Détente: Travel Curbs Hinder U.S.-U.S.S.R. Exchanges

Despite the progress made since the 1972 U.S.–U.S.S.R. accords in increasing the flow of scientists between the Soviet Union and the United States, the exchanges to date are by no means "free" in the same way they are with other advanced nations. A complex web of U.S. government rules still governs which campuses Soviet scientists may visit overnight, which conferences they may attend, which laboratories they may visit, and even whether they may attend parties with their American hosts.

The Department of State, which has charge of enforcing the rules, says that they are necessary to protect national security and to "reciprocate" for the similar but stricter rules enforced by the Soviet Union on visiting American scientists. But some Americans say that the U.S. rules discourage scientists here from participating in the exchanges, which are meant to be a bellwether of détente. As one said, they are "a reminder that we're not really meant to be nice to each other."

The rules, as described by Americans who have been hosts to visiting Soviet scientists and by officials of the State Department and of the National Academy of Sciences (NAS) are as follows. When a proposed visit of a Soviet scientist is approved by the State Department and the immigration office of the Department of Justice, his American host or hosts are presented with a set of instructions, either verbally or in writing. The visitor must not travel beyond a 25-mile radius of the place listed in his itinerary as a stopover or residence unless he notifies the State Department 4 working days in advance. He is not allowed to visit laboratories or attend meetings—even those inside the 25-mile limit—which are not listed on the official itinerary, unless he obtains State Department approval at least 1 week in advance. Sometimes, though not always, the American is told not to expose his Soviet guest to military-sponsored research, even if it is unclassified. Also, sometimes, after the visitor has departed, an agent from the Central Intelligence Agency (CIA) interviews the host and asks him to talk, as he would to a colleague, about what appeared to interest the Soviet scientist concerning American science and technology.

The rules are described by the 20 scientists interviewed as being more of a nuisance than a definite harm to efforts at collaboration with the Soviets. Lipman Bers, chairman of the department of mathematics at Columbia University, expresses the view that such rules are far less detrimental to true exchange than the Soviets' habit of sending to the United States not the expert whom Americans invite, but, instead, someone whom the Soviets wish to reward with foreign travel.

As might be guessed, the U.S. rules are a holdover from the Cold War and were first imposed during the middle 1950's. The U.S.S.R. closed off vast stretches of its territory to all foreigners in 1941, but the United States had expected the closed areas to be opened after World War II ended. Then, in 1955, when this had not happened, the United States closed off a similar fraction, or roughly one-third of the nation, to visiting Soviet citizens in all categories: diplomats, government officials, commercial travelers, tourists, and cultural exchange visitors, including scientists.

Checkpoints in Michigan

There followed a period of tit-for-tat, retaliatory incidents in which, every time an American visiting the Soviet Union was subjected to some restraint, the State Department here would try to subject a visiting Soviet of equal rank and profession to an identical restraint. Hence, for example, in 1958, professor A. J. Lohwater, then at the University of Michigan at Ann Arbor, was prohibited from having a visiting Soviet mathematician to Ann Arbor because, he was told, it was a closed area. Lohwater, now at Case Western Reserve University, recalls that he could only visit the Soviet guest at the Dearborn campus, some 30 miles away.

Lohwater says that when he asked permission to have the Soviet mathematician to his house for Thanksgiving dinner officials ordered him to drive the guest between Dearborn and Ann Arbor along certain highways and through specific checkpoints. "But," he adds, "there was nobody at those damn checkpoints checking."

The State Department has maintained all along that its system of travel restraints is intended as bait to induce the Soviet Union to relax its own curbs. Over the years, the United States has opened various places, with the U.S.S.R. on occasion reciprocating. The remaining closed areas in both countries have, therefore, been somewhat reduced (see maps, p. 713).

In 1967, however, the attempt at reciprocal easings of the curbs on travel reached an impasse. The United States exempted cultural exchange visitors, including scientists, and tourists from its closed area system, hoping that the U.S.S.R. would respond in kind. But the U.S.S.R. did not do so, and American scientists and cultural exchange visitors are still subjected to the Soviet Union's closed area system, with some exceptions. Despite this disappointment, the United States has not renounced its more liberal policy for exchange visitors. (The closed area system in the United States, however, still applies to Soviet diplomats, commercial visitors, and officials, although State Department spokesmen insist that they make exceptions wherever they can.)

