

## The Union of Councils for Soviet Jews

### VOLVOVSKY DISAPPEARANCE "EXPLAINED"

Leonid Volvovsky, who was arrested on April 23 and has not been seen since then, is now being interrogated under Article 209 of the Soviet Criminal Code (concerned with vagrancy). This charge carries a minimum sentence of one year and was brought at the demand of the Kishinev Procurator. Please send your protests to the Procurator and letters of support to Volvovsky's family in Gorky.

I.I. Cheban  
Chief Procurator of  
Moldavian SSR  
25 Gogola Street  
Kishinev, Moldavian SSR,USSR

Ludmilla Volvovsky  
Ul. Avtomobilnaya 20,Kv.102  
Gorky, RSFSR,USSR

### TONKONOGY SENTENCED ON "PARASITISM" CHARGES

Mosei Tonkonogy of Odessa was sentenced this week to one year in prison on charges of parasitism. Obstructed by authorities in his attempts to find regular employment, Mosei has been working at odd jobs since his original application to emigrate was refused in 1973. He joins a growing list of Jewish refuseniks sentenced in the last two months.

This intense harassment is the worst faced by Soviet Jews since the detention of Anatoly Shcharansky, and is being viewed ominously by the refusenik community. The five Jewish prisoners make a total of 162 prisoners arrested by the Soviets since June, 1979, for advocating political, religious or ethnic rights.

### ORLOV LETTER BIDS PLEA FOR AMNESTY FROM SOVIETS

May 12 marks the fourth anniversary of the founding of the Moscow Helsinki Group and the third year of imprisonment for famed scientist Yuri Orlov. A Helsinki Commission press release notes that Orlov has asked all of the participants in the upcoming Madrid Review Conference to work towards obtaining amnesty for Soviet political prisoners. As he states it, "Any government which considers itself to be a model society cannot claim that all criticism is interference in its internal affairs."

Amnesty International's recent publication indicates that there were 400 human-rights activists imprisoned in the 1975-1979 years, plus 162 arrested since June of 1979 in what is widely considered to be an overt "clean-up" of all dissident elements before the Olympics.

### SOVIET JEWS LOSE OUTSPOKEN ADVOCATE IN CONGRESS

Representative Robert Drinan (D-Mass.), the leading spokesman for Soviet Jews in the House of Representatives has been barred from running for reelection by a papal order.

In a letter to Rep. Drinan, Robert Gordon, president of the UCSJ wrote:

...You have been a tower of strength. Your office has always been open to us. It has been a unique situation: you have urged us to develop new ideas so that you could implement them on behalf of the Jews of the Soviet Union. This active response has resulted in numerous projects and actions which have increased understanding of the problems of Soviet Jews in the United States government, in the Russian government and among peoples of the world.

( continued on next page)





Judy Novick, Washington representative of the UCSJ, described Rep. Drinan's role in the Soviet Jewry movement:

...Working steadfastly for human rights, Rep. Drinan is the American Chairman for the International Committee for the Release of Anatoly Shcharansky. In that capacity he and his staff have organized and participated in special vigils across from the Russian Embassy, prepared "Shatter the Silence" packets, taken part in Special Orders on the House Floor, and organized letter writing campaigns and much, much more. He has also been an invaluable spokesman for many others including Ida Nudel. For all of us who work in the Soviet Jewry movement, Rep. Drinan's presence in the Congress will be greatly missed.

#### NEWS BRIEFS

It's nice to begin with pleasant, although belated news. Former POC Misha Kornblit and his wife Marjie celebrated the birth of their son, Simcha, on January 13 in Jerusalem.

\* Information received from the USSR indicates that Kiev and Moscow have refusenik populations of 5000 each. Reports from Novosibirsk state that no permissions have been given in that city since October of 1979. A family in Vinitsa in the Ukrainian SSR was told that no applications for emigration will be considered until after the end of the Olympics in September.

\* Igor Kushnirenko is now in a psychiatric hospital.

\* Reuters News Service reports that 2000 Jews in Kiev have begun an "action of protest" against the recent restrictions on Jewish emigration in that city. No further details were available at press time.

\* Many of the students enrolled in a Hebrew study circle run by Pavel Abramovich in Moscow have recently been interrogated by the KGB. They have been warned of dire consequences if they do not cease from their Hebrew studies, and some have been frightened away. Nevertheless, there are now more than 30 Hebrew study groups in Moscow alone. These groups avidly await publication of Jewish cultural samizdats such as "Our Ivrit". The March 1980 issue had 79 pages on varied cultural topics.

#### EMIGRES

Pavel Gertopsky - Orgiev    Riva Feldman - Moscow    Yefim Adamovsky - Kishinev

#### April Emigration Figures:

24% Soviet Jews arrived in Vienna, 37% went to Israel.

#### HELSINKI COMMISSION HOLDS HEARINGS ON SOVIET TREATMENT OF ETHNIC GROUPS

Lev Ulanovsky, former refusenik living in Israel since last October, testified at the recent hearings of the Helsinki Commission on the upsurge of Soviet anti-Semitism. He stated that "the anti-Jewish campaign in the Soviet Union has become so strong and dirty that people are sometimes beaten in the streets only because they have Jewish faces. The Jewish child in school is especially in a terrible situation, being held in contempt by his whole class. Refusenik families are even in more danger because they are projected by the mass media as the worst kind of traitors, who deserve no mercy. The most important obstacle to emigration is the fear of becoming the target of this hatred and unrestrained harassment."

The UCSJ also submitted testimony on anti-Semitism, including a memorandum entitled: "Anti-Semitism in the USSR: Official Soviet Violation of Domestic and International Law", prepared by Donna Arzt, general counsel of the Soviet Jewry Legal Advocacy Center.



