



Science for Peace

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BULLETIN

Vol. 3, No. 1 -- Winter, 1983

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S4P thanks Doreen Morton for typing this Bulletin.

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83.1. WHAT IS THE BULLETIN?

Science for Peace is rapidly growing and has reached the stage at which local chapters are forming and developing their own activities. The Bulletin will become less of a notice board for local events, and focus more on the activities of Science for Peace members. Ultimately, we would like the Bulletin to be a journal of some professional standing which will inform the membership and the public at large about our scientific activities directed towards a viable and secure peace.

Consequently, members are encouraged to send in reviews, abstracts of papers published elsewhere or presented at meetings, brief articles directed to a general scientific audience (which will be refereed), reports of the activities of S4P chapters and news of grants awarded and projects under way. Letters to the editor are particularly welcome.

Currently, it appears to be most feasible to plan to bring out the Bulletin quarterly, probably with one of the regular mailings of our organization.

82.3 C.A.U.T. BULLETIN

The December 1983 issue of the Bulletin of the Canadian Association of University Teachers (CAUT) carried several articles relating to "Scientists, the arms race and disarmament". This was the title of the lead article by Eric Fawcett, and the other articles were:

"Nuclear deterrence and the impact of technological change"
by Prof. Rod Byers, Director of the Research Programme in Strategic Studies at York University and member of Science for Peace,

"Development, disarmament and common security"
by Hon. Douglas Roche, International Chairman of Parliamentarians for World Order,

"Peace research in Canadian universities"
by Prof. Derek Paul, Research Director of Science for Peace,

"An International Satellite Monitoring Agency"
by Prof. John Polanyi, Director of Science for Peace.

This issue of the CAUT Bulletin also carried the Conclusions and Recommendations of the Pugwash/UNESCO Symposium, Ajaccio, Corsica, February 1982: the exhortation to "all scientists to acquaint themselves with these issues" will no doubt continue to go largely unheeded, but we might hope for some modest response in the form of recruitment to membership of Science for Peace.
(EF)

83.3 PHYSICISTS

A second Short Course on the Arms Race will precede the Spring Meeting of the American Physical Society. The meeting will be held on Sunday, April 17, 1983, in the APS Meeting hotel in Baltimore Md. from 10:00 a.m. to 10:00 p.m. Speakers will include Richard Garwin, Kosta Tsipis, Lynn Sykes, Gerard Smith. For further information contact Dietrich Schroerer, Department of Physics 039A, University of North Carolina, Chapel Hill, NC. 27514, U.S.A. (EF)

83.4 CANDIS

CANadian DISarmament Information Service now operates from:

Holy Trinity Church
10 Trinity Square
Toronto, Ontario
M5G 1B1

Telephone: (416) 585-2255
or
585-CALL

The operation of CANDIS is still developing, but it is intended to provide:

1. a monthly calendar of events
2. a reference library of books, periodicals and press clippings
3. educational tools

(EF)

83.5 S4P EXECUTIVE RESPONSE TO NATURE ARTICLE BY VERA RICH

1 December, 1982

Editor, Nature
4 Little Essex Street
London WC2R 3LF
ENGLAND

Sir,

Nature has from time to time criticized individual scientists and groups of scientists for their activities in behalf of peace and disarmament, especially in respect to nuclear weapons. But even this background left us unprepared for the tone and content of Vera Rich's article (28 October, p. 769). Basing herself on an article by E. Teller published in Reader's Digest, she endeavours to represent nuclear war as somehow survivable and thus perhaps not so different from pre-Hiroshima warfare. She speaks of a "swift return to quasi-normality after nuclear bombardment". Referring to Teller's Reader's Digest article she writes that "[He] attempts to refute some of the more fantastic myths of what nuclear war would entail. [He quotes] instances from Hiroshima and Nagasaki: 'bridges open ... a day after the blast, trains ran on the second day, street-cars ... on the third'".

Her terminology "fantastic myths" betrays her own outlook. It betrays also a failure to understand some indisputable and obvious aspects of the situation. Now, unlike in the days of Hiroshima and Nagasaki, huge numbers of nuclear bombs could saturate a whole country. This is the age of the new word "overkill". Hiroshima and Nagasaki, hit by what would be very small bombs, could receive aid from elsewhere. Now there would be no elsewhere. The utter destruction which would ensue would permit no return to Rich's "quasi-normality".

