The Moscow Times
30 YEARS
INDEPENDENT NEWS FROM RUSSIA

Reform Will Lead to Death of Russian Science, Academicians Warn

By Oleg Sukhov

December 23, 2013



At left, the main Academy of Sciences building, and at right, luxury apartments built on academy-owned land. **Vladimir Filonov**

Requesting money for a project that violates the laws of physics is something you would expect from an institution run by government officials, say critics of the reform of the Russian Academy of Sciences.

The Khrunichev State Research and Production Space Center, a government-owned company, is developing a *gravitsapa* — an engine named after a device in the 1987 Soviet science fiction film "Kin-Dza-Dza."

The engine violates the law of conservation of energy, but scientists working at the center are reluctant to say this to their superiors, academician Vladimir Zakharov said at a rally against the reform earlier this year.

"There is no one among these clever people who is brave enough to tell their boss: 'You are a fool, your gravitsapa cannot fly,'" he said.

According to critics of the reform, which was signed into law in September, the project to create a gravitsapa exemplifies the future of Russian research centers. They say that the institutes will be stripped of their independence and subordinated to bureaucrats and that the reform may even spell the death of Russian science.

Supporters of the reform argue that scientists will be free to do scientific research but should not meddle in economic affairs. Both sides accuse each other of being motivated by profit, with state television airing programs about alleged corruption at the academy and some scientists saying the Kremlin and its allies are promoting their own economic interests via the reform.

The changes in the Academy of Sciences are ostensibly aimed at increasing the efficiency of Russian state research, which has experienced a massive brain drain since the collapse of the Soviet Union and lags far behind Western rivals.

Some see the academy's restructuring as part of liberal reforms aimed at adapting Soviet institutions to the market economy by reducing their size and making them more results-oriented. But critics argue that the law on the reform lacks the tools necessary for improving the academy's efficiency and is written in an incomprehensible way.

Facing Challenges

The academy, whose budget for 2013 amounts to 67.8 billion rubles ($2.1 billion), runs about 500 research institutes that employ more than 55,000 scientists.

The reform envisages transferring property owned by the academy and the institutes run by it to a newly established entity called the Federal Agency of Scientific Organizations. The law also stipulates that the Russian Academy of Medical Sciences and the Russian Academy of Agricultural Sciences be merged into the Russian Academy of Sciences.

Alexander Degtyaryov of United Russia, a member of the State Duma's Science and Technology Committee, told The Moscow Times that the reform was part of the government's efforts to meet modern-day challenges, including the necessity of commercializing scientific research.

"All reasonable people are supporters of the reform," he said. "Reforms are the lot of the strong. Only the weak are incapable of reforming."

He compared the magnitude of the restructuring with the reforms of Tsar Peter the Great, who faced the challenge of transforming a backward medieval country into a modern empire.

Peter the Great in fact founded the Academy of Sciences in 1724 as part of his attempts to introduce Western science and civilization to the country. Russia's first university, founded the same year, was also based at the academy.

Initially, the academy employed exclusively foreign scientists, including world-famous Swiss mathematician Leonhard Euler and Swiss physicist Daniel Bernoulli, and used Latin

and German as its chief languages. In the mid-18th century, more Russian scientists started working there, and polymath Mikhail Lomonosov, after whom Russia's famed Lomonosov Moscow State University is named, became the driving force behind its activities.

In imperial Russia, presidents of the academy were appointed by the tsar. Alexander Karpinsky became the first elected head of the academy after the Russian Empire collapsed in 1917, but from the 1920s to 1930s the institution was integrated into the Soviet totalitarian system and shed the last vestiges of independence. Many key members of the academy were executed or imprisoned as part of Josef Stalin's political repressions.

After the fall of the Soviet Union in 1991, the academy reasserted its independence from the government but suffered as a result of reduced funding and a brain drain prompted by the removal of the ban on emigration. These problems persist to this day and serve as a major justification for the reform.