## SCIENTIFIC CONCERN BECOMES SIGNIFICANT ACTION: AN ALERT SPECIAL REPORT

Action on behalf of persecuted colleagues has become a major issue with human-rights-oriented scientists in this country.

Repression in the USSR has been the focus of their concern, as this is contrary to the Helsinki Accords of 1975 of which the Soviet Union is a co-signatory.

Because Soviet authorities are so sensitive to this type of activity, we are devoting a major portion of this week's ALERT solely to scientific activity.

Two major special interest organizations of concerned scientists exist. SOS, (Scientists for Orlov, Sakharov and Shcharansky) and the Committee of Concerned Scientists are ad hoc groups of scientists with varied political views and religious affiliations. They are joined by the belief that scientists must express their objections to violations of human rights and restrict scientific cooperation until treatment of dissidents improves.

The following statements by Morris Pripstein, SOS Chairman, and Kurt Gottfried, member of SOS Executive Committee, introduce SOS's history and focus of concern.

. . . Science has been an international activity since the Renaissance, and there are many precedents for collaboration between scientists who hold widely different political beliefs. For that reason scientists of both the US and the Soviet Union were highly effective good-will ambassadors, and made significant contributions to the transition from the cold war to detente.

That the Soviet Union abuses these collaborative arrangements has been common knowledge for many years. Everyone knows that our Soviet colleagues suffer from stringent political restrictions on their freedom to travel. . . . It is understood that a visit to a Western conference or laboratory is often a luscious reward for political loyalty, not for scientific accomplishment. It also does not take a Ph.D. in statistics to recognize that a Soviet scientist's ethnic background plays a large role in whether he can travel, or perhaps even publish. . .

It is against this background that the recent wave of persecution must be seen. For Western scientists were not only frustrated by these relatively benign perversions of the scientific spirit, they were even more distressed at the persecution of scientists who wanted to emigrate from the Soviet Union.

For many, therefore, the Orlov and Shcharansky cases were the straw that broke the camel's back. They realized that here, once again, there is no neat dividing line between science and politics. By withholding support from one's oppressed colleagues one is also taking a political action, because silence strengthens the hand of the oppressor.

What concrete form has the reaction taken? The most visible has been the formation of Scientists for Orlov and Shcharansky (SOS), an ad hoc group of 2400 US scientists who signed pledges that they will either cease, or sharply curtail, their participation in US-Soviet relations. The SOS signers included a significant fraction of the most active and eminent US scientists and engineers: 13 Nobel Laureates, about 10% of the membership of the National Academy of Sciences, etc. This unprecedented step was taken very reluctantly because it goes against the time-honored traditions of science. But these 2400 felt that an action that deprives the Soviet Union of real benefits was an essential ingredient in the campaign to help the imprisoned scientists.

. . . SOS's policy is that individual scientists should take action that deprives the USSR of some of the benefits of American science and technology -- until the Soviet authorities improve their treatment of their dissident and refusenik scientists.



The principal action thus far has consisted of individual scientists signing one of two pledges to restrict personal scientific cooperation with the USSR. The majority of the 2400 scientists signed a comprehensive pledge "to withhold all personal cooperation with the Soviet Union until Orlov and Shcharansky are released." The signers of the second pledge do not foreclose their participation in existing exchange programs, but commit themselves not to attend international conferences in the Soviet Union, to oppose the enlargement of the US-Soviet exchanges, and to campaign against the transfer of sophisticated technology.

These individual statements are quite separate from any action of the US government. For the government, scientific contacts with other countries have to be arranged taking account of a host of often conflicting governmental needs, including military, political and cultural factors. Individual scientists, on the other hand, can express themselves in support of human rights as their consciences dictate, independently of other issues. . . .

In addition to the SOS pledges, there has been a quieter, but nonetheless profound, shift in the attitudes of the US scientific community. Many scientists who did not sign the SOS pledges, some of them world-famous, have become more reluctant to cooperate with the Soviet Union, and have become actively engaged in human rights. Prestigious professional organizations, such as the National Academy, and the American Mathematical and Physical Societies, have formally interceded on behalf of Orlov and Shcharansky with both the US and Soviet governments. The most outspoken position has been taken by the Council of the Association for Computing Machinery, a 40,000 member organization of computer scientists-- a field where the Soviet Union is most eager for US cooperation. ACM has foreclosed collaboration in meetings held in the USSR. . . .

SOS petitions have elicited a startling degree of notice and response. Prominent news articles appeared in many of the major newspapers in the US and Western Europe. Most important, however, has been the response from the Soviet Union. On the one hand, the SOS actions were strongly applauded by Andrei Sakharov and other dissidents and refuseniks. On the other hand, these actions were widely denounced in the Soviet media -- twice on Soviet radio by one of their leading political commentators, Valentin Zorin, and in unusually long articles in Pravda and Literaturnaya Gazeta. If nothing else, this official reaction does suggest some sensitivity to the SOS effort.

That this shift of opinion jeopardizes a vital Soviet interest--scientific communication with the US, is recognized by Soviet scientists, and at least some elements in the Soviet government. The clearest sign was a very large article in Pravda on April 23, 1979, signed by two vice-presidents and three other members of the Soviet Academy, which contains an attack on "certain circles in the US hampering cooperation..." A very revealing indication of Soviet concern is a statement by Dr. Jessica Mathews, formerly the member of the White House staff responsible for formulating Presidential human rights policy: "The Soviets care deeply about scientific exchange with the US., so when they are curtailed by the American scientific community, that has an enormous effect, particularly because it is something the government can't turn on and off."

It is the Soviet government that must now take the initiative if we are to escape from this impasse.

(This material is taken from the testimony of Professor Gottfried at the International Sakharov Hearings in Septmeber 1979 and from an SOS policy statement by Dr. Pripstein dated March 7, 1980).



