



Pugwash

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Pugwash Meeting on Kashmir

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To the Pugwash Community

The role of Pugwash

The first three items in this current *Pugwash Newsletter* illustrate as well as anything the important, enduring role of the Pugwash Conferences on issues relating to science and world affairs.

First is the historic meeting that Pugwash arranged on the Kashmir dispute from 11–14 December 2004 in Kathmandu, Nepal. For the first time in decades, indigenous Kashmiri leaders from opposing sides of the Line of Control were able to come together for face-to-face discussions on how to resolve this long-running dispute that in the past has raised the spectre of a possible nuclear war between Pakistan and India. With the very much appreciated cooperation of the current Pakistani and Indian governments, Pugwash Secretary General Paolo Cotta-Ramusino was able to pull together the Kathmandu meeting and advance the overall peace process between India and Pakistan. Much remains to be done, of course, and it will take great political will on the part of New Delhi and Islamabad, as well as the various sectors of Kashmiri society, to reach a new spirit of accommodation in South Asia. But in this instance, at least, Pugwash played precisely the role that its founders envisioned in 1957 when they met in Pugwash, Nova Scotia to demonstrate that, even in periods of greatest tensions between political and ideological rivals, lines of communication must be kept open if the threat of nuclear conflict is to be avoided.

The second item is the report of the Secretary General to the 54th Pugwash Conference held in Seoul, Korea in October 2004. In his review of Pugwash activities over the previous year, Prof. Cotta-Ramusino focused on the Pugwash mission of bringing together parties to a conflict, especially in regions where the threat of nuclear weapons use is the greatest, such as the Korean peninsula and East Asia, the South Asia subcontinent, and the Middle East and Persian Gulf. With the continued support of the John D. and Catherine T. MacArthur Foundation, and with

new support provided by the Carnegie Corporation of New York, the Ploughshares Fund, the Rockefeller Brothers Fund, and others, Pugwash has been able to intensify its work in these critical regions. Pugwash workshops in the recent past in Tehran, Amman, Beijing, Islamabad, Washington and New York have brought together international experts with senior regional figures to seek common solutions to the challenges facing the nuclear non-proliferation regime. Related and equally important issues such as the threat of nuclear terrorism, relations between Islam and the West, and the domestic and international consequences of the ‘war on terror’ have also been at the heart of Pugwash discussions.

Thirdly, the eloquent and moving address given by Dr. Hussain Al-Shahristani at the Seoul conference, as part of the Dorothy Hodgkin Memorial Lecture series, brought into sharp relief the core Pugwash themes of nuclear proliferation and the personal responsibility of scientists for their work. It is unlikely that one could think of a more fitting tribute to Dorothy Hodgkin, Joseph Rotblat and the Pugwash Conferences than the personal testimony of a scientist such as Dr. Al-Shahristani who, at great personal sacrifice, refused to work on a nuclear weapons program that he viewed as dangerous both for his country and the world. For almost five decades, from 1957 through 2004, the Pugwash community of scientists and policy specialists has embodied the credo of personal responsibility for decisions that can affect global security, and we are indebted to Dr. Al-Shahristani for reminding us once again of the importance of the Russell-Einstein credo, “remember your humanity, and forget the rest.”

55th Pugwash Conference on Science and World Affairs

Pugwash takes special pleasure in announcing that the 55th *Pugwash Conference on Science and World Affairs* will take place from 22–27 July 2005 in Hiroshima, Japan. Under the conference theme, *60 Years After Hiroshima and Nagasaki*, up to 200 conference partici-

pants from more than 30 countries will convene in Hiroshima to help commemorate the 60th anniversary of the atomic bombings of Hiroshima and Nagasaki as they discuss strategies for eliminating nuclear weapons and ensuring that these devastating instruments of destruction are never used again. The year 2005 also marks the 50th anniversary of the proclamation of the Russell-Einstein Manifesto, the founding document of the Pugwash Conferences, as well as the 10th anniversary of the awarding of the Nobel Peace Prize to Pugwash and its founder, Sir Joseph Rotblat. Also of significance is that 2005 is being celebrated as the *World Year of Physics*, being the centenary of the publication of Albert Einstein's articles that provided the foundation for the theory of relativity, quantum theory, and the theory of Brownian motion. Given Einstein's scientific legacy in physics, as well as his role in persuading President Franklin Roosevelt to undertake the Manhattan Project and then joining with Bertrand Russell

to call upon the international community to forswear nuclear weapons, the Pugwash Conference in Hiroshima in July 2005 will take place at a truly historical moment.

For those looking further ahead, the 56th *Pugwash Conference on Science and World Affairs* will be held in Egypt, most likely Cairo, in the late summer or fall of 2006.

Acknowledgments

Pugwash is grateful to the following organizations for their continued support of the *Pugwash Newsletter*, as well as other Pugwash publications and the Pugwash website: the Italian National Research Council, the German Research Society, the John D. and Catherine T. MacArthur Foundation, and the Cyrus Eaton Foundation.

Jeffrey Boutwell
Executive Director

Pugwash Meeting on Jammu and Kashmir and the India-Pakistan Dialogue: The Prospects Ahead

11–14 December 2004, Kathmandu, Nepal

Press Release, 14 December 2004

The Pugwash Conferences, recipient of the 1995 Nobel Peace Prize, today concluded an historic meeting involving more than 50 individuals from Jammu and Kashmir, India and Pakistan on ways of ending more than five decades of conflict and establishing a secure and prosperous future for the peoples of this vital region of South Asia.

For the first time in many years, members of political parties, non-governmental organizations, and civil society from both sides of the Line of Control were able to meet each other, and their colleagues from India and Pakistan, in an atmosphere of trust and reconciliation as they discussed ways of overcoming many of the contentious issues that confront them.

Participants of the conference welcomed the resumption of the composite dialogue between India and Pakistan in the hope that a sustained dialogue between the two countries will lead to enhanced confidence and greater cooperation in areas of mutual interest and a resolution of all outstanding issues including Jammu and Kashmir.

For too long, conflict in Jammu and Kashmir has produced widespread suffering and deprivation for the people of the region and served as an enduring source of conflict between India and Pakistan. Participants expressed the hope that Jammu and Kashmir need not forever represent a chasm dividing Pakistan and India, but could potentially be a bridge between these two great countries and transform the political and economic fortunes of South Asia.

Over four days, participants discussed ways of reducing violence and building trust, improving the transportation infrastructure and economy of the region, instituting cooperative programs, and generally enhancing the welfare and fulfilling the aspirations of the people of Jammu and Kashmir.

Much remains to be done if long-standing tensions are to be overcome. But participants at the Pugwash meeting were optimistic that an important first step had been

taken. Future meetings and ways of continuing and intensifying the dialogue were discussed in the knowledge that the people of Jammu and Kashmir themselves must help lead the way to a more peaceful and prosperous future.

The Pugwash Conferences would like to express its deep appreciation to the government of Nepal for its assistance in hosting the meeting in Kathmandu, and to the governments of India and Pakistan for their encouragement and support.

Prof. Paolo Cotta-Ramusino
Secretary General
Rome office

Dr. Jeffrey Boutwell
Executive Director
Washington, DC office

ADDENDUM

Statement of Consensus by Persons from both sides of the Line of Control, Jammu and Kashmir

During the Pugwash meeting in Kathmandu, Nepal, there was a meeting just of persons from both sides of the Line of Control, on Monday, December 13. The following is a statement from that session.

A general consensus developed as follows:

- (1) The dignity and welfare of the inhabitants of Jammu and Kashmir are of paramount importance;
- (2) The process of peace should be developed around the following features:
 - solutions to be sought in a peaceful manner
 - solutions to be perceived as honorable
 - solutions to be feasible
- (3) Confidence-building measures to be taken include ending violence, steps to improve the economy and social institutions, and steps to create the conditions for the rule of law.
- (4) The dialogue process started in Kathmandu should be continued and institutionalized.

Media Coverage

From Kashmir to Kathmandu

14 December 2004

By *Charles Haviland*

BBC correspondent in Kathmandu

In a corner of the lobby of Kathmandu's plush hotel, a remarkable cluster of people sat together over whisky, tea and coffee.

There was a retired army general, the epitome of Pakistan's military and political establishment.

There were Kashmiri politicians from both sides of the Line of Control which divides the territory; an academic and a teacher; and a leader of Kashmiri Hindus, the Pandits, displaced from their homes by the violence in Indian-controlled Kashmir.

Remarkable sentiments were being expressed on this emotional occasion: one of the first times that different parties in the dispute have met in South Asia.

"We're similar in language and culture, in fact we're birds of the same feather," said the Kashmiri Pandit leader, Jatender Bakshi.

Ethnic division

He was seated with Professor MARK Khaleeque, a party leader and retired government member in Pakistani-controlled Kashmir, who nodded in agreement about the value of meeting "our brethren from that side".

The two had just met for the first time. Prof Khaleeque said any religious or ethnic division of Kashmir should be ended, while Mr Bakshi outlined his vision for the near future.

