

PUGWASH: EUPHORIA MARKS MEETING AS PERESTROIKA LOWERS TENSIONS

Pugwashites were in their element. There had been no less threatening time for a Pugwash conference since the organization's inception. At the end of the 39th meeting, held in a plush hotel in Cambridge, Massachusetts, from 23 to 28 July, the participants couldn't wait to return home to 42 countries to tell their scientific colleagues and political pals about it. The 178 scientists, scholars and public officials—who included four Nobel Prize winners, three members of the Soviet parliament, seven current or former ambassadors, four active or retired generals, and many past or present heads of universities, research centers and government agencies—appeared exhilarated by the heady experience.

The euphoric mood was in marked contrast to the somber and mostly pessimistic tone of previous meetings. For more than two decades, the physical scientists and political types who gathered at Pugwash often thought of themselves as an endangered species.

Now, largely because of political events in Eastern Europe, they appeared emboldened because the specter of nuclear war no longer haunts the world so unforgivingly.

As the conference opened, the governor of the host state, Michael S. Dukakis, confessed that he stood in awe of the participants and of this moment in world history. "Something new is going on out there... and many of you contributed to that," he said. "We have a solemn responsibility to take advantage of this opportunity... to insist that those of us in positions of political leadership work with you to see if we can't turn this moment into something which in my judgment can fundamentally change mankind for the better."

Harvard biochemist Paul Doty, who has been part of Pugwash from its start, read a message from President Bush acknowledging the "valuable contributions to world peace and understanding" made by Pugwash. "Opportunities for lessening interna-



Pugwash Council at lunch on the final day of the conference. From right: Vitalii I. Goldanskii (USSR), Anatoly Gromyko (son of the late foreign minister and president of the USSR), Martin M. Kaplan (Switzerland), Joseph Rotblat (United Kingdom), Lameck K. H. Goma (minister of education, Zambia), John P. Holdren (US) and Ubiratan d'Ambrosio (Brazil).

tional tensions and for improving global security have not been better in this century," wrote Bush.

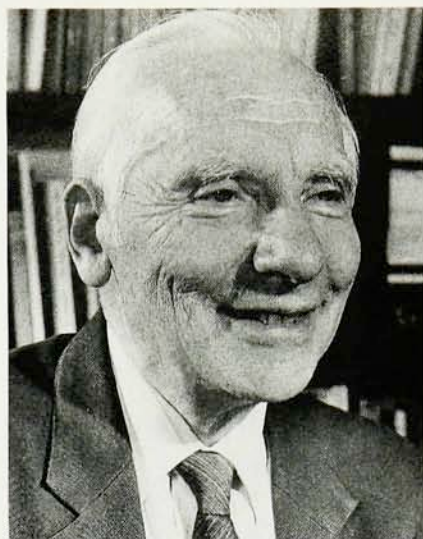
The contrast between this conference and previous ones was described by Joseph Rotblat, another founder of Pugwash and now its president. Rotblat, who was born in Poland and emigrated to England before World War II, moved to Los Alamos to help build nuclear bombs but left before the destruction of Hiroshima. Since then he has devoted his career to the medical aspects of nuclear physics at Bart's Hospital Medical College in London. Rotblat recalls that the last time Pugwash met in the US was in 1970, "at the height of the Vietnam War... at a time when official contacts and even scientific exchanges were greatly reduced and there were no welcomes from national leaders."

Magna Carta

It was Hiroshima, Nagasaki and the invention of thermonuclear bombs that led Bertrand Russell, the British mathematician and philosopher, to write Pugwash's Magna Carta. Russell's statement, cosigned by Albert

Einstein two days before his death in 1955 and by nine other scientists, is in the nature of a solemn manifesto: "In the tragic situation which confronts humanity, we feel that scientists should assemble in conference to appraise the perils that have arisen as a result of the development of weapons of mass destruction." It ends movingly: "There lies before us, if we choose, continued progress in happiness, knowledge and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal, as human beings, to human beings: Remember your humanity and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death."

A conference like the one Russell envisioned was planned for the following year in India, but the Suez Crisis upset these plans. Soon after came an offer from Cyrus Eaton, the eccentric president of the Chesapeake & Ohio Railroad, to finance a conference at his birthplace in Nova Scotia, known by the quaint name of Pugwash. The first conference, in July 1957, attract-



Rotblat: A founding Pugwashite

ed only 22 participants, of whom 15 were physicists—among them Leo Szilard, Cecil F. Powell, Hideki Yukawa, Victor Weisskopf, Alexander Kuzin, Alexander V. Topchiev and Dmitri Skobeltsyn. In the beginning both the US and USSR officially viewed Pugwash with suspicion, if not outright hostility. The report of the first conference had called for reducing East-West tensions and for ending the arms race. "The prompt suspension of nuclear bomb tests could be a good first step for this purpose," it exhorted. It was clear that the purpose of Pugwash was contrary to the policies of the superpowers in the Cold War.

