## Will Glasnost and Perestroika Improve Scientific Freedom in East Germany?

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About two years ago, Mikhail Gorbachev introduced the words glasnost (openness) and perestroika (restructuring) into the world's vocabulary. These words have become symbols of hope for a fundamental change in East-West relations.

For scientists, glasnost is interpreted to mean improved communication, freer travel, and closer collaboration between researchers in the East and West. This message has been repeated by a wave of highranking delegations of Soviet scientists in recent visits to the U.S. The visits have resulted in agreements on scientific exchanges and cooperation involving the Soviet Academy of Sciences, the U.S. National Academy of Sciences, the U.S. Institute of Medicine, and the American Society of Mechanical Engineers, among others.

But Gorbachev's policies of glasnost and perestroika have received a mixed response in eastern Europe. In particular, the German Democratic Republic (GDR) is the most stubborn opponent. The unfortunate result is that the Wall will likely remain a formidable barrier to freedom and communication for East German scientists. East German scientists have traditionally been restricted to travel primarily within the Soviet bloc. But Poland has become off-limits since the rise of Solidarity, the independent trade union. Hungary is likely to become a restricted zone as well, since it started dismantling the barbed wire fence along its border with Austria.

Some East German scientists have been granted travel permits to attend international conferences in which the GDR had a direct interest, usually related to national security—not the free exchange of scientific knowledge.

Also, East German scientists on exchange visits to the West have had to leave their families behind to discourage any thoughts of remaining in the West. Like their "refusenik" counterparts in the USSR, East German scientists requesting exit visas for emigration risk their careers and face long delays before permission is granted, if ever.

In late 1987, after 14 years of exhausting negotiations, East and West Germany signed an agreement on scientific cooperation on projects ranging from AIDS research to nuclear energy. In annexes to the agreement, both parties pledged to

allow the exchange of scientists "and their families."

Does this agreement signal a new era of scientific freedom in East Germany? The letters I have received from East German scientists are skeptical at best, and bitterly pessimistic at worst. The authors believe that only politically acceptable scientists will benefit from the new agreement. Those who are not loyal party members, who have not identified and harrassed dissenters, or who have innocently requested emigration will be denied participation.

Glasnost and perestroika probably will eventually be accepted by East Germany, and for the same reason it is now embraced by the USSR. Gorbachev sees glasnost and perestroika as a solution to the moribund Soviet economy. He also recognizes that scientific and technical competence is essential for long-term economic productivity and growth.

At present, East Germany is the technical and economic leader of the Soviet bloc. It can afford the es-

timated 20% of national income that subsidizes basic food and housing costs. But East German economists estimate that continuation of these subsidies will require a 5% annual economic growth rate. Adjusted for inflation, East Germany's economy grew by just 0.5% last year.

East Germany will eventually learn what the USSR now seems to know. That is, isolating researchers from the world by denying them the freedom of travel, communication, and collaboration results in an uncreative and uncompetitive science base. This, in turn, has a deadening effect on long-term economic productivity, which leads to popular discontent with political leadership.

Whether or not East Germany learns this lesson, scientists in the West have a moral obligation to protest the denial of basic human rights to their colleagues behind the Wall. However small our collective voice may be, it can and should be heard by the general secretary and chairman of the GDR, Erich Honecker.