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S.O.S

FOR

SAKHAROV



ORLOV



SHCHARANSKY



## Scientists and Engineers Pledge Moratorium on Behalf of Colleagues

On 22 January 1980, our colleague Andrei Sakharov, an outstanding scientist and world-renowned leader of human rights, was arrested and exiled to Gorki by the Soviet authorities, for the "crime" of expressing his personal opinions. Since then he has been repeatedly harassed and even physically assaulted by the police. His wife reports he is in poor health. We must help!

To protest the Soviet government's savage treatment of their colleagues Orlov and Shcharansky, more than 2,400 American scientists pledged last year to restrict their scientific cooperation with the Soviet Union. This action was strongly applauded by Sakharov and other Soviet dissidents (and was widely denounced in the Soviet media). Nearly 1,000 French and Australian scientists have also adopted similar pledges. Because of Sakharov's exile and the deteriorating plight of other dissident scientists, we must act now and in much greater numbers than ever before.

We appeal to you, our fellow scientists and engineers the world over, to join together in a strong and significant protest of the Soviet Union's blatant violation of the human rights provisions of the Helsinki Accords to which it is a signatory. We propose a moratorium on scientific cooperation with the Soviet Union

for a limited duration linked to Helsinki Accords actions.

To commemorate the founding of the Moscow Helsinki Watch Group by Orlov, Shcharansky and others, the Moratorium shall begin on the fourth anniversary of that date, 12 May 1980. Six months later, on 11 November 1980, there will commence a major conference in Madrid to monitor compliance with the Helsinki Accords, with representation from all 35 countries which signed the treaty. We propose to maintain the Moratorium until the end of the Madrid conference. Evidence from that meeting can then help determine the need for, and the course of, future action.

**Scientists everywhere, acting independently of their governments, must express their deep concern now! We urge you to sign the pledge coupon below and to solicit additional signatures from your professional colleagues.** The pledge does not preclude personal communication with Soviet scientists in the interests of promoting human rights and world peace.

We will publicize the pledge, along with the names of signers, and send the list to Soviet President and Secretary Leonid Brezhnev and to the President of the Soviet Academy of Sciences, A. P. Aleksandrov.

## Moratorium Pledge

To protest the human rights violations by the Soviet Union in the cases of Sakharov, Orlov and Shcharansky, we, the undersigned scientists and engineers, pledge a moratorium on professional cooperation with the Soviet scientific community for a period beginning 12 May 1980, the anniversary of the founding of the Moscow Helsinki Watch Group, and ending at the completion of the November 1980 Madrid Conference to monitor the Helsinki Accords. During this period we will not visit the Soviet Union or welcome Soviet scientists and engineers to our laboratories.

NAME (Please Print)

SIGNATURE

AFFILIATION (Department, Institution, Country)

Please mail pledge coupon (before 1 May 1980, if possible) to: Scientists for Orlov and Shcharansky, P.O. Box 6123, Berkeley, CA 94706, USA. [Telephone: (+15) 486-4403]. To help defray expenses, we would greatly appreciate a contribution. Checks may be made out to SOS or Scientists for Orlov and Shcharansky. Thank you.



COMMITTEE OF CONCERNED SCIENTISTS URGES INTERVENTION OF SOVIET ACADEMY OF SCIENCES  
PRESIDENT TO PERMIT EMIGRATION OF REFUSENIK COLLEAGUE

New York, April 23...Over 800 American scientists from mathematics and physics departments of 47 major campuses and laboratories across the country, have signed appeals on behalf of Professor Naum Meiman, a mathematical physicist who has been denied permission to emigrate from the USSR on grounds of "state secrecy" for four and a half years. The letter, written "in deep and continuing concern over the situation of our colleague Prof. Naum Meiman, was released by the Committee of Concerned Scientists on the "International Day of Support for Professor Meiman." April 23rd was designated as a day for expressions of solidarity with Meiman from the international scientific community.

In a formal letter sent to Academician A.P. Aleksandrov, President of the Soviet Academy of Sciences of the USSR, timed to arrive on the "International Day of Support for Prof. Meiman," it was emphasized that "Our experience as scientists confirms that research conducted twenty-five years ago and subsequently published in international journals cannot constitute a threat to any nation. Moreover, since Prof. Meiman's research was conducted during your tenure as director of the Institute of Physical Problems, a public statement from you indicating that Prof. Meiman does not possess state secrets should remove this deterrent to his emigration." Prof. Meiman last dealt with restricted matters in 1948-55 when he performed model calculations in conditional units, which are now obsolete.

*Invitation refused*

(Editor's note: Herbert A. Simon, professor of computer science and psychology at Carnegie-Mellon University and winner of the Nobel Prize in economics in 1978, is one of many American scholars who have refused to participate in exchanges with the Soviet Union. Following is the text of his letter to Boris F. Lomov, director of the Institute of Psychology of the Soviet Academy of Sciences, in which Mr. Simon refused to contribute an article to the institute's journal. This full text was published in the Chronicle of Higher Education).

Dear Academician Lomov:

Thank you for your kind invitation to contribute an article to the new Psychological Journal. Unfortunately, I shall be unable to accept your invitation, and I think I should explain the reasons for my refusal.

No human values are more important than the right of every man and woman to think their own thoughts and to speak freely what they think. With heavy heart I

have seen that right denied more and more violently to the people of the U.S.S.R. by their government.

I have watched as some of the noblest and best citizens of your country, men and women with obviously deep concern for the human condition, have been harassed and often severely punished for seeking to exercise that right.

I have seen them attacked and condemned for supporting the principles of the Helsinki agreements. I have in mind, of course, such scientists as Dr. Shcharansky and Academician Sakharov, but also artists and writers as well as ordinary citizens.