Despite the official lifting of the closed area system for Soviet exchange visitors to this country, some areas, notably the San Diego region, remain as exceptions and are closed to visiting Soviets who wish to stay there longer than a day or two. For San Diego and possibly other places the closed area restrictions appear to remain in force.

Over the years, the volume of traffic between the scientific communities of both countries has grown. In 1969, shortly after the U.S. closed area system was lifted for these visitors, about 100 scientists a year from each nation visited the other. In 1972, however, that number suddenly doubled. The State Department estimates that in that year 215 Soviets visited the United States under the science and technology agreement and 194 Americans visited the U.S.S.R. In 1973 the number doubled again: 463 Soviets visited the United States and 531 Americans visited the U.S.S.R. Some observers

noted that the larger volume of exchanges is making the old rules imposed by each side more cumbersome to enforce. They pointed to the fact that if the exchanges became as numerous as they are today with Great Britain, enforcing the present restraints would become virtually impossible.

Two other features of the State Department's present-day curbs on scientific traffic between the two superpowers are of interest because of the strategic importance of science and technology to both countries' industrial and military strength. One is that all Soviet applications to visit this country are routed by the State Department through an advisory committee whose very existence is classified, but which knowledgeable sources believe is based in and run by the CIA.

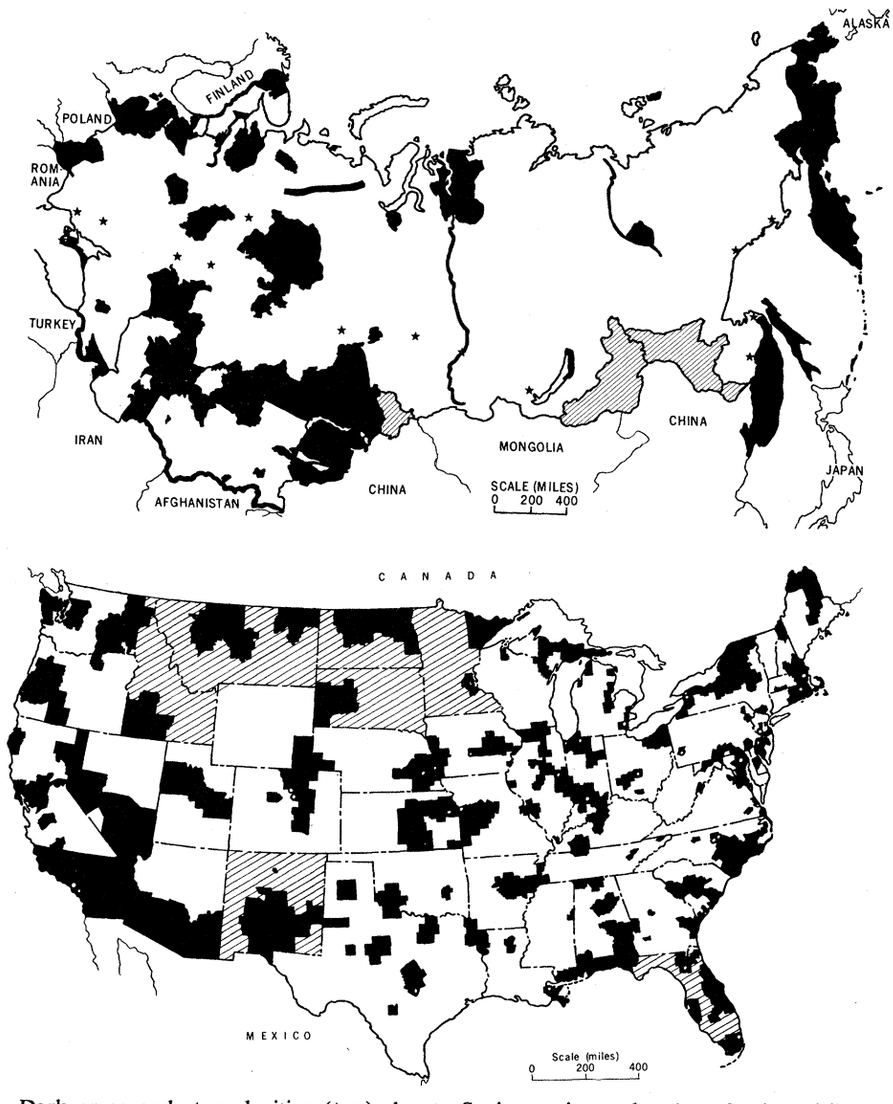
Represented on this committee, say several sources, are each branch of the military services, the departments of Commerce and State, the CIA, and perhaps other intelligence groups. Although its work is only advisory, this committee is said to be the forum in which the military, intelligence, and civilian sectors do battle, on a case by case basis, over whether to allow a Soviet expert into the country in the name of friendship or to keep him out on grounds of national security. Another function of the committee is to ensure that those Soviet scientists who come to American universities and laboratories are bona fide scientists and not, as has sometimes happened, bureaucrats of some other variety with an intelligence or political mission.

