

Question of Government Leadership in Science Policy Is Answered, Surprisingly, by Wisconsin Congressman

Just six months into his chairmanship of the House Committee on Science, F. James Sensenbrenner Jr., a ten-term Wisconsin Republican, is leading his committee into uncharted territory. By tradition, the committee is not considered one of the prominent players in the House. It usually passes a few bills that authorize the direction and funding for nondefense and nonmedical agencies under its jurisdiction—notably, NASA, the National Science Foundation, the Environmental Protection Agency, the Department of Energy's civilian research programs, NOAA and the National Institute of Standards and Technology. But in recent years, the committee's authorization bills—usually passed by the full House late in the session, after the House Appropriations Committee has done its job of making allocations for various programs—still haven't gotten very far in the Senate. In fact, the Senate custom is to fail to pass any authorizing legislation for the science agencies. So, since the Science Committee's authorization bills are not enacted into law, its influence has waned. Sensenbrenner, who has been on the science committee for 16 years, is sensitive to the benign neglect of the Senate and the erosion of his committee's power and prestige. Upon becoming chairman in January, he vowed to change the way the committee is positioned in the House and perceived in the science community.

In the 104th Congress, when Republicans took control of the House after 40 years in the minority, the Science Committee was notorious as an arena for partisan mud fights. At the start of the 105th Congress last January, Sensenbrenner and George E. Brown Jr of California, a former chairman of the committee and now its senior Democrat, began lunching together at nearby restaurants, where they discussed how to avoid rancor and to raise the committee's reputation.

They even began an amicable collaboration: They achieved consensus for a roughly 3% increase for fiscal 1998 in the budgets for the R&D agencies under the committee's jurisdiction. Like Brown, who is considered by scientists to be Congress's stalwart defender of R&D budgets, Sensenbrenner prides himself as an advocate of basic

research, and with Brown's blessing proposed a 7.2% increase for NSF research programs.

They also jointly sponsored an amendment to a bill authorizing NASA spending in 1998 and 1999. The amendment, which the committee approved unanimously, bars NASA from transferring funds to Russia or its contractors for work on a service module for the International Space Station. Russia had pledged to pay for the module, which was to be completed well ahead of the launch date in December 1998. But when module construction fell behind by eight months and then eleven months and NASA officials asked for additional money to pay for the delay, Sensenbrenner objected. He argued that NASA and the White House were "in denial" about Russia's ability to meet its obligation. The amendment required NASA to certify to Congress each month whether Russia is on its revised trajectory to provide the promised hardware. "The program is falling apart around us because of the Russians," Sensenbrenner harrumphed at a committee hearing. He also warned NASA Administrator Dan Goldin that unless the agency puts the \$30 billion station on a fixed schedule, Congress may decide the project isn't worth the cost.

Running like gangbusters

After Russia's Mir space station began experiencing serious mishaps that endangered the lives of its inhabitants, including an American astronaut, Sensenbrenner was furious. He and Brown drew up another amendment forbidding US astronauts from long-term stays on Mir unless NASA certifies that it meets US safety standards.

Sensenbrenner "runs the committee like gangbusters," says Representative Sherwood Boehlert, a New York Republican and a member of the Science Committee for his eight terms in the House. "Jim's a stickler for rules and ethics. I'm not surprised whenever Jim raises uncomfortable questions at hearings. That's just his style."

The Science Committee was the last committee in the House to organize in the current session, because of disagreements among Congressional leaders over how many seats it would have. But it was the first to the floor with its four authorization bills. "Jim's

very determined," Boehlert says.

If NASA bore the brunt of Sensenbrenner's anger, the Energy Department came in for scorn on its proposed agreement on US participation in the Large Hadron Collider being built at CERN in a tunnel under Switzerland's border with France. The committee denied DOE the \$35 million it sought in the 1998 budget to help build the LHC until Energy Secretary Federico Peña provides a report on the impact the funding will have "on the operations and viability" of the US high-energy and nuclear physics programs. Sensenbrenner and Representative Joe Barton, the Texas Republican whose district was the site of the partially built Superconducting Super Collider, which Congress terminated in 1993, both found fault with a draft agreement that had been initialed by DOE and NSF officials in February. They argued for guarantees that US scientists will have full access to the LHC and for a formal management role in the project (see PHYSICS TODAY, May, page 48). Sensenbrenner insisted that several provisos should be added to the agreement, including that if the project has cost overruns, the US will not be required to spend more than the predetermined contribution—\$450 million by DOE and \$81 million by NSF. DOE and NSF officials agreed to the changes—no doubt because Sensenbrenner had made the smart moves in the chess game Congress plays at budget time.