Until the U.S.S.R. is able and willing to guarantee, at least at a minimal level, the

basic rights to free thought and speech, I find it impossible to participate in scientific exchange with Soviet scientists, to visit the U.S.S.R., to accept Soviet visitors, or to engage in scientific communication that might be of use to an oppressive government.

I have great sympathy and affection for the Russian people and Russian culture, and have tried to acquire enough knowledge of your language to gain some access to that culture.

I look forward to that future day when all Russians will enjoy those essential freedoms that heroes like Shcharansky and Sakharov, like so many of their forebears, have struggled for. Until that day arrives, I must keep my distance, lest I harm those Russians who are the friends of freedom and aid those who are its enemies.

I am under no illusion that my actions, or even those of a majority of the American scientific community, are likely to sway the policy of the U.S.S.R. government. But sometimes one must act to express one's deepest beliefs independently of the chances that the action will have any practical effect. This is such a time.

With regret that I must decline your invitation, and with the hope that a day may come in my lifetime when I can accept it.

Herbert A. Simon  
Professor of Computer  
Science  
and Psychology  
Carnegie-Mellon University

Pittsburgh Jewish Chronicle  
April 3, 1980



## Science and Human Rights

by  
Earl Callen,  
Bernard R. Cooper,  
and John Parmentola

Yuri Orlov, sentenced to seven years of hard labor and five years of "internal exile" for publicizing Soviet violations of the Helsinki Accords, is a particle physicist. Anatoly Shecharansky, sentenced to thirteen years of hard labor for human rights activities, is a mathematician and computer scientist. Andrei Sakharov, leader of the Soviet human rights movement, is a nuclear physicist. The father of the Soviet hydrogen bomb, Sakharov was awarded the Lenin Prize and the Stalin Prize, was three times "Hero of Socialist Labor," and is a full member of the Soviet Academy of Sciences. These awards were all conferred for his scientific research before his advocacy of human rights.

Other activists have been physicists. Valery Chalidze, Pavel Litvinov, Naim Meiman, Sergei Polikanov, Valentin Turchin, Andrei Tverdoklebov, and Iosif Zisels; biologists Sergei Kovalev and Zhores Medvedev; and the mathematician Leonid Plyushch. Even writer Aleksandre Solzhenitsyn has had technical training. In *The First Circle* Solzhenitsyn recounts his prison experiences as an electronics technician in an acoustics and telephone communications "sharasha" (special scientific laboratory) of the Mavrinno Special Prison outside Moscow.

Science and human rights — in fact science and activism of any sort — seem unlikely partners. How can we explain the preponderance of scientists among Soviet human rights activists — numbers too great to be explained by coincidence? Is it due to the example of the great Sakharov? Or is it something peculiarly Russian? Scientists are supposed to be thing-oriented, introverted, lost in *gedanken* experiments in their ivy-covered monasteries. Human rights is supposed to be the domain of the other culture, the humanists.

This article attempts to show that the role of the scientist as freedom fighter is not as alien as it seems. We shall describe the evolution of a commitment in the American science community — widely shared and growing, albeit of a lesser intensity than that of the beleaguered Soviet reformist comrades. In particular, we shall describe the evolution of social consciousness in the American physics community and in its professional organization, the American Physical Society.

To the scientist, the search for understanding is a flight of the spirit. To fly free one must be free. Long before President Carter made human rights fashionable, and long before other professional societies had begun to discuss the propriety of social action, natural scientists and their societies were forming human rights committees and were petitioning, protesting, and boycotting.

Today more than ever, scientists are involved in world affairs. Two of us (Cooper and Parmentola) traveled to Moscow last February. Two months earlier we tried to attend an international conference organized by "refusenik" scientists — Soviet scientists, mostly Jews, who want to emigrate and have been denied that right, fired from their jobs, and persecuted for the attempt. For more than six years the refuseniks have held weekly Sunday afternoon seminars in Moscow to maintain their scientific capabilities. (The seminar is known in Moscow as the "nonexistent seminar.") A similar, smaller seminar is held in Leningrad on Monday evenings. The refuseniks have also organized three international

ism, Zionism, racism, and human welfare. In 1914, at the outbreak of World War I, the German government issued the "Declaration to the Cultural World," which declared that "German culture and German militarism are identical." Patriotic hysteria was such that not signing the declaration was viewed as tantamount to treason. Of Germany's intellectual leaders, only Einstein and David Hilbert, the great mathematician, refused to sign. Then, in 1946, only 10 years after coming to the United States, Einstein wrote of American racism: "The more I feel an American, the more this situation pains me. I can escape the feeling of complicity in it only by speaking out." But Einstein was not a joiner. Though revered for his scientific genius, he was not a member of the scientific or political establishments. In the 1930s and 1940s, the leadership of the scientific societies was conservative, and it — not Einstein — set the tone.

What was deemed proper for the individual scientist was even more appropriate for professional associations. For example, the constitution of the American Physical Society states that, "The object of the society shall be the advancement and diffusion of the knowledge of physics." From the founding of the A.P.S. in 1899 until the past decade, "physics, not physicists" was the shibboleth of the society, as if physics was something that existed in and of itself, rather than as a human activity. This view was a barrier to every human rights initiative. The A.P.S. published technical journals such as *The Physical Review*, organized scientific meetings for the dissemination of research results, elected largely non-official officers, and did little more.

The first significant step, one of philosophical importance not recognized at the time and one that came from the society leadership, was the initiation of a placement service. The placement service, a secondary activity of large technical meetings, helps match employers and job applicants with one another. The organizational role of A.P.S. is passive and the cost is small, but this function was that first recognition that physics is advanced and diffused by physicists.