A principal bone of contention within the classified committee, say many persons within and outside government, is the San Diego region. The Navy representatives on the committee are said to be adamant about prohibiting any Soviet scientists from remaining longer than a day or two in the vicinity of San Diego, where the Naval Undersea Center and the Naval Electronics Laboratory Center are located. William D. McElroy, chancellor of the University of California at La Jolla, recently protested to Secretary of State Henry Kissinger over the State Department's refusal to allow a Soviet theoretical physicist to stay for a few months at the La Jolla campus. This protest, like earlier ones by McElroy, who is a former director of the National Science Foundation, was to no avail. "As far as I can understand it, I do not believe that it is a fair restriction," he says. "There's some classified Navy work going on here, but there is [such work] all over the United States. . . . In a way we're dealt out of the exchanges."

Even the Scripps Institution of Oceanography is also off limits to Soviet visitors. William A. Nierenberg, director of Scripps, says his attempts to get scientific exchanges with the Soviets going at Scripps have been "the single most frustrating experience I have ever had." Nierenberg is angered by the fact that, while the two Naval research centers nearby seem to be the reason the U.S. government won't let Soviet visitors come to other institutions, the Naval Undersea Center itself hosted a group of Soviet guests in December 1972. Yet the Navy regularly prevents Scripps, the university, and the neighboring Salk Institute from having Soviet oceanographers, biochemists, and the like visit them.

Nierenberg recalls that in early 1973, in order for Soviet oceanographers and the crew of their research vessel to visit Scripps, the vessel was required to dock 100 miles to the north at Los Angeles. The guests had to ride for 2½ hours on a bus to the institution. They were not allowed to stay overnight at Scripps, says Nierenberg, but the Soviet oceanographers were allowed to visit Disneyland in Anaheim, which is "open" according to State Department maps, although all the surrounding counties are closed.

One futile attempt by the government to limit the flow of scientific exchange between the United States and the U.S.S.R. is the rule laid down by



Dark areas and starred cities (top) denote Soviet territory closed to foreign visitors. Still larger areas not shown on Soviet maps are also closed to U.S. scientists and other visitors. Areas of the United States closed to Soviet visitors (excepting, in most cases, scientists) are similarly marked (bottom). Hatched areas of the two maps show territory that each country reciprocally closed off last April.

the military which prohibits access to unclassified military-sponsored research by Soviet scientific visitors. Scientists who had hosted guests from the Soviet Union said that the rule is regarded as unenforceable and is generally ignored by scientists, since the fruits of military-sponsored research are found in scientific literature all over the country. The purpose of the military services' guidelines is difficult to decipher, as the following sample from a 1971 Navy manual indicates:

> No objection providing no Soviet or Eastern European visitors have access to facilities, documentary or verbal, production, research, or other activities, Navy contracts or grants whether classified or unclassified.

Some State Department spokesmen admit that the continuing curbs on Soviet exchange visitors are of questionable effectiveness in persuading the Soviet Union to ease its own restrictions. For example, a stumbling block in getting exchanges going in geothermal research has been the fact that the vast Kamchatka peninsula on the Soviet Union's Pacific coast remains closed to all foreign visitors, even though this is where much interesting Soviet geothermal research is carried out. The Soviet Arctic remains off bounds too, despite U.S. wishes to perform research on cold-weather effects and despite the fact that Alaska is open to Soviet exchange visitors.

