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PREPARATIONS FOR THE 27TH CONFERENCE

Munich, 24-29 August 1977

The special meeting of the Pugwash Council in Geneva on 16 and 17 April (see p. 115) which was mainly concerned with the programme of, and documentation for, the Munich Conference, underscores the importance of the 27th Pugwash Conference, marking twenty years of Pugwash activity.

Despite heavy professional schedules and individual commitments, many Pugwash scientists are gladly devoting extra time and energy toward ensuring maximum results from this Conference. Those who have agreed to be conveners of the eight Working Groups have undertaken to write background documents to serve as a basis for discussion at the Conference, and as a stimulus to the preparation of working papers by participants who have indicated their special interest in respective Working Groups. Working papers should be succinct, and should reach the Central Office by 5 July at the very latest for reproduction and distribution before the Conference; otherwise, distribution will have to await the Conference itself. By sharply focusing the issues and choices we can avoid cluttering further the air waves and mountain of print which are largely ignored, or have little impact.

During the next weeks participants will receive documentation concerning the Conference. This will include specific proposals on future activities

and organization of Pugwash, which were drafted with considerable effort by the Pugwash Council over the past year. There is also the draft of a public statement to be issued from the Conference. All these documents will be considered for action by the full Conference in Munich, which will also have the task of electing officers and Council for the next five years.

This is expected to be the largest of the Pugwash Conferences held up to now. Our colleagues in the Federal Republic of Germany, in particular Professor Klaus Gottstein and Mr. Jörn-Christian Behrmann, are putting in a tremendous effort to ensure the successful organization of the Conference; we are all most grateful to them.

One of the highlights of the Conference will be a special plenary session planned for Sunday evening, 28 August. This will consist of a panel of distinguished speakers, who will give their views on "Scientists and Problems of Peace", followed by a discussion from the floor. It is hoped to record this session on TV tape for subsequent transmission in many countries.

A final word. A glance at the programme of the Conference (p. 114) will indicate the time constraints and difficulties of the task we face during the Conference itself. Success will depend on the cooperation of the participants themselves in drafting preparatory documentation and in doing their homework. We count on your help before and during the Conference itself.

M. M. K.

27th Pugwash Conference on Science and World Affairs
Munich, 24-29 August 1977

Programme

	a. m.		p. m.	evening
	<u>pre-coffee</u>	<u>post</u>		
Tuesday, 23 August	Registration		Registration	Informal get-together
Wed. 24 "	Opening (Plenary I)		Working Groups	Reception
Thurs. 25 "	Working Groups		Working Groups	Plenary II
Fri. 26 "	Working Groups		← Excursion →	
Sat. 27 "	Working Groups	Plenary III	Plenary III contd.	Reception
Sun. 28 "	Working Groups	Plenary IV	Plenary IV contd.	Plenary V (special meeting)
Mon. 29 "	Closing (Plenary VI)			

Plenary II : "Future of Pugwash: Issues and Choices".
There is to be a panel of 3 introductory speakers (approx. 10 minutes each) followed by a general discussion. Reports from national and regional Pugwash groups and proposals of the Pugwash Council will be circulated in advance.

Plenary III : Reports from the Working Groups.

Plenary IV : "Future of Pugwash: Activities and Organization".
This will be a discussion of proposals prepared in advance by the Council and those developed during the Conference.

Plenary V : A group of distinguished speakers, allotted about ten minutes each, will present their views on "Scientists and Problems of Peace", followed by questions and discussion from the floor. We hope to record the session on TV tape for subsequent transmission in different countries. The list of panel speakers will be circulated in due course.

Plenary VI : Adoption of public statement and proposals for future of Pugwash, and election of officers.

PUGWASH NEWS

Meeting of the Pugwash Council, Geneva, April 16-17

A special meeting of the Council had been scheduled, the main purpose of which was to review documents concerning the future organization and programme of Pugwash, which had been prepared for it by its Executive Committee with a view to presentation at this summer's 20th Anniversary Conference in Munich. Three draft documents were agreed upon: one on future organization, a second on the modalities for future activities, and a third, on the future programme of Pugwash, intended for issue by the Munich Conference as a public declaration. These draft documents will be circulated to all Munich participants well prior to the Conference.

Other details of the Munich programme, the status of invitations and acceptances, and the procedures to be followed at the Conference, were discussed and agreed upon.

Plans were discussed for the 1978 Conference, to be held in Varna, Bulgaria, on 1-5 September. A proposed agenda will be discussed at Munich and published in the next Newsletter.

A tentative proposal from the Mexican Centre for Social and Economic Studies of the Third World, to hold the 1979 Conference in Mexico City, was warmly received.

The status of planned Symposia and Workshops was reviewed. In addition to those previously agreed upon (see revised list, pp. 115-116), plans were announced for a Symposium on the Thorium Nuclear Energy Fuel Cycle (USA, 1978), on the Disposal of Radioactive Wastes (USSR, 1978), and on the Nuclear Situation in the South Pacific (New Zealand, 1979). Information was also provided relating to planned national group meetings and symposia in Bangladesh (fall 1977) and Finland (April, May, and August 1977), all of which will be reported in a future Newsletter.

Finally, the Chairman of the Council's Finance Committee (Mr. William Swartz) announced plans for a special medal, commemorating the 20th Anniversary of the Einstein-Russell Manifesto, which has been designed, on commission from the French Pugwash Group, by a distinguished Parisian sculptor (Mr. William Chattaway) and which will be minted in Bulgaria through the courtesy of the Bulgarian Pugwash Group. The medallion, and a number of studies and busts prepared in its design, will be on exhibition and sale (for the benefit of the Pugwash Central Office) at the Munich Conference.

