



THIRD INTERNATIONAL PEACE WEEK OF SCIENTISTS November 7-14

The concept of the International Peace Week of Scientists was originated by Hendrik Bramhoff, a 32 year old West German mathematician at the University of Hamburg. Bramhoff personally organized and funded the first Peace Week in 1986 as a contribution to the United Nations International Year of Peace.

In its second year activities took place in more than 30 countries involving some 40,000 people.

In February of this year Oscar Arias Sanchez wrote to Bramhoff:

the dream of a world without war is one of the most cherished dreams of the Costa Rican people. To work for this ideal and, in particular, for the establishment of solid and lasting peace in Central America is one of the mandates that Costa Rica has given me.

Loyalty to this mandate and the dictates of my conscience compel me to make the maximum effort to contribute to the cause of concord and understanding among people. I believe that science has a key role to play in this undertaking. An unshakeable commitment to the use of science for peaceful ends, and for the socio-economic development of humanity, must be promoted among scientists worldwide. In this regard, the work of International Peace Week of Scientists is worth of all praise and deserves unconditional support from people of good will and from the world organizations called on to promote peace in the world.

For this reason, not only have I supported all initiatives for disarmament in the General Assembly of United Nations, but I also stand ready to propose to that body that the week of 11 November of each year should be dedicated to the theme "Science and peace". My Government will take the necessary steps immediately.

A draft resolution to the General Assembly on "Science and Peace" includes: celebration, each year, the week within which November 11 falls, a International Week of Science and Peace, and urging universities and other institutions of higher learning, scientific academies and institutes, and professional associations and individuals form the scientific community, to conduct, during that week, special lectures, seminars, debates and other activities conducive to the affirmation of the particular responsibility that each scientist has for the character of the utilization of his/her work, and the necessity to promote, among scientists world-wide, a strong commitment to the use of science for an enhancement of international peace, security and cooperation, socio-economic development of humanity, promotion of human rights, and protection of the global environment.

Science for Peace endorses the International Peace Week of Scientists and encourages the members and the local chapters to organized some activity for this week. Obvious suggestions are the sponsorship of public lectures. Innovative approaches are encouraged.

The GOALS are:

1. to improve the climate for arms control and disarmament, and the application of science for peace and human betterment;
2. to increase awareness of the impact of scientific developments on international security;
3. to encourage scientists to work for constructive rather than destructive objectives;
4. to involve scientists and citizens around the world in public dialogue on the grand issues of our time;
5. to support and uphold an ethical code for scientists which prohibits the use of scientific knowledge for destructive purposes.

Reports of activities should be send to Prof. Eric Fawcett, Department of Physics, University of Toronto, Toronto, Ontario M5S 1A7. tel (416) 978-5217/486-9801(h)

IN MEMORIAM : DAVID HORWOOD

Coming so quickly after the loss of Hans Zimmermann, the fledgling Quebec chapter suffered last July a further grievous blow with the sudden and dreadfully pre-mature death of David Horwood. David, a Director of Science for Peace, had been one of the most devoted and energetic members of our chapter, and shortly before his death had been asked to serve as the next president.

His background was far from that of many SfP members. Having graduated Hons.BA in English from McGill in 1970, he moved into the field of computer programming, and subsequently established his own software company. During the course of these professional activities he developed a most comprehensive and detailed understanding of the command and control systems that lie behind the nuclear forces of the superpowers, and became very much aware of the fragility and insufficiency of these systems. The danger of accidental war came to preoccupy him, and at the time of his death he was planning a book, "Uncertain Security", to which various members of Science for Peace had been asked to contribute. He had also taken the first steps to organize a conference on NORAD.

But besides the technical expertise that underlay his concerns, David was moved by the strongest compassion for his fellow humans. His childhood experiences in India and elsewhere had left him with a deep sympathy for the under privileged everywhere, a feeling that went beyond the immediate issues of war and peace, although he realized, of course, that without peace all other questions are meaningless.

David not only had a very wide knowledge of music and the arts, but also a familiarity with the sciences that was quite exceptional for someone with his background. We mourn the loss of a rare individual.

J. M. Pearson

INTERNATIONAL CONFERENCE ON ARCTIC COOPERATION

The International Conference on Arctic Cooperation, sponsored jointly by Science for Peace and the Canadian Institute for International Peace and Security (CIIPS), will be held in the Novotel Hotel in Toronto, Oct. 26-28.

Participation from 10 nations includes three groups: (1) the indigenous peoples who are most directly affected by Arctic industrialization and militarization, and who have special knowledge of the region; (2) physical scientists and technical experts able to discuss the substance and modalities of civil cooperation; and (3) social scientists and others who are in a position to analyze the Arctic international security situation and consider ways in which military cooperation might benefit from an integrated approach to Arctic security.