Perceptions of science as a human activity have percolated slowly and far from completely into the consciousness of working scientists. Because of the rapid progress of science, "generations" can be defined in terms of 10 or 15 years. These generations also represent differences in the development of social attitudes. The evolution to a heightened social conscience among scientists began with Hiroshima, grew with the civil rights movement, and was strengthened during opposition to the war in Vietnam. However, the continuing groping for the appropriate degree of social commitment is complicated by the fact that these events of the past 35 years have had different effects on different generations.

The cataclysm of Hiroshima thrust scientists now in their mid-fifties into awareness of the responsibility for the fruits of their labors. The Federation of American Scientists and the *Bulletin of the Atomic Scientists*, legacies from that era, are primarily concerned with nuclear proliferation and arms control. The primary social influence on scientists currently in their mid-forties was the civil rights movement

which, though it had little direct bearing on science, had a great deal to do with scientists.

The American Physical Society has 30,000 members, almost all of whom have Ph.D.'s. A decade ago there were approximately 50 black American physicists with Ph.D.'s, 5 Chicanos, and 1 American Indian. The numbers are better now, but still unsatisfactory. Less than 3 per cent of American Ph.D.'s in physics are women. Of almost 1,000 Ph.D.'s in physics granted in 1978, 9 went to blacks and 1 went to an American Indian.

At an A.P.S. meeting in March, 1954, at Durham, N.C., there was a mass resolution protesting the segregated dormitories of Duke University in which attendees were housed. The Solid State Division resolved not to meet again without guarantees of integrated facilities. To our knowledge, the society never again met at a segregated hotel or campus.

But it was the war in Vietnam that finally routed "objectivity." For a decade, young scientists observed their elders in supposedly objective, value-free work — developing laser-guided bombs, electronic fences, infrared missile-guidance systems, magnetic mines, and computerized warfare. Attempts to discuss context — "why" as well as "how" — were rejected as inappropriate for a society chartered to advance and diffuse the knowledge of physics (not to consider its social milieu). For the first time, the A.P.S. censored its bulletin.

Today, in marked contrast, members regularly discuss social issues at A.P.S. meetings. For example, there have been discussions of the war in Vietnam, the antiballistic missile, supersonic transport, arms control and disarmament, energy, pollution, nuclear reactor safety, nuclear proliferation, appropriate technology, classification of scientific secrets, "whistleblowers," privacy, employment guidelines, the job crisis, and the status of women and minorities. The A.P.S., not without controversy, has resolved to hold its national meetings only in states that have ratified the Equal Rights Amendment.

### Back in the U.S.S.R.

The first venture of American scientific societies into international human rights issues occurred in November, 1972. The Soviet Union was then imposing an emigration tax on its citizens, the stated purpose of which was to recover the cost of education provided free by the Soviet Union. This ex post facto tax amounted to approximately \$21,000, or about ten years' gross salary, for a Ph.D. Very few Russians have that much money, and if one did save it up, its possession, coupled with a request to emigrate, would probably lead to a charge of black marketing. Hence the emigration tax effectively blocked the emigration of scientists and other educated persons.

Letters from A.P.S. members urging action, and a petition circulated among industrial physicists, prompted the society to write to M. Kaldysh (then chairman of the Soviet Academy of Sciences) urging a discontinuation of the emigration tax. As far as we know, the A.P.S. was the first scientific society in the United States to take the plunge. With the ice broken, a number of other societies followed. Did this action have any effect? In such affairs, one never knows. But we do know that Henry Kissinger spoke



to Leonid Brezhnev about the tax, and it was dropped.

Over the years presidents of American scientific societies have written increasingly strong letters on behalf of the Russian refuseniks and dissidents. Academician Keldysh sometimes responded. His successor as president of the Soviet Academy of Sciences, A. P. Alexandrov, has over the years sent only one terse response to many remonstrances. This does not imply that Alexandrov is less sympathetic than Keldysh was, or that our letters are less useful. Even when the Russians respond to American pressure, they take great pains to conceal it. It is a thoroughly unscientific but serious game we scientists are playing.

The 1973 International Conference on Magnetism held in Moscow (see box page 27) taught American scientists much more than magnetism. Witnessing fellow scientists barred from an open, unclassified, international meeting — by Soviet soldiers with rifles — raised the consciousness of many Americans, and American scientists have aided Soviet refuseniks continually ever since.

Refuseniks are not only fired from their jobs; they are often barred from research institutes, colleges, and libraries and are generally shunned by the Soviet scientific community. To help relieve their isolation, the A.P.S. has mailed them gift subscriptions of scientific journals. But the journals and ordinary letters reach the addressees only intermittently. The Congressional commission charged with monitoring the Helsinki Accords has been informed of the irregularity of journal delivery, but that commission has little authority. Journals now being mailed to Victor Brailovsky are being received, but those sent to another refusenik, Yuri Gofland, are not being delivered although registered mail receipts are coming back.

#### Are Scientists Special?

We have presented a brief history of how scientists have recognized, individually and through their professional societies, the tie between the protection of human rights and the progress of science. But attitudes don't change overnight, and social awareness among scientists is continually evolving. One question we have had to grapple with is "Why are we making a special fuss about scientists?" Is it because of an arrogant assumption that scientists are more important than others? Philip Handler, president of the National Academy of Sciences, has remarked that "tortured shoe makers hurt quite as much as tortured scientists. Protest only for scientists doesn't quite fit with my own beliefs about all of this. Scientists happen to be a little more visible. The world knows about them. The shoe makers are taken off behind the barn and shot."

We hope that the honest answer to this disturbing question is that we act in aid of scientists because we are scientists. They are our people. We know them and we know the mechanisms by which we can help them, the institutions and the pressure points. We can marshal our own worldwide community on their behalf. We hope the shoe makers are doing something for the shoe makers, and we support organizations of broader scope, such as Amnesty International. Meanwhile we do what we can.