In May, Sensenbrenner, accompanied by his 15-year-old son, Jimmy, went to Geneva at his own expense to learn firsthand about the LHC and sound out its director, Chris Llewellyn Smith, on the changes he wanted to make on the agreement. The visit proved that Sensenbrenner's combination of bluntness and tenacity can work as well as diplomatic negotiations. Llewellyn Smith found that out after he told Sensenbrenner privately in Washington last year that US researchers might lose access to the LHC if the US failed to help build the facility. "I told him Congress does not take kindly to such threats," says Sensenbrenner. State Department staffers who went to CERN with Sensenbrenner were awed by his tactics. On 20 June, Llewellyn Smith presented the revised agreement to the CERN Council, which unani-

mously approved the changes and reconfirmed US participation.

Barton, to be sure, was enthusiastic about Sensenbrenner's approach. "He was quick off the mark," said Barton. "He's given the committee new respect and credibility." In a phone call and letter to Sensenbrenner, Peña stated that the changes had "greatly strengthened" the US position on the LHC.

The difference between the committee under Sensenbrenner and his predecessor, Representative Robert Walker, the Pennsylvania Republican who headed the committee the past two years and left Congress last year, is palpable. Where Walker was confrontational, Sensenbrenner is conciliatory. "He's firm but fair," says Brown. "We don't get to participate in important policy decisions. But unlike the Walker days, the Democrats and their staff are respected and we're kept informed about what the Republicans are doing. We've put the rancor aside."

President Clinton's science adviser, John H. Gibbons, admires Sensenbrenner for letting him in on committee matters. "Jim has a lot more substantive detail than most people recognize," says Gibbons. "What you hear from him at a committee hearing is no different from what he says in your private office. He's candid and honest. And, as we've seen in the past few months, he's also an activist."

Sensenbrenner, who graduated with a BA in political science from Stanford University in 1965, recalls that he received his only D grade in biology. He got a law degree from the University of Wisconsin in 1968 and practiced law for less than a year before getting a taste of Washington as a staff assistant to a Wisconsin congressman.

Having observed members of Congress conceal their wealth, Sensenbrenner reveals his in a detailed financial disclosure statement that is published annually in the *Congressional Record*. His own wealth doesn't stop him from penny-pinching. He drives a 1991 Buick Century. He also is frugal with taxpayers' money, backing his conservative rhetoric with votes. Two watchdog groups, the Council for Citizens Against Government Waste and the National Taxpayers Union Foundation, award him top marks for voting against spending more often than any other House member.

Though born in Chicago, he is devoted to Wisconsin. His great-grandfather was chairman of Wisconsin's Kimberly-Clark Corp, maker of Kleenex and other paper products and the inventor of a sanitary napkin, which was named Kotex.

When Sensenbrenner came to Washington in 1979 after a decade in

the Wisconsin legislature, Republican leaders put him on the Judiciary Committee and Science Committee—each for little or no reason. Though educated as a lawyer, he had little experience before the bar. This district, to the north and west of Milwaukee, lacks any major research university, aerospace contractors or government labs. Instead, the district has many dairy farms, though these are being replaced by high-income suburbs. The economy of the district is based on skilled manufacturing, such as Kohler plumbing fixtures, Allen-Edmonds men's shoes and West Bend kitchen appliances.

In the Republican takeover of the House in 1994, Sensenbrenner became chairman of the space and aeronautics subcommittee, on which he was a staunch but skeptical supporter of NASA's activities, particularly the expensive International Space Station. His staff couldn't resist Sensenbrenner's devotion to space and marked his 54th birthday on 14 June with a cartoon that he hung in his office reception room. It shows Sensenbrenner and his Dalmatian dog, Dumbo, on a space walk, each wearing an astronaut's helmet labeled NASA.

Following is an interview with Sensenbrenner by Irwin Goodwin, our Washington senior editor, conducted in the lawmaker's cluttered office in the Rayburn Building:

Q It is sometimes said in Washington that support of science in Congress is a mile wide and an inch deep. Do you agree with that aphorism?

