

F.A.S. PUBLIC INTEREST REPORT

Formerly the FAS Newsletter

SPECIAL ISSUE:
ANDREI SAKHAROV

Vol. 33 No. 3

March, 1980

FAS ADOPTS SAKHAROV

The Executive Committee of the Federation of American Scientists today urged American scientists to consider the possibility of their announcing, as individuals, that they would refuse to engage in scientific exchange with the Soviet Union until such time as Andrei Sakharov had his political rights returned to him or was permitted, if he preferred, to leave the Soviet Union. They released the following declaration for scientists to consider:

"I assert my intention of refusing to participate in official bilateral scientific exchange with the Soviet government, and its scientific representatives, either here or in the Soviet Union, until such time as Andrei Sakharov is released from internal exile."

In raising this possibility, the Federation applies to Sakharov a method which it first conceived and proclaimed in March 1976, after meeting with Sakharov and other dissidents in Moscow in November 1975. Since that time, a number of individuals have "adopted" foreign colleagues who were denied certain rights, and have refused to cooperate with their colleague's government pending a restoration of those rights. Indeed, not long ago, an organization was formed to adopt two particular individuals — Scientists for Orlov and Shcharansky (SOS).

The Federation has never before, however, itself suggested that any particular individual be the focus of quite general concern. But obviously Sakharov is an unprecedented case.

In the first place, he personifies the scientist of conscience. Indeed, his Nobel Laureate citation called him "the spokesman for the conscience of mankind."

This Peace Prize was awarded for his courage and eloquence and for his thesis that no country could consider its national security assured unless individual liberties were assured in every country. Thus he enunciated and advanced a new and fundamental justification for the pursuit of individual freedom everywhere.

Moreover, of significance to scientists, he reached his conclusion as a result of his scientific experience — as the inventor of the Soviet H-bomb. Thus, he moved gradually and tortuously toward this conviction as a result of his professional appreciation of the destructiveness of nuclear weapons, an experience which gives his views special significance throughout the world.

Of paramount importance, in his writings, such as his *Treatise on Progress, Coexistence, and Intellectual Freedom*, and in his periodic comments on world affairs, he generated the world's most powerful voice of science and public affairs. To silence this voice by exiling him in a closed city is an historic crime against the freedom of scientific conscience.

Needless to say, he was also the captain of the ship of democratic dissent in the Soviet Union. Unquestionably, his suppression is keyed to the suppression of dissent throughout the Soviet Union and meant to signal others to keep still. If scientists do not protect his voice, whose would they protect?

In this connection, Academician Sakharov himself observed on January 28 that the measures taken against him were:

"aimed at humiliating and discrediting me and at the same time making possible further re-

FAS RELEASES POLL OF NAS

On February 26, as this newsletter went to press, FAS held a press conference in an effort to deter the Soviet authorities from expelling Andrei Sakharov at its March 4 meeting — a meeting to which, ominously, Andrei Sakharov had not been invited. Elena Bonner had given an interview on February 9 in Moscow warning of this possibility and suggesting that it would trigger a "return to Stalinism."

The press conference sought to show that American scientists would indeed sign the pledge given above in defense of Sakharov by releasing a poll of 1280 National Academy of Sciences members (see page 3 for poll). The results are striking.

Continued on page 8



Andrei Sakharov

pressive measures against all dissident groups in the country, with less possibility of the world's finding out about them, and further international adventures."

Finally, we cannot forebear from observing our close kinship with this man. Our Federation was founded by those who had invented our own nuclear weapon of mass destruction. Our own founders reached many of the same conclusions as did Academician Sakharov, and in the same way — through experience with nuclear weapons and a sense of guilt about participation in their creation. If FAS did not defend Academician Sakharov, we would not be defending ourselves.

Nevertheless, we do not now call upon *all* scientists to foreclose *all* scientific communication until such time as Sakharov is released from this sentence of internal exile. We recognize, as we always have, the importance of maintaining the scientific brotherhood. And we do not mean, in any case, to exclude personal scientific contacts, scientific contacts aimed at diplomatic solutions of war and peace issues and other non-scientific questions (such as Pugwash conferences) or the exchange of reprints and so on. Indeed, the more difficult the cold war, the more important these exchanges can be. Thus we recognize the importance of having some scientists go and complain, even as others refuse to go and complain.

