

EUROPE

An Uncertain Start for a Brain Decade

BRUSSELS—U.S. neuroscientists may question whether President Bush's declaration of the 1990s as the Decade of the Brain has had a real impact on federal spending for neuroscience research, but the initiative can claim one definite achievement: It has sired a litter of copycat efforts in Europe. Italy, the Netherlands, Sweden, and Switzerland have all either already launched their own neurodecades, or are now doing so. And now those efforts have transcended the level of nation-states with the inauguration last week of the European Community's (EC) own "European Decade of Brain Research."

Like its U.S. counterpart, Europe's brain decade has questions of funding hanging over its head. In fact, many European scientists are braced for disappointment in the next few weeks, when the European Commission (the EC's executive) formally submits its request for the EC's next 5-year research budget, due to run from 1994. But that isn't the only thing that bothers European neuroscientists. Some are angry that the main professional organization for Europe's neuroscientists wasn't consulted by the task force of brain research experts that drew up the program. Worse, many neurobiologists are upset by what they see as a too-heavy emphasis on psychiatry and drug development and a failure to promote basic neuroscience.

Even at the launch ceremony in the Palais des Academies in Brussels, the program's future seemed clouded. Although the task force has proposed an annual budget of \$130 million, one commission science official confided that the figure is unrealistic. And while commission vice president Filippo Pandolfi enthusiastically endorsed the brain decade concept, Paolo Fasella, the commission's research director-general, was less effusive when quizzed about the details. Citing "subsidiarity"—the principle that restricts the EC to funding only those programs that can't be achieved at the national level—Fasella told *Science* that he'd have to look carefully at the proposal to see which parts should be supported by the EC and which should be left to its member states.

Most of the national efforts—which are being administered independently of the pan-European initiative—face similar uncertainty over funds. Italy, for instance, launched its brain decade in 1990. But Nobel laureate Rita Levi Montalcini of Rome's Institute of Neurobiology says that little has been done since then to make the program a reality. In Sweden, neuroscientists hope to bankroll their program through private donations. It's unrealistic to expect the Swedish Medical Research Council to spend more on neuroscience, explains neurobiologist Annica Dahlström of the University of Göteborg,

since the agency already devotes 30% of its budget to the discipline.

But at least the national programs emphasize basic science, say the critics of the European decade. In their eyes the EC effort leans too far toward psychiatry and the drug industry and away from badly needed fundamental research into how the brain functions. Those concerns stem partly from the composition of the task force that has designed the program—it is dominated by neuropsychiatrists. And the outline proposal unveiled by the task force last week seems to confirm these fears, calling for more than two-thirds of the budget to be spent on projects linking academic researchers with drug company labs.

Task force head Julien Mendlewicz of the Free University of Brussels says a strong industry component is essential to make the proposal "politically attractive," given that the EC is mostly interested in supporting applied research. But many researchers say that a coordinated effort is needed most in basic neuroscience, where European efforts lack the critical mass to compete with the United States (*Science*, 24 April, p.468). "Both the psychiatrists and the pharmaceutical industry...pull in directions that aren't

actually conducive to the development of neuroscience in Europe," says learning and memory researcher Steven Rose of Britain's Open University, voicing a concern held even by some members of the task force itself. "I think there's a lack of basic science [in the proposal for the European decade], compared to what's done in the United States," says one task force member, who asked not to be identified.

Further unsettling some basic researchers, the task force failed to consult formally with the European Neuroscience Association (ENA)—the only organization that can claim to speak for basic neurobiologists throughout Europe. But the French government has tried to heal the rift, in August appointing incoming ENA president Constantino Sotelo to the task force, which is still working on the fine print of the brain decade plan. Sotelo, a developmental neurobiologist from the Salpêtrière Hospital in Paris, promises that "basic neuroscience will be well represented" in the final plan.