The conference itself is to be tightly focused on discussions among about 30 invited international experts, who will be seated around a conference table to foster thoughtful but lively and wide-ranging discussions. It is intended that somewhat larger number of observers - diplomats, officials, media people, Arctic experts and other informed persons, will be seated behind immediately behind those at the conference table. Two places will also be reserved at the table for participation by observers with special knowledge of a particular paper or topic. All of the presentations in the first two days will be invited papers which will be available as preprints at the conference. The final half day will be devoted to panel discussions which may lead to a conference statement.

The Conference Steering Committee, co-chaired by Dr. Ronald Purver (CIIPS) and Prof. John E. Dove (SfP) includes Prof. Franklyn Griffiths (SfP), Programme Chairman, Dr. George Ignatieff (Honorary President, SfP), Prof. John Valleau (SfP), Conference Treasurer, Prof. Jan de Koning (SfP), Conference Assistant Treasurer, Mrs. Robena Weatherley (SfP), Assistant Conference Coordinator, and Prof. Lynn Trainor (SfP). Mrs. Cecilia Rossos, Victor Travel, attended meetings and greatly assisted the Committee in its work.

The programme put together by Frank Griffiths is given in the next column. The conference dinner speakers are Dimitri Shparo and Richard Webber, the leaders of the Canadian-Soviet Transarctic Ski Expedition.

The major funding (\$98,000) for this project was received from CIIPS. The Walter and Duncan Gordon Foundation made a grant of \$10,000 for dissemination of the results of the conference through the media, and an additional grant of \$10,000 towards the cost of the book publication. Gulf Oil is assisting with the additional accommodation and living costs of the Soviet delegation which is arriving well before the conference.

Prof. Dove emphasises that this should not be simply a single event on a topic that is then shelved as Science for Peace moves on to other matters. It would be very good if the conference led, e.g., to the formation of a working group within SfP which would maintain an active interest in the Arctic and consider ways to follow up some of the results of the conference.

Welcome and Introduction

Geoffrey Pearson, Canadian Institute for International Peace and Security

Anthony Arrott, Science for Peace

Part I. The Regional and Global Context

Unities of the Arctic Physical Environment

Max J. Dunbar, Institute of Oceanography,
McGill University

Industrialization and its Consequences

Terence Armstrong, Scott Polar Research Institute,
Cambridge University

Militarization and the Aboriginal Peoples

Mary Simon, President, Inuit Circumpolar Conference

Political-military Relations among the Ice States

Willy Ostreng, Fridtjof Nansen Institute, Oslo

Part II. The Arms Race and Arms Control

Naval Interaction

Stephen Miller, Center for International Studies,
Massachusetts Institute of Technology

Missile Defences, Cruise Missiles, and Air Defences

David Cox, Political Studies, Queen's University

Military Doctrines and Confidence-Building

John Skogan, Norwegian Institute of
International Affairs, Oslo

Confidence-Building Measures

E.I. Israeli, Institute of the USA and Canada,
Academy of Sciences of the USSR, Moscow

Part III. Science and Cooperation

Global Science and the Arctic; Status and Prospects

E.F. Roots, Environment Canada

Ethnoscience and Prevailing Science

Milton Freeman, Boreal Institute,
University of Alberta

Knowledge Requirements for Ocean Management

Anders Stigebrandt, Oceanographic Institute,
University of Goteborg

Arctic Airborne Pollution and the Greenhouse Effect

Anders Karlqvist, Polar Research Secretariat,
Royal Swedish Academy of Sciences, Stockholm

Part IV. Technical and Cultural Cooperation

Exchange of Experience in Arctic Marine Transportation

A.I. Arikhinen, All-Union Research Institute for
Systems Studies,
Academy of Sciences of the USSR, Moscow

Offshore Oil Exploration and Development

Melvin Conant, Conant and Associates,
Washington, D.C.

Cultural Exchanges

Carl Christian Olsen, Council Member,
Inuit Circumpolar Conference Nuuk

Public Health in the Circumpolar North

Jens Misfeldt, Chief Medical Officer Greenland, Nuuk

Part V. Conclusions

Panel: Opportunities and Constraints on Arctic Cooperation

Arkady Cherkasov, Institute of the USA and Canada and
Oran Young, Center for Northern Studies, Wolcott, Vermont

Panel: Interrelations between Non-military Cooperation and Confidence-Building

Franklyn Griffiths, Political Science, University of Toronto
and Kari Mottola, Finnish Institute of International Affairs,
Helsinki

Panel: Agenda for Arctic Cooperation

THE PROBLEM OF MILITARY FUNDING OF NON MILITARY RESEARCH

The military from a large number of countries funds a significant body of research which appears to have little direct bearing on weapons production or development. For example, after WWII the U.S. Office of Naval Research was a mainstay of research in biology and physics. As well, studies of a significant number of diseases, malaria for example, was carried out by military personnel using military research money.