On the other hand, the Soviet Union has made some exceptions to its closed areas policy for visiting scientists in the last 2 years, so that some American scientists and officials are led to argue that U.S. policies are indeed effective. Robert Wallace, of the U.S. Geological Survey in Menlo Park, California, says that American seismologists have recently been allowed to bring in their own instruments and work for several months in the previously closed area of Tadzhikskaya, between the city of Tashkent and the Afghanistan border, which was previously closed. Under the U.S.–U.S.S.R. environment accord, a team of American wildlife experts has been allowed to visit two northern cities,

Science Advising... Cont'd.

In recent weeks, rumors have been floating around Washington that President Gerald Ford would strengthen or upgrade the present science advisory system for the executive branch of government. Some officials have been whispering that a White House decision could come as soon as Thanksgiving. Meanwhile, Senator Edward M. Kennedy, in a single week in October, rushed a complex, potpourri science advisory bill through his science subcommittee of the Committee on Labor and Public Welfare, through the full committee, and on through the Senate. The move seemed to be designed to put pressure on both the White House and the House of Representatives to take action on the science advisory question.

For several weeks White House staff has had before it a list of options for strengthening science advice in the executive branch. These options were forwarded by Roy Ash, director of the Office of Management and Budget (OMB) and were reviewed at some stage by H. Guyford Stever, the current presidential science adviser and director of the National Science Foundation (NSF).

Options before Ford

The options are said to include various ways of strengthening Stever's hand, such as giving him the prestige of a White House office, a seat on the Domestic Council, or more money and staff for his present science policy operations inside NSF. (The present arrangement came about when President Nixon moved the science adviser's job for the White House to NSF in July 1973.) Other options are to create a council on science and technology or to create an office of policy studies of which science policy would form a part. Still another possibility would be to recreate the old Office of Science and Technology in the White House—but this proposal is likely to be opposed by OMB.

Stever, who has maintained that the new science advisory system works perfectly well says he has talked on several occasions with President Ford about the need to strengthen science advice in the White House. But he would not say which of the above options he is urging Ford to accept.

At the other end of Pennslyvania Avenue, there is also a push—albeit a confused one—for strengthening science advice in the executive branch. In 1 week, Kennedy's staff arranged hearings on three pieces of science-related legislation pending before the committee, rewrote all three bills into a giant-sized one, and moved it through the Senate without opposition.

The final measure, titled the National Policy and Priorities Act for Science and Technology, rolls together several old proposals. One which originated with the Kennedy staff would turn the NSF into a civilian science organization resembling the space agency to solve problems such as housing and transportation.

Another bill, reported out of the Commerce Committee earlier this year, would create a council of science advisers in the White House (another section of this bill which would have made the space agency into a civilian science organization was eliminated earlier). Finally, a proposal from Kennedy's chief adversary on the science subcommittee, Peter Dominick (R–Colo.) would provide science advisers for state governors. The resulting package would bring about a massive reorganization of science advice everywhere. It is understood that Kennedy's actions were made possible in part by the fact that Dominick, who has countered many Kennedy proposals in subcommittee in the past, was busy in Colorado fighting a losing battle for reelection to the Senate.

The Kennedy action is indicative of the more zingy things Congress is apt to do when an election is about to take place, but it also has the effect of moving the science advisory reform ball into the House's court. There, the Committee on Science and Astronautics has responsibility for science policy matters. But spokesmen for committee chairman Olin Teague (D–Tex.) say he will not be hurried by the Senate. The committee is not likely to report out any science advisory legislation until after some previously planned hearings next year.—D.S.

Noril'sk and Magadan, as well as a central one, Krasnoyarsk, all of which had been previously closed to foreigners.

But despite these "successes" of U.S. policy, some American experts are objecting to the way it is being enforced in this country. "We're not interested in selling national security down the river," says Lawrence C. Mitchell of the Commission on International Relations of the NAS. "But we are interested in honest answers. If there is a good reason why a theoretical physicist from the Soviet Union should not spend 3 months in San Diego, fine. But it looks as though the military in particular is acting in a categorical manner."