B. T. F.

CALENDAR OF FORTHCOMING PUGWASH MEETINGS

(please note revised dates)

17-19 August 1977

Leverkusen/Köln, FRG

Fifth Workshop on Chemical Warfare

Topic: Norms of possible verification procedures relating to a ban on lethal chemical weapons.

22-23 August, 1977

Munich, FRG

46th Session of the Pugwash Council

24-29 August, 1977

Munich, FRG

27th Pugwash Conference

(For agenda see Newsletter, July and October 1976, p.44)

October, 1977

India

Workshop on Code of Conduct/Guidelines for International
Scientific Cooperation for Development

November, 1977

Oslo, Norway

Symposium on Militarism and National Security

(for topics see p.117)

January, 1978

Ghana

Pan-African Symposium on Feeding Africa

(For agenda see Newsletter, July and October 1976, p.44)

Spring, 1978

Toronto, Canada

Symposium on Avoiding a Nuclear War by the Year 2000

(For agenda see Newsletter, January 1977, p.79)

Spring, 1978

USA

Symposium on Technological Choice and Social Values

(For agenda see Newsletter, July and October 1976, p.43)

April, 1978

Zakopane, Poland

Symposium on European Cooperation and Security

1-5 September, 1978

Varna, Bulgaria

28th Pugwash Conference

September, 1979

Mexico City, Mexico

(tentative)

29th Pugwash Conference

Summer, 1980

Netherlands

(tentative)

30th Pugwash Conference

THEME FOR 28TH PUGWASH SYMPOSIUM ON
MILITARISM AND NATIONAL SECURITY

Oslo, Norway, November 1977

The spiralling arms race, the waste of natural resources for military purposes, the increasing number of military take-overs, the military suppression of social forces, the process of integration between military and civilian sectors of many societies, and the growing transfer of arms across boundaries, particularly to the developing countries, are all important aspects of the present international situation and give reason for grave concern. In short, we are facing a complex set of problems which at the outset are intertwined and are difficult to deal with both intellectually and practically.

Many of the problems involved in current discussions, denoted by such terms as militarism, militarization, militaristic systems, etc. are so vague that they are devoid of scientific value.

Moreover, to the extent they are defined at all, different authors apply varying definitions so that one term may be used for a series of different concepts, and conversely, one concept finds its expression in many different terms. It would be naive and futile to work for a common agreement on the language to be used in these matters. However, it is imperative for researchers to try to arrive at a better understanding of the contemporary processes involved, to identify the problems and to clarify the issues.

This requires a fruitful scholarly exchange of views on these matters and a basis for coordination of research. This is the purpose of the suggested symposium. Hopefully, it will be a contribution to the general efforts of Pugwash to combat increasing militarization and thereby further the cause of peace.

WORKSHOP ON A DRAFT TREATY ON A WORLD-WIDE
NUCLEAR WEAPON-FREE ZONE

Geneva, 14-15 April 1977

List of Participants

Dr. F. Barnaby (SIPRI)
Mr. E. Bauer (France)
Prof. F. Calogero (Italy)
Prof. A. Chayes (USA)
Dr. A. Corradini (UN)
Prof. C. Dominicé (Switzerland)
Prof. B.T. Feld (USA)
Mr. S. Freier (Israel)
Prof. J. Freymond (Switzerland)
Prof. E.E. Galal (Egypt)
Dr. R.I.A. Hyvärinen (UN)
Dr. M.M. Kaplan (Switzerland)
Dr. C. Kiuranov (Bulgaria)
Prof. L. Kowarski (CERN)
Dr. V. Kuleshov (USSR)
Prof. M.M. Mahfouz (Egypt)

Dr. W. Mark (Switzerland)
Acad. M.A. Markov (USSR)
Prof. J.K. Miettinen (Finland)
Prof. M. Nalecz (Poland)
Prof. R.R. Neild (UK)
Mr. A. Parthasarathi (India)
Dr. V.P. Pavlichenko (USSR)
Mr. J. Prawitz (Sweden)
Prof. J. Rotblat (UK)
Prof. P.B. Smith (Netherlands)
Dr. I. Sokolov (USSR)
Mr. W.M. Swartz (USA)
Prof. V.G. Trukhanovsky (USSR)
Dr. H. von Arx (Switzerland)
Mr. J. Handler (Switzerland)

Workshop on a Draft Treaty on a World-Wide Nuclear Weapon-Free Zone

Geneva, 14-15 April 1977

Report

Taking advantage of the meeting of the Pugwash Council in Geneva, and of the hospitality of the Swiss Pugwash Group,* a two day workshop was convened to consider, in detail, the proposal for this workshop made at the Mühlhausen Conference (see Newsletter, Vol.14, nos.1 & 2, July-October 1976, pp.26-33). The workshop was attended by 31 participants from 14 countries and three international organizations.

It was generally agreed that the draft treaty requires clarification and strengthening in a number of respects. The emphasis, rather than being a negative one focused on the prohibition of nuclear weapon acquisition by certain states, should be on the positive goal of renunciation of nuclear weapons and their use by all states. Toward this end, and also to remove the confusion arising from the use of the term "zone" in a world-wide context, it was suggested that the treaty be entitled "A Convention (or Covenant) for the Renunciation of Nuclear Weapons"; that full benefits of membership be accorded only to those states that are unequivocally willing to forego dependence on nuclear weapons in any form; and that only a form of associate membership be granted to those nations (presumably including the "super-powers") that, while not yet prepared to accept the full responsibilities of member-

ship, are still willing to respect the provisions of the Convention relating to its full members.