That is the return of Pandits to their homes in the Kashmir Valley "to live physically, emotionally and intermingle with the majority [Muslim] community there as we lived before".

"We're similar in language and culture, in fact we're birds of the same feather."

—Kashmiri Pandit leader, Jatender Bakshi

He had been invited to hold a meeting on this subject at the Srinagar office of the All-Party Hurriyat Conference—the main umbrella separatist group in Indian-controlled Kashmir.

Nearby, Hurriyat leaders—those representing its mod-

erate wing, opposed to the armed struggle—patiently gave media interviews, although keen to get out sightseeing.

Hurriyat chairman Mirwais Omar Farooq, young and slick, said the great value of these informal talks was that they were focused on Kashmiris rather than just on India and Pakistan.

"Half my family are in Azad [Pakistani] Kashmir, but I've never visited," he said. "We need open borders—let's forget rhetoric, forget passports."

A hug

His older Hurriyat colleague, Prof Abdul Ghani Bhat, was effusive—the meeting had enabled a far greater depth of interaction than anything in the past, he said.

There was even a hug between Pakistani and Indian retired lieutenant-generals, Talat Masood and BS Malik.

Holding such talks in Nepal—like Kashmir a Himalayan beauty spot—may have seemed an unlikely choice.

"We chose Kathmandu because it's neither India nor Pakistan but very nearby," said the amiable Italian professor, Paolo Cotta-Ramusino, the prime mover behind this event.

As head of Pugwash Conferences, an international peace think-tank, he visited both halves of Kashmir a year ago and decided to do something concrete.

He said there was a heartening degree of mutual respect, adding that the Indian and Pakistani governments had offered "amazing" support.

He did not, however, hide his disappointment that Indian-administered Kashmir's current and former governing parties had both failed to send delegates.

"We tried by every means to get them—you'll have to ask them why they didn't come," he said.

Humanitarian problem

By contrast, there was a contribution of sorts from the hardline faction of the Hurriyat separatists.

Syed Ali Shah Geelani had sent a paper for debate, describing Kashmir as a humanitarian problem rather than a territorial dispute.

Hurriyat chairman Mirwais Farooq said that while both Delhi and Islamabad had tried to "sabotage" such meetings in the past, things were now different. He had been allowed to travel using just his driving licence for identity purposes.

Media Coverage

But whatever new cross-border initiatives are discussed here, and however deep the goodwill, will the governments will retreat to their normal positions when it comes to the crunch?

That could happen, admitted Hameeda Nayeem, a professor from Srinagar. But, she felt, when ordinary people and think tanks get involved, “it is very difficult for governments to backtrack”.

On India’s regular complaint, alleged cross-border incursions by militants, General Masood said he believed Pakistani policy towards guerrillas had significantly hardened, especially since assassination attempts on President Musharraf last year.

Delegates here talked of a future of open borders, of Kashmir being an engine of commerce in the region—a unifier rather than a divider.

That may all be a long way off. But as of now, the Pugwash-sponsored talks here have produced a lot of smiling faces.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/south_asia/4094421.stm
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Editorial

15 December 2004

Daily Times of Pakistan

Milestone Kathmandu conference

The Pugwash Conference on Science and World Affairs has recently concluded a meeting in Kathmandu that brought together experts from India, Pakistan, the United States and some other countries. Even more significantly it had some leaders and analysts from the two sides of Kashmir — Azad Kashmir and Indian-Held Kashmir. This was a milestone conference for many reasons.

The stimulus for Pugwash came from a Manifesto issued in 1955 by eminent scientist Albert Einstein and philosopher Bertrand Russell. The manifesto “called upon scientists of all political persuasions to assemble to discuss the threat posed to civilisation by the advent of thermonuclear weapons”. The forum got its name from Pugwash, a small village in Nova Scotia in Canada, birthplace of the American philanthropist Cyrus Eaton, who hosted the first meeting. Since that day, Pugwash has expanded to



Amb. Parthasarathi, Prof. Cotta-Ramusino, Mohd Abdullah Tari, and Imram Jeelani

cover various areas of security and conflict resolution. It brings together, “from around the world, influential scholars and public figures concerned with reducing the danger of armed conflict and seeking cooperative solutions for global problems”.

During the Cold War, Pugwash provided a forum to antagonists on both sides of the East-West divide to talk to each other candidly in private. This is why Pugwash meetings work on the principle of non-reporting. While the Einstein-Russell Manifesto sets the ideal goal, much of Pugwash’s success — for instance, in relation to preventing the spread of nuclear weapons — was owed to its policy-oriented approach. In 1995, it got the Nobel Prize for Peace in recognition of the work it had done towards non-proliferation and arms control.

For the last four years, Pugwash has also been involved in reducing the risk of war between India and Pakistan — following the nuclearisation of the two countries — and has recently also joined efforts to try and work out a solution to the Kashmir problem. The Kathmandu conference was a follow-up on at least two earlier conferences in Geneva and New Delhi. However, this was the first time it managed to bring together leaders and opinion makers from both sides of the Line of Control.

What is good is the fact that the meeting was facilitated by the governments of India and Pakistan, though there were anxious moments when bureaucrats on both sides tried to throw a spanner in the works. Pugwash was

Media Coverage



Prof. Cotta-Ramusino, Hon. M. Rasgotra, Gen. Masood, and Raja Mohan.

also a little concerned about some press coverage in the run-up to the conference, some of which hinted at its (Pugwash) being part of the American efforts to work out a solution. That is wrong, as Pugwash was at pains to point out. It simply provides a forum for frank and candid exchange of ideas which, most would agree, is important as part of ongoing efforts to improve the atmospherics between India and Pakistan and keep the normalisation process on the rails. Additionally, this particular meeting proved significant because of the interface between Kashmiri leadership from AJK and IHK. It has been a long-standing demand of Pakistan as well as the All Parties Hurriyat Conference that Kashmiris on both sides should be allowed to meet and work out a joint strategy. Therefore, it makes eminent sense for Pakistan to support all initiatives, whether official or unofficial, which seek to do just that.

Given that the UN resolutions on Kashmir have become mostly moribund in the backdrop of India's refusal to accept them, it is important to come up with creative solutions. Also, no solution of Kashmir is likely to stick unless it is generally acceptable to the majority of Kashmiris. This is also the official position of Pakistan and General Pervez Musharraf has reiterated it consistently. A good upshot of the recent meeting has been the committees set up to intensify contacts between leaders on both sides and provide them the space to flesh out ideas dis-

cussed at the Kathmandu meeting. That is why this development should be welcomed by India and Pakistan. Both can use the Kashmiris to climb down from their maximalist positions without losing face. *

Kidnappings are a blot on Sindh CM

Upper Sindh is once again in the clutches of dacoits and gangs of kidnappers. On December 3, a gang of criminals kidnapped three additional sessions judges, one of whom managed to escape but not before he was severely beaten up. The other two, Abdul Wahab and Farooq Ahmed Channa, are still missing. All three were travelling from Ratodero to Shikarpur when they were kidnapped.

But this is not the only incident. Ten other people including three Hindu boys have been kidnapped in Shikarpur alone in less than a month. There have been other reports of similar incidents from the districts of Jacobabad, Sukkur, Ghotki and Larkana. While the Citizen-Police Liaison Committee in Karachi has extensive records on kidnapping-for-ransom cases in urban Sindh, rural Sindh is largely a matter of conjecture. Rough estimates put the number of recent incidents across Sindh at nearly 100 cases. There is also a discrepancy between records held by the police and estimates given by the CPLC and other NGOs working with citizens. Invariably, in rural Sindh, the kidnapped person has had to buy his freedom.

An interesting observation regarding these cases is that the dacoits either target officials or people from less powerful clans and tribes. Most known Baloch tribes have generally not faced this problem. Another pattern relates to the rise in kidnapping cases whenever there is a political government in Sindh. Many observers have noted the nexus between dacoits and politicians in the province. That is why it is important for the Sindh government to capture the culprits and take to task the politicians involved in it in any way. The Sindh chief minister has generally showed off as a "tough" administrator. But he might be a better chief minister if he could take time off from private tableegh to look after the welfare of his public constituents. *

From http://www.dailytimes.com.pk/default.asp?page=story_17-12-2004_pg3_1

Media Coverage

Not chasm, J-K a bridge between India and Pakistan

15 December 2004

C. Raja Mohan, *Indian Express*

Hope reigns at first-ever interaction between people from J-K and across LoC

Dispelling political concerns all around and overcoming many procedural difficulties, a rare conversation among Indians, Pakistanis and Kashmiris ended here today with the hope that the state of Jammu and Kashmir could eventually become a bridge between New Delhi and Islamabad.

As the Pugwash Conference on Science and World Affairs, winner of the 1995 Nobel Peace Prize, prepared to host a dialogue on Jammu and Kashmir, there was considerable anxiety in New Delhi about its unusual format and potentially unwelcome consequences.