Indeed, our strategy of defending Academician Sakharov is not foreclosed by any lack of unanimity. A very large number of scientists will adopt Sakharov, we are sure, in any case. This means that the Soviet Union will have to recognize how often its delegations will be snubbed on arrival by many offices they would otherwise visit and how many fine scientists will not travel to Moscow.

And, in the end, this spontaneous outburst of scientific support for Sakharov, through his individual adoption, is probably the only immediate strategy which cannot be credibly dismissed by the Soviets as politically motivated by hostile foreign forces.

With these considerations in mind, we propose to invite scientific professional societies, throughout the United States, to relay our message to their members and to secure themselves, or direct to us, what responses their members choose to make. Such distinguished societies as the New York Academy of Sciences, the American Physical Society, and the American Chemical Society have already assured us that means will be made available to carry this message to their members. (The Federation will also ask the organization, Scientists for Orlov and Shcharansky [SOS] to explore with their members the possibility of extending that organization's commitments to the case of Andrei Sakharov's political freedom.) FAS will maintain a depository of declarations in support of Sakharov and will periodically relay the results to the Soviet authorities. □

—Reviewed and approved by the FAS Council

WILLIAM H. STEIN DIES

Two days after endorsing the FAS pledge on Andrei Sakharov, William H. Stein succumbed to a long illness. He had served as an FAS sponsor for most of the seventies and his occasional contributions to FAS thinking had been much valued. The Federation deeply regrets his passing. A Nobel laureate, Dr. Stein had been confined to a wheelchair for many years, but had steadfastly continued his work under difficult circumstances.

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The Federation of American Scientists is a unique, non-profit, civic organization, licensed to lobby in the public interest, and composed of 5,000 natural and social scientists and engineers who are concerned with problems of science and society. Democratically organized with an elected National Council of 24 members, FAS was first organized in 1945 as the Federation of Atomic Scientists and has functioned as a conscience of the scientific community for more than a quarter century.

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*Nobel Laureates

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**FEDERATION MEMBERS AND COLLEAGUES
URGED TO TEAR OUT AND FILL IN
THIS POLL‡**

- _____ I. (SCIENTISTS SHOULD NOT BE INVOLVED) The internal exiling of Andrei Sakharov is basically a political matter, not a scientific one, and American scientists should not become involved, nor should scientific exchange be used as part of any reprisals, or efforts to secure rescission of the order.
- _____ II. (VERBAL PROTEST) I intend to write to Soviet authorities and protest the internal exiling of Andrei Sakharov and, to the extent possible, to refer to this matter in all subsequent relevant correspondence until it is resolved.
- _____ III.* (TRAVEL BOYCOTT) I intend to refuse to travel to the Soviet Union for official scientific purposes until such time as Andrei Sakharov is released from internal exile.
- _____ IV.*‡ (BIDIRECTIONAL BOYCOTT) I assert my intention of refusing to participate in official bilateral scientific exchange with the Soviet government, and its scientific representatives, either here or in the Soviet Union, until such time as Andrei Sakharov is released from internal exile.
- _____ V.* (CUTOFF OF FEDERALLY FUNDED SCIENTIFIC EXCHANGE) I would approve of a general cutoff in federally funded scientific exchange until such time as Andrei Sakharov is released from internal exile.
- _____ VI. (DETERRENCE) In order to help deter future attacks on him, I assert that if Andrei Sakharov is placed on trial, or otherwise seriously further harassed, I would support still stronger action such as Option _____.

- I am
- I am not a member of the Federation of American Scientists

*This does not include such exchanges as personal scientific contacts, diplomatic contacts between scientists, and the exchange of reprints.

‡At a January 31 press conference, the Federation announced that it would seek to make this option, in particular, available to scientists through their scientific societies; it announced that the four highest FAS officials, and ten Nobel prize winners, had become initial adherents of this pledge.

‡This is the identical poll sent to all members of the National Academy of Sciences over the names of: Kenneth J. Arrow, Lipman Bers, Hans A. Bethe, Paul J. Flory, Henry S. Kaplan and Arthur Kornberg. Please fill in and encourage your colleagues to fill this in too (xeroxing copies as necessary) and send it to: Federation of American Scientists, 307 Massachusetts Avenue, N.E., Washington, D. C. 20002.

