were held, involving 25,000 people. When the 1982 research budget was announced, the payoff was evident: A whopping 25% increase in civil science spending.

In contrast, Fillon has been forced by the shaky state of France's economy to order a round of belt tightening. "We had been told that research funds were increasing," says Audier. "And then the lab directors received their budgets for 1994, with cuts of 10% or more. That's when they started signing [the manifesto] in droves." Indeed, many scientists believe that Fillon's intention to stress industrially relevant work while budgets are shrinking would damage fundamental science. "Basic research is in a really bad position at the present time," says Chambon.

Many scientists also saw a threat to research in the discussion report's suggestions for dealing with the serious problem of France's bulging university classes. The report envisioned campus-based researchers taking on greater teaching loads, transferring some full-time researchers employed by agencies like CNRS and INSERM to the universities, and even creating a class of professors who would not do research. The worry, says immunologist Claude de Preval of the Paul Sabatier University in Toulouse, is that the government wants to solve the problems of France's universities on the cheap by diverting scientists from research rather than funding new teaching posts.

The scientific community was already on the offensive even before the preliminary report was issued in January. Last year, some conservative ministers floated the idea of breaking CNRS and INSERM up into a number of more specialized agencies. "That surprised a lot of people," says Anne-Marie Duprat, director of the CNRS Center for Developmental Biology in Toulouse. Although this suggestion had been rejected by the time the discussion report appeared, the desire to defend CNRS and INSERM—neither of which was represented in the working group that prepared the preliminary report—was a major factor in the groundswell of opinion that culminated in the rebel manifesto.

The sentiments expressed in the manifesto were, however, no real surprise to Fillon. The discussions during the six colloquia held earlier this year had already made it clear that many of the proposals outlined in the January document would not fly. Thus the final report, which appeared just before the 18 April Paris meeting and will be the basis for a parliamentary debate in June on the future of French research, is even more vague than the January version. It contains few firm proposals on linking government researchers with industry beyond encouraging more collaborations and retreats into a series of voluntary suggestions to promote closer relations between the research agencies and the universities—such as exchanges of personnel and expanding the existing network of "mixed" research units run jointly by a university and a government agency.

All this leaves many in the French research community wondering just where Fillon will go from here, and senior science policy makers have few clues as to what his next move will be. "We now have to wait until the debate in the parliament," says INSERM director-general Philippe Lazar. But the 1200 supporters of the rebel manifesto have their own idea: They want the government to propose a law that would guarantee a steady growth in research funding, similar to a 1982 law passed by the socialists after the consultations of the early 1980s, which mandated minimum annual increases in the civil research budget of 17.8% over the subsequent 3 years. But given France's current economic problems and the solid conservative majority in Parliament, this proposal is unlikely to fly. And it seems that these same economic pressures may now be Fillon's best hope of driving researchers into closer interaction with industry, as lab chiefs scout for alternative funding sources. "[I]n our lab," says Strasbourg's Chambon, "we used to have 80 to 90% of our expenses covered by CNRS and INSERM. Now 50% of our funding comes from industry."

Fillon, meanwhile, is trying to put the best face on things. After the publication of the rebel manifesto, he issued a response saying that "I almost want to say that I could sign the text myself. For me, it is the contribution of 1200 researchers to my national consultation." That contribution, however, has been to scuttle Fillon's plans for a thorough revamping of French science policy. "The consultation was a rather remarkable exercise," concludes Lille's Capron. "I don't know of any [other] country in the world that would take the risk of opening such a widely critical discussion of its own system." After the bruising experience of the past few weeks, Fillon must wish it was a risk he had not taken.

–Michael Balter

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GENES AND BEHAVIOR

Violence Study Hits a Nerve in Germany

BONN, GERMANY—Geneticist Hans-Hilger Ropers is having second thoughts about accepting a position he has been offered as one of three directors at the Max Planck Institute for Molecular Genetics in Berlin. The reason: Ropers was the target of a ferocious attack in an article in the science pages of the German daily *Frankfurter Allgemeine Zeitung* recently because of a paper he published in *Science* (22 October 1993, p. 578) linking abnormal criminal behavior in a Dutch family with a particular genetic mutation. The article, written by Benno Müller-Hill, professor of genetics at the University of Cologne, rhetorically linked Ropers' research with that of Eugen Fischer and Otmar von Verschuer, scientists who 50 years ago actively supported the Nazi regime with their teachings on racial hygiene and eugenics.

Ropers, who describes Müller-Hill's attack as "unbearable, defamatory, and infamous," is concerned that it reflects the hostile climate for genetics research in Germany. The German public has always been uncomfortable about research on human genetics, partly because of the experimentation on prisoners and gypsies under the Third Reich. Germany's community of human geneticists is very small, and procedures such as embryo research and gene therapy are almost nonexistent. The Max Planck Institute for Molecular Genetics, which has traditionally concentrated on bacteria, recently decided to branch out into human genetics, however. Ropers, a German national currently at the University of Nijmegen in the Netherlands, and Hans Lehrach of London's Imperial Cancer Research Fund, were offered posts as two of the Institute's directors.

The research that attracted Müller-Hill's criticism connected the inherited lack of one particular enzyme to "a behavioral phenotype that includes disturbed regulation of impulsive aggression." While Müller-Hill does not dispute the findings of Ropers' team, he complained that the research held no benefits for carriers of the disease and wrote that the implications of the work were not properly considered. "Will all the carriers of these mutations have to count on being sent to closed institutions?" he wrote. "Will children be aborted[?]...[W]ill scientists look for the frequency of such mutations in ethnic groups?" Müller-Hill, who has written a book on the eugenics of the Third Reich, says his main concern is the description of crime as a phenotype. "Criminal behavior can have many roots. If you use it as a phenotype, you open a Pandora's box," he says. Ropers counters that the genetic roots of behavior are well proven, and it would be immoral to simply ignore them.

Ropers has strong support from colleagues such as Eberhard Passarge, head of Germany's Society of Human Genetics. "He is an international authority and there is nothing but support amongst the scientific community," says Thomas Trautner, the Berlin institute's managing director.

–Michael Simm

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