Rather than taking as authoritative an article published by a single American physicist in Reader's Digest, we would rely upon the resolution adopted virtually unanimously by the (U.S.) National Academy of Sciences (regrettably never published in Nature) on April 27, 1982. We cite only two of its findings: "science offers no prospect of effective defense against nuclear war and mutual destruction," ... "a general nuclear war could kill hundreds of millions and destroy civilization as we know it".

Unanimous endorsement for the entire resolution came in June, 1982, from the Executive Committee of the American Physical Society and also from the Academy of Sciences of the Royal Society of Canada.

Eminent physicians have made it absolutely clear that the health care delivery systems would be destroyed by a nuclear bombardment. Death would be widespread. Those who survived the explosion, would suffer horribly until their brief post-bomb existence ended.

This was agreed unanimously and documented scientifically by a panel led on the U.S. side of Professor Lowms of Harvard and on the Soviet side by Academician Chazov, Deputy Minister of Health of the U.S.S.R. The panel was televised

nationally by the Soviet television network and in the U.S. by the Public Broadcasting System. Information concerning transcripts is available from the Public Broadcasting System, 609 Fifth Avenue, New York, NY 10017, U.S.A.

Executive Directors

Derek Manchester (Prof. of Physics)
 Lynn Trainor (Prof. of Physics)
 Metta Spencer (Prof. of Sociology)
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 Eric Fawcett (Prof. of Physics)
 Terry Gardner (Prof. of Mathematics)
 Brydon Gombay (Writer)
 Lee Lorch (Prof. of Mathematics)

Science for Peace.

83.6 STATUS OF PROPOSAL FOR ISMA

The concept of an International Satellite Monitoring Agency was born in the mind of Bill Epstein and brought to international attention at UNSSOD I by the then president of France, Giscard d'Estaing in 1978. The proposal has been studied by Pugwash working groups in 1980 at Avignon and in 1982 at Versailles. The proposal was examined in detail by a U.N. Committee of Experts who recommended in favour after examining the legal, financial and technical aspects. It had been hoped that action would be taken on the recommendations of the U.N. Committee at UNSSOD II, but it failed even to make the agenda.

The Versailles Pugwash meeting in October, 1982 examined various modalities by which early implementation of an ISMA might be achieved. The Versailles meeting was particularly well-timed in view of the intention of the French Government under President Mitterand to press for a resolution at the General Assembly (December 1982 or early in the new year) supporting the concept of establishing an ISMA under an international consortium of nations. The Versailles meeting was attended by Polanyi and Trainor for Toronto and Epstein (adviser to the Canadian U.N. delegation in New York). The upshot was strong support for a consortium which might eventually come under U.N. auspices.

The Canadian Government did not actively oppose the original French proposal, but it did not pursue the proposition with enthusiasm -- presumably in part because the U.S. and the U.S.S.R. opposed an independent agency in competition with their own efforts in satellite monitoring activities. Nonetheless, representations made to the House of Commons Standing Committee on External Affairs and National Defense, led to a recommendation of that committee in support of an ISMA and Canadian involvement in it.

From a Canadian perspective, involvement in an ISMA makes sense. Canada has a great deal of expertise in satellite technology, particularly in remote sensing by synthetic aperture radar and in sophisticated data transmission (telemetry) and data processing services. Canadian expertise had been developed in large part as an adjunct to resource assessment and monitoring, meteor-

ological services, etc. Civilian technology in the optical, infra-red and radar modes is so highly developed as to be of considerable value in appropriate adaption to military monitoring applications.

Moreover, Canada has an image among world nations as (in relative terms at least) a peace-keeping nation. Like any other human activity, effective peace-keeping requires the latest technologies in assessment of arms build-up, troop movement, military production, etc. The fact that the U.S. and U.S.S.R. use satellites as the prime means of data gathering and verification by so-called "national technical means", illustrates this fact. Serious attempts at international peace-keeping must employ satellite technology, at least as an adjunct to other activities (such as seismic, e.g.) concerned with information gathering and assessment.