Even within and beyond groups there are delicate distinctions. For example, compare our relations with the Russian refuseniks and with the dissidents. The dissidents want to change the Soviet Union. The

boycott for Soviet science. The Russians know that they benefit from the influx of ideas from American science, and they are worried. But are they worried enough to release Yuri Orlov from prison?

Activism is spreading among Western scientists. The Dutch have always been very active in human rights and lately the French scientific community has grown more militant. In Germany, at a nuclear physics symposium in May, and in spite of the protestations of the Soviet delegation, 50 scientists signed a statement asking for Orlov's release from prison.

While unofficial groups in Britain, notably those associated with physicist and human rights author John Ziman, have an outstanding record on human rights, some of the United Kingdom scientific establishment has dug in its heels. In his 1977 presidential address to the British Association for the Advancement of Science, Sir Andrew Huxley argued that "The persecutions of the present day are not directed against scientific doctrines or against scientific enquiry as such; they are directed against individual citizens who have had the courage to speak up against oppressive features of the regimes under which they live . . . The appropriate reaction therefore comes from us not as scientists, but as citizens . . . If a scientific body publicly takes a step whose justification is political and not scientific, it will lose the right to claim that it is acting purely in the sense of science."

To many of us in the United States, the separation between "science" and "scientist" seems less clear than it does to Sir Andrew Huxley. We see growing human rights involvement of the American scientific community as an integral part of its broadening definition of what constitutes "science." Continuing evolution of the commitment of American scientists to human rights does involve a conflict. On one hand, there is a yearning for purity, a detachment, but on the other hand, there is a growing recognition that science is as complex and "dirty" as any other human endeavor.

We quote from the address of the outgoing 1977 A.P.S. president, George Pake: "Part of our heritage in the United States is a deep concern for human rights. This concern is a legitimate province for the American Physical Society when physicists or scientists anywhere have their basic human rights at risk, because the fundamental purpose of A.P.S. as a scholarly society is thus inhibited. . . . That purpose is stated in the A.P.S. constitution to be the advancement and diffusion of the knowledge of physics. If the governments of nations interfere on political grounds with the ability of physicists to engage in research or with their freedom to publish or travel in diffusing knowledge of physics, there is interference in achieving our purpose."

We are pleased that a community dedicated to the advancement and diffusion of the knowledge of science finds within the penumbra of its mission the advancement and diffusion of human rights. We are proud to be a part of that community.

Earl Callen is professor of physics at American University and former chairman of its Physics Department. He is a member of the Committee on International Freedom of Scientists of the American Physical Society, a member of the executive board of the National Council on Liberties Union, and a member of the executive board of Helsinki Watch. Bernard R. Cooper is professor of physics at West Virginia University in Morgantown, W.V. He is a member of the executive board of the Committee of Concerned Scientists and former chairman of the Committee on International Freedom of Scientists of the American Physical Society. John Parmetola is a postdoctoral fellow in physics at M.I.T. and a member of the American Physical Society's Committee on International Freedom of Scientists.

## Reality and the Nonexistent Seminar

A confrontation with reality at the 1973 International Conference on Magnetism in Moscow was probably the single most important spur to human rights activism by the scientific societies. Three members of the Moscow seminar — Mark Abbel, Moshe Gitterman, and Alexander Voronel, all active in magnetism research — were barred from attending by magnetism conference police at the doors of Moscow State University.

This was in violation of the rules of the sponsoring organization, the International Union of Pure and Applied Physics.

To give the excluded scientists a chance to discuss their work, an impromptu session was to be held in Voronel's apartment on Sunday afternoon, August 26. All conference participants were to be invited. But how? A few individuals distributed hand-written announcements in the halls of Moscow State University, posted notices on bulletin boards, and intercepted the announcement into their technical talks. The posted notices were torn down, and in one instance, the public address system was cut off in the middle of an announcement. Conference participants were told that the refusenik seminar was to be strictly scientific; no

demonstrations or protest speeches would be allowed. Those wishing to attend the seminar would meet and then go together to Voronel's apartment.

The seminar was attended by 41 conference participants from the West, by a number of Soviet scientists (refuseniks and others), observers from the official conference organization, and several K.G.B. agents (including one very friendly blonde woman, just like in the spy thrillers).

This was the first participation by Western scientists in the Moscow seminar. Since then, the seminar has had many visitors, and speakers from the West.

The seminar has continued to be held weekly, often under difficult circumstances, first in the apartment of Alexander Voronel, then of Mark Abbel, and now of Victor Brailovsky, as successive organizers have left the Soviet Union. □

## The Red Guide (Not by Michelin)

The importance of Western scientists visiting the Moscow seminar has been recognized in "Guidelines for Visitors to the Soviet Union," published in the November, 1976, issue of *Physics Today*. Some excerpts:

"The decision to boycott visits as a protest of the treatment of dissident Soviet scientists is a personal one; however, this is a useful action only if it is made known to appropriate persons in the Soviet Union. . . . If one does visit the Soviet Union, one should go with the thought of taking constructive actions to help maintain the scientific capability and physical well-being of the suppressed

scientists. These actions should include making personal contacts with the scientists and participating in their seminars.

"The expression of one's concern for the suppressed scientists, in conversations with Soviet scientists and officials, should include businesslike discussion of the possible consequences for scientific and technical exchange and an emphasis on the situations of individual scientists.

"If one attends international conferences in the Soviet Union, one should insist on the rights of suppressed scientists to attend on an equal basis." □



# Russia's Secret Weapon: U.S. Technology

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The Russians are using American technology to build up their war machine—and the U.S. can't seem to find an effective way to stop it.

