POLAND

Scientists Brace for Change As Ex-Communist Wins Election

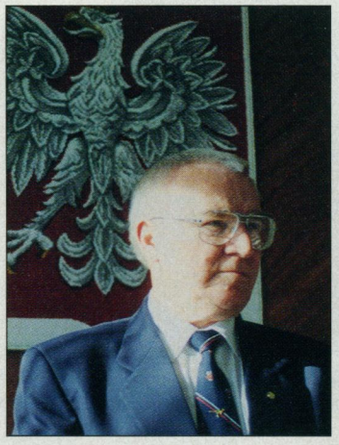
WARSAW—The narrow victory of reformed communist Aleksander Kwasniewski over graying Solidarity hero Lech Walesa in last Sunday's presidential election here left scientists scrambling to assess the impact on Poland's science reforms. The pace of change has slowed in the past several years as science budgets have gotten tighter, and while Kwasniewski has pledged not to turn back the clock on democratic changes, some fear that his party's firm control may strengthen the hand of "old guard" scientists to regain some influence over the science budget—a prospect that some scientists here view with alarm. "We've reached the point of no return with science reform in Poland," asserts prominent physiologist Witold A. Karczewski. "We can't go back to the old system."

Five years ago, in what was viewed by many scientists as a model for eastern Europe, Poland's new leaders reformed the nation's science bureaucracy—wresting budget power from the old Polish Academy of Sciences (PAN) and handing it over to a new agency, the State Committee for Scientific Research (KBN), headed by Karczewski until last March. KBN now controls funding for PAN and its 83 institutes, as well as grants for university-based researchers and other institutions, and many scientists feel it has made the granting system more competitive and less political.

The main problem is that Poland's Parliament—controlled since 1993 by a coalition led by Kwasniewski's Democratic Left Alliance—has not backed up the reforms with increased financial support. This year, KBN's budget declined as a percentage of gross domestic product (GDP), reaching a low point of 0.54% of national earnings, although next year's proposed budget would slightly increase that percentage. By contrast, the United States and many other nations spend over 2% of GDP on research.

That gradual whittling away of Polish research budgets has exacerbated complaints—particularly from PAN leaders, who had far greater influence over science policies and budgets during the communist era—that the new system is flawed. "We have only about half the money [after inflation] that we received in 1990," asserts biologist Leszek Kuznicki, PAN's president. While critics regard him as a leader of the scientific "old guard," Kuznicki says he is committed to democratic reforms and wants PAN and its institutes—which house some of Poland's best scientists—to be "at the center of Polish science."

Giving PAN leaders more authority would require changes in the 1991 law that created KBN, and to that end PAN leaders have been in touch with contacts in Kwasniewski's party. But it is unclear if Kwasniewski—whose presidential role is limited—will back such changes. Also, some say, the post-election cabinet reshuffle might affect the current chair of KBN, Deputy Prime Minister Aleksander Luczak, a historian and official of the Polish Peasant Party.



PHOTOS BY ROBERT KOENIG

Poles apart. Polish Academy of Sciences President Leszek Kuznicki *(above)* and KBN deputy leader Jan Krzysztof Frackowiak.

One factor that may work in KBN's favor is a recent report by a team of science policy experts from the Paris-based Organization for Economic Cooperation and Development (OECD). The examiners urged Polish officials to upgrade KBN's status to a "true Ministry of Research and Technology" and to dilute PAN's authority to a "more limited" role—similar to that of Western academies. The report stated that the "conflict over PAN is detrimental to Polish science and must therefore be resolved as a matter of urgency." And they recommend increasing Poland's research budget to at least 1% of GDP.

While KBN's deputy leader, physicist Jan Krzysztof Frackowiak, concedes that money is tight, he contends that Polish science is advancing nonetheless. "We are devoting more of the science budget to real science," he says, noting that Poland does relatively well in citation counts for scientific papers. While many of Poland's expatriate scientists criticize the low science budgets, some also cite progress in research. Polish-born astrophysicist Alexander Wolszczan, co-discoverer in 1992 of the first planets outside our solar system, praises Polish astronomy, especially Warsaw's Copernicus Astronomical Center and the Torun Radio Astronomy Laboratory. And Waclaw Szybalski, editor of *Gene* magazine and an oncologist at the University of Wisconsin, cites "vast improvement in Polish science in my field"—including research at PAN's Institute of Biochemistry and Biophysics in Warsaw, as well as at Gdansk University's new biotechnology faculty.

Despite those bright spots, the OECD report and interviews with some two dozen Polish scientists and expatriates reveal many concerns. "The government has to wake up to the fact that science and higher education in Poland are in a state of crisis," warns Wolszczan, who is based at Pennsylvania State University and spends a month each year at Copernicus University in Torun. Physicist Andrzej Kajetan Wroblewski, a former rector of Warsaw University, accuses short-sighted government "blockheads"—notably, in the finance ministry—of slashing research and education funding. Indeed, university budgets are so low that some professors use part of their research grants to subsidize expensive laboratory classes for students.

Such privations in the universities have caused an exodus of talented young researchers to Western countries; a trend that is now coupled with what Polish officials call an "internal brain drain" as increasing numbers of young scientists and students switch to more lucrative fields such as business or law. "One of my best young physicists left after getting his Ph.D. to work for an American insurance company," says Jan Zylicz, director of Warsaw University's prestigious Institute of Experimental Physics. Because few industries in Poland now support basic research, some experts fear that the low salaries will lead to a "generation gap in science."

A century ago, Marie Sklodowska Curie—a patron saint of Polish science—had to choose between her native Poland and greener pastures abroad. Although Curie donated money and radium to found Warsaw's Radium Institute in 1932, she did her Nobel Prize–winning research in Paris. If Curie were a young scientist today, KBN's Frackowiak says, "maybe she'd still go abroad."

–Robert Koenig

Robert Koenig is a writer based in Berlin.