A We'll find out in the next month or so when the appropriations bills come up for consideration.

Q There seems to be a science alliance being forged in Congress—a rather new phenomenon. In the Senate, Bill Frist [a heart transplant surgeon before his election from Tennessee] and Pete Domenici [of New Mexico] among Republicans and Joe Lieberman [of Connecticut] and Jay Rockefeller [of West Virginia] representing the Democrats have established a science and technology caucus. In the House, there is an amity about science matters that hasn't been the case since the Soviet *Sputnik* accelerated the support and, inevitably, the growth of scientific research and engineering. But the House leaders have decided no caucus is necessary because the Science Committee is a caucus of sorts. The cold war and its space race obviously benefited science and technology in Congress. But without the cold war to challenge the nation, why do you think science is apparently gaining support among the legislators?

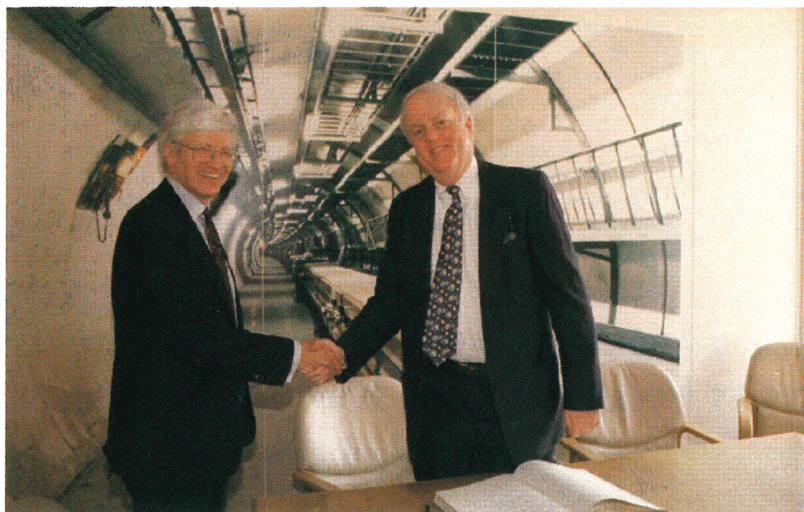
A I can't speak about what's going on in the Senate, but what I can say is that when I knew I would become

chairman of the House Science Committee, I decided as the first order of business to try to build trust across the aisle. I met very quietly on several occasions with George Brown, and Todd Schultz, who was my chief of staff designate, met with his Democratic counterpart to see what we could do to have committee debates over legitimate differences of policy rather than over real or perceived procedural slights. I think that I've accomplished that. The reason there is a science consensus in the House is that there is more bipartisanship about science than there has been in the past. All of the committee's accomplishments in the first six months of this session were built on mutual trust.

Q Your actions in that time, with the support of Congressman Brown and other committee members, have been astonishing—the pressure on Russia to meet its obligations for the space station and on the Energy Department to negotiate a more rigorous agreement with CERN on the Large Hadron Collider, the passage of four authorization bills and so on. Some members of Congress and of the news media, along with some members of the scientific community and the general public, may be thinking that you are setting government policies for science. Is this because R&D leadership is lacking in the White House?

A The White House has been sending mixed messages on science. Mr. Gore has his agenda. Mr. Gibbons has done a very admirable job, but I don't think he has the backup from the executive agencies that he needs to advance his work. That may be why he has not been as assertive as he was in his early years as director of OSTP [the Office of Science and Technology Policy]. How much all of this is being driven by OMB [the Office of Management and Budget] wanting to balance the budget, I really don't know. We were the first committee, by far, to complete our authorization bills, and the bills that we passed should have received strong support in the White House. The executive branch was basically not a player in the authorization process. I don't think the Administration has an overall science policy, and I regret that, because I would like to work in sync to try to maximize support for science in the government.

Q House Speaker [Newt] Gingrich and you have assigned Congressman Vern Ehlers [of Michigan, vice chairman of the Science Committee] to cobble together a framework for a science policy the House can endorse. Is Ehlers going to draft a post-cold war science policy—something we haven't had since Vannevar Bush's venerable



AFTER ARM WRESTLING, A HANDSHAKE: Congressman James Sensenbrenner (right) visits CERN's director, Chris Llewellyn Smith to restructure a partnership agreement.