**MEMBERSHIP POLL
ON CARTER ACTIONS**

Desiring to take the pulse of the membership on the general responses of President Carter to the Afghanistan invasion, and to compare them with general population responses, we reprint here five questions from a TIME poll and ask interested members to check their view:

Do you approve of the embargo on wheat to the Soviet Union?

_____yes _____no

. . . and the embargo on technical equipment to the Soviet Union?

_____yes _____no

Do you favor increasing the defense budget?

_____yes _____no

Was Carter right in his military conscription policy?

_____yes _____no

Do you favor boycotting the Olympics?

_____yes _____no



**Register Your View As An FAS Member
And Ask Others To Do As Well**



**ACADEMY PRESIDUM
CENSURES SAKHAROV**

Moscow, January 28, TASS — The Presidium of the USSR Academy of Sciences considered the question of the anti-social activities of Academician Andrey Sakharov.

The Presidium pointed out that Academician Andrey Sakharov, notwithstanding the reprimand by the Academy of Sciences of the USSR, continues activities directed toward undermining the Soviet system, towards virtual counteraction to the Soviet Union's policy of peace, the struggle for limiting arms, for relaxation of international tensions, the policy which enjoys the support of Soviet scientists and all Soviet people.

Sakharov embarked upon the path of direct approval of the policy of the most reactionary, aggressive imperialist circles such as, for example, Senator Jackson in the USA, which objectively facilitated the limitation of Western countries' scientific and economic contacts with the Soviet Union, and created ground for anti-Soviet activity abroad.

The Presidium of the USSR Academy of Sciences censured Academician Sakharov's actions directed against the interests of our country and the Soviet people, actions helping the heightening of international tensions and denigrating the lofty title of Soviet scientist.

UNPUBLISHED EXCERPTS FROM THE PRESS CONFERENCE OF JANUARY 28 OF ELENA BONNER

"The Soviet authorities are always saying very assiduously that he (Sakharov) is not engaged in scientific work. This is not true . . . He has just finished preparing for publication and translation for reprints in English three scientific works which he has done since spring of 1979."

Yet another mistake: Western correspondents say "that Sakharov has felt remorse for the building of thermonuclear weapons, and that this remorse is what has driven him so far. I can tell you that to me, a person very close to him, he has never mentioned anything about remorse. He continues to maintain that geographic, political, and military balance is the best guarantee for the continuation of safeguarding life on earth."

"He has never revealed, sold or divulged any government secrets to anyone. All his public activities are reflected in open letters, documents, statements and speeches. If the KGB conducted a search, it would not find one word which has not been published except personal letters to the children, to his sister, or someone else."

ROSEN RESIGNS FROM SOVIET ACADEMY OVER SAKHAROV

Samuel Rosen, an ear specialist famed for his stapes mobilization cure for deafness, an operation he has taught in more than 40 countries, resigned on January 23 from the Soviet Academy of Medical Sciences of which he was a foreign member. His telegram follows:

"Some 14 years ago, I had the great honor to be elected to your prestigious society as a foreign member who had contributed to the scientific knowledge and communion between our two countries. I have cherished this award until today, when I read that Andrei Sakharov, a great scientist and a man encompassing humanity, has been stripped not only of all his awards, but also exiled to a place distant from Moscow, his friends and his work. Knowing that were I there instead of here, I would be shoulder to shoulder with him in his efforts to build a democratic atmosphere, the only one in which science can flourish, I therefore strip myself of the award you bestowed upon me and resign as honorary member of the Soviet Academy of Medical Sciences. I consider that I have many cherished friends in the Soviet Union and hope they will understand that as a man of honor I must take this drastic step."

Samuel Rosen, MD
820 Park Avenue, New York

WHO SAID WHAT ON SAKHAROV

Congressman George E. Brown, Chairman of the House Subcommittee on Science Research and Technology of the House Committee on Science and Technology introduced a bill declaring that it is the policy of the United States government "to halt official travel to the United States which is not essential to our national needs, by scientists and scholars of the Soviet Union, for a minimum of one year" and to recommend that all federal, state and local agencies defer all official and non-essential travel to the Soviet Union for the same period "unless otherwise dictated by extraordinary circumstances or individual conscience."