The participants in the workshop also felt that the relationships of the proposal to the existing NPT regime require clarification. The proposal is intended as a supplement to the NPT, designed to strengthen the political and psychological incentives for a non-nuclear approach to enhanced national and international security. Toward this end, many felt that the draft treaty requires additional provisions aimed at constructing a system of obligations toward collective security among the full treaty members (e.g., mutual aid in case of threat or attack by nuclear weapons) combined with pressure towards adherence in the form of refusal of all forms of nuclear aid (by full and associate members alike) to non-adherents.

The workshop generally agreed that the effort to draft a Covenant along the proposed lines was well worthwhile. It suggested that a revised draft be prepared, to be discussed further at the Munich Conference, with the intention that it should be provided as a major input into next year's special session of the UN General Assembly on Disarmament. Such a new draft is in process of preparation.

B. T. F.

* This Workshop was made possible through a financial grant to the Swiss Pugwash Group kindly provided by the Department of International Law of the University of Geneva. Financial assistance for this meeting was also received from the Swiss Federal Government and Geneva Cantonal authorities.

B. T. Feld

Comments on my Attached Paper "A New Look at Nuclear Weapon-Free Zones"
and Annexed Draft Treaty

The purpose of the attached paper was to explore the concept of a world-wide nuclear weapon-free zone, based on the earlier concept of the "non-nuclear club". A draft treaty was presented by the author to Working Group 2 at the 26th Pugwash Conference (Mühlhausen, GDR, 26-31 August 1976); the attached, revised paper has benefited from the discussions at the Mühlhausen Conference. However, it was felt that the idea required further, more intensive consideration in a number of respects, and the present Workshop has been convened for this purpose.

The following commentary on the draft "Treaty for a World-Wide Zone of the Prohibition of Nuclear Weapons" is intended to facilitate and guide the discussion in this Workshop.

General: The draft treaty is patterned quite closely after the Treaty of Tlatelolco. In particular, it combines the idea of nuclear weapon-free zones with guarantees of no-first-use of nuclear weapons against nations adhering to the treaty. There are at least two fundamental problems associated with this concept. First, is the question (or questions) of the applicability of the nuclear-free zone concept to this kind of a non-contiguous, Swiss cheese like conglomeration of nations. In the world-wide concept, all the problems of transit of weapons, through "the territorial sea, air space and any other space over which the state exercises sovereignty in accordance with its own legislation" (definition of "territory" according to Article 3 of the Treaty of Tlatelolco), which still remain unresolved in the case

of Tlatelolco, are exacerbated by the more extensive and non-contiguous nature of the world-wide zone. This problem remains unresolved in my draft treaty.

Security Guarantees: The other aspect, that of no-first-use against non-nuclear nations, is of course the quid intended to compensate for the quo of renunciation of all possibility of nuclear weapons acquisition by the signatory nations. Without this provision, the proposed treaty would simply be a truncated version of the Non-Proliferation Treaty (NPT), containing merely the responsibilities (and benefits) of renunciation of nuclear weapons, without the positive incentives of help in peaceful nuclear applications associated with the NPT. On the other hand, because the Treaty relates to only one aspect of the whole range of possible nuclear activities -- and the most dangerous and unproductive one to boot -- it does have the benefit of simplicity.

However, objections of a much more fundamental nature have been raised against the concept of positive security guarantees (i.e., no-first-use) on the part of the nuclear powers. In the view of some, what the Treaty should attempt to establish is a "community of nations in favour of a nuclear-free world"; in setting up this community, any acknowledgement of the "legitimacy" of nuclear weapon possession by some states would be morally unacceptable and, furthermore, undermine the entire basis of the treaty. Hence, these critics contend, all that is needed is a set of proclamations by the morally superior nations that they abhor nuclear weapons and all doctrines for their use -- in effect, a "leproszation" of the nuclear-weapon states as a means of isolating

the disease of nuclear weapons.

On the other hand, defenders of the no-first-use concept respond that these criticisms demonstrate once again that, frequently, "the best is the enemy of the good". The important thing is to strengthen all existing barriers against the use of nuclear weapons, to create an atmosphere in which the temptations and pressures for the introduction of nuclear weapons into non-nuclear conflicts are minimized, and in which the benefits of non-nuclear status become increasingly evident, first to the states not now possessing them and eventually to all states. The no-first-use route, they contend, in this imperfect world is the most direct one to eventual universal nuclear disarmament. The no-first-use-against-non-nuclears approach, which would be accomplished by the proposed treaty, is an attainable and necessary first step along this route.

At this point, one becomes involved in an argument on tactics, as to the relative efficacy and attainability of small steps (arms control) as opposed to radical changes (comprehensive disarmament), an argument that is clearly not resolvable in the context of this proposal.

The Problem of Alliances: There remains the problem of how to treat non-nuclear weapon states that are allied to nuclear powers and, in particular, are members of groupings that come explicitly under the "nuclear umbrella" of one or the other of the nuclear superpowers (e. g., NATO, WTO, SEATO, Cuba, Japan). Pending the resolution of this problem by special negotiation among the nations involved, it would seem to me to be most reasonable to exclude most of such nations from adherence to the treaty, especially those that accept the presence of troops or bases of one of the superpowers on their territory. However, non-contiguous

territories of such nations, especially if they are in regions in which most or all of their neighbours are treaty adherents, should be permitted to join (Article 3). Furthermore, possibility should be allowed that some nations within regional alliance may renounce the nuclear protection of the superpowers and, instead, place themselves under the umbrella of the nuclear weapon-free zone treaty, provided they are willing to demonstrate compliance. It is to be hoped that, in time, the treaty will provide a more effective nuclear umbrella for non-nuclear nations than any military alliance. On the other hand, the situation might eventually evolve in the direction of de-emphasizing the nuclear component of mutual defence arrangements without necessarily weakening the conventional defence aspects.

