

more impassioned as his voice grows louder, is echoed by many of his internationally minded colleagues: "We understand that the country is poor, so we cannot ask for too much," he says. "But the little money that is available is distributed with no regard for scientific merit—that is really frustrating."

Under the Soviet system, Moscow used to decide who got money, and personal contacts were always important. But now the Ukrainian Academy of Sciences is in charge and has "taken over the role of imperial power, with just a few small changes," complains Krishtal. Under the old system, explains Demchenko, "you had to live like Faust, and sell your soul for a few privileges."

One radical suggestion to give a boost to Ukrainian science is to persuade some scientists at the academy to leave in order to provide resources for the few who do good work.

Geneticist Sergei Gershenson, 86 years old and a pioneer of molecular genetics, says that "30% to 50%" of academy scientists should be "fired immediately, especially in biology." Krishtal goes even further: "Three-quarters of the industry in this country would be bankrupt, except they don't have such a concept here yet, so people keep going to work every day. In science, it is exactly the same."

Radical change is unlikely, however. Unlike the East European and Baltic republics, which are already inviting experts from the West to evaluate their science, attempts at reform in Ukraine have so far failed. One of the first acts of the new government was to create a State Committee on Science and Technology, a kind of science ministry that would act as a rival to the academy. But as the academy retains total autonomy from the committee, including its own budget, the new

committee is able to do little.

Attempts to introduce change from below have also failed. A couple of years ago, Demchenko helped organize a "Society of Democratic Scientists," which tried to break the monopoly of power in science held by the academy. But even though several thousand scientists joined the society, its efforts quickly fizzled. The movement lacked money, explains Demchenko, and the academy leaders were just too powerful. "The same people edit the journals, head the academy councils on their fields of science, and award the scientific degrees. If one of them decides you are an undesirable," he continues, "you have had it."

Researchers everywhere in Ukraine said that they are afraid the system will not change soon because of the difficulty in adapting to life in a noncommunist country. "Over the years," says Andre Sibirny, a yeast geneticist at the Ukraine Academy of Sciences in Lvov, "people here were transformed from *Homo sapiens* to *Homo Sovieticus*." Among other things, he says, that means that the first impulse for people who are moved into positions of power is to "take whatever they can get" for themselves.

The difficulty in changing people's perceptions is neatly illustrated by the experience of U.S. high-tech business consultant Dave Ziegler, who spends most of his time in Kiev. Years of living in a system where there were constant shortages has made Ukrainians think that once they have a product, any product, it will sell, explains Ziegler. "I've heard that there are 72,000 researchers at the Ukrainian Academy," says Ziegler, "and I must have heard from 62,000 of them by now, trying to sell me on business proposals. Eighty percent of them have ideas marketable only in their heads because they don't know what's on the market. Of the others, 5% have good ideas, but of them all but 5% are asking for such outrageous terms that they will never be able to make a deal," says Ziegler with exasperation.

Despite all the psychological and other problems, a Western evaluation would still do a lot of good, says Demchenko. It would force people to think about what 'good science' really means. The question is, when reform does eventually come, will there be any competent scientists left in Ukraine?

—Steven Dickman

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An Academic Reincarnation

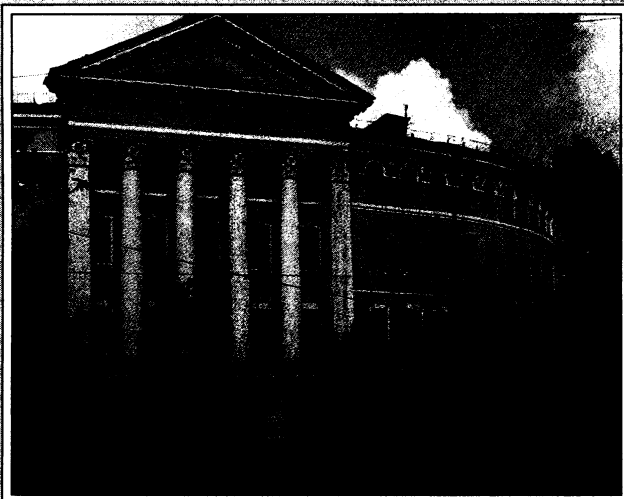
KIEV—Amid the gloom in Ukrainian intellectual circles, one recent event provides at least a glimmer of hope: This month, the "University of the Kiev-Mohyla Academy" reopened—175 years after it was closed down by Czar Alexander III for its humanistic teachings—as the first non-state-run university in Ukraine. Its objective, says director Viatcheslav Briukhovetsky, is to train people to think independently and try to help recreate a cosmopolitan intellectual culture in a country traditionally dominated by ideology.

Although short of funds and staff, prospects for the new university look good. The new government of the independent Ukraine has given the university the handsome buildings of the Naval Political Academy—until recently used for the ideological training of officers in the Soviet Navy—as well as a rundown hospital, both located in the bohemian Podol district of Kiev. Also promised are startup funds of 50 million rubles (\$400,000) and an annual budget of 60 million rubles (around \$500,000) a year, with no ideological strings attached. Several U.S. and Canadian universities, including Columbia and Rutgers, have also agreed to exchange students, faculty, and administrators.

On the curriculum will be lots of foreign language study, with some courses taught only in English, and students will be given the chance to tackle subjects like international law and theology that were banned under the Soviets. Students—there will be 1500 eventually—will be able to mix offerings from the university's three faculties: Humanities, Philosophy, and Cultural Studies; Social Sciences; and Natural Sciences.

Most important, says Briukhovetsky, is freedom from the ideology that he fears will continue to endanger the quality of education at the state-run universities even though the communists are no longer in power. "The communist ideology is like a corpse now: It may be dead, but we can still smell it everywhere." It will take 10 or 20 years even to begin to teach people to think a different way, he says.

—S.D.



No ideology. The Kiev-Mohyla Academy, now a private university.

Correction

An article in last week's issue ("Agencies Split on Nutrition Advice," 25 September, p. 1857) incorrectly reported the recommended daily allowance of folic acid as 400 milligrams. The correct unit throughout the article should have been micrograms.