Frank Press, Science Advisor to President Carter: "In the field of scientific exchanges alone, three high level meetings scheduled for January and February have been indefinitely postponed; the magnetohydrodynamics (MHD) channel built in the U.S. was not shipped as planned. We are now examining each individual activity planned under all 11 of the bilateral agreements to determine whether they are appropriate under the present circumstances. Certainly there will be no meetings involving high level Administration officials. Furthermore, only those low-level, substantive exchanges will be permitted which are of specific scientific interest to the U.S. or which involve humanitarian subjects such as health and pollution prevention."

Philip Handler, President, National Academy of Sciences: *In September 1973, during major attacks upon Sakharov, a telegram from Philip Handler was given credit for precluding the expulsion of Academician Sakharov from the Academy. It said, in particular: "harassment or detention of Sakharov will have severe effects upon the relationships the scientific communities of the U. S. and the USSR . . ."*

His testimony on January 31, 1980 said:

" . . . I must confess that I am sorely pressed to find any justification for merely proceeding as usual.

"It is my understanding that the Department of State has adopted a policy of postponing and deferring all high-level exchanges, and letting the working-level individual exchanges proceed on a selective basis, taking into consideration particularly whether they are uniquely in the U.S. national interest or have humanitarian purposes. We agree with this policy; accordingly we will defer all bilateral seminars and the like, while permitting the activities of individual scientists to proceed on our usual basis, leaving decisions to the individual consciences of American scientists. Parenthetically, I may note that I so informed two scientists who called me last Friday. One asked me what I would do if I were he and I replied that I would not go. Over the years, I have repeatedly warned Soviet scientific officialdom that if they persist on course, American scientists would be so alienated that there will be none willing to participate in exchanges. At this juncture, I far prefer that the Soviets receive that message from individual scientists than that our government order our scientists either to go or not to go."

John Tileston Edsall, Chairman of the Committee on Scientific Freedom and Responsibility of the AAAS: "One important result of the Science Forum that might be suggested by our delegation would be the creation of a working group charged with collecting and reviewing reports about obstacles to international scientific cooperation . . . A working group established by scientists from Helsinki signatory nations would study and identify specific barriers to scientific cooperation. If the necessary resources for such a group were not available, the Forum might draw upon the International Council of Scientific Unions, which has two subcommittees charged with reviewing restrictions on ICSU-sponsored meetings and identifying other barriers to the pursuit of science."

Paul Flory, Nobel Laureate and Professor Emeritus of Chemistry at Stanford University: ". . . I favor a complete ban on technology transfer to the USSR under prevailing conditions . . . The following are suggested as minimum conditions for scientific cooperation:

1. Meetings and exchanges must be fostered in a climate conducive to free association of, and unfettered communication between, individual scientists. They must not be under the scrutiny of secret police.
2. Participants in cooperative endeavors must be selected solely on the basis of their scientific achievements, without regard for their political conformity, race or ethnic background.
3. Negotiations and arrangements should be in the hands of scientists, not governments.
4. Those who are invited by the host country must be allowed to accept.
5. Science areas chosen for collaboration or exchanges must offer prospects of benefit to both parties.

The Institute of Electrical and Electronics Engineers (IEEE) joined with the **Association for Computing Machinery** and the **American Mathematical Society** and said "This latest curtailment of scientific and individual freedom will make Moscow a less desirable place to visit and the world a poorer place to live in."

In addition, the ACM testified on January 31 that it was continuing to follow a 1977 resolution that ACM would not "cooperate with or cosponsor any meetings to be held in the USSR" in view of Russian restrictions on scientific freedom and on the freedom of computer people." This resolution sprang from its earlier defense of Valentin Turchin and, later, of Anatoly Shcharansky. □

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*Nobel Laureate

SYMMETRY OR ANTI-SYMMETRY: WHO IS IN ALLIANCE WITH WHOM?

Valentin F. Turchin

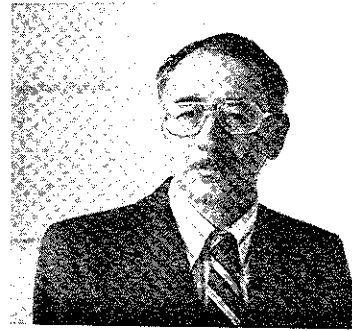
This testimony of Dr. Turchin, submitted to the January 31 House of Representatives hearing on Sakharov, argues, provocatively, that "doves in the West support and encourage hawks in the USSR, while the hawks support the doves." This advice, the reverse of the conventional wisdom, comes from the former head of Moscow's section on Amnesty International — a physicist turned computer scientist, now professor at City College of New York. Dr. Turchin introduced the Federation to Andrei Sakharov in 1975, and his courageous activities as a Soviet dissident were described in the PIR of December, 1975.