Peaceful Nuclear Explosions: Another basic issue, common to all nuclear weapon-free zone proposals, and to the NPT as well, relates to the role of "peaceful nuclear explosions". The inability to distinguish from afar between weapons and devices for peaceful purposes (PNE's) is well understood and recognized in the NPT; all restrictions, therein, refer always to "nuclear weapons or other nuclear explosive devices". At the same time, the NPT makes provision for an international regime that would permit beneficial applications of PNE's that might develop in the future, without permitting these applications to be used as an excuse for nations to develop, test and demonstrate a nuclear weapons capability.

This is an extremely important issue. The definition of nuclear weapons contained in Article 5 of the Treaty of Tlatelolco⁽¹⁾ tries to avoid it. As a result, the treaty has been greatly weakened by the reservations and ambiguities with respect to PNE's insisted upon by some of the most important Latin American nations. I have tried (in Article 4 and 5 of the draft treaty) to

define nuclear weapons so as to include all nuclear explosive devices, leaving the PNE problem to the NPT regime in the expectation that solution of this problem is most likely to be sought and found in the NPT context.

Verification: The Treaty of Tlatelolco sets up a rather elaborate organizational structure, involving an Agency, a General Conference and a Secretariat, for the purpose of verifying and assuring compliance. It has seemed to me that, in the case of a world-wide treaty, advantage should be taken of the existence, experience and interests in nuclear non-proliferation of the International Atomic Energy Agency. Accordingly, the verification function is assigned to the IAEA

(Article 6) with, however, responsibility for general oversight and administration placed in the hands of the Secretary-General of the United Nations and adjudication of disputes in the International Court of Justice (Article 7). Short of a world government with binding powers, compliance with such treaties, and verification thereof, cannot but be on a voluntary basis by sovereign states. However, it is important that the mechanisms provided and the procedures for their application and reporting shall be such as to provide maximum incentives to states to exhibit on all available occasions both the intention and the practice of complying, and of reassuring the rest of the world as to this compliance. The verification procedures suggested are intended to be sufficient for, but not excessive to, these ends.

(1). "For the purposes of this treaty, a nuclear weapon is any device which is capable of releasing nuclear energy in an uncontrolled manner and which has a group of characteristics that are appropriate for use for warlike purposes. An instrument that might be used for the transport or propulsion of the device is not included in this definition if it is separable from the device and not an indivisible part thereof."

B. T. Feld

A NEW LOOK AT NUCLEAR WEAPON-FREE ZONES

1. Generally speaking, the concept of nuclear weapon-free zones is intended to serve three purposes:

a. Reassurance to the inhabitants of the zone that -- in case of outbreak of a conflict involving nations within the zone and even if such conflict should involve nuclear weapon states and the eventual use of nuclear weapons outside the zone -- they will be spared from the threat and danger of nuclear attack. In this sense, it serves as a

security supplement to the Nuclear Non-Proliferation Treaty.

b. Reinforcement of internal political and economic barriers, within the nations of the zone, against pressures for the independent acquisition of nuclear weapons. Such pressures can arise from a diversity of causes: from justifiable concerns for the survival of a nation in a hostile international or regional atmosphere to the time-honoured practice (among nations

as well as individuals) of "keeping up with the Joneses".

c. Progress towards the ultimate goal of eliminating nuclear weapons from the arsenals of all nations. The larger the fraction of the earth which is covered by nuclear-free zones, the greater will be the pressures and the incentives for extending this area to cover the entire globe. Since the concept of a nuclear-free zone, as it is now understood by most of its serious advocates, includes guarantees to the members of the zone of no-first-use of nuclear weapons by the nuclear weapons powers, such zones do indeed represent a serious stage in the universal acceptance of the non-useability of nuclear weapons. The non-first-use concept appears, in turn, to be a prerequisite for the acceptance of an eventual ban on the production, deployment and use of nuclear weapons.

2. The concept of nuclear-free zones has recently been considered in a special study by the UN Conference of the Committee on Disarmament (CCD/467, also UN document A/10027/Add.1). The general consensus (but not universal agreement) of the participants in the study was that a nuclear weapon-free zone agreement should contain the following elements:

- (a) Agreement by the zone members
 - i) Not to develop or to accept possession of nuclear weapons on their territories.
 - ii) Not to deploy or to permit deployment of nuclear weapons on their territories.
 - iii) To permit appropriate provisions for control to verify compliance.
- (b) Nations outside the zone would

agree to respect its nuclear weapon-free character. In particular, the nuclear weapon states would agree formally (as part of the treaty establishing the zone) not to use or threaten to use nuclear weapons against any zone member as long as this member complies with its treaty obligations (i.e., does not acquire nuclear weapons or accept such weapons on its territory).

(c) There are a number of collateral issues on which general agreement is more difficult to achieve: questions of transit and transport of nuclear weapons; so-called peaceful nuclear activities, including peaceful nuclear explosions; treatment of territories or possessions of nuclear powers that lie within the zones; inclusion or exclusion of the high seas and ocean passageways; other security arrangements and alliances of zone members, especially with nuclear weapon states; supplementary security guarantees to zone members. Such issues are very complex and their resolution may differ from zone to zone, making each zonal negotiation a separate problem.

