HUNGARY

Spirited Academy Faces Painful Cuts, Consolidation

BUDAPEST—Hungary's 172-year-old Academy of Sciences has fared better than most in Europe's former Eastern bloc. It has survived empires, wars, and military occupation, as well as this decade's transition from communism to democracy, while keeping control of its institutes and their purse strings. But as Hungary comes to terms with the harsh reality of a free-market democracy, this independently minded academy is now moving toward a painful consolidation forced by lean budgets and changes in research orientation. Hungary's research institutes "are in such a financial state that something has to be done," says Norbert Kroo, director of the academy's Solid State Physics Institute in Budapest and a recent president of the European Physical Society.

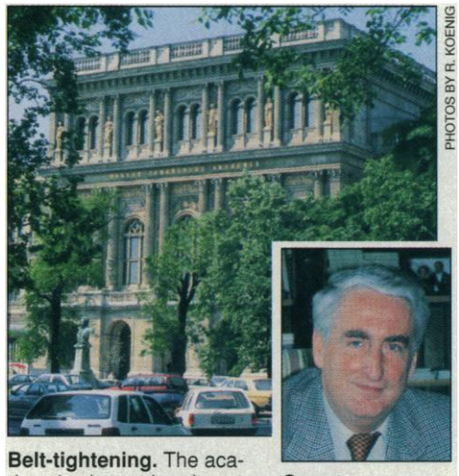
The consolidation plan, approved in May after a heated debate in the academy's general assembly, will reduce the academy's roster of institutes by 20% (from 42 to 33) over the next 18 months, including major cutbacks in physics and chemistry. "We are moving to reform an outmoded structure and create interdisciplinary synergies," says Laszlo Keviczky, the computer scientist who has been the academy's secretary-general since 1993. He says the consolidations are essential, given the severe financial problems facing the academy and years of layoffs that have left many institute buildings partly vacant.

The academy has been caught in an overall downward spiral in research funding. Hungary's spending on research and development—a relatively healthy 2% of gross domestic product a decade ago—has declined steadily, to less than 0.8% of GDP last year. That drop was mainly due to the precipitous decline in industrial funding, but the government's science budget has not kept up with inflation, which was running at a crippling 23% last year. The number of Hungarians working in the natural sciences has dropped by more than a third—from 8476 in 1985 to 5377 in 1996—partly because the academy has lost nearly half its employees.

"The amount of money available for science is spread too thinly over too many institutes," complains Pal Venetianer, a molecular biologist who until recently headed the academy's Biological Research Center in Szeged. Take what is happening to Budapest's Institute for Experimental Medicine: Its 50 researchers and 90 other staff get by on a barebones annual budget of $600,000, plus outside grants. "That budget is a bad joke," says institute director E. Sylvester Vizi. Adds Venetianer: "The available money has to be spent in a more focused way."

But changing that focus has proved to be a wrenching process for Hungary's academy. Last year, it carried out a thorough evaluation of its institutes and used the report's results in developing the reorganization plan. Academy officials are now drawing up the details of the restructuring. Planned changes include:

- The Solid State Physics Institute—the top-ranking center in last year's evaluation—will become the core of a central physics institute that will consolidate a now-separate optics institute and a crystal physics laboratory. Two other institutes will be merged to become the Institute of Materials Science and Technical Physics.
- The Central Research Institute for Chemistry will be joined by leaner versions of the now-separate institutes specializing in organic chemistry, as well as some isotope-research laboratories. Two other chemistry institutes will leave the academy to join regional universities.
- One of the academy's largest centers—the Computer and Automation Research Institute—will swallow a smaller institute of measurement and computing techniques.



PHOTOS BY R. KOENIG

Belt-tightening. The academy's elegant headquarters; Secretary-General Laszlo Keviczky *(inset)*.

Ferenc Marta, director of the Central Research Institute for Chemistry—whose staff has declined from 600 to 380 in recent years—has mixed feelings about the reorganization. "In some ways, it was a cruel decision" to consolidate institutes and lay off some employees, Marta says, but "something needs to be done," because low research budgets have "made life very difficult for many scientists" and driven some promising young people into more lucrative fields.

Kroo, whose Solid State Physics Institute is one of the reorganization's winners, supports the plan, but says there are "several land mines"—including insecure funding levels—hidden in the process of implementing the changes. Consolidating research institutes "can have a positive effect only if the spending on research is gradually increased," Kroo says. Otherwise, he warned, the changes "will drive the institutes into a downward spiral."

Key government officials have promised to increase support for research over the next few years—including an extra $10 million annually to help pay institutes' operating costs—but some scientists argue that broader reforms are needed. A 1995 report by the Paris-based Organization for Economic Cooperation and Development (OECD) described Hungary's science and technology sector as "highly fragmented." The academy controls its institutes; the education ministry has jurisdiction over university research; and the industry ministry oversees applied research. The OECD examiners said: "Individual R&D institutes, committees, and institutions pursue their own separate goals and strategies, often with little communication with others."

"We do need better coordination," says Keviczky, but he is wary of suggestions by some scientists that the creation of a science ministry might improve the situation. "I believe in a scientific system with many focal points," he says. But Venetianer argues that a ministry would be able to implement reforms more quickly and focus scarce resources on the best science and most promising researchers. "Too many young people are rejecting science because the pay is so low, and the prospects are limited," he says. "We need to show that science has a great future here."

Hungarian-born George A. Olah, who won the 1994 Nobel Prize in chemistry, is optimistic about Hungary's future: "Despite the budget and staff cutbacks, I consider Hungarian science overall to be doing quite well." Olah, director of the Loker Hydrocarbon Research Institute in Los Angeles, left Hungary 4 decades ago but keeps in touch with scientists there. He says the academy's reorganization is "probably the only sensible way, in the short range, to try to solve the problems as humanely as possible." Although money is short at the academy's institutes, he says, "those who really are dedicated to science will persevere."

–Robert Koenig

Robert Koenig is a writer in Berlin.