The Soviet invasion of Afghanistan marks the collapse of the policies based on what may be called "the principle of symmetry." In particular, the approach to the problem of relaxation of international tension known as "the policy of detente" has been based on this principle. It states that the post-Stalin Soviet leaders are as willing to reduce international tension and eliminate conflicts as the Western leaders are, and that the reason for the hostility between East and West is just mutual fear and distrust, a hangover from the "cold war." Therefore, the argument went on, we only should show our good will clearly enough, and this will support "doves" in the Soviet party bureaucracy while making the fears of "hawks" unfounded.

This presumption, however, has been completely wrong. There is no symmetry of motivations, there is rather an "anti-symmetry." Free flow of people and ideas, which is inseparable from a true international cooperation, has been always considered extremely dangerous by the Soviet bureaucracy. They want good relations with the Western nations only if and to the extent these nations help them to hold their totalitarian power inside their own country. They want trade and international prestige through such undertakings as Olympic games, but they do not want interference on behalf of political prisoners. They may not want a global nuclear war, but they want a certain level of international conflicts and instability, as well as expansion of their sphere of influence. The oppression inside the country and external aggression are two aspects of the same policy, which is a direct consequence of the position of the party bureaucracy as a privileged class holding power through a ruthless and all-embracing dictatorship. A democratically elected government need not justify its right to govern: the fact of being elected is the justification. A dictatorship must be constantly justified and defended. The very existence of a free and prosperous West is an indictment to the Soviet system and a threat to its chieftains.

The difference between "hawks" and "doves" (if any) in the Kremlin is not that the "doves" are more "liberal," or hate Western democracies less than the "hawks." It is preposterous to think that the doves need demonstrations of the peaceful intentions of the West in order to hold them out to the hawks. On the contrary. The doves are those who believe more in the ability of the West to hit back, and therefore profess caution. This is the anti-symmetry: doves in the West support and encourage hawks in the USSR, while the hawks support the doves.

It took about ten years of systematic encouragement of the Soviet hawks to create an atmosphere in which the Soviets deemed it possible to invade an independent third world country. Simultaneously with becoming more aggressive, the Soviet



Valentin F. Turchin

rulers cracked down on the human rights movement. The year 1979 was marked by a sharp increase in repressions, which passed unnoticed by the Western public opinion. Let me mention only most well-known human rights activists who were arrested during last three months: T. Velikanova, Yu. Grimm, V. Sokirko, Father D. Dudko, V. Abramkin, V. Sorokin, Father G. Yakunin, R. Kadyev, M. Soglovlov, L. Regelson, A. Terlackas, Yu. Sasnauskas, V. Kalinichenko, M. Prutianu, V. Streltsiv, A. Pozniakov, M. Gorbal, V. Goncharov, A. Stasevich, V. Mikhailov, A. Gotovtsev, T. Shchipkova. The logical continuation (although, I am afraid, not conclusion) of this course of action was the detention and exile of Academician A. Sakharov.

The measures taken by President Carter in the present critical situation are proper, if not sufficient. The notion of human rights emphasized by Carter at the beginning of his presidency should be reemphasized once more. One must bear in mind that the only hope for a peaceful and secure world is in the success of the human rights movement in the USSR. The pressure on the Soviet rulers should be exerted with the view of compelling them to release political prisoners and curb repression inside the country, not only to stop aggression outside. Otherwise the roots of the aggression will remain and will produce new sprouts.

A boycott of Olympic games will be a significant blow on the prestige of the ruling class in the eyes of the population in the USSR. So will be a boycott of scientific and cultural contacts, if duly explained as an inevitable reaction of free people on the violations of human rights in the Soviet Union. In particular, the Scientific Forum to convene in Hamburg in the framework of the Helsinki Accord should be boycotted if the Soviets do not release Prof. Yuri Orlov and the other members of Helsinki watch groups.