Furthermore, the question of what is "military" and "non-military" is difficult to answer. What may seem non-military to one researcher, may be put to a military use by another. The case of a vaccine against a disease causing microorganism is the classic case. While developing a vaccine may save civilian lives in the absence of conflict, developing a vaccine is a key step towards use of the agent in biological warfare. More generally, any scientific advance increases the base of technology which may be used to produce more deadly weapons.

So it seems clear that military funds a broad range of non-weapons related research; is there something wrong with such funding? Indeed, an occasional remark from those who receive funds from the military is that by taking the military's money one reduces the amount they can spend on weapons production, and so is in some sense working for disarmament.

However, I believe there is a problem with military funding of basic or non weapons related research. The problem is this: such funding blurs the distinction between basic research and weapons related research.

As a result, such funding makes it difficult for society to separate the military from non-military functions of the armed forces. The net result is not that the society benefits in any way in which it would if the money were channeled into non-military research. Rather, the effect

is that the military is able to control a larger fraction of the research and technology resources.

The key point is that if society believes that the non weapons related projects which are funded through military grants are important, the funds should be allocated through non military agencies.

For example if the vaccine is important, transfer the funds from the military budget to the public health agencies and allow the grant to be funded there.

Such transfers would reduce the military budget and allow more grants in public health areas to receive more funding. Furthermore, such funding would make clearer the goal of military research.

One colleague of mine who has had some dealings with the military suggested to me that they had so much money they didn't know what to do with it all so they were willing to fund non weapons related research. The fact that the military has sequestered so much money is a demonstration of the problem. The remedy is to not give the military so much money in the first place, not to accept money allocated to military budgets.

By accepting grants from the military, one provides additional justification for future budget requests. Such budget items make it more difficult for elected officials to see clearly what the priorities are.

Part of our role as scientists should be to bring issues facing society into focus. Certainly distribution of resources, in this case research funds, is a key factor in our ability to meet be imminent social problems. I believe that we can help to clarify the role of the military as a source of solutions to our problems by dissociating it from non military functions. I would urge all fellow scientists to neither seek nor accept military funding for any non-weapons related research.

George Spiegelman

NUCLEAR WEAPONS AND HUMAN RIGHTS

To mark the second anniversary of the kidnapping of the Israeli nuclear technician Mordechai Vanunu - and the danger posed by the proliferation of nuclear weapons in the Middle East - the following statement was sent to and published by Canadian news media:

October 1 marks two years since the Israeli nuclear technician, Mordechai Vanunu, was kidnapped from Europe by the Israeli intelligence service, Mossad, in violation of international law.

Vanunu's alleged crime was to inform the ordinary citizens of the world, in an interview with the London Sunday Times, that Israel had secretly produced a large number of nuclear weapons.

Vanunu's technical evidence confirmed British and U.S. atomic scientists' conclusion that Israel likely has between 100 and 200 nuclear weapons. It is public knowledge that Israel also has a missile delivery system that reaches beyond the Middle East.

Vanunu made his revelation as an act of personal conscience. He opposes all nuclear weapons and their proliferation. So do we.

After a totally secret trial, an Israeli court sentenced Vanunu to 18 years imprisonment. Currently he is kept in solitary confinement in a 6 square meter cell under 24-hour electric light and camera surveillance. This is a violation of elementary human rights.

Many parliamentarians in England, Australia and Canada have nominated him for the Nobel Peace Prize. Nobel prize winners have expressed their support for him. He has received prestigious awards in Sweden and Denmark.

His personal act of conscience is not widely known in Canada where the danger posed by the confirmed proliferation of nuclear weapons to the Middle East is barely discussed in public circles.

We wish to mark the second anniversary of Vanunu's kidnapping by publicly calling on the Israeli government to release Mordechai Vanunu from prison. He served the cause of human survival, including the survival of the people of his own country, by making known Israel's possession of these weapons.

We also call on the Israeli government to open its nuclear facilities to international inspection and to join in the current international process of dismantling nuclear weapons.

We hope Canadians will become more aware of the dangers posed by nuclear proliferation. Surely anywhere in the Middle East is one of the least safe places for them to be.