Money on the Line

Perhaps the biggest point of contention between opponents and supporters of the reform law is whether scientists should be stripped of their ability to manage academy properties.

When the Soviet Union collapsed, state funding for the academy was cut but market-based financing tools became available. Many research institutes started leasing out their property and using other schemes to earn cash, while some scientists at the academy, such as the late Boris Berezovsky, began dabbling in business.

On an average day now, the array of expensive foreign cars and well-dressed people coming and going on the parking lot of the academy's main building off Ploshchad Gagarina, near metro station Leninsky Prospekt, impart a feeling of economic vibrancy — particularly toward the end of the day as the billiard club that takes up half the second floor and the rooftop restaurant spring to life. It is hard to spot any of the stereotypical academic visages with thick glasses or scruffy beards.

One gets a similar feeling when looking at the premium apartment complex on the banks of the Moscow River not far from the buildings of the academy and its presidium. The complex was built for top academy officials during the tenure of Yury Osipov, president of the organization from 1991 to 2013, who owns a luxury penthouse there.

Education and Science Minister Dmitry Livanov said in September that scientists should be as independent as possible in the field of science but that commercial and property management functions should be exclusively supervised by the newly created agency.

Explaining the rationale for the move, State Duma Deputy Degtyaryov said economists should deal with the economy and scientists with science. He also said the current method of elections promoted the emergence of close-knit "clans" at research institutes.

Degtyarov said that, far from stripping the academy of its rights, the reform had actually given it a lot of powers. For instance, all those applying for government money need to submit their research projects to the academy, he said.

In an apparent further concession to scientists, President Vladimir Putin, who has been a vocal supporter of the reform, said at a meeting of the state science and education council on Dec. 20 that there should be a moratorium on the sale of academy properties for now.

"Even if something is not practically needed for research purposes, nonetheless do not rush to part with it," Putin said.

Proponents of the reform have lashed out at top academicians' supposed wealth and argued that the financing tools used by the academy were a breeding ground for corruption.

As examples of potential corruption cases, several scientists who criticized commercial projects undertaken by the academy have been killed, beaten or received death threats, economist Mikhail Delyagin wrote in a Komsomolskaya Pravda article in September.

In one such case, Lebedev Physical Institute head Oleg Krokhin was fired in 2004 after a bank's offer to build an office on the institute's premises was rejected by its top management, while Krokhin's deputy Yury Alexandrov was killed, Delyagin wrote. Krokhin was replaced with Russian Academy of Sciences vice president Gennady Mesyats, who had promoted the office project.

Countering the accusations, Institute for African Studies deputy head Irina Abramova said there was little scope for corruption, given that research institutes have not actually managed their property for 10 years.

She said there were severe restrictions on their use of the property and that the minuscule amounts allocated for the academy did not allow for any large-scale graft.

Others say that, far from eliminating corruption at the academy, the reform will actually help some people close to the Kremlin cash in on its property. They say the restructuring was intended as revenge by the government against the academy for its conflicts with Kremlin-tied scientists.

In one conflict, the academy's physical sciences department refused to authorize the election of Mikhail Kovalchuk as head of the crystallography institute in June, columnist Yulia Latynina wrote in Novaya Gazeta in September. Mikhail Kovalchuk is the brother of Yury Kovalchuk, a co-owner of major bank Rossia and a close associate of Putin.

Since the president came to power, Mikhail Kovalchuk's clout has steadily grown, Latynina said. In 2005, he became head of the Kurchatov Institute, a nuclear research center that is not run by the academy. Since then, the institute has expanded by merging with the Institute for Theoretical and Experimental Physics, the St. Petersburg Nuclear Physics Institute and the Institute of High Energy Physics.

Another Kremlin-connected scientist who has clashed with the academy is Viktor Petrik. In 2009, United Russia planned to include one of his inventions, a water filter, in a $469 billion government spending program for the period until 2020. The plans triggered a scandal known as Petrikgate after representatives of the academy said the filter could be harmful for health and that most of Petrik's inventions were either pseudoscience or plagiarism, and the plans were eventually dropped.