To succeed, the boycotts must be widely supported and uncompromising. It would be a good idea to suspend all contacts for a specified term, say a year, provided that this idea is shared by the public and not just imposed by Government or Congress. After a year, a decision could be taken on the basis of the Soviet behaviour, whether to stop the boycott or continue it, like it was suggested in the case of the Jackson amendment, which proved instrumental in the long run. The boycotts should concern only the USSR and not its satellite countries, which do not have a freedom to choose their way.

The Soviet leadership has shown that they completely ignore all appeals and protests. In the present situation nothing that falls short of really hurting measures as boycotts and embargoes can make any impact on the Soviets. Verbal exercises will only amuse and encourage them. □

FRENCH ATOMIC TESTING IN THE SOUTH PACIFIC CAUSING SERIOUS DANGER TO POLYNESIA AND OTHER ISLANDS

Nancy Abrams

Dorothy Levy

Tahiti means Paradise to most people, yet Tahiti and all the other islands of the South Pacific are in danger of contamination from nuclear testing which France is carrying on under the greatest secrecy on the coral atoll of Moruroa. Having bought off the cooperation of Tahiti's colonial officials, and at times imprisoned the opposition, France has conducted 41 atmospheric tests, spreading fallout throughout the Pacific, and probably 24 underground tests in the ongoing program.

This past July two serious accidents occurred. Moruroa has been used not only for underground nuclear tests but also for "detonation experiments" carried out in concrete bunkers on the atoll's surface. Whether these are experiments with subcritical quantities of plutonium is a matter of speculation, but they are reportedly releasing significant amounts of plutonium.

On July 6, in an effort to decontaminate a bunker for re-use, the French plastered the walls with acetone-drenched paper which was supposed to dissolve the Pu inside. When the decontamination workers entered, one, following his instructions, started to enlarge a hold in a metal plate. His drill caused a spark which ignited the acetone gases. A tremendous explosion blew out the door, killing two men, severely burning the other four, and releasing a cloud of Pu. All six were flown immediately to Paris, where the two bodies were buried in heavy lead coffins.

On July 25, a bomb to be tested underground lodged only part way down the shaft and could not be moved. On a gamble, the French detonated it anyway. The explosion — measured by Greenpeace in New Zealand at 6.3 on the Richter scale — split the island and set off a tidal wave causing injury and property damage to other islands as well.

Details on both accidents have been kept secret by the French. Information on the first was obtained by outsiders only because the injured workers, knowing themselves close to death in a Paris hospital, broke the secrecy rule and spoke with reporters from *Le Matin*, a French Socialist paper. The French Army insisted only that the accident was a common chemical explosion, not nuclear, and that no radioactivity had been released. Although medical examinations were performed by the Army on all 72 Moruroa workers within 300m of the explosion site, including 28 Polynesians, the Territorial Assembly of French Polynesia, like everyone else, was refused access to those dossiers.

Finally on August 17, 1979, the usually docile Territorial Assembly passed a resolution demanding the following:

1. an immediate and full investigation of both accidents,
2. the despatch to Tahiti of a team of civilian impartial radiobiologists, not all French, to test *all* the islands for radioactive contamination and health effects, and
3. the establishment of a permanent radiation laboratory in French Polynesia, staffed by independent professionals.

In response to the second demand, France sent a group of five "experts" — only one of whom was a radiobiologist — which consisted of two high officials of the French Atomic Energy Commission (CEA) and three professors, accompanied by two more CEA men. After a short visit to Moruroa they stated that no radiation had been released by either accident. No report was

ever written by them, no radiation measurements actually made, and no evidence to support their statements was ever presented; the health dossiers on the workers were also kept secret, including their identities.

In response to the first demand, the French permitted six members of the Assembly, but none of the advisors they wanted to bring, to visit a small part of Moruroa well away from the test and accident sites, and to helicopter around a little. Following this excursion, the French "experts" held long private consultations with them.

Opponents of the testing emphasize that the French have never conducted or permitted any radiation tests on marine life in the zone, although fish is the staple of life for most Polynesians, or any statistical studies on the incidence of cancer and leukemia in Polynesia. In fact, the standard statistics previously kept by the Public Health Department were discontinued when the French bomb program began in the late 1960s.

