France Sets Out to Democratize Science

By law, junior scientists, lab assistants, and technicians will be included in decision-making

Paris. French science is being democratized. This at least is the official message from Paris, where government officials are currently trying to put into practice the Mitterrand administration's commitment to "open up" science policy to greater participation from those inside and outside the scientific community. Many of the government's proposed reforms are, however, stirring up controversy.

Some of the new developments are similar to those in other Western countries over the past decade. Two weeks ago, for example, the French National Assembly voted by a large majority to establish a small secretariat to help politicians understand the increasing number of complex scientific and technological issues that arise in legislative debates. Many explicitly acknowledge that the aim is to establish a modest version of the U.S. Congress' Office of Technology Assessment.

At the other end of the political hierarchy, the government has given its sanction—albeit somewhat reluctantly—to the creation of a number of experimental "boutiques des sciences," or science shops. These are intended to provide direct access to the scientific community for members of the public seeking answers to or advice about problems with a scientific or technical component. The concept is based on similar experiments carried out by universities in Holland since the mid-1970's.

At the center of the various efforts to democratize science has been the administrative reforms of the Centre National de la Recherche Scientifique (CNRS), the French equivalent of the National Science Foundation, which has 24,000 employees and an annual budget of 6 billion francs ($850 million).

One of the principal goals of a reorganization of CNRS, announced at the beginning of September by Jean-Pierre Chevènement, the dynamic and ambitious minister of research and industry, has been to increase the involvement of all ranks in the research community—including laboratory assistants and technicians—in decisions about how science should be run.

Ideologically, the main impetus for this wave of democratization has been the socialist government's declared intention of breaking the grip of strict hierarchical administrative traditions in all areas of French life. Such traditions, in the case of science, are claimed to have "marginalized" most scientists from important administrative decisions about their work and its applications, undermined creativity and innovation in research by encouraging intellectual "sclerosis," and created a gulf between the scientific community and the rest of society.

> Scientists will be barred from heading a research team for more than three consecutive 4-year terms

More pragmatically, the government is keen to generate as much political support as it can for its efforts to use research and high-technology development as the spearhead of future economic growth. Providing scientists with a greater opportunity to participate in broad policy debates has undoubtedly blunted the edge of potential criticism—for example, of efforts to link university research more closely to its industrial applications—even if it is still unclear how far that participation is likely to affect the eventual outcome of these debates.

Central to the government's strategy was a move that turned out to be a political masterstroke. This was a national colloquium, held last January in Paris at the Palais des Congrès, whose participants included more than 3000 representatives from the scientific community, labor unions, industry, and government.

Both the colloquium itself, which was attended by President François Mitterrand and 30 government ministers, and the various preparatory regional "assises," which generated more than 200,000 pages of documents, became vehicles for a vast national debate about the importance of science in French society. Many scientists felt that, even if all their proposals were not adopted, at least the government—and the French people—appeared to be listening to them with respect for the first time in almost two decades.

Equally important, however, the colloquium ensured the scientific community's endorsement of the new government's research policies, in particular its commitment to provide a substantial increase in the national research budget and to develop new ways of strengthening links between basic research and the industrial sector (*Science*, 14 May 1982, p. 712). Up to then, many had been tempted to dismiss the government's promises as little more than political rhetoric.

"Even though the government made this commitment soon after coming into power, the colloquium was necessary to catalyze a broad base of support for the idea that research should become a national priority," says Pierre Papon, a physicist who was one of the colloquium's chief organizers and a close adviser to Chevènement. He has recently been appointed director-general of CNRS.

The concrete outcome of all these debates was a bill, passed into law by the French government in July, which commits the government to increase support for research by 17.8 percent for the next 3 years until a figure of 2.5 percent of the gross national product is reached in 1985. In addition to this somewhat optimistic target, the law specifically requires greater democracy within the scientific community.

In line with these requirements, the ministry of research and technology has announced that scientific staff, research assistants, and technicians in government facilities will all be able to elect representatives to laboratory councils set up to advise laboratory directors about a range of policy issues.

Similarly, membership of the various sections and sectoral committees of the Comité National de la Recherche Scientifique, the parliament of French science which advises CNRS on scientific priorities, the allocation of research funds, and the evaluation of research, will be

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enlarged to accommodate more elected representatives, including technicians and research administrators, disenfranchised by the previous administration. There will also be elected staff representation on the CNRS's 21-member administrative council.