Europe's neurobiologists will want to hold him to his word. Even Mendlewicz, who supports the thrust toward psychiatry and drug development, warned at last week's launch ceremony that if the EC fails to back the initiative, all Europe can expect from the next 10 years is a brain drain of its best young neuroscientists to the United States.

—Peter Aldhous

UK SCIENCE

Royal Society Suggests Remedies

Citation impact and morale are falling. The once plentiful Nobel Prizes are now few and far between. All the evidence points to a decline in British science. But what exactly is the problem? That's the question the elite Royal Society set out to answer in January 1991, when its president, Cambridge University mathematician Michael Atiyah, launched a wide-ranging inquiry into UK science policy. After consulting with more than 300 people, the society has now reached a diagnosis. And in a report on "The Future of the Science Base," released 1 October, it suggests some remedies.

For those scientists who wanted the Royal Society to add its influential voice to the many demanding a large increase in public research spending, the report will be a disappointment. While it does note that UK government science funding was squeezed over the past decade, it doesn't say just how much should be spent on science. "We have to take a more statesman-like view," Atiyah explains. Nor does the Royal Society call for sharp changes in existing funding mechanisms. Instead, the report blames the state of UK academic science largely on poor career structure, and that's where many of its suggestions are focused.

One major problem, the report notes, is that permanent faculty posts were cut back over the 1980s while the number of young scientists employed on short-term contracts continued to grow—making university research a blind alley career option for many young scientists and destroying morale. Indeed, there were 6000 more university research scientists and engineers on temporary contracts in 1990-91 than in 1977-78. "We have too many people who've been there too long on short-term contracts," says Atiyah. Among the society's solutions: Granting agencies should identify rising stars after a couple of postdocs and reward them with 5-year fellowships, rather than making them struggle along on 2-year grants until they land a faculty position. Also, the report says that employers should rapidly pick out the ones who aren't faculty material and give them training to ease the transfer out of academia—instead of simply discarding them after they reach their thirties.

Meanwhile, many of Britain's established scientists are kept away from the bench by heavy teaching and administrative duties. To solve that problem, and to help poorly paid Ph.D. students, the Royal Society borrows a

U.S. idea: Pay doctoral students to take over some of those duties. The benefits, says the society, would outweigh the drawback of students' taking longer to complete their Ph.D.s than the current 3 years.

But to those who would like to see Britain copy U.S. funding mechanisms as well, the Royal Society is discouraging. Under Britain's "dual support" system, the indirect costs of research are funded through block grants to the universities that are only loosely linked to grants awarded by the research councils. To improve accountability, the government has recently taken steps to tie this money more closely to universities' grant income—and some advocate moving further toward the U.S. practice, where indirect costs are met through overheads awarded according to the value of government grants won by each university. But the Royal Society comes down in favor of the present system—which it says provides flexibility, as the block grants are also used to support speculative projects overlooked by granting agencies. If there's a problem, the society says, it's that block grants haven't kept pace with research council spending—forcing universities to pare back direct research support to meet their indirect costs.

The report takes a similarly conservative line when it comes to the UK government's science agencies. Although William Waldegrave, who was appointed cabinet minister for science in April, is now preparing a new science policy—and is reportedly open to radical suggestions such as merging some of the research councils to improve coordination—the Royal Society doesn't call for a major reorganization.

One small change the Royal Society does support, however, is giving the newly formed Office of Science and Technology (OST) some added responsibilities. OST already oversees the research councils' spending, but the society wants it to have an extra few tens of million dollars a year to support universities conducting European Community (EC) research projects. EC grants don't include funds for overhead, and universities complain that they currently lose money by taking them on. The society also wants OST to pay the UK subscription to international organizations like CERN from a budget protected against varying currency exchange rates. These dues are now mostly paid by the research councils—and if the pound plummets in value, they can be forced to cut other projects to keep up the payments.

Similar suggestions have been made by the lobby group Save British Science, but the Royal Society's stamp of approval may improve their chances of appearing in Waldegrave's policy document, due next summer. Don't expect the Royal Society to play the role of lobbyist, however, Atiyah warns: "Other people can fight it out."

