go too far in trying to levy draconian cuts on research or environmental programs, the Senate will most likely be a moderating force.

There, Senator Mark Hatfield, the moderate Oregon Republican who has been a staunch friend of higher education in his own state and elsewhere, takes over the Appropriations Committee, which had been headed by Robert Byrd, the West Virginia Democrat. Hatfield ward off attempts to slash funds from the National Institutes of Health when he last occupied the chair of that committee, in the early 1980s. Senator Christopher Bond, a Republican of Missouri, where the presence of McDonnell Douglas Corporation makes him a strong NASA supporter, replaces Senator Barbara Mikulski, the Maryland Democrat, to lead the Appropria-

tions subcommittee that handles NASA, NSF and the Environmental Protection Agency. Senator Larry Pressler, a moderate Republican of South Dakota, takes over the Commerce, Science and Transportation Committee from Ernest ("Fritz") Hollings, the South Carolina Democrat; Pressler is virtually certain to bring some order into the turbulent debate over telecommunications bills that failed to get anywhere last year.

At the Senate Energy and Natural Resources Committee, Alaska Republican Frank Murkowski takes the chair that's been occupied for eight years by J. Bennett Johnston, a Louisiana Democrat. Murkowski is sure to maintain Johnston's support for the oil and gas industries and to back DOE's environmental management programs. Some at DOE prefer Murkowski over Johnston. "Murkowski is known to have a good relationship with [Energy Secretary Hazel] O'Leary, and he gets along better with the department than Johnston does. In the last few years Johnston fought us at every turn," an agency official says. Johnston had steadfastly refused to pass authorization measures through the Energy and Natural Resources Committee, which he also chaired. Hatfield is expected to replace Johnston as chair of the Appropriations subcommittee on energy.

A winner at the Pentagon

If the big losers in R&D are Commerce's ATP and DOE's Cooperative Research and Development Agreements, more commonly known as CRADAs, the big winner is almost certain to be the Pentagon. The chairman of the Senate Armed Services Committee is Strom Thurmond, the South Carolina Republican who also has been a Democrat and a Dixiecrat in his 92 years. The same position in the House is now held by Floyd D. Spence. Like Thurmond, Spence is a South Carolinian with strong ties to the military and a firm belief in the virtues of ballistic missile defense.

Unlike DOD, NASA is on Gingrich's agenda for reinvention. A space enthusiast whose district includes a large Lockheed aerospace plant, Gingrich nevertheless wants NASA to return to the style and structure of its pre-Apollo Moon-landing days. He argues that the agency's function should be limited to basic R&D and that satellite communication and space voyages should be left to what he calls the "entrepreneurial environment" of the aerospace industry.

Gingrich endorses the space station, even though he knows that with flat or declining budgets NASA can barely eke out the remaining \$20 billion to complete it. "It means I'm

going to try to figure out a way to fund NASA for a lot less money," Gingrich says.

But if prospects for Federally funded technology are bleak, the outlook for basic science under Republicans is fairly bright. "Nobody should forget that it was in the Reagan and Bush years that science spending went up dramatically despite decreases in many other programs," says Representative Robert Walker, the Pennsylvania Republican who is now chairman of the House Science, Space and Technology Committee after failing in his bid for majority whip. As the senior Republican on the House Science Committee, Walker succeeds George E. Brown Jr., the California Democrat who was frequently called Congress's "Mr Science."

Even before he formally took his post on 4 January, Gingrich assumed more power than any speaker in recent memory by picking committee chairmen. Some historians are comparing him to such commanding Republican speakers of the late 19th and early 20th centuries as Thomas Brackett Reed and Joseph Cannon. For the time at least, Gingrich dominates the House. He skipped over Joseph M. McDade of Pennsylvania, the senior minority member of the House Appropriations Committee, who still faces a 1992 Federal indictment on corruption charges, to pick a loyalist friend, Bob Livingston, the fifth ranking member of the committee, to be its new chairman. Gingrich bumped Carlos J. Moorhead of California, the low-key senior Republican on the Energy and Commerce Committee, in favor of Thomas J. Bliley Jr of Virginia.

Bliley replaces John D. Dingell, the Michigan Democrat who became notorious for his aggressive investigations. Under Dingell, the House energy committee had assumed authority over legislation on oceanography, banking, telecommunications, Medicare, railroads and many other fields. In recent years 40% of the laws passed in Congress were drafted and reported out of Dingell's committee. Its hearings on the Superconducting Super Collider left a sour opinion in Congress on the costly project. With Dingell now in the minority, House Republicans intend to pare the committee's scope, shift all energy research to the science committee and change the energy panel's title to the Commerce Committee. The science committee, which was to be renamed the Technology and Competitiveness Committee, will be known, thanks to the intervention of Chairman Walker, as simply the Science Committee.

—IRWIN GOODWIN