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United States-Soviet Scientific Relationships

The issue of human rights has lent urgency to an assessment of scientific relationships between the United States and the Soviet Union. Such an examination was already in progress before the events of this year and the Kaysen report for the National Research Council was a major contribution. The study focused on a program of scientific exchanges sponsored by the National Academy of Sciences (NAS) together with the Soviet Academy of Sciences since 1959. The program had been created with four goals in view: (i) to establish individual and institutional contact with the scientific community of the Soviet Union, (ii) to learn about Soviet strengths and goals in science and engineering, (iii) to contribute to improved U.S.-Soviet relations, and (iv) to achieve at a later date the "normalization" of scientific contacts between the two countries. The panel noted that the NAS could claim "striking success" in meeting the first three goals.

In a world where thermonuclear war is an ever-present menace, progress toward the second and third goals is of great importance. Nevertheless, in our relationships with the scientists of the Soviet Union, we should not allow one-sided arrangements to persist.

For two decades, the Soviet Union has enjoyed a status of equality to the United States in international scientific matters. The reality is that in only a few fields does equality prevail. The Soviet Union can compete in almost any of a limited number of specific fields that the Kremlin chooses to emphasize. However, the planners are usually years behind the times and world science is conducted on a thousand frontiers. The Russians have never achieved an instrumentation industry and thus most of their scientists are poorly equipped. Another handicap is poor communication. The restricted interaction with the rest of the world has a counterpart in limited interchange within the Soviet Union. Finally, excessive weight is given to party loyalty and to the heads of laboratories, whose tenure is for life. In consequence, young scientists encounter many frustrations. With such handicaps the Russians will continue to lag behind in most fields.

Interactions with the Russians occur in a number of ways, such as the Pugwash conferences, Academy exchanges, and activities sponsored by the international scientific unions and by Unesco. The meetings of the unions have involved the most individuals and the greatest interchange of scientific information. Many warm friendships have begun at such gatherings.

The organization and conduct of a large international meeting is a huge task. Almost invariably the organizers find that by far their worst headaches come from the Russians. Many of them send in abstracts and announce their intention to participate. But when the time comes perhaps half will be permitted to attend, thus leaving gaping holes in the schedule of papers. In other instances a group of uninvited or unscheduled people will show up demanding space on the program. The paper of an invited distinguished scientist will often be read by a party hack. When the international meeting is held in Russia there are usually visa problems. The international scientific community should not tolerate such forms of behavior.

In the bilateral exchanges the record is better, and in some areas of science there is a clear gain for both parties. For example, cooperation in the earth sciences has been worthwhile. But too often in other areas the United States has given far more than it has obtained. Current opinion in Washington is that we should be more selective in our interactions. We should ask with respect to a particular field, How good are they? Where are the key installations? Will we have access to the top people and laboratories?

It is in our national interest to continue to have interactions with the scientists of the Soviet Union. But the time has come to conduct the relationship on a tough-minded basis. In the process, though, we should remember that some sanctions may injure well-meaning scientists far more than they irritate the Kremlin.—PHILIP H. ABELSON