

AT THE HARRIMAN INSTITUTE

Volume 1, Number 7

Soviet Science and *Perestroika*

The scientific and technical community in the Soviet Union plays a key role in Mikhail Gorbachev's reform program of *perestroika*. Yet the problems that the ambitious changes address are historically embedded in this community and may prove intractable. This was the focus of a presentation held at the Harriman Institute December 3, 1987, by Harley Balzer, Director of the Russian Area Studies Program at Georgetown University. Balzer used the field of science to show how *perestroika* encompasses both change and continuity.

He noted that while the reforms occurring now are important and that "there is a major difference in emphasis and scope," they are not radically new but build upon experiments initiated under Leonid Brezhnev. The new statute for the State Committee on Science and Technology expands on these earlier efforts. It is a "characteristic Gorbachev reform, hastily prepared and less than fully thought out. Most of the really tough specific decisions still remain to be taken."

A Stinging Indictment

Recently the Soviet press has presented a stinging indictment of the scientific structure, especially the coordinating role of the State Committee for Science and Technology. Balzer agreed with such criticism and for analytic purposes he divided it into three areas. First, there is the problem of basic coordination — focusing attention and resources towards specific issues. Balzer claimed that much scientific activity "does not produce results, and when it does produce results, they're not up to international standards." Where Soviet science makes progress, it often breaks new ground and then sees other countries finalize and put into practice its work. Secondly, cooperation between organizations is poor and the publication and information system is inadequate. Third, would-be reformers cite "the poor use of the results of international scientific and technical cooperation, especially with East European allies."

The reforms are designed to make the State Committee on Science and Technology a more effective director and coordinator of the scientific community, a goal of the Soviet leadership for the past forty years. The Central Committee Decree on Science and Technology, which was passed in July and is supposed to be applied by early this year, institutionalizes this revitalization. Most scientific organizations will now operate under self-financing (*khozraschet*). In basic research, there will be a shift to project funding. Moreover, the decree calls for contractual relationships among scientific organizations and new unified standards for data banks (supervised by the State Committee). "The decree suggests that the most important task of the State Committee is coordinating cooperation with scientific organizations in the Eastern European countries," Balzer noted. This suggests that Soviet bureaucrats have a realistic assessment of the scientific and technical capabilities of the USSR and its allies. The idea of self-management is being implemented and "it's probably what they need." But the transition will not be easy. "There will be a phenomenal scramble among the institutes about who gets subsidized by the State Committee."

The problems are rooted in more than the recent past; their antecedents are in the formative years of the Stalinist system. Balzer points to the cultural revolution of 1928-1931 as a "significant turning point in creating a lot of the difficulties that the current reforms are seeking to overcome." Since then, there has been a tripartite division of scientific administration among the Academy of Sciences, the branch industrial ministries and the higher education institutes. The Academy of Sciences has always resisted being controlled from outside, and both the Academy and education institutes are concerned about being overwhelmed by branch industrial ministries. Adding to the divisions, there are regional and republic scientific institutions, most of which were developed during or after World War II. To make sense of this institutional overlap, "there have been repeated attempts to somehow strengthen the authority and the role of a central body, currently the State Committee for Science and Technology."



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Lack of Prestige for Engineers

Balzer noted that "the reason to get a higher education in the Soviet Union is to get out of the jobs where you get your hands dirty, not into them." The Soviets face a situation in which most engineers and professionals are in offices, not on the floors of factories where they are most needed. There has long been a tendency to avoid these undesirable positions by arranging to "rig the placement process." Often, if people do not like job assignments, "they just don't show up." The profession currently lacks prestige; half of the world's engineers are in the USSR, yet there are seven million Soviet engineers working in non-engineering jobs, often to make more money. In the thirties, engineering was the career of choice, but today it is far down on the list. Significantly, Brezhnev and Kosygin were both engineers, whereas Gorbachev was trained in law and economics.

The Soviet leadership also faces the disturbing question of how to maintain control. As Balzer put it, "How do scientifically illiterate politicians keep track of complex technologi-

cal decisions? The only way the Party can maintain its role is if more of the scientists, or at least the science managers, are Party members." Thus there will be an increased Party role in vetting personnel.

Balzer said that the result of *perestroika* in science will probably be uneven development in the USSR, since "these reforms are going to work in some places, but those places will be islands in a sea of very confused, incompetent scientific and technical institutes." For the majority of cases, the "major game" in Soviet science in the next few years is going to be to somehow "hang on to being subsidized." Nonetheless, closings and bail-outs will probably take place. The Soviet scientific leaders "know what they want to do but their plans are half-baked. They are unsure of the method of achieving what they want and may not be prepared for the ramifications of the path that they have chosen."

Reported by Paul Lerner with assistance from Robert Monyak

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