Petrik claims to have invented a perpetual motion machine and a graphene-based water purification device jokingly dubbed a "philosopher's stone" by critics.

Reversing the Decline

Supporters of the reform also say the government would make the academy more efficient by hiring and promoting more young scientists, using foreign citation indices and shutting down inefficient research institutes to help reverse the steady decline of Russian science.

In 2012, Russia ranked 15th in the world in terms of the number of scientific articles and reviews, down from 9th place in 2002, according to the Web of Science index. The country's share of articles and reviews dropped to 2.06 percent from 3.09 percent, while the U.S. and China ranked first and second, respectively, with 27.18 percent and 13.7 percent.

Education and Science Minister Livanov said in September that the reform would make the academy more open and transparent. He said the human resources model should be changed to attract the most talented specialists and called for "external assessments" of scientific research.

"The best scientists, regardless of whether they have a formal status or not, will be actively involved in [the academy's work]," Livanov said at a meeting devoted to the reform. "It is they who will be in charge of creating new scientific organizations and developing financing tools."

At the meeting, academician Alexei Khokhlov proposed a comprehensive audit of research institutes and laboratories and dividing employees into permanent and temporary ones, depending on their achievements.

Some supporters of the academy's restructuring have argued that these measures are part of efforts in recent years to adapt institutions inherited from the Soviet era to modern realities. These include massive defense sector reforms, which focused on laying off military personnel and depriving the military of property management functions, and education reforms, which included closing inefficient universities, cutting jobs and introducing tuition fees for some classes.

But some critics say these efforts, which they say are modeled on the liberal reforms of the 1990s, have been aimed at destroying the Soviet industrial and scientific potential. They argue that Westernization and free-market elements are harmful for science.

Dmitry Oreshkov, a former research fellow of the Maritime Medicine Institute who said he espoused communist views, argued that the preservation of the Academy of Sciences in its current state would only be possible under a socialist system. He added that the current free-market economy did not need such a large number of scientists.

Commenting on the introduction of "efficient management," Sergei Abramov, head of the Pereslavl-based Program Systems Institute, said it would be absurd to destroy the academy because some people work inefficiently.

"I am sure someone in the government works inefficiently. Let's dissolve the government,"

he joked.

Abramov also argued that supporters of the law had failed to prove that the reform would make the academy more efficient.

A War of Independence

Many opponents of the reform say its true aim is to destroy the academy's independence from the government.

The scientific community has been a key element of civil society and has so far preserved independence from the Kremlin, said academy member Askold Ivanchik, adding that the Academy of Sciences was one of the few state organizations that had refused to comply with some of President Vladimir Putin's orders.

"The purpose of the reform is to integrate the academy into the Kremlin's power structure," Ivanchik said.

Sergei Streltsov, a scientist at the Engelhardt Institute of Molecular Biology, said research institutes would be essentially run by the Federal Agency of Scientific Organizations, with scientists supposed to be at the beck and call of bureaucrats. Streltsov and other researchers argued that the transfer of research institutes to the agency was tantamount to the destruction of the academy.

The scientists cite new rules for electing heads of research institutes as another blow to their independence. The reform passed in September stipulates that institute heads be elected by their employees and authorized by the Federal Agency of Scientific Organizations, while currently the people elected by research institutes are approved by the academy.

In addition to running research institutes, the government will be empowered to commission scientific research, said Mikhail Gelfand, a deputy head of the Institute for Information Transmission Problems. He said such a policy would have a very harmful impact.

The reform will lead to a "total bureaucratic collapse" and "a flood of bureaucratic nonsense," Gelfand said.

Abramov, of Program Systems Institute, said research institutes would now have to appeal to the agency to get every single test tube, catalyst or computer. Another harmful aspect of the law, he said, is that it describes the academy in detail but does not say anything about the agency, which opens the door to the agency being empowered to do anything — for instance, sell any property.