The challenge to the Canadian scientific community is to explore the possible modes for Canadian involvement in an ISMA consortium and to bring to the attention of the Canadian Government and the Canadian people recommendations for action.

Lynn Trainor

83.7 CANADIAN PEACE RESEARCH AND EDUCATION ASSOCIATION

The purpose of CPREA is to provide a service for persons whose participation in the peace movement has a scholarly aspect. Its newsletter emphasizes developments in research, conferences, books, films, etc., rather than demonstrations -- including items from around the world, but particularly from Canada. CPREA is a member of the Social Science Federation of Canada, and we make a point of passing on information regarding the funding of research and publications, the establishment of courses, and the peculiar problems of gaining recognition for studies which are necessarily interdisciplinary.

People who have interests of this sort may apply their skills and express their concerns in the peace movement in many different ways. Some are members of the peace organization of members of their own discipline, such as science or medicine, or of a peace activist organization which appeals to the general public, such as Project Plowshares or Operation Dismantle. A cooperative arrangement between CPREA and Science for Peace was announced a year ago, providing an affiliated membership in CPREA for only \$5. for individuals who are members of Science for Peace. (Science for Peace reciprocated, allowing CPREA members to join them for the same reduced rate of \$5.)

The CPREA affiliated membership offer was extended, last September, and is now available for current members of any Canadian peace organization. What these members receive is the CPREA newsletter mailed out as a separate item three times a year (rather than as an insert in the journal Peace Research, which goes to regular members) and the announcements and call for papers for the three-day CPREA Conference, which is held each year at a university as part of the Learned Societies Conference.

I would like to add that for academics whose interest in peace is somewhat more focussed on current work being reported by peace researchers, a full regular membership in CPREA is a bargain at \$20.00 (\$10. for students). It includes subscriptions to two journals: Peace Research and Peace Research Reviews.

When only this regular membership was available many people participated in the CPREA conferences, and gave worthwhile papers, even though they were not members or did not renew membership from year to year. We feel we are now providing the means for them to pay only for the lesser services they desire, and we hope that the number of members of CPREA (which tend to be regarded as a touchstone by agencies which fund conferences, etc.) will more amply indicate the level of interest of the academic community in CPREA's work.

Don Bryant,
Editor, CPREA Newsletter.

83.8 B.C. CHAPTER OF SCIENCE FOR PEACE

Science for Peace, B.C. Chapter was organized in May 1982 by a group of scientists and engineers anxious to use their training as researchers to aid the disarmament movement. The group has at present approximately 70 members.

The B.C. Science for Peace is organized around an executive committee and several study groups. The study groups were charged with researching and subsequently preparing reports on particular issues which were felt to be of particular interest and importance. The groups are currently working on: the implications of the Cruise missile; the economic effects of the arms race; computer simulated nuclear attacks on western Canada; strategies of nuclear war and the implications of the sale of the CANDU reactor. The report of the Cruise missile study group is scheduled for release in January. Monthly meetings are held for the entire membership. In addition to business issues, an outside speaker, or one of the study groups makes a presentation at the meetings.

The B.C. Science for Peace joined and has participated in the activities of End the Arms Race, a Vancouver based coalition of over 100 Peace groups. As part of these activities we hosted a luncheon for Dr. Linus Pauling and have taken part in E.A.R. demonstrations.

The next major activities of the B.C. Chapter include release of the Cruise missile report and a major Disarmament Symposium being sponsored jointly with the Physicians for Social Responsibility March 5 and 6.

83.9 PHILIP MORRISON ON NUCLEAR WAR

Philip Morrison's experience of the science of nuclear war and also of its impact on the city and people of Hiroshima makes him unique among all nuclear scientists. This film, Philip Morrison on nuclear war, made in the fall of 1980, will be repeated on David Suzuki's C.B.C. Program "The Nature of Things" on Wednesday, February 23 at 8:00 p.m.