Some of the government's proposed reforms have, however, met with resistance from parts of the scientific community. Two weeks ago, leading researchers at the National Institute for Health and Medical Research (INSERM) went public with fears that a new rule that scientists cannot remain head of a research team or unit for more than three consecutive 4-year terms, could lead to a "purge" of leading members of the research community, particularly if applied retroactively.

Chevènement moved quickly to head off the dissent, announcing that there would be a 3-year grace period before the rule is applied to those who have already spent more than 12 years at the head of research units, and adding that those at the end of their mandate would be free to take over the leadership of a different research group.

However, he insisted that the government intends to apply the new rule—established in principle by the research law passed by the National Assembly in July—as a way of encouraging a greater turnover of individuals and ideas within the research community. He also suggested that the public outcry seemed motivated by individuals concerned about losing their power and influence in the academic community, claiming that talk of a purge had been orchestrated by the "reactionary right."

At the other end of the political spectrum, Chevènement has also made it clear that his concept of democratization is a long way from the form of workers' control that some of the trade unions have been demanding. In particular, he has firmly rejected demands that only union members be eligible for election to the comité national. Chevènement's rebuff has fanned skepticism in some unions about the proposed reforms, even though the unions have in general supported his efforts to challenge the power of what they consider to be a conservative hierarchy in the scientific community, known as the "mandarins" of science. The INSERM branch of the powerful Confédération Française Démocratique du Travail, for example, issued a statement describing the government's decision to limit the terms of research leaders as a "technocratic measure which does not take into account the necessary democratization of all sectors of research." The union predicted that "the hierarchical system, at all its levels, is likely to remain just as oppressive as before."

Replacing the mandarins

Research minister Jean-Pierre Chevènement (left) with CNRS president Claude Frejacques and CNRS director-general Pierre Papon.

Despite such political differences, the scope of acceptable democratic intervention in science remains potentially broad. The new technology assessment office, for example, is intended to bring outside advice to bear on technological issues that come before the National Assembly. The idea, which was personally promoted by Mitterrand and is seen by some as an effort to soften the aggressive pro-technology statements of his government, was raised in the National Assembly several years ago but was firmly rejected by the administration of the time. Like its American counterpart, the office will be the responsibility of a committee made up of ten deputies from the National Assembly and six senators, from all political parties. It will be advised by a scientific committee and a consultative committee made up of representatives from the unions, public organizations, and industry. It is intended to work primarily by commissioning outside studies.

CNRS, itself, as one of its new missions, is increasing its efforts to make science more popular and better understood by the public—a dimension of the government's desire to broaden support for its decision to significantly increase research funding in what is frequently described as a large public gamble on the future. The plans to support the science shops are likely to be more controversial. They are intended to be more than shopwindows for science. Many see them as mechanisms for assisting individuals and groups who may wish to challenge technological decisions taken by industrial or political leaders. In Lyons, for example, officially endorsed efforts to establish a science shop are being coordinated with a group of trade unions concerned about the impact of automation and robotics on the local vehicle production industry.

Understandably, the scientific community is a little nervous about the implications of the government's decision to "let a hundred flowers bloom" under the banner of democratization. As one supporter of the science shops points out, even though officials may not like the idea, the public commitments of political leaders at the national colloquium make it very difficult for ministries to reject funding requests out of hand.

Everybody expects that the experience of "opening up" science will encounter some bumpy patches. Whether any substantial change will actually take place in the way the scientific community runs its affairs remains to be seen. "It's absolutely unclear how things will go, and it may take a year or two before we know; those at the top of the administration seem to have been converted, but the question is whether they will be able to move the people in the middle-level positions," says Jean-Marc Levy-Leblond, professor of physics at the Université de Nice.

Meanwhile, Chevènement has clearly indicated—apparently to the relief of a scientific community wary of his strong political base on the left of the socialist party—that his formula for democratizing science is of the reformist rather than the revolutionary variety. "With capitalists, you have to play the capitalist," he said in a recent newspaper interview, shortly after authorizing increased financial aid for private companies that cooperate with government research laboratories.—DAVID DICKSON