Despite those apprehensions, New Delhi decided to allow leaders of the All Party Hurriyat Conference to travel to Kathmandu in their individual capacity. Many of them, including Mir waiz Omar Farooq, Abdul Ghani Bhatt and Sajjad Lone joined the unprecedented dialogue.

Although the Indian government let Syed Ali Geelani travel and participate in the conference, the hardline leader of the Jamat-e-Islami in Kashmir was a no-show.

New Delhi's calculated risk appears to have been worthwhile as the engagement between Indians, Pakistanis and Kashmiris took place amid rhetorical restraint, political civility and mutual respect.

No one at the conference ceded ground on the controversial question of Jammu and Kashmir. Yet, no one sought to impose a set of positions on the others. The emphasis was on the widely shared interest in promoting peace and development in Jammu and Kashmir.

The conference over the last four days saw two sets of conversations. One among Indians, Pakistanis and Kashmiri leaders; and another, taking place for the first time, just between the conference participants from Jammu and Kashmir across the dividing line.

Summing up the essence of the dialogue in a press release, Paolo Cotta-Ramusino, Secretary General of the Pugwash, underlined the vision that "Jammu and Kashmir need not forever represent a chasm dividing India and Pakistan, but could potentially be a bridge between these two great countries".

A separate statement from the leaders of J-K reflected the consensus among them that the solutions to the problem in the state must be "sought in a peaceful manner", "perceived as honourable", and must be "feasible". No one from New Delhi, Islamabad, Srinagar or Muzaffarabad would want to quibble with those political criteria for a settlement of the Jammu and Kashmir question.

A running theme in both the conversations was the urgency of initiating measures to reduce the levels of violence, enhance the rule of law, and generate greater contact and economic exchanges between the people of the divided state.

Trading charges and apportioning the blame for the extended crisis in Jammu and Kashmir are common in any dialogue between Indians and Pakistanis. The focus at Kathmandu, instead, was on finding common ground despite major differences between Indians, Pakistanis and Kashmiris and among the various regions of the original state of Jammu and Kashmir.

The conference did not come up with any solutions to the Jammu and Kashmir problem. It was not expected to. If sustained, however, the initiative might help generate a wee bit of political space for New Delhi and Islamabad to explore answers to the problem.

http://www.indianexpress.com/full_story.php?content_id=60



Jammu and Kashmir and the India-Pakistan dialogue: The Prospects Ahead

Kathmandu, Nepal, 11-14 December 2004

Report

By Claire Galez

[Throughout the document, unless otherwise specified, "Jammu and Kashmir" is taken to mean all the territory comprising both Indian and Pakistani-administered Jammu and Kashmir]

Following a terrorist attack on the Indian Parliament in December 2001, diplomatic relations between India and Pakistan were suspended and both countries maintained a military standoff for over a year. After more than five decades of acrimonious relations between the two neighbours, where the lives of millions of people were imperilled by three wars and several near-war situations, India and Pakistan in April 2003 committed themselves to fresh rounds of talks with the aim of constructing a bilateral composite dialogue where the conflict over Kashmir would be addressed.

The Pugwash workshop on 'Jammu & Kashmir and the India-Pakistan Dialogue: The Prospects Ahead' was the most recent in a series of Pugwash workshops on South Asia issues, held in Lahore, Geneva and New Delhi in 2002-2003, focusing on the need for and ways of strengthening a normaliza-

tion process between India and Pakistan. Although Jammu and Kashmir is certainly one of the most contentious issues between the two countries, it had not been discussed in detail during previous sessions, except for issues of cross-border infiltration and the management of the Line of Control as seen from the perspective of India's and Pakistan's national security concerns. It was felt that the participation of key Kashmiri actors from both sides of the divide was paramount in evolving mechanisms of sustainable and rewarding conflict resolution.

For the first time in decades, members of political parties, non-governmental organizations, and civil society from both sides of the Line of Control were able to meet with each other, and with their colleagues from Pakistan and India, for constructive dialogue. More than 50 participants from India, Pakistan, Azad Jammu and Kashmir (Pakistan Administered Kashmir-PAK) and from all the regions of the Indian State of Jammu and Kashmir (Indian Administered Kashmir-IAK) attended. [No representatives from Kashmir's Gilgit and Skardu regions (the Northern Areas-NA) attended].

The Pugwash Conferences are very grateful to the governments of India and Pakistan for helping to

facilitate the meeting, to the government of Nepal for agreeing to host the meeting on its territory, and to the Carnegie Corporation of New York for its support of the Pugwash South Asia program which made the meeting possible. The Pugwash Secretary General, Prof. Paolo Cotta-Ramusino, and all the members of the Pugwash community would especially like to pay tribute to Mr. J.N. Dixit, the national security advisor to the government of India, who did so much to help make the meeting a reality, and who passed away on 3 January 2005, shortly after the meeting.

Following a general opening plenary session, the participants broke into three working group sessions on the following topics:

- Intra-Kashmiri Dialogue
- CBMs and Immediate Measures
- Steps towards a Peaceful Resolution of the Conflict

The workshop then concluded by re-convening in a plenary. What follows is a general summary of the main points covered in the meeting, with the report being the responsibility of the rapporteur, and not meant to convey or imply approval by any particular participant, or the group as a whole.

Background

The stated positions of all parties to the Kashmir dispute are well known. After a brief introduction of the standard Pugwash methodology for meetings—where individuals represent only themselves and where there should be no attribution of remarks made during the meeting—the organizers urged participants at this meeting, intended at **creating a framework for dialogue between people from India, Pakistan and from both sides of the Kashmir divide**, to go beyond acrimony and stated positions and creatively reflect on their own capacity in contributing to peace and reconciliation in the region.

First steps towards conflict resolution

Although no consensus was reached in identifying the starting point for evolving conflict resolution mechanisms, all participants acknowledged that the human dimension of the conflict should take priority over geo-strategic considerations. Key approaches were developed by some participants, stressing the need for ‘**change**’ mainly in developing a people-centred approach and making the human dimension of the Kashmir problem part and parcel of the political dialogue at all levels.

Some participants also felt that ‘**time**’ is a fundamental factor in establishing a durable peace between India and Pakistan, but most importantly for the whole of Kashmir in its regional environment. What is needed is a prolonged period of non-violence, coupled with genuine social and economic reforms, that could deflate a great number of problems and help establish a durable and sustainable peace. One cannot expect a society to shift instantly from pro-

found trauma to peace. Genuine space should be carved out for the people of Kashmir to recover from 56 years of estrangement and alienation, and from over a decade and a half of intense violence.

At the outset, there seemed to be much agreement that the **UN Resolutions** proposing a plebiscite to express the political choices of Kashmiris, of acceding to either India or Pakistan, was now obsolete.

It was also generally agreed that the end result of negotiations on the future political status of Kashmir cannot be realistically ascertained at this stage. Nevertheless, initial negotiations can and should focus on the Kashmiri people’s prime interest in

peace, reconciliation, and economic and social development. While there remain dissenting views on who exactly are the representatives of the Kashmiri people (and in fact no party or individual can claim an absolute representative character), the overriding consideration is that the **Kashmiri people need to be represented** meaningfully at different levels of negotiation.

The need for developing a **multi-level approach** was generally agreed to by the participants, stressing the need for an intra-Kashmiri dialogue and process of reconciliation within both sides of Kashmir and across the Line of Control; and between Kashmiris and both capitals. To that end,



while participants appreciated the efforts of both India and Pakistan to sustain a composite dialogue, it was nonetheless emphasised that the bilateral process should arrive at **Kashmiri-specific CBMs**.

This **multi-track dialogue** should be a means rather than an end; it should result in formulating CBMs that should in turn be implemented by all parties concerned within a particular timeframe. Most importantly, CBMs related to Kashmir—whether emanating from the bilateral or the multi-track dialogue process—must provide people of the State with palpable dividends. It was also underlined that while the Indian and Pakistani governments have set up a framework for a political route that could lead to a more secure environment and perhaps to peace, a number of measures can safely be taken without embarrassing either government or making either of them dramatically change their historical position. Meanwhile, measures such as opening roads and enhancing trade relations would substantially improve people’s lives.

The heterogeneous character of J&K must of course be taken into consideration. Over 56 years of history, there have been no opportunities for developing social, economic or political cohesion within Jammu and Kashmir, either across the LoC or within the respective units of Indian Administered Kashmir and Pakistan Administered Kashmir. Today, each region of J&K tends to be specific rather than inclusive about its own vision and demands. In the context of a multi-track dialogue, it will be important to keep ground realities in focus while simultaneously recognizing at the outset the common link of geographical conti-

guity as a basis for more fluid relations among them.