83.10 CONFERENCE ON DEVELOPMENT AND DISARMAMENT, OTTAWA MARCH 8-10

Over recent years, the link between development and disarmament has become increasingly clear. The growth of the arms race and the spread of militarism have made true development impossible for many countries, and this growing inequity has spurred even the poorest of them to search for military prowess at the expense of meeting basic human needs. Disarmament and development are different faces of the same issue, and real progress can only be made on either as their interrelatedness is understood. Pope Paul VI put this connection succinctly: "If you want peace, work for justice."

In order to enable the development and peace community to investigate this connection more fully, the Canadian Council for International Co-operation is planning a conference in Ottawa for March, 1983. The conference will co-incide with the government's 1st annual Hi-Tec Industries Export Conference, a sort of weapons trade show intended to help Canadian defence and hi tech industries identify and capitalize on world export market opportunities. Canada finds itself in what many consider a highly contradictory position. While involved in development programs, Canada at the same time remains one of the world's leading arms traders. As a symbol of that active involvement, the Hi-Tec conference raises issues for us about militarism, the growing nuclear threat, good vs. bad trade, and underdevelopment. Against this background then, the conference will examine such areas as: the international links between disarmament and development; the role of Canadian government and industry in the arms race; the consequences of that involvement for development in Canada and in the Third World; alternative such as conversion, good trade and development; and a look at how we can work together for change.

The registration fee of \$50 will include dinner on Tuesday March 8 and Wednesday, and lunch on Wednesday and Thursday, as well as a package of resource materials. Accommodation in the price range of \$16-26 per night will be available at the YM-YWCA. Further enquiries: write CCIC, 321 Chapel St., Ottawa K1N 7Z2 or telephone 613-236-4547.

83.11 NETWORK

This is a Canada-wide newsletter which grew out of the Conference on Militarism held in Ottawa on October 31, the day after the anti-Cruise rally. This conference marked a milestone in the development of the Canadian peace movement because representatives of other movements were invited to relate their causes to that of disarmament and keynote speeches. Often during the conference, people expressed the need for channels of communication which would cut across these various movements and keep those active in each aware of overall progress, of news events downplayed or ignored by the mass media, and of events worthy of their support. This newsletter has been created to attempt to fill that role, to create a network of information sharing among supporters of the peace, civil rights, feminist, native rights, third world liberation, prison reform, counter culture, gay rights, progressive labour and ecology movements. Its purpose is not to supplant any of these organizations' publications, but to provide a quick summary of material in them that might be of interest to those in other movements or the general public.

This goal can only be reached if groups and individuals are willing to work towards it in two ways:

(1) Subscribe: The first issue was mailed to those who left their addresses at the conference and other known sympathizers. The cost of mailing being what it is, no further copies can be mailed to non-subscribers. Subscriptions are \$6. for 12 issues, one per month. If you send cheques or money orders, please make them out to Gary Moffatt.

(2) Communicate: The role of Network's editors is to collate rather than produce information. If they don't get the information, there's no Network. If your group prints a newsletter or magazine, they'd like to set up an exchange between it and Network. As a group or an individual, you're welcome to send any reports and/or analysis of activities, summaries of articles you consider important, or any other forms of information you feel should be shared. DEADLINE FOR INFORMATION FOR EACH MONTH'S ISSUE IS THE 20TH DAY OF THE PREVIOUS MONTH. Any viewpoint relevant to the social movement may be expressed, and will be understood to represent the author only, not Network or other writers therein.

Send subscriptions and information to: Network, 105 Rideau St. Ottawa K1N 5X1.

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83.12 A HISTORY OF THE CANADIAN PEACE MOVEMENT

Gary Moffatt traces efforts of Canadians to secure peace from earliest times through to the upsurges of activity in the 1960s and 1980s. Price \$4. The same author's Community Heritage in Western Civilization traces attempts to create model communities from ancient Greece to the present. Price \$1. Both available from Network, 105 Rideau St. Ottawa K1N 5X1.

83.13 MCGILL GROUP PROMOTES WORLD PEACE

The McGill Study Group for Peace and Disarmament has been encouraging research and dialogue at McGill on issues related to world peace and the urgent need for global disarmament since September, 1981. Currently chaired by Donald Bates, a professor in the department of history of medicine, this group of about 40 members exists to stimulate academic research and provide objective information to anyone interested. Apart from regular research seminars, the group sponsors public lectures and has co-sponsored a symposium on the medical aspects of nuclear war.