3. For reasons such as those mentioned above, only few nuclear-free zone arrangements have thus far been negotiated; the Antarctic Treaty (1959); the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (1963); the Treaty (of Tlatelolco) for the Prohibition of Nuclear Weapons in Latin America (1967); the Treaty for the Prohibition of the Emplacement of Nuclear Weapons and Other Means of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil thereof.

Other nuclear-free zones have been proposed -- Central Europe; the Balkans, the Adriatic and the Mediterranean; Africa

(south of the Sahara); Northern Europe; the Middle East; South Asia. In each case, special problems, relating to one or more states in the proposed zone, have prevented its successful establishment. Even in the Latin American case, which is the only populated area where a nuclear-free zone exists, some states (e.g. Cuba) are not yet parties to the treaty, while others (Argentina, Brazil, Chile) have signed with various reservations, including the right to conduct "peaceful" explosions, thus blocking its entry into force for these countries. Among the five admitted nuclear weapon states, only the USSR has not yet formally accepted the Zone's nuclear-free status (Protocol II), owing to ambiguities concerning the right of transit of nuclear weapons through nations in the area and the waters surrounding it.

4. In the end, the prospects for equivalent treaties in other areas seem rather remote at this time, in spite of the very strong desires of many nations to enter into such arrangements. For this reason, some participants in the 25th Pugwash Conference in Madras, India, last January

proposed the following variant of the nuclear-free zone idea. (This is essentially a revival of some elements of an idea which was current in the early 1960s, to my knowledge first proposed by Sweden in 1961, of a "non-nuclear club" of the non-aligned nations): those nations which were prepared to do so could, together form "a World Nuclear-Free Zone to be established by Treaty or other instruments to which all nations of the world would be asked to accede... The areas encompassed by such a zone need not be contiguous and... the zone would be feasible even though only a limited number of countries become parties in the first instance."

In response to the suggestion of the Madras Working Group that Pugwash might develop a formal proposal that "could then be presented to the UN and other world organizations for their consideration and, hopefully, action", I have prepared the following text for a draft World Nuclear-Free Zone Treaty. The wording is based on existing treaties (especially the Treaty of Tlatelolco) and agreements, and is intended to serve primarily as a basis for further discussion and consideration.

- - - - -

A TREATY FOR A WORLD-WIDE ZONE OF THE PROHIBITION OF
NUCLEAR WEAPONS

Preamble: In the names of their peoples, the Governments of the States which sign this Treaty,

Desiring to contribute towards ending the arms race, especially in nuclear weapons,

Recalling that the establishment of nuclear weapon-free zones can be a significant means for achieving universal nuclear disarmament at a later stage,

Desiring to undertake all measures possible to strengthen world peace and security,

Convinced that the incalculable destructive power of nuclear weapons and the inevitable after-effects of a nuclear war could endanger the survival of the human species,

and that the proliferation of nuclear weapons would make their eventual elimin-

ation enormously difficult and would increase the danger of the outbreak of a nuclear conflagration,

Convinced further that the continuing military denuclearization of regions now free of nuclear weapons will not only be beneficial to the peoples of these zones, but will exert a benign influence on other regions of the earth,

Agree as follows:

Article 1

1. The Contracting Parties hereby undertake not to use for nuclear weapons or other nuclear explosive purposes the nuclear materials and facilities which are under their jurisdiction, and to prohibit and prevent in their respective territories:

(a) the testing, use, manufacture, production or acquisition by any means whatsoever of any nuclear weapons by the Parties themselves, directly or indirectly, on behalf of anyone else or in any other way, and

(b) the receipt, storage, installation, deployment and any form of possession of any nuclear weapons, directly or indirectly, by the Parties themselves, by anyone on their behalf or in any other way.

2. The Contracting Parties also undertake to refrain from engaging in encouraging or authorizing, directly or indirectly, or in any way participating in the testing, use, manufacture, production, possession, or control of any nuclear weapon anywhere.

Article 2

For the purposes of this Treaty, the Contracting Parties are all those States, irrespective of their locations, for whom the Treaty is in force.

Article 3

For the purposes of this Treaty, the territory of a party State shall include all the land, sea and air-space over which its sovereignty is recognized by established international law. However, in the case of States that, de jure or de facto, exercise international responsibilities for territories non-contiguous with their main bodies, such territories may, with the agreement of the States party to the Treaty bordering thereon, be separately accepted as contracting Parties to the Treaty.

Article 4

For the purpose of this Treaty, a nuclear weapon is any device which, starting from an inactive state, is capable of being triggered in a pre-arranged fashion in such a way as to release, in an explosive manner through a rapid nuclear chain reaction, the energy stored in atomic nuclei and which, in the inactive state, is capable of being transported to the site intended for the explosion.

Article 5

All the Parties to the Treaty have the right to participate in the exchange of equipment, materials and scientific and technical information for the peaceful uses of nuclear energy, in accordance with this Treaty and under appropriate international supervision and through appropriate international agencies and procedures.

Article 6

For the purpose of verifying compliance with the obligations entered into by the Contracting Parties in accordance with Article 1, the following controls shall be put into effect:

1. Each Contracting Party shall negotiate appropriate agreements with the International Atomic Energy Agency for the application of safeguards to its nuclear

activities; the scope and nature of such safeguards shall be determined by the same provisions as govern signatories to the Treaty on the Non-Proliferation of Nuclear Weapons.