One should also recognize that the question of **quality leadership** is essential in evolving people-centred policies and giving the Kashmiris their due place in a negotiating process. All parties, mainstream or separatist, must emphasize their commitment to genuinely benefiting the people and staying away from political manoeuvring by India or by Pakistan. A high sense of responsibility and morality must prevail in claiming

.....
No party concerned can remain insensitive to the fact that reforming a society is quite different than re-constructing a war torn society. It is therefore expected that collective interests will ultimately prevail upon personal ambitions.
.....

a representative role on behalf of the Kashmiri people. Moreover, some participants thought that a multi-track dialogue should be inclusive of all parties concerned, to include representatives of the Northern Areas, main stream parties contesting elections in Indian Administered Kashmir, and opposition parties in Pakistan Administered Kashmir.

The Pugwash gathering was reminded that over 15 years of violence have profoundly affected people’s psyche, especially in Indian Administered Kashmir, where physical violence has stamped every soul. Kashmiri society ground realities are very different today than fifty or

twenty years ago. Violence has crippled all institutions and affected people’s confidence, both with presumed friends and imagined foes. No party concerned can therefore remain insensitive to the fact that reforming a society is quite different than reconstructing a war torn society. It is therefore expected that collective interests will ultimately prevail upon personal ambitions. Secondly the leadership in India, in Pakistan and in each unit of J&K must develop a truly compassionate mind-set that is realistic in vision and pragmatic in deeds while being committed to restoring the right to life, and the right to live, of the Kashmiri people.

Beyond wide acknowledgement that there can be **no military solution** for Kashmir, it was stressed that a prime requirement for sustainable dialogue and resolution of the conflict was the **end of violence**. The yearning for non-violent interventions on Kashmir territory was strongly emphasized throughout the meeting by most participants, who agreed that all forms of violence should be stopped unconditionally. The gun must be silenced from all sides and all forms of violence—including mental persecution and human rights abuses and violence perpetrated by armed groups—must be halted immediately in all parts of Kashmir. Political will on all sides is essential to this end, especially as the military option seems to still exist in the strategic thinking of some parties.

Meeting of Kashmiri participants:

As noted in the press release circulated after the meeting (see page 3 of the *Newsletter*), Kashmiri participants gathered for a separate session during the Kathmandu conference and issued the following statement:

A general consensus developed as follows:

- (1) The dignity and welfare of the inhabitants of Jammu and Kashmir are of paramount Importance;
- (2) The process of peace should be developed around the following features:
 - Solutions to be sought in a peaceful manner
 - Solutions to be perceived as honourable
 - Solutions to be feasible
- (3) Confidence-building measures to be taken include ending violence, steps to
- (4) Improve the economy and social institutions, and steps to create the conditions for the rule of law.

The dialogue process started in Kathmandu should be continued and institutionalized.

Recommendations of the Working Groups

The three working groups that met during the Kathmandu conference also came up with general recommendations, as noted below. These recommendations represent general principles discussed by one or more of the working groups, and do not necessarily represent the view of each and every conference participant.

Ending violence

- All forms of violence should end, irrespective of their form or origin.
- Oppression and humiliation of Kashmiri people should be stopped.
- Civil society throughout the state should de-legitimize violence through massive demonstrations.
- Whereas the ceasefire between Pakistan and India on the LoC is already paying dividends, the cease-

fire should be extended within J&K.

- Proselytizing should be banned; training camps and recruitment networks should be dismantled. All parties and individuals should refrain from statements and actions that incite or promote hatred and violence.
- No one should assume that all individuals or parties yearn for an end to the conflict. They should be identified and the dialogue process should be extended to them as well.

A process of dialogue and reconciliation

Whereas multiculturalism and tolerance are historic features of Kashmiri society, inclusiveness, democratic and secular values should be the bottom line of resolution of the conflict within J&K and between all parties concerned. There is a need to create the right set of conditions and an atmosphere conducive to re-building trust and giving people confidence by:

- Allowing freedom of political expression in all parts of the State.
- Releasing political prisoners and prisoners interned without trial for long periods.
- Allowing and facilitating interaction between all regions of the state, including with the Pandit and other displaced communities.
- Easing restrictions on travel documents to ensure maximum possible people-to-people contact.
- Facilitating family reunion across the Line of Control.
- Building extensive academic, social and cultural contacts between institutions across the Line of Control.

Above all, Kashmiris need to contemplate on how to use the political space they would gain by India and Pakistan relieving pressure on them.

Social and economic measures

For there to be a durable peace, India and Pakistan must take adequate measures and encourage the development of a vibrant economy in all the different regions of J&K. Good governance and accountability are key issues that need to be examined in all parts of the State, therefore models of greater political and economic autonomy applied to all parts of the State should be put forward.

Notwithstanding the violence that has become associated with Indian Administered Kashmir (IAK), the problem as much as the solution is not confined to the IAK. Important steps have to be taken as well in Pakistan Administered Kashmir and the Northern Areas in order to greatly improve the governance model in these areas of Kashmir and to ensure that people across the state benefit from social and economic reforms.

- In terms of specific measures to be implemented across the Line of Control and within both Indian and Pakistan-administered Kashmir:
- Bus services should be activated linking different parts of the state.
 - Multiple land routes should be opened or constructed within J&K and across the LoC and infrastructure should be developed to link all parts of J&K to the rest of the region.
 - Border markets and meeting points could be set up at possible crossing-points along the LoC, for example at Beelam Valley and at Uri-Chakhoti.
 - Trade in goods and services should be developed across the LoC and at a regional level.
 - Kashmir's water resources should be the subject of closer studies and in depth discussions, as the State holds a great potential to benefit itself and the whole region.

- It would be desirable to identify and initiate joint developmental and environment projects in areas of mutual interest across the LoC

Media

The national media in India and Pakistan as well as local media in J&K and international media have the potential to play a major role in de-escalating tensions, de-legitimizing violence and strengthening peace constituencies in India, in Pakistan and in J&K. Honest and objective reporting, and the discarding of stereotypes and inflammatory rhetoric, could go a long way in rebuilding social bonds in the region.

Strengthening dialogue, CBMs, and negotiations

- (1) A good deal more social, economic, cultural and political interaction between peoples in different parts of the State would be beneficial in highlighting different sets of issues and viewpoints that are of concern to the inhabitants of J&K, and could lead to the building of new relationships based on common denominator interest in local and regional issues.
- (2) CBMs should be seen as creating trust from the ground up, and should not be made hostage to progress in other areas of the bilateral composite dialogue between India and Pakistan. At their most effective, CBMs create inter-dependence between a wide range of issues, allowing progress to be made in a number of different spheres. Specific CBMs relating to the Pandit community should also be explored.
- (3) There should be transparency in the negotiation and dialogue

processes between India and Pakistan on the question of J&K. While it goes without saying that the Kashmiri people must be an integral part of the negotiation and dialogue process, it is also true that State leaderships should walk an extra mile to understand and take into account the national and security concerns of India and Pakistan. Finally, all parties concerned should demonstrate their political will and intellectual ability in showing flexibility. Moving away from maximalist positions, all parties concerned must envisage various formulae applicable to J&K which would not necessarily disregard vital interests.

Security and military issues

Participants welcomed the reduction of security forces in IAK and hoped that a continuation of the process of normalization will lead to further reduction of forces. It was also stressed that basic political freedoms are necessary in Pakistan Administered Kashmir so that no military overt or covert operations can gratuitously hijack the dialogue and peace process by making use of these areas.

The cease-fire should be extended and maintained within the State, and should be accompanied by the demining of border areas in order to facilitate people-to-people initiatives and the overall strengthening of CBMs.

Finally, the role of various intelligence agencies operating in J&K was generally perceived as distorting people's wishes, creating fear psychosis and working against people's interests. Such conduct can only undermine the long-term viability of a solution to the J&K issue.

Participants adjourned at the end of the three day-meeting with strong agreement that such dialogue involving all sectors of society from J&K with counterparts from Pakistan and India should continue, and with the Pugwash Conferences promising to seek the resources necessary to convene a follow-up meeting, hopefully in the spring of 2005.

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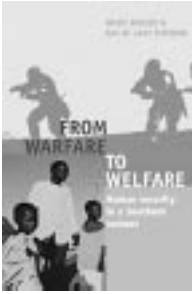
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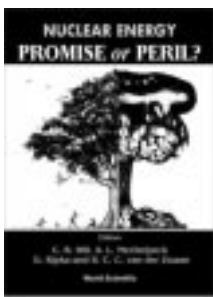
NUCLEAR ENERGY

Promise or Peril?

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A L Mechelynck (*Huldenberg, Belgium*) & **G Ripka** (*Centre d'Etudes de Saclay, France*)



Nuclear energy will inevitably become an important issue worldwide in the 21st century. It pollutes the environment, with consequences that are highly controversial; and it generates plutonium — the essential component of nuclear weapons. At the same time, it is a realistic alternative to at least some of the expected huge increase in global demand for fossil-fuel burning, which itself is a major source of environmental pollution, and not least of “greenhouse” gases.

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Bridging a Divided World Through International Cooperation and Disarmament

4–9 October 2004, Seoul, South Korea

Report of the Secretary General

Prof. Paolo Cotta-Ramusino

5 October 2004

Pugwash, as we all know, has 47 years of history of promoting dialogue, cooperation and peace. In most of our history we dealt with the world divided by the iron curtain and with the nuclear confrontation between East and West. Now the world has changed in many significant ways and the Cold War is over. Still, many of our previous goals are relevant now.