(University Affairs, February, 1983, p.7)

83.14 THE CRUISE MISSILE: A CANADIAN PERSPECTIVE

This 16-page document, prepared by Adam Kahane, Robert Kay, Luis Sobrino and Andrew Spence, of the B.C. Science for Peace Chapter has now been produced (see item 83.8 for background). It can be obtained from Dr. George Spiegelman, Department of Microbiology, University of British Columbia, Vancouver, B.C. V6T 1W5. Please send a 9x12 stamped self-addressed envelope or a small donation to cover expenses. The cost of the document is \$1.00.

83.15 COURSE AND CONFERENCE AT THE UNIVERSITY OF GUELPH

In January, a course on nuclear disarmament given by Professor Henry Wiseman was inaugurated. It attracted a great deal of public interest to the extent that 190 students showed up on the first night and Professor Wiseman was interviewed on CBC Toronto's Metro Morning on Thursday, January 13.

A fall conference in connection with Disarmament Week is being held at the University of Guelph on October 27-29, with the following day open for extra study sessions. This international conference will focus on the themes: (1) arms control and alternative provisions for security; (2) cost and consequences of the arms race; (3) effects of the arms race on Third World development; (4) environmental and medical consequences of nuclear war. Further information: Professor Henry Wiseman, Department of Political Studies, University of Guelph, Guelph, Ontario N1G 2W1 (519) 824-4120 ext. 3535.

83.16 THE REORGANIZATION OF RESEARCH

The current U.S. Government view of its security requirements is leading to newly severe pressure to militarize scientific research. This has potential dangers for academic life, as well as for the health of Canadian research and economic development. The attempt is to control stringently the flow of information on unclassified research in broad areas. This brief article will describe developments in the U.S. and then comment on their likely implications from a Canadian perspective.

The moves stem from alarm over the "hemorrhage of technology" -- i.e., the availability of U.S. scientific and technical information to other nations, in particular the U.S.S.R., and its possible military use. The U.S. Department of Defence issued a report in January of 1982 in which it claimed that published U.S. research has been useful to Soviet weapons development. That report takes the position that essentially all high technology now has military impact. It therefore urges that release even of unclassified research results should be controlled; this has been reiterated elsewhere -- for example by Admiral Inman (former Deputy Director of the C.I.A.) in addressing the AAAS meeting in the same month.

As one mechanism for this control the D.O.D. report proposes that D.O.D. contracts should stipulate that all research results be submitted for pre-release review: those deemed "sensitive" would not be made public. The report envisages extending such requirements to all U.S. Government funding agencies (presumably including N.I.H., N.S.F., etc.) and eventually even to research funded by industry or funded within the Universities! Nor is it only a question of unpublished articles, but of censorship too at scientific meetings and even in private conversation. As yet there are no regulations in effect allowing actual prohibition of the publication of unclassified material, but instead recipients of D.O.D. grants must submit proposed publications for "review and comment". The inhibiting effect of this is easy to imagine, and the consequences are already appearing. A recent article by Stephen Strauss (Globe and Mail, January 3, 1983) cites case after case of U.S. scientists who no longer feel

free to share their work, due to pressure from their D.O.D. granting agencies: there is danger of censorship becoming self-policing. A striking instance was the last-minute withdrawal, at D.O.D. behest, of 100 papers from the annual meeting of the Society of Photo-Optical Instrumentation Engineers (San Diego, August, 1982). At least one professional organization, the Public Cryptography Study Group, has accepted voluntarily the review procedure proposed by the D.O.D. A second mechanism proposed for controlling the flow of information is to restrict personal contacts through limitations on the number and activities of foreign students and visitors in the U.S. -- this could have a direct effect on Canadian scientists.