For years this country has tried to bar sales to Communist nations of American products that could be turned to military use. President Carter recently added a temporary embargo on sales of any kind of high-technology equipment, regardless of its intended purpose.

But now it is becoming evident that such controls are not doing the job. The Soviets are continuing to obtain Western technology and know-how, not only for their technically backward industries but for their armies, as well.

Many militarily useful products slip through the export-licensing system—bought by Russia ostensibly for civilian use, then diverted to military ends.

That is only part of the problem. The Soviets are buying from other Western nations—including America's allies—much of the technology that they can no longer buy from the United States. What's more, they are stealing much of the American technology that they cannot buy.

This was brought out in a recent hearing by the Senate's Permanent Subcommittee on Investigations. Senator Henry M. Jackson (D-Wash.) cited a prediction made years ago by the Bolshevik leader, Nikolai Lenin, that sales-minded Western capitalists would "supply the rope" that Communism could use to hang the capitalist system.

That, said Jackson, is what is happening: "The United States and its allies have been selling the rope to the Soviet bloc. What we haven't sold or given away, they have stolen."

The record is full of examples supporting that charge. American companies sold more than 1.5 billion dollars' worth of equipment and information for the Soviets to build an immense truck factory on the Kama River. The trucks were supposed to be used in the civilian economy. When Russia invaded Afghanistan, however, its Army used trucks made in the Kama plant.

Russia's Zil truck complex, also built with the aid of American exports, is producing not only military trucks but missile launchers as well.

Two years ago, the Soviets bought navigation and electronic orientation devices from a U.S. firm, Litton Industries. The technology that came with that equipment is now being used to help Russian planes and ships track American submarines.

American and Japanese electronics, purchased purportedly for use in civilian air-navigation systems, have been converted to use in computers for missile guidance, filling an important gap in Soviet technology.

The famous Corky auto works, reportedly run with U.S. computers and Japanese business machines, makes not only civilian cars and trucks but also amphibious assault vehicles and military trucks.

Precision ball bearings bought from Bryant Grinder Corporation of Vermont are said by Pentagon experts to have aided Russia in developing its MIRV missile.

**Free for the asking.** Sometimes Moscow doesn't even have to pay for technology.

The Soviets apparently learned how to make wide-bodied jet airplanes without buying a single plane. They created a bidding war among three American firms. In their eagerness to win a lucrative contract, the companies handed over more and more details of their construction techniques. When the Soviets had all the information they needed, they called off the contract negotiations. Such planes are now on the proscribed list—but too late.

Russia played a similar game with West Germany to steal technology for making diesel locomotives. Saying they were eager to buy such locomotives, the Soviets sent experts to West Germany, ostensibly to learn how to service diesel engines. But they learned so much that they were able to go home and build their own locomotives.

Now, spurred by the Soviet invasion of Afghanistan, the Carter administration is engaged in an intensive search for ways to plug such leaks. Export-licensing procedures are to be tightened. Meanwhile, shipments under licenses already issued have been frozen and action on pending applications for licenses has been suspended.

But, American officials say, the U.S. by itself cannot effectively restrict the flow of technology to the Soviets. "We will need the support of our allies, and we expect their support," Defense Under Secretary William Perry told the Senate investigators.

Most allies have promised cooperation in curbing militarily useful exports to Russia. Yet, there have been numerous leaks of Western technology to Russia through companies of allied nations. Sometimes those sales by allies have been made at the expense of American firms that had been denied export licenses for sales of similar products.

In 1978, Carter vetoed the sale of a 7-million-dollar Univac computer to the Soviet news agency, Tass. Last March the administration reversed itself and granted a new license to the American firm, Sperry Rand, which makes the computer. But by then the Soviets had bought an 18-million-dollar computer from a French company.

Another American firm, Cyril Bath Company, won a contract to sell the Soviets metal-forming presses. But its application for an export license was turned down because the presses conceivably could be used to make airplane wings. Three years later the company won a reversal of the export ban, arguing that the same presses were available from France. But by then the Soviets already had purchased the French presses.

**Impact questioned.** Many American experts question whether even effective bans on U.S. sales would have much immediate impact on the Soviet economy because so many other countries are able to supply substitutes for U.S. wares.

For example: Russia needs oil-drilling equipment. But, says Daniel Wallace, an international assistant vice president of Armco International, Inc.: "Almost all the oil-field equipment the Soviets get from the U.S. is available from the Japanese, French, Germans or British or Rumanians."

American attempts to curb sales to Russia have created an international black market in technology that the Soviets exploit. Products sold to a non-Communist country are often re-exported to Russia or one of its satellites.

Exchange programs initiated during the years of American-Soviet détente have been turned into a one-way street for transmitting technological information and skills to Russia, with the U.S. learning virtually nothing in exchange.

Senator Jackson cited the case of a Russian exchange student who came to the U.S. to study the chemistry of fuel-air explosives. "In contrast," the senator said, "American students go to the Soviet Union to study literature, history and economics."

**Why is the Soviet Union so backward in technology?**

An answer given by European experts is this: The people in the Soviet Union are as gifted in mathematics, research and development as those in Western countries. But Soviet leaders have never tried to mobilize their nation's technological capacity. To do so would require reform of the centrally controlled economic system—and the Soviet leaders fear that more-liberal economic policies would weaken the Communist Party's political control. It seemed to them easier and safer to buy Western technology and put off reform. This also enabled the Soviets to concentrate on military rather than industrial technology.

**Policy's cost.** The Soviets are now paying the price for that policy. The technological gap between East and West has widened, and Communist countries are increasingly dependent on massive technological aid from the West to modernize their industry.