We have mainly been concerned with the risks associated with the development, deployment, and overall the use, of deadly indiscriminate weapons—primarily nuclear weapons, but also chemical and biological weapons, all of these being loosely known as WMD, or Weapons of Mass Destruction. The destructive role of nuclear weapons, and the global risk of annihilation for mankind, prompted Russell and Einstein almost 50 years ago to write their famous Manifesto, which is still the basis of our work.

Dealing with the problems associated with nuclear weapons and WMDs is a complicated task, since it means first of all having a clear understanding of the consequences that can derive from the use (and the possession) of such indiscriminate weapons, and building a consensus over this understanding.

It also means appreciating and supporting the role of specific international institutions that can prevent the spread and trafficking of such weapons and the dangerous materials necessary to build them and, ultimately and most importantly, that can help direct the international community towards the total elimination of such weapons.

It means understanding the motivations that can push some specific countries to acquire or to refuse to dismantle WMDs, and dealing with the relevant specific threats and threat perceptions. Here the task is to propose security frameworks wherein the illusory safety deriving from the possession of WMDs is replaced by better and more stable security arrangements.

It means remembering that the world of WMDs, and nuclear weapons in particular, is an unequal world of haves and have-nots, and that the legitimate aspiration to equality, mutual respect and fairness should not imply that equality will be reached when all States who feel the need to do so are allowed to acquire nuclear weapons or other WMDs.

It must also be taken into account that the technology underlying most WMDs is not a particularly sophisticated one (most of it being decades-old), and that this technology is also used in many civilian applications. One of the key issues of the NPT, and also of the CWC, is that countries—by abiding to the non-proliferation regime or to the prohibitions imposed on specific WMDs—would obtain the right to receive specific technologies and materials (for civilian use), albeit under international supervision.

In more recent times, the collective role of the international community has been played down, and the idea has gained momentum that some countries should be entitled both to possess sizeable amounts of nuclear weapons indefinitely, as well as to decide which are the good countries (that can do the same) and which are the bad countries (that should be pressured, militarily and/or economically, to give up their WMD capabilities). Countries have been divided into good and evil, reliable and unreliable. The resulting Manichean approach, applied to WMD, has:

- undermined the universal and moral appeal for the elimination of WMD;
- stimulated the desire in many countries to acquire WMD (before being subjected to blackmail);
- increased the feeling of injustice and discrimination in significant parts of the world.

This has been called counter-proliferation. To make things worse, unilateral pressures to curb the spread of WMD have often been ill-directed and inconclusive.



Secretary General Paolo Cotta-Ramusino, flanked by Nobel Peace Laureates Kim Dae-Jung and Joseph Rotblat

The tragic case of the war on Iraq falls into this category. The attack on Iraq was motivated primarily by the fact that Iraq “surely” possessed WMD that were not detected or detectable by the UN inspector teams. In fact, this has been the first war in history motivated by the will to eliminate some WMD.

But we all know that no WMD have been found in one-and-a-half years of US occupation. What is absolutely remarkable is not only the fact that a big mistake was made, but that, in comparative terms, an exceedingly small political price for this mistake has been paid in the US and in the other Western countries that supported the attack.

Other motivations for the attack on Iraq involved the elimination of Saddam Hussein’s regime, and the establishment of a democratic government in Iraq that would represent a model for the entire Middle East and the fight against terrorism. While it is true that Saddam has been eliminated (and his elimination will certainly not be regretted), a democratic government in Iraq is not yet on the horizon, and terrorism has gained solid ground in Iraq after the war. In addition, the living condition of Iraqis is still critical, to say the least.

We will discuss these points in this conference. Let me mention that the war on Iraq has lowered the credibility of the goal of eliminating WMD, a goal that has been transformed, in Iraq, into nothing more than a false excuse to allow a unilateral military action conducted largely against the will of international public opinion and against the UN.

But many are the challenges to the non-proliferation regime in the near future. Let us mention them briefly:

1) First, the official nuclear powers are doing very little to proceed towards an effective nuclear disarmament, as dictated by Art.6 of the NPT. The Moscow Treaty foresees some 4000 strategic nuclear weapons by the year 2012, and it does not require the dismantlement of withdrawn nuclear weapons. Moreover, new types of nuclear weapons are possibly planned and a sizeable amount of strategic nuclear weapons are still kept in a high alert status. No effort is being made to let the CTBT enter into force, and occasionally in fact the possibility of the resumption of tests is mentioned and discussed. Of the well-known 13 steps approved by the 2000 NPT Review Conference, very little if anything survives, and even mentioning the 13 steps can create negative reactions among the nuclear powers. The so-called war on terrorism has created a political climate (in the US and also in Russia) where it is relatively unpopular to press for any form of disarmament (nuclear, conventional, etc.), even though there is apparently no role for the possible use of nuclear weapons in any conceivable counter-terrorist action. The reluctance of the official nuclear powers to abide by the NPT obligation (Art.6) does not consider the fact that the discriminatory nature of the NPT is bound to last only for a definite amount of time.

Challenges to the non-proliferation regime arise moreover in specific regions of the world:

2) The critical situation in the Middle East could trigger (in the area) a wide-ranging renunciation of the NPT. The position of Israel, the only (unofficial) nuclear country in the area, and its refusal to discuss its arsenal and its possible elimination, could in the long range stimulate serious adverse reactions. In the Middle East we have also a significant number of countries that are not members of the CWC or the BWC. The situation would become even more complicated if some specific military actions were to be initiated against countries, such as Iran, where some controversial nuclear activity is being carried out. On the positive side, there have been long-standing proposals to establish a Nuclear- or WMD-free Zone in the Middle East. This of course should include Israel as well as all Arab and non-Arab states in the area. Building such a WMD-free zone is not an easy task, not only because of the large presence of nuclear weapons and WMD in the area, but also because of the connection between WMD issues, the staggering Israeli-Palestinian peace process, and the atmosphere of mistrust and hostility between Israel and other States.

2) The situation of North East Asia is also a source of concern. The DPRK considers itself outside the NPT. The goal of a nuclear-free Korean Peninsula (and North East Asia) is still outstanding, and the immediate prospects are not bright. Even here there is an interplay between nuclear weapons and an atmosphere of mistrust and hostility. Progress could be made if talks were to begin in the direction of combining the creation of a nuclear-free Korean peninsula, with the prospect of a peace treaty between the US and the DPRK, and the normalization of relations between the two countries and among the other countries of the region and regional powers; but, as things stand now, this normalization is not likely to materialize in the near future. Were the DPRK to become an open nuclear weapon state, it could have a significant consequence on the development of other nuclear options in the region and on the NPT as a whole.

3) What is happening in South Asia could also have a profound impact on the non-proliferation regime—neither of the regional nuclear powers (India and Pakistan) being members of the NPT. We have seen in South Asia that even non-members of the NPT have a responsibility regarding the spread of nuclear materials, technology for enrichment & reprocessing, and more generally of nuclear weapons design and technology. Serious mistakes can be and have been made. More significantly, the confrontation between India and Pakistan over longstanding issues such as Kashmir has triggered in the past a military confrontation wherein some million troops from both countries confronted each other along the recognized border and the line of control. If the confrontation between India and Pakistan had involved the use of nuclear weapons, this would have had dramatic consequences not only on the lives of many Indians and Pakistanis, but also in terms of nuclear proliferation. The controversy between India and Pakistan is the main controversy existing today between two nuclear-armed States. While the situation has significantly improved recently, the danger is still present.

4) There have been proposals to enforce non-proliferation in a more efficient and aggressive way. The Proliferation Security Initiative of the Bush administration falls into this category. So does the proposal to limit the right to produce nuclear fuel to specific countries. Such proposals and initiatives have some specific merits and advantages, but also involve the risk of being perceived as additional discriminations imposed on specific developing countries, thus enhancing the already heavily discriminatory nature of the

NPT. Additional discriminations may have the effect of tightening an already very tight rope, and backfiring as far as the stability of the Non-Proliferation regime is concerned. For this reason every effort should be made by international institutions to have these provisions promoted in a careful non-discriminatory way.

In 2003/2004, Pugwash tried to tackle some of these issues by promoting dialogue, track II meetings, and analyses on some of the above-mentioned issues. We had a very active year, with about 15 meetings conducted on the subjects and themes mentioned above, as well as others.

We dealt with some specific realities (the Middle East, South Asia, North East Asia) by devoting much attention to the specific problems of nuclear weapons and WMD, while at the same time trying to understand the complexities of the contentious issues in those areas and the interesting and innovative relevant peace proposals.