As more well-connected participants took part in its annual meetings, Pugwash became steadily more respectable to governments as an unofficial and useful way of conducting peace talks and negotiating arms treaties. On the US side, the Pugwashites included former government officials and scientific advisers as well as the customary prominent scientists. From the USSR, the participants have been members of the Soviet Academy of Sciences and officials of its research institutes and occasionally members of the Central Committee of the Communist Party or the Supreme Soviet.

High and mighty

This year's conference attracted prominent figures from the past and present—among them, McGeorge Bundy, national security adviser to Presidents Kennedy and Johnson; Antonia Handler Chayes, under secretary of the Air Force in the Carter Administration; George Rathjens, chief scientist at DARPA and deputy

director of the Arms Control and Disarmament Agency during the Carter period; and three physicists who were recently elected to the Soviet Congress of People's Deputies—Vitalii Goldanskii, Andrei Sakharov and Roald Sagdeev.

"It is because we approach political problems in the objective spirit of science that governments have come to listen to us and trust us," Rotblat told us. "Even when East-West communications broke down, at the time of the Berlin Wall, the Cuban Missile Crisis, Vietnam and Afghanistan, the Pugwash channels remained open, generating new approaches to arms control and global security." Neither Pugwash's annual conferences nor its more frequent topical workshops and forums are held with glitz or gizmos. While Pugwashites prefer to operate behind the scenes, they nevertheless deliver their lines to top-level audiences. They are credited with helping to prepare the groundwork for most of the arms control treaties—the 1963 nuclear test ban, the 1968 nonproliferation declaration, the 1972 antiballistic missile agreement and the 1972 biological weapons convention. Starting in 1980, Pugwash's semiannual workshops in Geneva provided an off-stage forum where Soviet and American technical teams and policy analysts discussed problems arising in the official negotiations for the 1987 Intermediate Nuclear Forces treaty.

Great transformation

Despite the Pugwash record so far, the Cambridge conference revealed that the main objectives of the Einstein-Russell manifesto have hardly been attained. In a summary of the conference, the Pugwash Council, whose 27 members come from 21 nations, carefully observes that "the single most important contributing factor . . . for building global security through cooperation is the remarkable transformation that has been under way in the Soviet Union under the names of *perestroika* and *glasnost*." Indeed, the council states, "promising changes" in the USSR "have made possible a rate of progress in arms control, international tension reduction and security building that would have been almost unimaginable only a few years ago."

The council then sounds a cautionary note: "Leaders and publics in the West, in particular, should not allow residues of a Cold War mentality, or simply excessive caution, to impede the build-down of East-West economic cooperation. On the success of these initiatives depends not only the success of *perestroika* for the Soviet

Union but also the prospects for building more secure and prosperous societies worldwide."

For all the new thinking on both sides, the council says in its statement, strategic arms control still remains elusive. An agreement on strategic arms reduction talks, called START, "along the lines now envisioned in the official negotiations, representing about a 50% cut in strategic forces by the counting rules being considered, would not in itself make the world a great deal safer; nor would it necessarily save money; but it nonetheless should be achieved as quickly as possible because it moves us in the only sensible direction—toward still deeper reductions."

Eliminating nuclear arms

The council finds "no insurmountable verification obstacles to an early START agreement"—though it admits that some types of strategic forces are more difficult to verify than others. Indeed, there are no problems that can't be resolved, the council says, "if both sides really want an agreement." Moreover, the council sees no "promising" missile defenses in sight "that could provide a plausible excuse to violate the ABM treaty." To be sure, says the statement, "the only reliable way to reduce the number of nuclear weapons that could strike one's country is to negotiate a reduction in the number of those weapons possessed by the other side. . . . Elimination of all nuclear weapons stationed on European territory would be a good start—and may be practical soon." In fact, the council declares, maintaining nuclear arsenals of any size in any country "seems to be incompatible in the long run with nonproliferation and with putting an end to technological arms races."

At last year's conference, in Dagomys on the Soviet Black Sea, participants from the Third World argued for Pugwash to examine economic and environmental perils to global security with the same diligence it gives to military and political quagmires. At this year's conference, the council responded to such concerns. In its statement it finds that the risk of global climate changes induced by "greenhouse gases" increases the potential for widespread misery, and that the transfer of resources from the poor countries in the Southern Hemisphere to the richer countries of the North to pay off massive debts only deters the South's economic development, "encouraging environmental destruction and worsening North-South tensions."

"It seems that peace has broken out

and we cold warriors aren't certain how to deal with the new world," said Herbert F. York of the University of California at San Diego, a former director of Lawrence Livermore Laboratory and defense adviser to four Presidents. "We wanted so badly to end the Cold War, but now even the word *détente* makes little sense. We face the reality of normal relations.

The old assumptions no longer hold."

Nor do the old issues. "We haven't lost sight of some old problems that gave birth to Pugwash," York said in an interview at the conference. "And there are plenty of additional problems to work on cooperatively—hunger, poverty and environmental degradation should keep us busy thinking of solutions, and for excitement

there's an expedition to Mars."