Anthony Arrott, President, Science for Peace
Mordecai Briemberg, Dr. Fred H. Knelman,
Thomas L. Perry, Sr., M.D., Svend J. Robinson, M.P.
Henry Rosenthal, Editor, Jewish Outlook

ADRENALINE FOR PEACE

Science for Peace is a small organization in a country without nuclear weapons trying to influence the odds for passing on to future generations the gift of life.

Science for Peace serves to encourage its members in their individual efforts and from time to time organizes collective efforts for education and research devoted to the elimination of war, particularly wars of mass destruction, and the causes of war.

Despite the best intentions of science educators, the number of scientists contributing to and benefiting from the arms race continues to rise. In the face of changing world opinion in the nineteen eighties, they have switched their rationalizations of their personal involvement from those of prevailing in wars and the saving of their way of life to that of preserving the peace. These scientists convince themselves that they are serving their societies, which provide them the opportunities for challenging research and development. Indeed they are right, for if societies became convinced that this was not the case, the funds for their work would vanish. There is increasing awareness of this on their part. Beneficiaries of the arms race will argue that every advance toward a cooperative world is the result of their insistence on military strength based upon superior technology.

Should members of Science for Peace work towards changing the minds and occupations of their fellow scientists or toward changing the minds of the electorates that ultimately pay for their work? Or is the target the politicians who make the decisions of how government resources are allocated?

Two major influences in the choice of occupation of young scientists are the facilities and opportunities for exercising their skills and the direct rewards from the conditions of their employment. Even before leaving universities, their choices of fields of research are influenced by the sources of funding and the terms of graduate student stipends.

NATO serves an example of how easy it is to influence scientists. NATO supports conferences and the exchange of scientists to the benefit of many at a very small cost, about \$30 million Canadian per year. Most likely, a psychological survey of scientists would produce a strong positive response to the mention of NATO, including most members of Science for Peace.

Science and engineering follow the money. The feedback in this process comes as the scientists dream up new possible technologies which spur the politicians to appropriate more money in order that they will not be accused of having failed to provide for future defence.

There is perhaps no better cautionary tale than the case of Peter Hagelstein, a highly creative young scientist with altruistic visions of serving mankind by providing an x-ray laser for better medical technology. As a graduate student he was offered an attractive Hertz fellowship and access to the multi-million dollar facilities of the Lawrence Livermore

Laboratories. At the weapons lab he attended a seminar on the use of nuclear explosions to trigger an x-ray laser. From his own thinking about lasers, he realized that they were on the wrong track and that he had a better way of doing it. His girl friend, Josie Stein, told him that if he worked on the idea, she would leave him. She followed through on that, as Peter went on to provide Edward Teller with the dazzling scientific arguments that Teller used with hyperbole to push the Strategic Defence Initiative and to hold back the United States from agreeing to a ban on nuclear weapons testing.

Certainly it has been demonstrated by Edward Teller that one scientist can make very significant impacts on the course of history. Teller can rightly claim responsibility for development of thermonuclear weapons, the maintenance of atmospheric testing for four additional years, the continuation of underground testing for more than 25 years and the rise of Star Wars and its influence on scientific research. He did not need the backing of the scientific community to achieve all this. He did need the money that the politicians provided to create a Laboratory that attracted and continues to attract some of the best scientific minds.

Partisan political activity in Canada is outside the mandate of Science for Peace. Our aims are for the education of members of all parties in the quest for peace. It should be obvious, but it seems not to be, that the change in language of politicians around the world in this decade is in response to the awareness of the people of the dangers of the arms race, not to the success of peace through strength policies. The peace through strength advocates can take credit for their unintentional injection of a shot of adrenaline into peace movements around the world.

Adrenaline provides for response in times of stress. But it wears off. And the arms race continues. There is another effect of adrenaline that remains long after the chemical activity. Nothing serves so well for the creation of lasting memory as the presence of adrenaline in the blood stream. Awareness that Man has the power of ending the four billion years of nature's experiments that have led to his existence raised the adrenaline of many. That thought has entered into the collective consciousness of humanity.

Each member of Science for Peace can build upon that new awareness. We have an opportunity to participate in task of as much importance as that of any generation that has gone before. We can help pass that task on to the next generation by working to preserve life. Tony Arrott

For those wishing insight into the role of science in the arms race outside of academia, William J. Broad's book *Star Warriors*, published in 1985 by Simon and Schuster, is highly recommended. It sets the stage for the current turmoil in the US weapons laboratories. Recent accounts are found in the New York Times Magazine Oct. 8 and the Bulletin of Atomic Scientists for September.

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