2. The Contracting Parties shall submit to the Atomic Energy Agency such reports and other information as it shall require to verify compliance.

3. The Secretary-General of the United Nations may request any of the Contracting Parties to provide him with complementary or supplementary information regarding any event or circumstance connected with compliance with this Treaty, explaining his reasons. Such Contracting Parties undertake to co-operate promptly and fully with the Secretary-General.

4. The International Atomic Energy Agency has the power to carry out special inspections in the following cases:

(a) In accordance with the agreements referred to in paragraph 1 of this article.

(b) When so requested, the reason for the request being stated, by any Party, which suspects that some activity prohibited by this Treaty has been carried out or is about to be carried out, either in the territory of any other Party or in any other place on such later Party's behalf.

(c) When requested by any Party which has been suspected of or charged with having violated this Treaty.

5. The International Atomic Energy Agency shall promptly report the findings of its inspections to the Secretary-General of the United Nations, who shall

initiate any necessary action required through appropriate procedures provided by the Charter of the United Nations.

6. The costs and expenses of any special inspection carried out under paragraph 4 above shall be borne by the requesting Party or Parties, except where the Secretary-General of the United Nations concludes on the basis of the report on the special inspection that, in view of the circumstances existing in the case, such costs and expenses shall be borne by the IAEA.

7. The Contracting Parties undertake to grant the inspectors carrying out such special inspections full and free access to all places and all information which may be necessary for the performance of their duties and which are directly and intimately connected with the suspicion of violation of this Treaty. If so requested by the authorities of the Contracting Party on whose territory the inspection is carried out, the inspectors designated by the IAEA shall be accompanied by representatives of said authorities, provided that this does not in any way delay or hinder the work of the inspectors.

8. The IAEA shall immediately transmit to all the Parties, through the Secretary-General of the UN, a copy of any report resulting from a special inspection. Similarly, the IAEA shall send through the Secretary-General, for transmission to the United Nations Security Council and General Assembly, and for his information, a copy of any report resulting from any special inspection carried out in accordance with the provisions of this article.

Article 7

Unless the Parties concerned agree on another mode of peaceful settlement, any question or dispute concerning the interpret-

ation or application of this Treaty which is not settled shall be referred to the International Court of Justice with the prior consent of the Parties to the controversy.

Article 8

1. This Treaty shall be open indefinitely for signature by all States and by the non-contiguous territories of States, as provided in article 3.
2. This Treaty shall be subject to ratification by signatory States in accordance with their respective constitutional procedures.
3. This Treaty, of which the Arabic, Chinese, English, French, Hindi, Russian, Spanish, and Swahili texts are equally authentic, and the instruments of ratification shall be deposited in the archives of the United Nations.
4. This Treaty shall enter in force as soon as, both
 - (a) it has been ratified by fifteen States, and
 - (b) the additional protocol has been ratified by at least three of the permanent members of the United Nations Security Council.
5. Each Party shall have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty and to the United Nations Security Council six months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

Additional protocol

In the names of their peoples, the Governments of the States which sign this protocol,

Agreeing with the need for the Treaty as set forth in its Preamble,

Desiring to contribute, in so far as it lies within their power, towards the eventual total elimination of nuclear weapons in a world at peace,

Have agreed as follows:

Article 1

The statute of denuclearization in respect to warlike purposes, as defined, delineated and set forth in the Treaty for a World-Wide Zone of the Prohibition of Nuclear Weapons of which this instrument is an annex, shall be fully respected by the Parties to this Protocol in all its express aims and provisions.

Article 2

The Governments represented by the undersigned undertake, therefore, not to contribute in any way to the performance of acts involving a violation of the obligations and undertaken by the Contracting Parties.

Article 3

The Governments represented by the undersigned also undertake not to use or threaten to use nuclear weapons against the Contracting Parties of the Treaty for a World-Wide Zone of the Prohibition of Nuclear Weapons, so long as said Parties shall continue to adhere to their obligations under said Treaty and so long as said Treaty shall remain in force.

Article 4

The duration of this Protocol and the provisions regarding ratification, authentic texts and deposition shall be the same as those of the Treaty for a World-Wide Zone of the Prohibition of Nuclear Weapons.

E. E. Galal

A "COMPLETE" LOOK AT NUCLEAR WEAPON-FREE ZONES

The problems of proliferation of nuclear weapons both vertically as well as horizontally are alarmingly multiplying. All measures of control so far have been of a marginal nature serving no other purpose than sustaining the strategic balance of terror to which the two superpowers are fully committed. The basic issues which inevitably impinge on the bipolar hegemony (military and subsequently political) have been circumvented or simply ignored. The experience of the last decades have conclusively demonstrated the nominal role permitted to the world community in seeking a breakthrough from this impasse, as far as vertical proliferation sustained by the two superpowers is concerned. It has also demonstrated that nuclear control and disarmament can only change to a meaningful arrangement from a restrictive exercise on the have-nots only if its global and universal nature are fully recognized.

The world community has been either deceptively lulled into a vague sense of resignation to an ever expanding complex system of negotiations and arrangements, or helplessly seeking a modus vivendi with the mushrooming risks.

Even attempts at finding ways and means to live with this dangerous state of affairs through seeking marginal protection and safeguards, as exemplified by NPT and NFZ, have been thwarted by the total lack of commitment not only by the superpowers but very often by the nuclear powers, the near-nuclear as well as the potentially nuclear.

Obviously, what is needed is not a new

non-productive diversion of the control game, which again avoids all the basic issues and thus serves only the purpose for further lulling the deceived and confusing the resigned.