In recent years, roughly half of all Western exports to the Communist area were technologically advanced products, and another 20 percent were capital-intensive products. Sales of Western machinery and equipment to the Communist bloc have risen tenfold since 1965 and now exceed 10 billion dollars annually, with well over half of those shipments going to the Soviet Union.

According to the Commerce Department, what the Soviets want most to buy from the United States are chemicals, computers, semiconductors, business machines, automotive parts and manufacturing equipment, ball bearings and oil-drilling equipment.

From West Germany, the Soviets seek cameras and other optical equipment, timing devices, diesel locomotives and heavy construction equipment.

The Soviets look to Japan for steel-manufacturing machinery, oil-drilling equipment, timing devices, computers, automatic manufacturing controls, television and other electronic equipment, semiconductors and microconductors.

In formulating a new strategy to keep Russia from getting American technology, the Carter administration is beset by two conflicting arguments.

American manufacturers say that government curbs hurt them in competition with exporters abroad. They point to this nation's 34-billion-dollar trade deficit, which makes exports a high national priority. The Commerce Department estimates that 112 million dollars of sales to the Soviet bloc were lost because of export-license denials in 1979. American firms want the export-control procedures to be simplified and the rules clarified to make foreign sales easier.

On the other side, the Defense Department contends that national security must be given higher priority than business sales—and that the technology-starved Soviet bloc cannot be trusted to use American technology for civilian purposes only.

The problem is how to protect U.S. business without supplying the rope for Communism to hang capitalism. □



# Scientists pinch the Russian bear

By John H. Bunzel

It does not take a Gallup poll to reveal that as a result of the invasion of Afghanistan the American people look upon the Soviet Union today with more revulsion and contempt than at any time since the beginning of the Cold War more than 30 years ago.

What they can or should do about it remains an arguable question, which is one reason their anger is matched only by their deep frustration.

It is all the more remarkable and satisfying, therefore, when it turns out that a respected group of Americans is taking some direct action to protest another form of Soviet repression — in this instance, to denounce the refusal of the Soviet Union to abide by the human rights provisions of the Helsinki agreement on European security. Not only are they doing something concrete as individual citizens, but they are not being taken lightly by the Russian government.

In what has been called a "grass-roots" protest of the treatment of dissidents by Soviet authorities, a nationwide group of scientists has signed a pledge to "withhold all personal cooperation with the Soviet Union" until Yuri Orlov and Anatoly Shcharansky, the two USSR scientists imprisoned in 1978 on charges of "anti-Soviet

activity" (Orlov) and "high treason in the form of espionage" (Shcharansky), are released.

The Americans' action was unprecedented because the withholding of scientific cooperation runs against all of the oldest and most sacred traditions in the scientific community. But the scientists did more than circulate a Statement of Principle. They pledged themselves not to attend international conferences in the Soviet Union, to campaign against the transfer of sophisticated technology to the Soviet Union, and to oppose the creation of new scientific and technical exchange programs.

Scientists for Orlov and Shcharansky (SOS) was started by a group of physicists at the University of California-Berkeley last year and within a few months drew support from all areas of science and engineering. Among its more than 2,400 members are 13 Nobel laureates, 113 members of the U.S. National Academy of Sciences, and presidents (past and present) of 20 major scientific societies. The actions taken by

SOS are a spontaneous response to Soviet policy and the persecution of their Soviet colleagues. The American scientists' actions are also independent of any position or policy of the American government.

These scientists are sending a simple message to Soviet officials: "You may be able to negotiate exchange agreements with our government, but these programs will be stillborn if large numbers of American scientists will not participate in them." SOS wants the Soviet government to change its present policies in two principal directions. First, it must adhere to the commitments it has undertaken as a member of the United Nations and as a signer of the Helsinki Accords. Second, the participation of Soviet citizens in international scientific life must be based on scientific and not political criteria.

A new sense of urgency has been created by recent human rights violations by the Soviet government, most notably the internal exile of Andrei Sakharov and the new wave of arrests of dissidents and refusniks. This month SOS is calling

on individual scientists all over the world to commit themselves to a moratorium on scientific exchanges with the Soviet Union, beginning on May 12, 1980 (the anniversary of the founding of the Moscow Helsinki Watch Group) and ending at the conclusion of the Helsinki Accords meeting in Madrid approximately six to eight months later.

In recent months the SOS petitions and actions have elicited (in addition to widespread press coverage in this country) strong support from Andrei Sakharov and other dissidents, and angry denunciations in Pravda and other Soviet-controlled media complaining of an inflammatory anti-Soviet campaign in the United States. These are good signs that the protest by American scientists have been effective and painful.

It is important to continue the pressure. The Soviets care deeply about scientific exchanges with the United States. Their curtailment by the American scientific community has an enormous effect, "particularly because it is something that government can't turn on and off."

John H. Bunzel, former president of San Jose State University, is a Senior Research Fellow at the Hoover Institution at Stanford University.

Editorial

April 6, 1980

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Sunday Morning News

## Union of Councils for Soviet Jews

24 Crescent St., Suite 3A, Waltham, Ma 02154

May 12, 1980

### INSIDE THIS WEEK'S ALERT

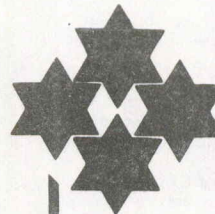
\* A special report on Science and Human Rights begins on page 3.

• S.O.S. (Scientists for Orlov and Shcharansky) presents its policy and program on page 3.

• The Committee for Concerned Scientists calls for intervention on behalf of Naum Meiman on page 6.

• "Science and Human Rights," reprinted on page 7 is one of the more than 100 articles on this topic which appeared in scientific journals in the past year. It provides an excellent overview of the subject.

\* Rep. Drinan is unable to seek reelection due to papal order. Statements on his involvement in the Soviet Jewry movement appear on pages 1 and 2.



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