U.S. scientists are of course alarmed by this pressure. As one result the AAAS Committee on Scientific Freedom and Responsibility has begun to publish a Bulletin of information and comments.¹ In this forum and elsewhere scientists have expressed, besides their fears for the traditional openness of academic work (in the "free world"), the opinion that that openness is a sine qua non of the continued health of U.S. technology and finally its economic well-being. They point as well to the lack of confidence one must finally have when work is not made public and thus is not subject to peer review and criticism. In September the National Academy of Sciences published a report² by its Panel on Scientific Communication and National Security in which it reviewed the subject rather thoroughly. It rejected much of the D.O.D. argument and made alternative proposals in which less stringent consultation procedures would apply to a narrowly-defined "grey area" of sensitive fields. The effectiveness of these responses from the scientific community remains to be seen; the scientists' outcry is no doubt muted by the large role the D.O.D. plays in funding U.S. research.

As Canadian scientists we will scarcely be heard in Washington, and we are of course partly shaltered from the direct impact of these censorship policies. In some ways, however, we are probably worse off than U.S. scientists, because there will be fields -- the most important and timely technological fields -- in which as foreigners we will be left completely "out in the cold". This will have drastic effects on the relevance of our research efforts and dismal long-run economic repercussions for Canada. (Indeed it is fair to ask whether the U.S. Government's attempt to control the flow of technological information is not directed as much against the industrial development of "friends" like Japan and Germany and Canada as against the military development of the U.S.S.R.) Canada's technological base is probably too small for us to surge ahead on our own in many fields. There is no reason to expect Canada to be excepted from this plight. Indeed we could seek relief from it only by accepting further involvement in U.S. military endeavours, only by accepting U.S. control and possible confiscation of the results of our research, only at the expense of scientific freedom.

Many Canadian scientists now hold U.S. D.O.D. grants for research. They must face the fact that such grants are offered only if their work "has a direct and apparent relationship to a specific military function or operation". However sanguine (sic) they may be about that, their dilemma will be heightened if the D.O.D. becomes able to prohibit dissemination of the results of their research.

Faced with real or apparent exclusion from broad ranges of U.S. technological research, other nations (including Canada) may well react by trying to limit release of their own advanced information. This "snowball" effect would have drastic effects not only on minor industrial countries like our own, but on the progress of the scientific and of the economic development of the whole world.

In the case of Canada such a 'reactive' response is apt to be confused by one of complicity, due to our NATO and NORAD ties with the U.S. In a previous issue of this Bulletin³ we pointed out that the Canadian Government was attempting to encourage Canadian Universities to seek contracts under the U.S.-Canada Defence Development Sharing Agreement. This move followed Reagan's 1981 visit to Ottawa. We commented on its inappropriateness to Canadian science policy. At the same time there was an attempt to make Canadian Government research contracts dependent on the recipient's seeking security clearance from the Department of Supply and Services (formerly Department of Defence Production)! At the University of Toronto at least this was successfully rejected. Whether the attempt sprang from U.S. concern over the "hemorrhage of technology" is not certain. How will our Government react to further U.S. pressure to restrict the flow of information? Given the close "defence" ties between the two nations I believe we should be on the lookout for Canadian Government cooperation in attempts to limit the flow of unclassified material. To combat it we must share information and opinions on these matters: we would be happy to hear from you in this regard. On our own Government we can perhaps have some influence.

1. The Bulletin of the AAAS Committee on Scientific Freedom and Responsibility (chairman Leonard Reiser, Dartmouth College). Inquiries to the Committee, c/o the AAAS, at 1515 Massachusetts Avenue, N.W., Washington, D.C. 20005, U.S.A. I believe they will send copies to interested scientists.
2. The report on Scientific Communication and National Security was published by and is available from the National Academy Press, 2101 Constitution Avenue, N.W., Washington, D.C. 20418, U.S.A.
3. Science for War? Science for Peace Bulletin, Vol. 2, No. 1 (February, 1982), #82.10

John P. Valteau
Chemistry, University of Toronto

83.17 ACQUISITIONS

The following have been received at the Science for Peace office:

Preprint (50pp and 79 references) "Strategic Arms Control Through Test Restraints: Principles and Case Studies" by M.B. Einhorn, G.L. Kane and M. Nincie, University of Michigan.

Reprint: "The Arms Race as a Hypergame" P.G. Bennett and M.R. Dando, Futures (Aug. 1982) pp 293-306, 39 references.