—Peter Aldhous

SOVIET BREAKUP

Cut Off From the Mainstream, Ukrainian Science Drifts

KIEV—Ever since the Soviet Union collapsed last year, a constant stream of senior Western scientists and government officials has passed through Moscow to assess what the West can do to help researchers struggling to make a living. That's all very welcome to researchers in Russia. But viewed from Kiev, capital of Ukraine, there's a bitter side to this outpouring of assistance: Ukraine is the second largest of the states that made up the former Soviet Union and it boasted a large and active community of scientists, but researchers here now protest that no one—including their former scientific colleagues in Moscow—is taking any notice of their plight.

"Criminal negligence," is how Oleg Krishtal, a membrane biologist at the Institute of Physiology in Kiev and one of the most cited scientists of the former Soviet Union, describes the way Ukraine has been forgotten. Without help, he says, his country is on the way to becoming an "intellectual desert."

Strong words, but a 2-week trip by *Science* across Ukraine reveals that Krishtal is not exaggerating. Ukraine has economic problems just as deep as those in Russia and a political old guard that is proving much more skillful at self-preservation than were the conservatives in Moscow. And, on top of its traditional isolation from the West, Ukraine is now more cut off from Moscow than it used to be. That puts Ukrainian researchers even further out of the mainstream of scientific ideas.

Located to the south of Russia and bordering on Poland, Czechoslovakia, Hungary, and Romania, Ukraine is almost as populous as the United States west of the Rockies and about the size of California and Oregon together. Economic difficulties are obvious to the visitor: The cities are crowded and dirty. Much of the countryside, in which two-thirds of the population lives, is missing the most rudimentary trappings of modern life, including paved roads, sewers, and piped water. Food is in plentiful supply—Ukraine was the "breadbasket of the Soviet Union"—but anything from outside Ukraine is almost impossible to obtain.

Amid these problems, science has sunk to the bottom of the political agenda. "Now is not the time for science. It will have to wait," says physicist Ihor Yukhnovsky, who as head of

the Permanent Parliamentary Committee on Education and Science is Ukraine's most senior scientific official. Sky-rocketing prices have left Ukraine's basic researchers with little time but to look for the necessities of everyday life. Salaries are "just enough to keep people from starving," says Krishtal. Most basic researchers are among the 40,000

scientific employees of the Ukrainian Academy of Sciences. Even though the Ukrainian government still provides the academy with a budget equivalent to about 85% of what it used to receive, explains the academy vice president, physi-

cist Victor Baryakhtar, prices have risen more than 400% since independence last August.

The sudden severance of links with Moscow has brought special problems for Ukraine. Moscow, it turns out, was a lynchpin for everything science in Ukraine needed and still needs: access to journals, contacts with the West, and—especially—money. Nearly half the overall science budget in Ukraine was provided by Soviet military contracts, an amount in the millions of dollars that Ukraine is wholly unable to make up out of its own budget. Moscow also used to provide hard currency so that Ukrainian scientists could purchase both Western equipment and journals. But hard currency has disappeared.

While Russia used to help, it now competes for foreign resources, according to some Ukrainian scientists, monopolizing contacts between the former Soviet Union and the West. According to one of Ukraine's best-known scientists, director Platon Kostyuk of the Academy Institute of Physiology, Moscow was offered the chance to send 60 young scientists from the former Soviet Union to the meeting of the International Physiology Society in Edinburgh next year. "So we prepared a list of 20 people from Ukraine who should attend," says Kostyuk with detectable bitterness. "But when we called Moscow, they told us we could only send one or two people."

Researchers who have spent time abroad argue forcibly that reform is urgently needed to help save Ukrainian science. Alexander Demchenko, a biochemist who works at the Academy of Sciences Institute of Biochemistry in Kiev, worked at Florida State University and publishes in Western journals. His complaint, gradually becoming more and

"The little money that is available is distributed with no regard for scientific merit."
—Alexander Demchenko