But other observers dismissed both the government's claims and those of the academy as propaganda.

The conflict over the reform is just a squabble between two interest groups because of the academy's property, said Sergei Sazonov, a philosopher who has opted to stay out of the Russian scientific community and works as a lawyer.

He was skeptical about the claim that the reform would destroy Russian science.

"The science that the reform could allegedly destroy does not exist," he said. "All Russians who can and want to be scientists left Russia a long time ago."

The current system discourages scientific research and encourages charlatans because the national elite is not interested in science, he said.

Political Backlash?

Disaffection over the reform has turned scientists into a political force, albeit one somewhat lacking in clout.

Scientists' discontent with the government's policies has been building since a long-running conflict began in 2005 between Livanov, then a deputy education and science minister, and the academy over the institution's strategy. The backlash against the reform, plans for which were first announced in June, brought the conflict to a new level, with many scientists saying that the government had completely ignored their arguments and treated them disrespectfully.

"The government does not want to justify its actions by resorting to arguments and treats us like zombies," said Anna Dybo of the Institute of Linguistics said at a protest in September.

Abramov of the Program Systems Institute agreed that the government had turned a deaf ear to the scientific community.

"Nobody has asked for my advice or intended to ask for it," he said. "In a civilized society, scientists are a force to be reckoned with."

In July, about 60 academy members announced they would quit the academy if the reform was completed.

There have also been numerous protests against the reform since early July throughout Russia. In September, hundreds of protesters took part in two unauthorized rallies near the State Duma building when the parliament's lower house was considering the bill.

With emotions running high, some scientists even said protests should not be limited to peaceful rallies.

"Which of the research institutes have active nuclear reactors?" Nadezhda Volkova, a research fellow at the Institute of Philosophy, jokingly asked at the September rally, with observers left guessing whether she implied using them for the purposes of the protest movement.

As a result of the protests, the government has had to make some concessions. The reform bill has been heavily amended, and in October, Putin proposed a "moratorium" on decisions about the academy's property and personnel for a year — a move that some interpreted as a temporary suspension of the reform.

But opponents of the restructuring argue that the concessions were minor and insufficient, saying Putin and other top decision makers deceived them by first agreeing to their arguments and then failing to remove some provisions of the reform bill that prompted the backlash. These include, for instance, the clause on the transfer of research institutes

to the new Federal Agency of Scientific Organizations.

Many scientists were also angered by Putin's decision in October to appoint an outsider, Deputy Finance Minister Mikhail Kotyukov, to head the new federal agency, despite previously having promised to choose a member of the scientific community for the post.

Due to frustration with the government's actions, many scientists have become more opposition-minded, said Ivanchik. He and several other scientists told The Moscow Times that they had voted for opposition leader Alexei Navalny in the Sept. 8 mayoral election.

But some commentators said the scientific community had failed to oppose the restructuring vehemently enough and that the turnout at anti-reform rallies was insufficient. Vladimir Fortov, who became president of the academy in May 2013, was initially a vocal opponent of the reform but eventually backed down and accepted it.

Streltsov of the molecular biology institute said many people were afraid of participating in protests against the reform.

Some specialists may also prefer leaving Russia to protesting. Gelfand of the Institute for Information Transmission Problems said that if scientists were treated like "sheep," they would be inclined to emigrate because they know what they are worth.

But State Duma Deputy Degtyaryov dismissed the idea that scientists had been treated disrespectfully, saying the law was a result of consensus between the government and the scientific community. He said the reason for the protests was the fact that most people are conservative by their nature and dislike change.

Justin Lifflander contributed to this report.

Contact the author at o.sukhov@imedia.ru

Original url:
https://www.themoscowtimes.com/2013/12/23/reform-will-lead-to-death-of-russian-science-academicians-warn-a30739