1) In dealing with Middle East issues, we obviously acknowledged the importance of a Middle Eastern WMD-free zone, but also saw that this zone could be more feasible in a framework such as the one considered by the Arab plan, where normalization of relations between Israel and other States has been linked to the creation of a Palestinian State within the 1967 borders or within borders adjusted in some mutually acceptable way, such as the one defined by the Geneva Peace Accord model. The combination of the Arab plan and the Geneva Peace Accord represent up to now the best scheme for a decisive progress for peace in the Middle East. One outstanding issue for some time has been whether talking of a WMD-free zone can be meaningful only after a comprehensive peace has been achieved (as Israel claims to be the case), or whether the development of even partial initiatives towards a WMD-free zone could be integrated into the peace process to the benefit of the peace process itself. Here there is the need of exploring several options and possibly finding new proposals.

2) The Iranian nuclear question can more easily be addressed if both a non-discriminatory policy towards fuel acquisition is achieved, and the IAEA safeguards, including the additional protocol, are fully implemented. This is not an impossible task, especially if an effort is made towards normalizing/improving the relations between Iran and other Western countries, including the US. While it is possible to acknowledge possible past technical violations of the NPT, cornering, if not criminalizing, Iran will not make things easier for the NPT itself in the Middle East as a whole.



3) We have seen the recent positive changes in Indo-Pakistani relations. Here we can detect a paradigm change in the reciprocal approach of the nuclear states. Confidence-building measures (CBMs) in the nuclear field will likely be discussed more and more (an approach Pugwash has advocated since our first South Asian security meeting in Geneva). Other economic CBMs and cooperation agreements, as well as the easing of communications between the two states, are also presently being discussed and, to some extent, implemented. The key issue of Kashmir is now undoubtedly being dealt with in different tones and with much less constraints than in the past. Even though the Kashmir issue may not stay permanently at the absolute center of the Indo-Pakistani relations, it will always have a political relevance and a powerful impact on the heart and minds of the people in the subcontinent. Helping to promote dialogue on the Kashmir issue is also something with which Pugwash is very much involved.

4) We are now here in North East Asia, and we believe that there is a widespread desire to have a nuclear-weapon-free zone here—a desire which hopefully spans the two Koreas. The possibility of a stable nuclear-free Korean peninsula is certainly linked to the establishment of a better, much less adversarial relation between the powers present in the area, including of course the US and DPRK. There is a wide-spread consensus that the alternative to a local *détente* is a freezing of the present situation, possibly with more economic restrictions and hardship. Military action of any type is generally not considered a feasible option. Nevertheless, if the DPRK were to openly become a nuclear state, the shock waves would be felt in

the entire region, with other States (such as Japan) possibly considering an alternative nuclear option. Again, this would have an effect that would go well beyond this area and would be a significant blow to the NPT.

5) Finally, promoting and strengthening the role of truly international organizations in preventing nuclear proliferation—with clear non-discriminatory policies as opposed to either unilateral decisions or decisions taken by some ad hoc “coalition of the willing” or “coalition of the strong”—is very important to making the non-proliferation regime stable and increasingly stronger. International organizations such as the IAEA or the OPCW have performed remarkably well, and are still our best hope for building an international legal framework that would hopefully soon outlaw all WMD. This of course does not deny the need for an evolution and an adjustment of international regulations in the area of controlling the spread of critical material and technologies and the relevant role of international institutions.

The concern for nuclear proliferation is ultimately motivated by the dire consequences of the use of nuclear weapons, which can be used by adversarial nuclear powers or by terrorist groups. As advocated many times by (and not only by) Pugwash, in order to prevent nuclear terrorism, the international community should seriously take steps for:

- Controlling all dangerous nuclear materials: highly enriched uranium (HEU) and separated plutonium
- Speeding up the dilution of HEU and the disposal of plutonium, keeping in mind that the risks associated with HEU are higher since there are less technical obstacles for the construction of a rudimentary bomb with HEU.

Pugwash continues to address these issues, especially in connection with the situation in Russia where the problem is more severe.

The risk of nuclear terrorism is naturally influenced by the global spread of the terrorism phenomena, and a legitimate question to ask is, what are the real effects of the so-called war on terror? How has the spread of terrorism been affected? One of our working groups here is devoted to this issue, and over the last few years Pugwash has held a periodic workshop on this. In one of these workshops which took place before the war on Iraq, while we acknowledged that terrorism of the Al Qaeda-type was hardly present or related to Iraq, we raised the issue that

following a US military intervention, terrorism would likely be much more present and active there. I very much wish we had been wrong.

Many issues need to be discussed concerning the war on terror, and I have just pointed out a few of them. The concerns I am expressing here are not, needless to say, aimed at promoting tolerance towards terrorism. The point is that, in order to contain terrorism, it is not useful to proclaim a “war on it”; taking concrete and effective steps is what really matters.

First of all, as a consequence of the war on terror, two countries (Afghanistan and Iraq) have been invaded. While it is true that two dictatorial regimes have been eliminated, allowing new options for the future, it is also true that the suppression of the old regimes did not allow per se the consolidation of new stable governments. In both countries, progress towards democracy is uncertain to say the least. Most importantly, many lives have been destroyed, and many are still being lost in those same countries, as a consequence of terrorist and criminal activities (that are apparently not declining) and of some very dubious counter-terrorist military actions. In particular, when counter-terrorist actions involve retaliations against civilians, including children, the resulting public anger increases the support for terrorism.

In the West, terrorism is de facto identified with Islamic terrorism, and Islam is often seen as one of the main sources of terrorism, despite occasional formal reassurances to the contrary. The clash of civilizations became too much of a self-fulfilling prophecy, and the gap between Islamic and Western countries grew larger. In this climate, it has become much more difficult to promote communication and scientific-cultural exchanges—even organizing visits of scholars and political experts from some areas of the world to the US (or EU) has become a nightmare. This is an environment where anti-Western terrorism can grow and find increased support.

The war on terrorism has resulted in a long list of restrictive measures that have strongly limited individual liberties. This is especially true for the US, where the detention of individuals can be indefinitely prolonged without a trial (e.g., Guantanamo) and where people are carefully followed and scrutinized. Also of concern are reports of US occupying forces using torture and of terror suspects being deported to countries where torture is practiced.

We in Pugwash started as a small community made up almost exclusively of scientists who wanted to promote dialogue and mutual understanding and point out the risks associated with the presence of nuclear weapons and other WMD. As you can see from our activities and participation, many of us are still scientists concerned with our responsibility and with the possible consequences of developments in Science and Technology. It is not only weapons which matter when we are talking about human security. Other non-military aspects (unequal economic development, the spread of specific diseases, the environment) can have a dramatic impact on our security and ultimately provide sources of conflict. There is certainly space now and in the future in Pugwash for these problems.

Let me conclude by remembering the title of our conference “Bridging a Divided World through International Cooperation and Disarmament”. This is more than the title of a conference, it should be considered as the goal of our work. Our “special interest” for nuclear weapons and WMD fits perfectly well, since nothing contributes more than nuclear weapons and WMD to division and mistrust, and is detrimental to peace. In difficult times, talking about disarmament may seem unpopular, since fear, animosity, a sense of national frustration, and anger may result in suggesting weapons as the solution. Well, they are a big part of the problem, not of the solution, and if disarmament is unpopular, then we are quite happy to be unpopular for quite some time.

Science and Politics: Lessons from Iraq

Hussain Al-Shahristani

DOROTHY HODGKIN MEMORIAL LECTURE

54th Pugwash Conference

Seoul, 7 October 2005

Introduction

Madame chairman, Colleagues and guests!

It is a great honour to be invited to give this lecture in the memory of a great scientist and humanist, Dorothy Hodgkin, who maintained a life-long commitment to issues of peace, justice and security. She was the recipient of the Nobel Prize in Chemistry in 1964, President of the Pugwash Conferences from 1976 to 1988 and great source of inspiration for many of us here.

I would also like to pay tribute here to Professor Sir Joseph Rotblat who has spent more than half of his life campaigning for ethical science. His argument has the kind of authority that only comes with experience. Rotblat was among the team of scientists who developed the atom bomb, and he is the only member to have left the project on moral grounds.

Following his footsteps, in December 1979, I had to make a choice: either to work for Saddam on his nuclear weapon programme, or to pay a price. The choice was simple, and the price turned out to be reasonable: 11 years and 3 months in prison.

When I made that choice, it never crossed my mind that I would have to explain my decision to such a distinguished gathering of scientists. Then, I was more concerned with how to explain myself to my interrogators.

The chief of the Iraqi security organisation at that time, Barazan Al Tikriti, Saddam's half-brother, came to visit me after I was initially tortured for 22 days and nights. He told me that Saddam wanted me to work on developing nuclear weapons, because he needed "a long arm to reshape the map of the Middle-East". This was in June 1980, even before he waged war on Iran later that year. When I explained to Barazan that my scientific training was not in the field of bomb making, he forcefully told me that "It is a man's duty to serve his country" and that

"those who do not abide by this precept do not deserve to be alive." I nodded that I agreed it to be a person's duty to serve his or her country, but I had a different understanding of what constituted a service to my country. I was then taken into solitary confinement, where I was to remain for ten years.