French Polynesia, of which Tahiti is the largest island, has long been under very tight French control and censorship, but now New Zealand and other countries of the South Pacific are becoming increasingly concerned about the radiation danger. New Zealand's representative to the United Nations formally requested on Oct. 15, 1979, full information from France on its probe of the two accidents, and throughout October and November, investigations by the press of New Zealand and Australia have been the only, if scant, sources of published information. The silence of Polynesian officials has for years been assured by French money, which provides 65% of the GNP of the country — 41% for the bomb program alone, a mammoth amount of bribery and hush-money, according to the leader of the timid ecology movement there. Polynesian leaders justify the heavily subsidized economy as a way of buying time so that Polynesia can develop some industries in preparation for independence; however, the industries — fishing, canning and aquaculture — are precisely those most endangered by continued bomb testing.

Polynesia suddenly became important to France when it lost the Algerian War and consequently the Sahara as a nuclear test site. France has no other interest in Polynesia. Moruroa is apparently becoming saturated with holes and radioactive contamination, and there are indications that the French may begin testing under the lagoon off Moruroa.

France furthermore has just completed a new international airport in the Marquesas, an isolated group of islands that form part of French Polynesia and which are even further from Tahiti than Moruroa. This has created suspicions that the French intend to establish a major military base on the Marquesas. Certainly there is no indication of any slackening in their military program, which is not only contaminating Polynesia but destroying its economy and possibilities for local industry and tourism if it should ever gain its independence.

The next tests are expected soon. No one yet knows what really happened last July. It is extremely urgent that a truly impartial and international team of scientists go to Moruroa to investigate the accidents and to see what effect these tests are having on the health and future of the South Pacific peoples. It is clear that their protection is now up to the international community. □

Santa Cruz, CA
Nov. 18, 1979

In about eight days of mail returns, one-fifth of the Academy (260 NAS members) had responded — 75% chose the FAS pledge (Option IV — see page 5 for names). Only a handful chose to argue that the Sakharov case was basically political. Fifty percent of the respondents went well beyond the Federation position and were ready to call for a cut-off of federally funded scientific exchange until Sakharov was released from internal exile.

The National Academy of Sciences, which had requested and received the poll results a few days in advance for its annual Council meeting, decided to formalize an announcement which President Handler had made on January 31. At that time, quoting Administration policy on deferring scientific exchange, he had testified that "... accordingly, we will defer all bilateral seminars and the like ...". At the February 25 meeting, the NAS Council decided to announce this as a six months deferral with review.

Some journals, such as the Washington Post, treated the event as major while others, such as some observers in the science press, felt that the Academy was repeating itself.

At the FAS press conference, Chairman Frank von Hippel explained that FAS was not, in any event, seeking "ruptures" of scientific exchange or across the board cutoffs, from the NAS or any other group. We wanted pressure not "punishment." In that connection, the contingent pledges signed by individuals, as put forward by FAS, had many advantages. Being spontaneous and made by individuals on the basis of conscience, they could not be dismissed as done by a few with "anti-Soviet" motives. Above all, they would lapse when the adopted scientist regained his rights.

Increasingly, it seemed that scientific societies ought to poll their members in such cases. It may be more credible and sensible for AAAS, or the American Academy of Arts and Sciences to ask its members what they plan to do as individuals than it is for a few leaders at the top to design a verbal statement of response.

In the past, it has, after all, been a commonplace, and a cliché, to leave the issue of participation in scientific exchange under circumstances like these to the individual consciences of

the scientists. What has been missing is any method of giving these consciences a formulated option to choose, and a method of registering their conclusion — this is what is provided by the poll.

At the press conference, Tanya Yankelevich noted that Andrei Sakharov had asked permission, and an invitation, to travel to the March 4 meeting. And, evidently, some high ranking Soviet scientists were planning not to attend the March 4 meeting lest they be implicated in any expulsion which might, in turn, lead to their being ostracized in the West. This reveals the high sensitivity of Soviet scientists to the responses of their Western colleagues. □

ANDREI SAKHAROV'S ADDRESS

For those scientists wishing to write or telegram Andrei Sakharov, his address in Gorky is:

Gorky, U.S.S.R.

Shcherbinka, 2

Gagarin 214 — Apt. 3

Academician Andrei D. Sakharov

Letters should be sent registered mail. At the time, it appears that letters would be intercepted and not delivered (a violation of postal rules which would, and does, permit senders to apply for \$15.76 for each registered letter undeliverable). But no doubt the sentiments of letters sent will be recorded and members are encouraged to write as a token of support of Andrei Sakharov. Perhaps in time, they would be delivered.

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