Science—The Endless Frontier?

A Vern's job is basically threefold: One is to try to tie the various loose ends together so that we can form a coordinated science policy. The second is to reach out to the scientific community. Congressman Ehlers is a physicist by profession, so he can speak to science groups with more credibility than almost all of the rest of us. The third task is to put together a program to increase interest and perhaps funding for more science and math education, particularly at the elementary and secondary levels. Vern is probably the most effective vice chairman of any committee or subcommittee in the House, and with his background and knowledge, we expect him to complete his tasks very well.

Q The other day, Congressman Ehlers spoke to the Science Coalition, a group of leaders and lobbyists representing universities, societies and other organizations, and left the impression that he would produce a document that will bring Vannevar Bush's report up to date. That's a daunting assignment since he has no staff and no task force to help him. Others have tried to do this with varying degrees of success or failure. And now the National Science Board is embarking on something of the sort.

A Vern's job is not to prepare a broad-based document or report. His job is to come up with recommendations to me as chairman of the Science Committee. I will then review his recommendations with a view of introducing policy changes through legislation.

Q You have almost single-handedly been able to force DOE and CERN to forge a tougher, more exacting agreement for the LHC collaboration. Why

did you find it necessary to get involved in what is traditionally a matter for the executive agencies?

A Because the first deal that DOE negotiated was a bad deal. It didn't protect American scientists in their access to CERN in exchange for the huge amount of money we would be sending over there. It didn't prevent the CERN leadership from lobbying ferociously against high-energy physics projects in the United States, as Carlo Rubbia did during his time as director general of CERN. And it would not protect the United States against cost overruns, which would probably reduce the capabilities of the machine. The reason that I interjected myself in the negotiations is that without the changes that were made, the US contribution to CERN would have been voted down, because Congress would have recognized that it was a bad deal. With the changes, I think the chances for funding the project are significantly improved. Now, I must say that I think it is disappointing that the chairman of a Congressional authorizing committee had to personally interject himself because the DOE did such a lousy job. But what I did, I think, was in the national interest, and I know that many of the people who were very upset with me when I fenced the money in the DOE authorization bill are now looking at the changes made in the agreement with a very different view of Congress intruding in the process.

Q Do you remain angry that Europe did not come to the rescue of the Superconducting Super Collider in its hour of need?

A Members of Congress went to Europe repeatedly to gain support for the SSC, but were turned away.

Carlo Rubbia usually got to Europe's leaders ahead of our guys and urged them not to spend a dime on the SSC, so that when the Americans found that their game was up, they would learn that the LHC was the only game to join. My colleagues who were involved haven't forgotten that fiasco. My trip to CERN was made to convey the concerns of Congress.

Q The shuttle diplomacy that you're engaged in also took you to Brookhaven National Laboratory to convey your concerns. Did you meet with the leaders there?

A I met with a broadly based group of people. I met with the management of DOE, AUI [Associated Universities Inc], local government officials, the neighbors, representatives of employee organizations, both unionized and nonunionized organizations—all in the course of about four hours. Brookhaven has been very badly managed. No matter how impressive its research has been or is likely to be in the future, it wasn't mindful of safety for workers at the site or for residents outside its gates. And its public relations outside the lab were nonexistent. The neighborhood hates the lab, even though it employs 3000 people in a region where a major defense plant, Grumman [which once had Long Island's largest workforce], shrank in size [from 25 000 in 1986 to 3500 today]. Brookhaven's image has got to change. I support [Energy] Secretary [Federico] Peña's firing of AUI [the organization that had managed the lab for DOE]. I would hope that there will be vigorous competition in rebidding the management contract to operate Brookhaven. The fact remains that the lab has got to do a lot more outreach on the kinds of research done there, emphasizing the civilian scientific research that benefits society. I told the news media when I was at the lab that there is no mood in Congress to close Brookhaven, even though there are a lot of people in the neighborhood who would like to turn the place into a monument or a museum. I also told the press that the scrutiny and restructuring taking place at the lab will make Brookhaven a stronger institution than it has ever been.

Q Have your trips to Russia relating to the international space station put more pressure on Russia or on NASA to complete the project faster and cheaper?