Nevertheless, the regime, as we know, did manage to mobilise the nation's resources and to generate not only a nuclear military programme but also chemical and biological weapons programme. Scores of very talented Iraqi scientists and engineers were directed to work on these programmes. I knew most of these people personally. Many of them were scientists with clear ethical values. Why then, one wonders, would they put their talents at the disposal of such a vicious and brutal dictator as Saddam?

I will come to this question later, but first I would like to ponder on our social responsibility and moral obligations as scientists.

Moral obligation of scientists

"Science is not immune to the infection of politics and the corruption of power." as Jacob Bronowski once said. He himself worked on war programmes and only woke up to the catastrophic effects of some of science's applications after he visited Nagasaki with a British Mission to study the effects of the atomic bomb.

Science and technology have been affecting every aspect of the daily lives of all peoples of the world ever since the industrial revolution. Scientists have been revered for their contribution to the expansion of our frontiers of knowledge and for the improving quality of life for many on this planet. Our generation is thus the custodian of the tirelessly earned recognition, respect and authority accrued by many generations of scientists; and we should therefore be very alert to any misuse of scientific knowledge which may tarnish or undermine these accomplishments.



Hussain Al-Shahristani.

The most obvious example of misuse is, of course, allowing scientific knowledge to become a destructive force in the hands of dictators or even, I dare say, politicians who are not strictly controlled by the general population and held accountable both by their constituents and by the wider community of nations.

Another possible misuse of science in our modern society is the over-commercialisation of scientific advances. This is partially due to the fact that scientific research is increasingly directed by corporate funding, and is thus more and more inclined towards ends deemed commercially attractive to these financiers. Of course the commercial exploitation of science in the fields of physics and chemistry started in the early days of the industrial revolution, and in many ways it was desirable as it provided the required resources for scientific research.

However, if the moral values of honesty, objectivity, reliability and transparency associated with science are to be upheld, and if science is perceived as being a contribution to the public good, scientists must remain free to pursue knowledge guided by these morals and the needs of the public, rather than by corporate interest and short term profiteering.

I believe one of the foremost duties of scientists is to ensure that their discoveries and achievements are used for the benefit of mankind; to improve the quality of life of as many people as possible, to prevent further damage to the environment, to find means to regenerate our planet and make life sustainable for human beings and all our co-inhabitants on earth. Our meaningful survival depends upon these traditional ideals of science.

Independent, honest scientists are needed today as they have always been, whether they are working within governments, or in the commercial sector. Important decisions impacting society depend on the integrity of scientists and upon the reliability of the scientific data they provide. Wrong decisions can cost us the earth.

This puts a serious responsibility on the shoulders of scientists. Should we not work together to change the world from what Omar Bradely described as “a world of nuclear giants and ethical infants” into a world where we strive to know more about peace than about war, where we invest more of our intellectual and material resources in caring than in killing?

I leave it to you to answer that question, and would



Dorothy Hodgkin.

turn now to the proliferation of weapons of mass destruction and disarmament. Of course, this issue is very important in the Korean Peninsula and in South Asia, but I will focus on the Middle East, as other distinguished colleagues may cover the other areas.

Proliferation of WMD

Historically, the United States, with the support of European scientists, developed the atomic bomb because it feared German research on fission reaction might lead to such a development. The Soviet Union soon followed suit because it too felt threatened—by the West. China too developed its nuclear bomb after its relationship with the Soviet Union deteriorated. As soon as India tested its second atomic bomb, Pakistan matched the test with one of its own. Israel developed its nuclear arsenal as its ultimate deterrent to perceived threats to its existence from Arab countries.

Talking to senior Iraqi scientists who worked on the military nuclear programme, I am told that they started to work on the programme after Israel attacked the Iraqi nuclear research reactor in June 1981. That attack kindled a patriotic spirit among them that would have been otherwise difficult for Saddam to inspire.

Turning to Iran’s nuclear programme and its possible impact on the security of the region, I do not know what the Iranian capabilities are in developing nuclear weapons. It appears that its current policy is to develop nuclear power for energy production while keeping its options open for the future. Such a policy is to be expected given Israel’s massive nuclear arsenal, some of which are aimed at Iran. The only way to assure Iran of its security, is to get all Middle Eastern countries to sign the NPT and to open all their nuclear sites to inspectors. These countries should be subjected to an IAEA regime of unannounced inspections, whenever and wherever the agency deems necessary.

Before leaving this subject, I would like to seek this opportunity to call from this podium on fellow scientists around the world to refrain from working on weapons of mass destruction. Such weapons will not enhance national security, but rather encourage rulers to be more aggressive and less compromising in solving international problems. The nuclear states should take the lead in reducing and eventually eliminating nuclear and other weapons of mass destruction in their possession while at the same time strict

adherence to non-proliferation be respected by the states that have not developed such weapons.

Iraq

I would like now to share with you my deep concerns with what is going on in Iraq. Let us recall that today's Iraq is the ancient Mesopotamia. The civilization that grew in the river valley of the Tigris and the Euphrates produced the world's first writing, first calendar, first library and the world's first democracy. Hammurabi, the king of Babylon was the first to codify laws governing the social life of citizens. It was a code in which abandoned women, slaves, and even animals had rights. The Hammurabi code is acknowledged not just as the birth of legality, but the beginning of an understanding of the concept of social justice.

Most of these treasures were kept at the Iraqi Museum in Baghdad, one of the greatest repositories of human heritage. The museum was the second on the list of 16 crucial sites which the Office of Reconstruction and Humanitarian Assistance asked the Pentagon to protect before the invasion of Iraq. Yet the Museum was left unprotected and was—inevitably—looted. The last building on that same list was the Ministry of Oil. It was the only one that was given protection.

Iraq has more than 10,000 listed archaeological sites. These sites were not protected either, and several sites have been irreparably damaged because they were used as military camps. At Babylon, the military have located their helicopter-landing field in the heart of the ancient city. The frequent daily flights of the helicopters rattled the ancient walls and the winds blown by them damaged the fragile ancient bricks.

The Iraqi National Library and State Archives Building which contain some very old copies of the Quran were left to be burnt without any attempt to secure them by the occupying forces.

Iraqis were liberated from Saddam's tyranny with promises of democracy and of assistance in the rebuilding of their country. Several nations, most notably the United States, pledged many billions of dollars for the reconstruction of Iraq. Iraq's own oil revenues were also put at the disposal of the Coalition Provisional Authority (CPA), for the purpose of financing reconstruction.

To this end, the UN Security Council passed resolution 1483 in May 2003 to set up the Development Fund for Iraq giving control of Iraq's oil revenues along with other Iraqi funds, to the CPA on condition that these funds be

spent in the interests of the Iraqi people and that they be independently monitored and audited. However, not until April 2004, almost a year later, was an auditing firm appointed, leaving it only a few weeks to go through the books before the CPA dissolved itself and handed over authority to the Interim Iraqi Government. This meant that for the entire year that the CPA ruled in Iraq, it was not brought to account for what it had done with some US\$20 billion of Iraq's own money.

Meanwhile, in a different pot, the US congress approved US\$18.4 billion for the Iraq Relief and Reconstruction Fund. In addition to these two funds, the Madrid conference of donor nations last year pledged over US\$15 billion towards reconstruction in Iraq.

So, how were these major funds spent, and what impact have they had on Iraqis?

Well:

Of the \$18.4 billion Iraq Relief and Reconstruction Fund approved by the US, only \$366 million of the total pledged was actually spent by the time the CPA ended its work—merely 2% of the total. Of the Madrid Conference pledge of \$15 billion, to date less than \$2 billion has materialized but even this has not found its way to Iraq yet.

As for the Iraqi oil money, almost \$20 billion was spent with no clear records and no accountability. At the time of the handover of power in June 2004, Christian Aid issued a report that read: "billions of dollars of oil money that has already been transferred into the U.S.-controlled Coalition Provisional Authority has effectively disappeared.... The U.S.-controlled coalition in Baghdad is handing over power to an Iraqi government without having properly accounted for what it has done with some \$20 billion of Iraq's own money."

Not much can be shown to Iraqis in terms of basic services or construction projects for the billions of their money that has apparently been spent. The lack of progress in reconstruction has only made the security situation worse, providing as it does a point of focus for the grievances of those deprived of their share in the national wealth and denied participation in Iraq's social and economic advancement.

Transparency is essential in any democracy. Without transparency and accountability, Iraq will go the route of riches and power for the few, and poverty and marginalization for the many. If a unified Iraq with territorial integrity is to be preserved, only a democratic system that holds integrity, transparency and accountability as the main pillars of governance will be capable of holding the

country together. No reform in Iraq will bear fruit without the establishment of a pluralistic and democratic system. Iraqis, in all their different hues, ethnic affiliations and religious and sectarian factions are unanimous in believing democracy is the only framework capable of allowing them to live together as equal citizens.