The only exercise worth the effort is an exercise which attempts to tackle all the causes of the failures and omissions of existing inadequate arrangements.

For the sake of realism, one has to recognize the basic constraints hindering our progress towards such real nuclear disarmament, or at least control. For the superpowers it is quite clear that the arms race is an expression of a balance of terror that is still, and probably will continue to be for a long time to come, their basic strategy vis-a-vis each other and vis-a-vis the rest of the world, however successful they may become in smoothing out the crudeness of that strategy by tactics of "détente" or similar tactics.

It follows that the arms control exercise is, and will continue to be, an exercise tailored to propagate the bipolar hegemony and the balance of terror, and consequently ignore the fundamental differences in needs and targets between the superpowers and the non-nuclear states in particular.

Paradoxically, the nature of these very fundamental differences may afford the limited but significant common ground that could offer a chance for a breakthrough. Because of the dynamic and critical nature of the balance of terror and its ultimate limitations, the repercussions on its very utility by forces outside the superpowers' control pose a real challenge. The scope of such potential repercussions widen with

the horizontal proliferation of nuclear capabilities.

The predicament can be readily identified under the ever imminent risks of mutual annihilation. The two superpowers cannot give the safety of others any real consideration that overrides the requirements of their own balance. The only considerations possible can only be marginal ones. Even these marginal considerations cannot be of a permanent nature since technological advances and political shifts can at any juncture disrupt the whole critical balance exercise.

The marginal and transient nature of the assurances that their very strategy permit to other states cannot fail to act as a global inducement for these states to endeavour to enhance their impact on the bipolar balancing exercise. Again the political demands of the bipolar hegemony, basic to the balancing act, entangle the superpowers in initiating, exploiting, fomenting or actually participating in peripheral conflicts that further accentuate and multiply the risks.

Herein lies the justification for the hope that in exchange for more fundamental and lasting guarantees, safeguarding the balance of terror against the impact of peripheral entanglement may ultimately appear as an attractive proposition. The realization of this hope, however, is a strenuous haul because of its far-reaching implications to the whole fabric of global balances.

Ambiguity, however, can only diminish the chances of ever catching up with this historic opportunity.

The implications are self-evident. The no-first-use-against-non-nuclear clause in the proposed draft is a step towards rectifying the situation, but it

is only a step. It may meet some (but only some) of the requirements of non-nuclears not allied to nuclear powers and not parties to confrontations with such powers, or near-nuclear powers. Short of a global holocaust it should safeguard them against direct nuclear power threats. It can hardly be considered an inducement for adhering to the proposed treaty, however, unless it is complemented by other guarantees:

- a. A reversal of the existing discrimination in applicable safeguards to parties to non-proliferation treaties, as compared to non-parties to such treaties.
- b. Undertakings to enhance their capabilities for peaceful uses of nuclear energy, and a reversal of the existing preferential treatment actually given to non-party states in this connection.
- c. Urgent moves to establish facilities for multinational cycles non-available to non-party states.

The nuclear states, in particular the superpowers, are very unlikely to diminish their political and military involvement in peripheral hot confrontations among smaller states. It is these regional or bilateral confrontations that represent the acid test of the whole strategy of non-proliferation. It is in these regions that the temptations to acquire independent nuclear potentials, and eventually to threaten or actually use these potentials, are very real. It is in these very regions that the nuclear powers are so involved that they may succumb to the temptation to extend direct or indirect assistance to non-party-near-nuclear states and thus help them to acquire the nuclear capabilities to threaten or actually use such weapons against their adversaries. The nuclear power, thus, would pose an indirect threat, though not less lethal, to non-nuclears without renouncing their treaty obligations.

It is evidently crucial that any productive arrangement must in particular guarantee the non-nuclears involved in such regional confrontations concrete guarantees:

- a. Non-assistance whatsoever, direct or indirect, that may enhance in any way the potentialities of non-party adversaries to acquire nuclear capabilities. Such non-assistance clauses would deny them technical or scientific information or co-operation as well as non-supply or exchange of equipment or fuel material or any other aid. These restrictions should apply to third parties giving assistance to states subjected to non-assistance restrictions.
- b. Undertakings to give assistance to victims of threats or acts of use of nuclear weapons and to take the measures to prevent such threats or potential acts. All assistance in this connection had to be prompt and effective and at the request of the victim, in accordance to decisions by the UN, exempted from the veto rights of the superpowers in the Security Council.
- c. All parties would accept their

obligations on a permanent basis; unforeseeable developments would be dealt with by all the parties to the treaty.

Only such serious guarantees have any chance of cancelling the inducements for horizontal proliferation and consequently reducing the chances of the repercussions of peripheral conflicts upgrading or exploding the global balance of terror. Only such global commitment can create the environment with the optimal conditions and the mobilized forces that can curb vertical proliferation and eventually enforce total nuclear disarmament.

It is to be hoped that the obvious lack of interest of nuclear states to accept such obligations will not, again, delude the "realists" into launching a new, futile and deceptive exercise that will only confuse the issues and dissipate the impact of informed opinion.

The outcome of previous "realistic" approaches are too obvious for those who want to see. The mounting risks and needed strenuous efforts are too great to permit a new postponement of the inevitable candid appreciation of the fact of the situation.

Recent Publications

1. "International Arrangements for Nuclear Fuel Reprocessing", edited by Abram Chayes and W. Bennett Lewis, published by Ballinger Publishing Company, Cambridge, Massachusetts, 1977. 251 pages.