At the public session in MIT's Kresge Auditorium, Bundy seemed to characterize Pugwashites correctly. "It was not easy to be a Pugwash scientist in the 1950s... and it's not easy today," he said. "Pugwash scientists have done the hard thing of telling their leaders the truth."

—IRWIN GOODWIN

ISRAELI PHYSICISTS, AND OTHERS, COMMENT ON CASE OF PALESTINIAN PHYSICIST

More than one year has now elapsed since Tayseer Aruri, a politically active Palestinian physicist, was arrested during a house-hunting expedition with his sister in Ramallah. The Israeli military occupation authorities issued a deportation order against Aruri nine days after his arrest on 8 August and, following an unsuccessful appeal to a military advisory committee, the Israeli High Court held hearings in the matter in late May and early June this year. A decision by the High Court is still pending at this writing, and signals are mixed as to what kind of verdict should be expected.

In the words of David Horn, the past president of the Israeli Physical Society, the case raises at least four questions: Is justice being done? Is Aruri guilty of something? Is this mainly a human rights case? Or is it mainly a political matter?

Aruri, a member of the Palestinian Communist Party, was arrested last year not long after signing a model peace treaty with a couple of dozen other Palestinian and Israeli intellectuals. The model treaty called for a two-state solution to the Arab-Israeli conflict, mutual recognition, security guarantees and a neutral Jerusalem. Because of the timing of Aruri's arrest, his reputation as a "man of peace" and the Palestinian Communist Party's reputation as the most moderate element of the Palestinian Liberation Organization's coalition in the Occupied Territories, there has been a perception abroad that Aruri was detained because of his political convictions—because he represented an alternative that the current Israeli government did not want to recognize or nourish. There has also been widespread and deeply felt sentiment that even if Aruri was an active organizer of Palestinian protests, as the Israeli government claims, the authorities would do better to negotiate with individuals like Aruri, rather than exile them.

Amnesty International, the human rights organization that mounts campaigns for individual prisoners if it is convinced that they were arrested for political reasons and that they do not employ or advocate violence, adopted Aruri late last year as a "prisoner of conscience." A host of other organizations also intervened, among them the Lawyers Committee on Human Rights, the Committee of Concerned Scientists, the American Academy of Arts and Sciences, the New York Academy of Sciences and The American Physical Society.

Meanwhile, in the physics community, a petition calling on Israel to free Aruri and "to listen to his message" quickly garnered more than 1000 signatures. Edward Witten and Freeman Dyson of the Institute for Advanced Study in Princeton and Richard Wilson of Harvard University sent letters calling attention to Aruri's situation to *PHYSICS TODAY*, provoking an energetic reaction from

defenders of Israel's occupation policies (see May, page 15, and August, page 13).

Action by CIFS

Early this year the current chairman and all the past chairs of the Committee for the International Freedom of Scientists, The American Physical Society's human rights group, sent *PHYSICS TODAY* a letter about Aruri. The letter was sent only after queries to Israeli authorities went unanswered. It was an unprecedented step for CIFS chairs to join in such a protest—perhaps a little too unprecedented in the minds of some committee members. The letter was withdrawn after the Israeli High Court agreed to hear the case and after leaders of the Israeli Physical Society promised to monitor the Aruri case closely and to report on it back to CIFS.

On 28 April, growing impatient about Aruri's continued confinement, CIFS sent a letter expressing concern about the Aruri case directly to Israeli Prime Minister Yitzhak Shamir, Defense Minister Yitzhak Rabin, Foreign Minister Moshe Arens, the president of the Israeli Supreme Court, the president of the Israeli Academy of Sciences, the Israeli ambassador to the United States, the US ambassador to Israel, and the US assistant secretary of state for human rights. Copies went to Yitzhak Yacoby and Horn, president and past president of the Israeli Physical Society, and the letter again was signed by the present and all past chairs of CIFS. The letter read in whole:

"The undersigned physicists, present and former chairmen of the American Physical Society Committee on the International Freedom of Scientists, express our deep concern over the case of West Bank physicist Tayseer Aruri. A lecturer in the physics department at Birzeit University starting in 1973, Aruri was arrested by Israeli authorities and held

Four Palestinian Cases

The Aruri case is one of four involving Palestinian physicists in which The American Physical Society's Committee on the International Freedom of Scientists has been involved. In spring 1988, when the current and past chairs of CIFS wrote to Israeli authorities on behalf of Aruri, they also protested the detention of Sami al-Kilani and Nicola Dabit. Both subsequently were released, but Kilani recently was stopped by an Israeli army team, questioned, severely beaten, hospitalized and jailed. CIFS, with assistance from the Israeli Physical Society, was able to arrange for Texas physicist Herbert Bork to visit Kilani in prison. In the case of Abdel Gaber Shayeb, who currently is teaching in Riyadh, Saudi Arabia, CIFS intervened unsuccessfully in a repatriation proceeding.