A On the most recent trip I went to Arkonichev [where the service module for the space station is being built], the Russian Space Agency and the Russian White House. In this country, I've been to NASA and OSTP. And in every place, I've made known my concerns and those of my colleagues. The Rus-

sians finally came up with this year's money for their part of the service module. I don't know if that was the result of my being on their backs or on the backs of our guys. My fear is that every time they're bumping up against a deadline, we will have these problems, because the financial situation in Russia isn't going to improve until

the Russians get a functional tax collection system. So far, neither the money nor the deadlines have lived up to the promises made by President Yeltsin last April. The thing is that of the \$2 billion the [Clinton] Administration claimed we saved by bringing the Russians into the space station partnership, we've already lost \$1 billion

in additional American payments because Russia has not performed on time. Russia is in the consortium because they're in the critical path. I think we're going to pay for them to be in the critical path in dribs and drabs from now until the time the useful life of the international space station runs out 20 years hence.

Peña Breaks Ground at Livermore Laser-Fusion Facility But Construction Awaits Federal Court Ruling on Project

Despite a Federal court action in Washington that would prevent construction of the \$1.2 billion National Ignition Facility (NIF) at Lawrence Livermore National Laboratory, Energy Secretary Federico Peña hoisted a shovelful of soil on 29 May to symbolize the start of the project. NIF is the centerpiece of the Department of Energy's (DOE) science-based stockpile stewardship program, which was conceived to make sure that the US nuclear weapons arsenal remains safe, secure and reliable, without underground testing (see *PHYSICS TODAY*, March, page 63). Under the Comprehensive Test Ban Treaty (CTBT), signed by President Clinton at the United Nations building in December but not yet sent to the Senate for ratification, developing new nukes, remanufacturing existing ones and exploding any nuclear weapons would be unlawful.

At the groundbreaking at the site for NIF, Peña declared: "I am absolutely convinced that [the facility] is required to allow us to enter into the Comprehensive Test Ban Treaty without losing our nuclear deterrent."

NIF is a large project. Construction plans call for it to rise seven stories at its highest point and to stretch the length of two football fields. Though excavation for the facility's storm drains began on 1 July, the foundation was not to be started until the end of July. Actual construction has been put on hold until the US District Court for the District of Columbia rules on a preliminary injunction to stop work on NIF. The legal challenge has been posed by the Natural Resources Defense Council and 28 other environmental groups. They contend that DOE had not considered alternatives to the laser-fusion facility and that the project itself would result in environmental and health hazards in northern California.

Volatile court hearings on the injunction were held on two afternoons in June before Federal Judge Stanley Sporkin. DOE decided to delay con-

struction until 27 June, when Sporkin first said he would decide the case. Then, when the judge did not issue his ruling on that date, Peña told Livermore officials to go ahead.

In his remarks to some 2000 lab employees and their guests, Peña also recognized the 142 protesters who had been invited to attend the event. He told the crowd that he had met with some of NIF's opponents that morning, and they had argued that the facility could be used to design and develop new weapons. Though the protesters argued that the facility would increase the risk of nuclear proliferation and should not be built, Peña recalled that the discussion was peaceful and productive. "There was common ground," he said, "that we all support the goal of nonproliferation." In fact, said Peña, aiming his remark at the project's opponents, "if you support the Compre-

hensive Test Ban Treaty, then you should support NIF." To support his position, he cited statements about the project by three prominent physicists: Hans Bethe of Cornell University (see *PHYSICS TODAY*, July, page 47), Henry Kendall of MIT and Herbert York of the University of California, San Diego, who was Livermore's first director.

It turns out that 34 of the protesters were arrested, according to *Inside Energy*, an authoritative newsletter, when they attempted to block an entry gate of the lab and to distribute "citations" stating that Livermore is "out of compliance" with last year's ruling by the World Court in The Hague that nuclear weapons are illegal. Before Peña spoke, the protesters launched a large helium-filled balloon that read "NIF: Nuclear Insanity Forever." Then, after Peña, Livermore director Bruce Tarter, and Representative Ellen Tauscher, a



ENERGETICALLY FOR NIF: Energy Secretary Federico Peña flanked by Representative Ellen Tauscher and Lawrence Livermore's director, Bruce Tarter, dig up the NIF site.

BRYAN QUINTARD/LAWRENCE LIVERMORE