83.18 FOR REFERENCE

Fellowship magazine regularly runs articles on nuclear disarmament which are too numerous to detail here. For a subscription, write to Fellowship of Reconciliation, 523 North Broadway, Nyack, NY 10960 (phone: 914-358-4601; rate: \$10 per year for 8 issues).

"The missed chance to stop the H-bomb" by McGeorge Bundy. The New York Review, Vol. 29, No. 8, May 13, 1982, pp 13-22.

"The MX on the spot": "Why it will work" by George Keyworth. "Why it won't work" by Jeffrey Smith. Insight section. Toronto Star, Dec. 11, 1982, p B1.

"What the Warsaw Pact proposes" A Reuter article carried by Toronto Star, Saturday, Jan. 8, 1983.

"Soviets offer to cut missiles in Europe" Reuter article carried by the Globe & Mail, Wed., Dec. 22, 1982. "Excerpts from speech by Andropov on medium-range nuclear missiles" New York Times, Wed. Dec. 22, 1982.

"Reflections: the waiting nations" by William Pfaff. The New Yorker, Jan. 3, 1983.

"Bishops attack nuclear policy" Globe & Mail, Sat. Dec. 11, 1982, p 20.

"Gospel according to fads just isn't good enough" by Herman Kahn. (A response to the pastoral letter of the U.S. bishops.) Globe & Mail, Mon. Dec. 13, 1982.

"Municipal elections: wrong spot for nuclear ballot" by J. Patrick Boyer, Globe & Mail, Fri. Nov. 5, 1982, p 7.

"The dangers of nuclear brinkmanship: is case for deterrence sound?" by Don G. Bates, Globe & Mail, Fri. Oct. 8, 1982 p 7.

"Arms control: faint hopes for success" by John Gellner, Globe & Mail, Sat. Oct. 16, 1982 p 9.

"Bush takes on a formidable task" by Jeffery Simpson, Globe & Mail, Tues. Jan. 25, 1983 p 7.

"U.S. planning defense cuts" "Arms plans ineffectual, studies say" "Soviets 'consider' missile disposal" Globe & Mail, Wed., Jan. 12, 1983 p C5.

The whole of Volume XI, No. 2-3, 1982 of the journal AMBIO (Journal of the Human Environment), published by the Royal Swedish Academy of Sciences is devoted to the effects of nuclear war. Articles appearing are:

Frank Barnaby, "The effects of a global nuclear war: the arsenals"
Barnaby & Rorblat, "The effects of nuclear weapons"
Hugh Middleton, "Epidemiology - future sickness and death"
Coggle & Lindop, "Medical consequences of radiation"
Crotzen & Birks, "Twilight at noon - the atmosphere"
Wetzel, "Effects on global supplies of freshwater"
Alan Seymor, "Effects on ocean ecosystems"
Bondetti, "Effects on agriculture"
Woodwell, "Biotic effects of ionizing radiation"
Hjort, "Impact on global food supplies"
Chazov & Varvarian, "Effects on human behaviour"
Arkin, von Hippel & Levi, "Consequences of 'limited' nuclear war
in East and West Germany (B. Gombay)

83.19 ADDRESS UNKNOWN

Mail to the following members of Science for Peace has been returned "address unknown". Any member knowing the whereabouts of one of these people should let Doreen Morton know at 978-8601:

Stephanie Cairns (formerly 1574 Bathurst St., Toronto)
Paul Jarbeau (formerly 66 Spadina Rd., Toronto)

83.20 WHO IS G.B.S.?

For a moment, when we received an envelop with cash and the initials G.B.S. on the envelop, we thought that we had succeeded in recruiting a famous Irish playwright. However, when we realized that he has been dead for some time, we decided it must be someone else. Can anyone help us?

83.21 CITY OF TORONTO - NOW A NUCLEAR-FREE ZONE

In January, the Council of the City of Toronto passed a resolution "that the production, testing, storage, transportation, processing, disposal or use of nuclear weapons or their components not be undertaken within Toronto by the declaration of the City of Toronto as a nuclear weapons free zone; and that this decision be forwarded to the Prime Minister of Canada."

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