Several American scientists, although they disagreed on whether the government Cold War era rules serve a useful purpose, did agree that the rules have been responsible for the restrained, arm's length character of the exchanges with the Soviet Union of the last 2 years. Several of them contrasted this situation with the Soviets with current scientific exchanges between the British and Americans. The latter are so free-wheeling and spontaneous that no official at the NAS could be found to even estimate how many scientists from each side are involved. Commented one American: "We don't really have scientific exchange yet with the Russians in the sense that we do with the British."

—DEBORAH SHAPLEY

Patients' Rights: Harvard Is Site of Battle over X and Y Chromosomes

Boston, Massachusetts. Patients have rights. It is a startlingly simple concept, one of those things that ought to go without saying. But today, rather suddenly it seems, people are putting into words ideas that sound strangely new, and patients are acquiring rights they have never had before: the right to be *fully* informed before consenting to an experiment, the right to refuse consent.

As patients gain rights, researchers lose prerogatives they used to take for granted; they are increasingly under fire for experimentation they are doing in the name of medicine and science. It is a difficult time, fostering controversies that probably never would have come up as few as 6 or 8 years ago.

Harvard Medical School is the site of one such controversy where a disagreement over a study of chromosomal abnormalities in newborns has become an acrimonious battle. One group of faculty members is trying to force another to abandon a chromosome screening study that has been going on for several years. The battle is cast in terms of the persecutors and the persecuted. There are those who say that the spirit of McCarthyism is alive at Harvard Med.

X and Y chromosomes are a significant part of the trouble. Since 1968, Stanley Walzer, a psychiatrist, and Park Gerald, a geneticist, have been looking at the chromosomes of every baby born at the Boston Hospital for Women, one of the Harvard teaching hospitals. (Some 15,000 newborns have been screened.) Not surprisingly, they have identified some baby boys who have the XYY chromosome pattern; that is, they have one extra Y—male chromosome. The XYY pattern has been dramatically, if somewhat simplemindedly, associated with criminality.

A few years ago, XYY was used as a defense in two widely publicized murder trials, one in France (it was not accepted) and one in Australia (where the defendant was judged insane, but not by virtue of being XYY). The problem of understanding what XYY means was further compounded by the erroneous rumor that mass murderer Richard Speck, who killed eight Chicago nurses, was XYY. As late in the game as 1972, one of this country's leading geneticists stood up at a small meeting and pushed the XYY stigma to its limits. "We can't be sure XYY actually makes someone a criminal," he said, "but I wouldn't invite an XYY home to dinner." The audience was incredulous at his bias.

Today, no scientist with any experience in the matter actually believes there is such a thing as a "criminal chromosome," but there is preliminary evidence that XYY boys are at risk for developing some rather ill-defined behavioral problems. Gerald says XYY boys seem to have "impulsivity and difficulty controlling themselves, but they are certainly not criminals." Walzer says that some XYY children are "hard to handle," that others are "perfectly fine." Both he and Gerald are of the opinion that XYY is a "disease," however, and that children who have it are entitled to medical treatment just as they would be for any other disease. (Not all XYY researchers are willing yet to commit themselves so flatly to a definition of the aberration as a "disease." Said one, "The reason we all need to continue our studies is to find that out." One thing that has emerged from work so far is the fact that XYY is not all that rare. It occurs in one out of every 1000 births, making it as common as Down's syndrome—mongolism.

The chromosome screening study has also identified a number of boys with a less publicly familiar aberration, XXY, which is also related to behavioral problems, although criminality has not even been implied. XXY boys, Walzer reports, have normal, even high, IQ's but are likely to suffer "speech and language difficulties" and may be handicapped by a "significant reading deficit." With early identification and intervention, he believes, these boys can be helped. The incidence of XXY is as high as that of XYY. Both Walzer and Gerald believe that screening for these, and other, chromosomal patterns is more than justified. And they believe that, in XYY and XXY cases, it is possible to offer useful help in the form of psychological counseling.

Not everyone agrees. Chief, or at least most vocal, among the opposition is Harvard microbiologist Jonathan

Recent advances in biomedical science are raising important problems of ethics and public policy. This is one of a series of occasional articles planned for News and Comment on the conflicts involved.