This timely subject was discussed at the 26th Pugwash Symposium held at the conference facilities of the Johnson Foundation at Wingspread, Racine, Wisconsin in May 1976. It concerned arms control implications of the widening use of nuclear power reactors, focusing on the technical, political and economic issues in multinational control of the nuclear fuel cycle.

The papers in this volume reflect that orientation of the symposium. After the two opening chapters in Part I, which are designed to provide the general background and setting of the problem, the main portion of the book is devoted to questions relating to nuclear fuel reprocessing. Part II deals with a number of the technical aspects of reprocessing: economic considerations, safeguards, health and safety, physical security, operational problems, and waste management. In each case the method is to consider the particular issue first in the context of national facilities, and then to ask whether significant differences, favourable or unfavourable, arise in the multinational case. Part III explores some of the problems involved in setting up what would be a very complicated international institution to operate a high-technology venture. Some of the relevant experience, both

inside and out of the nuclear field, is examined, and a general analysis of the institutional requirements is attempted. Part IV reverts to the broader political setting that conditions all non-proliferation efforts.

2. "A New Design Towards Complete Nuclear Disarmament", edited by William Epstein and Toshiyuki Toyoda. These proceedings of the 25th Pugwash Symposium, held in Kyoto, September 1975, will be published by Spokesman Press, U.K., in August. 332 pages. Paperback £5, hardback £7.

The Symposium held at Kyoto, Japan, from August 28 to September 1, 1975 was the 25th in a series of Pugwash International Symposia. It was held under the auspices of the Japanese Pugwash Group and the organizing committee was under the co-chairmanship of Professors Hideki Yukawa and Sinitiro Tomonaga. The Symposium dealt with the subject "A New Design Towards Complete Nuclear Disarmament (The Social Function of Scientists and Engineers)". Thirty-eight papers were presented and discussed by thirty-two experts from 16 countries and a unanimous report was agreed upon, which is reproduced as Chapter 12 in Part III of this volume.

The Kyoto Symposium constitutes a break-away from the stalemate on substantive issues which characterized recent Pugwash Conferences. Because of the importance of the subject and the fact that the discussions raised questions about some long-accepted views on various aspects of the nuclear arms race and of

disarmament, and tried to throw new light on them. It was decided that a monograph should be published in order to give wider dissemination to the ideas examined and to the conclusions reached.

The subjects discussed at the Kyoto Symposium take on new topicality and meaning in the light of the revival of interest in nuclear arms reductions and disarmament by the new American Administration. The gist of the proposals made by it was discussed at the Symposium as set out in this volume.

3. "The Role of Self-Reliance in Alternative Strategies for Development",
edited by Ashok Parthasarathi.

These proceedings of the 24th Pugwash Symposium, held in Tanzania in June 1975, will be published in India in August. Apart from the papers read at the Symposium, the titles of which were published in the Pugwash Newsletter Vol. 13, No. 2, October 1975, the book will contain an additional paper by C. H. G. Oldham, background papers, and an expanded report on the discussion by Parthasarathi. The book will be available at the Pugwash Central Office at approximately \$3 for paperback and \$5 for hardback editions. A more complete description of the monograph will be given in the next issue of the Newsletter.

4. "The Fourth Pugwash Quinquennium 1972-1977: A Supplement to the

History of the Pugwash Conferences",
by Prof. J. Rotblat. Published as a special issue of the Pugwash Newsletter, May 1977, and obtainable from the Pugwash Central Office. 72 pages. £1 or \$2, plus postage.

"Scientists in the Quest for Peace", published by the MIT Press in 1972, brought the history of Pugwash to just before the Third Quinquennial Conference which was held in Oxford in September 1972. During the five years that have since passed there has been a multitude of Pugwash activities and considerable changes in the organization of the Movement. This supplement is intended to chronicle these events, and to bring the Pugwash history up-to-date (May 1977), in time for the important decisions to be made about the future of Pugwash at the next Quinquennial Conference in Munich in August 1977.

This supplement covers only the activities and changes that have occurred during the last five years. It is a continuation of "Scientists in the Quest for Peace"; the style is the same, and the chapters and sub-chapters follow, in general, the same order as in the book. However, the material in the tables and the statistical data in the text cover the whole 20 years of Pugwash, so that the reader may have at hand the major facts about the Movement without having to refer back to the book.

Note: A limited number of the original book "Scientists in the Quest for Peace", MIT Press 1972, 399 pages, can be obtained from the Pugwash Central Office at the special price of £1.50 or \$3, plus postage.

OBITUARIES

We regret to announce the death of the following Pugwashites:

PROFESSOR ALBERT D. ALLEN of Canada died on December 25, 1976 at the age of 57. Professor Allen did pioneering research in inorganic chemistry (particularly in making the first metallic compound of molecular nitrogen), and thereafter went on to serve as Dean of the Faculty of Arts and Science at the University of Toronto, and Principal of Scarborough College in the same University. Professor Allen was keenly conscious of the special obligations of scientists. He was a valued supporter of Pugwash in Canada, and was a participant in the 10th and 22nd Conferences in London

and Oxford, respectively.

PROFESSOR THEODOR ROSEBURY of the United States, died in December 1976 at the age of 72. He was emeritus professor of bacteriology of the University of Washington. Professor Rosebury was a distinguished microbiologist and played a prominent part in the 5th Pugwash Conference on Chemical and Biological Weapons, held in Pugwash, 1959. He also attended the 10th Pugwash Conference in London in 1962 and had accepted an invitation to the 27th Conference in Munich in 1977.

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