Conditions in Iraq today

I returned to Iraq on 7 April 2003, two days before the fall of Saddam's regime, on a humanitarian mission. I had to go first to Abu Ghraib prison, where I had been imprisoned, to look for fellow political prisoners. None was found. I then went to look for them in mass graves. Tens of mass graves were uncovered; some held a few dozen remains and others many thousands. Only a few people could be identified.

On this humanitarian mission I visited many towns and villages and talked to common people about their hopes, expectations and dreams. Despite the diversity of Iraqi society one common theme was repeated to us.

An Iraqi woman told us: "These three decades (under Saddam's rule) were very hard. The first decade melted away our fat. The second ate the flesh. The third crushed the bones. But we are determined to keep our heads up."

An Iraqi man said: "Saddam tried to destroy the goodness of the Iraqi people. We must prove that he has failed."

A common commitment was: "Never again another dictator". The laws of occupation — derived primarily from the Hague and Geneva Conventions and the International Bill of Human Rights — impose two fundamental obligations on Occupying Powers. The first is for it to withdraw its military forces and to end the occupation as soon as possible. The second is for it to safeguard the rights of the occupied population during the temporary period before the occupation is ended.

Ordinary Iraqis have lost hope that the occupying forces can or even care to protect them from local and international terrorism or to provide for their basic needs. The only hope left for them is to have elections where they can choose their representatives from among themselves and entrust their governance to an authority that cares about them.

If we fail to hold free and fair elections by January 2005 as envisaged by the UN, and thereby kill this last hope of the ordinary people, then Iraq will be on a very dangerous course and the chaos that will result could lead to a civil war and the disintegration of the country. Under such pressures, Iraq will quickly turn into a breeding

ground for anarchy and terrorism that would not only engulf the region but also threaten the rest of the world.

There are dangerous forces, both local and external, that are working to undermine the January election. They do not want a stable, progressive and prosperous Iraq, and see their interests in tightening their control on the people and plundering the national wealth. Iraq needs all the help and support of the international community and the UN it can get to organise and carry out these elections in accordance with international norms. Such a distinguished group as Pugwash can play an important role in joining Iraqis in calling for these elections to be held in a timely and a fair manner.

The reason that is normally cited for delaying elections is the security situation. The security situation will not improve under military occupation and not until a legitimate government is elected; legitimate in the eyes of its own citizens. Hence, elections are a prerequisite for security and not visa versa.

What can the international scientific community do to help Iraq?

First and foremost of the ways in which the community can help is by calling upon the UN Secretary General, Security Council members and on their respective governments to provide all the necessary support and the political will to ensure that free and fair elections are held on time by January 2005. The Iraqi Independent Electoral Commission that was set up by the UN is determined to succeed in organising this election on schedule and in accordance with international norms. The Commission should be given all the backing and tools it needs to succeed in this mission.

Secondly, the community has a role to play in rebuilding institutions of higher education, universities and research centres; this is an important and urgent task in Iraq. Iraqi universities have been cut off from the rest of the world for thirteen years. Most of the universities and research centres in Iraq were looted during the war and need to be re-supplied with laboratory and research equipment and instruments. They also lack scientific journals. If international scientific journals cannot be provided directly, then internet access to them would be very helpful.

Under Saddam, the whole population has suffered, but the scientists were a special case. The majority of competent scientists, professionals and technologists were forced to work on military programmes, to develop weapons of mass destruction: chemical, biological and nuclear. After the fall of the regime, most of these scientists have been

left without jobs, even though some of them may still be paid salaries. There isn't any real work for them, and no facilities for them to work in. A primary task in the reconstruction is to rebuild those facilities and engage these scientists in a way that would benefit the country and serve the people. I regret to report that there has not been much progress on this front.

Weapon scientists, as the experience in the ex-Soviet Union shows, can produce research and contribute to the national development if properly organized and provided with the appropriate incentives. But, in general, these scientists do not have a real or clear understanding of global scientific and development needs. Iraq requires international support to help it establish Science and Technology Centres for the re-employment of these scientists and engineers and put them in touch with similar centres in other countries. Such centres can be good incubators for projects that absorb the talents and expertise of these scientists and redirect their work into the reconstruction and development of the country.

Restoration of the southern Iraqi marshes is another area where international collaboration is required and the contribution of the scientific community is essential. These marshes were the cradle of human civilization and supported a unique culture and way of life that had continued almost unchanged for over 5000 years, since Sumerian times.

The marshes were drained by Saddam's regime during 1992–95 and turned into salty wasteland. The southern Iraqi Marshes are of global importance and their restoration is a human, cultural and environmental concern, not only for the Iraqi people but for humanity at large.

Recognising these needs and the role which the scientific community is capable of playing, a group of distinguished Iraqi scientists have set up the Iraqi National Academy of Science to promote natural and applied sciences for the service of the people and country, and to revive Iraqi creative talents for the good of humanity. Among the aims of INAS is to develop an ethical framework for the application of science for the benefit of the people and the country. The support of the world academies, scientific institutions and the world scientific community is needed to help the Iraqi academy through its initial stages.

Conclusion

This morning I have tried to concentrate on two principal themes, and I thank you all for bearing with me if at times I appear to have digressed or indulged in personal, anecdotal meandering!

On the one hand, I wanted to bring our attention here at this gathering to the thorny issue of ethics and science; to attest to the possibility as well as to the imperative of an ethical approach to science. I believe that in pursuing this debate, and working together towards an understanding of the relationship between advancements of human knowledge and human ethical conduct, we as scientists must respect those who went before and to whose collective canon of knowledge we can only hope to increase microscopically.

In seeking an engaged debate on the role of ethics in science we are also acknowledging the responsibility of the individual at a time when it has become too easy for the scientist to absolve himself or herself of personal responsibility, as macro forces—be they driven of the market economy or forced upon us by political or military circumstances—tend to depersonalise the motor propelling scientific knowledge forwards.

This is not to say that I judge or am in any way capable of judging scientists and others who are forced into the morally unpleasant circumstances in which many ethically grounded and intellectually solid Iraqi scientists sadly found themselves. It is rather to suggest that as a community of scientists, growing technologically closer together and globally more responsive to each others realities, we owe it to one another and to the fields of knowledge in which we work, to make those circumstances as rare as possible and to provide one another with the kind of support that will ensure no scientist that stands by his ethical or moral position in the face of political, military or other pressures, will stand alone.

My second area of focus has, of course, been Iraq and the present situation there. The scientific community, which has historically owed so great a debt to this little patch of the planet, yet which has recently seen almost only its horrific and destructive forces at work, must now look again to the possibilities in Iraq. These are virtually unlimited in terms of the scale of the need in the country. None is more important and urgent than helping Iraqis carrying out their first elections free and fair. Also engagement of the scientific community in new Iraq is necessary and urgent; it is also vital that a new era of ethical scientific conduct be heralded and supported.

Finally, I wish to thank Mr Park and the Korean Pugwash Group for such a wonderful organisation of this conference. No wonder after he organised the Seoul Olympics. Thank you.

2nd Pugwash Workshop: *The Impact of Agricultural Biotechnology on Environmental and Food Security*

Havana, Cuba, 1–4 April 2004

Report

by Jeffrey Boutwell

The incorporation of modern biotechnology and genetic engineering into agricultural production processes has generated new ethical, economic, social and environmental dilemmas confronting societies all over the world. Research into these biotechnologies has sparked an intense debate on the benefits and risks of implementing transgenic technologies into the world's agricultural production, raising questions about the extent of our current knowledge as to the long-term effects of genetically modified organisms.

In May 2002, Pugwash organized

an initial workshop on these issues, held in Mexico City, to focus especially on new developments in agricultural biotechnology as they relate to farming practices and food production in Mexico and elsewhere in Latin America. In particular, the biological and genetic diversity of Mexico, both in wild and domesticated varieties (especially maize), made the country an ideal venue for international workshops on these issues.

As a result of the Mexico workshop discussions (see the Pugwash website, www.pugwash.org, or the *Pugwash Newsletter*, vol. 39, no. 1, December 2002, pp. 55–59 for a full report of the workshop), participants identified six key principles which they felt should guide research and

policymaking regarding agricultural biotechnology:

(1) Current knowledge is insufficient for assessing the benefits and risks of genetically-modified organisms (GMOs), especially in light of the long-term consequences these technologies may pose for the biosphere and future generations.

(2) To that end, independent research and institutional capacity building within society is needed to identify and implement short- and long-term research and to analyze, monitor and evaluate the environmental, economic, health and socio-cultural aspects of biotechnology developments.

(3) Because many of the short-term and long-term consequences of



Lesley Blancas, Terje Traavik and Renato Andreotti listen as Carlos Borroto gives a tour of Center for Genetic Engineering and Biotechnology



Quentin Kubicek, Moises Burachik and Norman Ellstrand (rear, from left) during tour of the production facility at the Center for Genetic Engineering and Biotechnology



Israeli-manufactured greenhouses at the Center for Genetic Engineering and Biotechnology



Workshop participants at the Nacional Hotel

GMOs remain unknown, certain activities should not be undertaken until more is known of their biological and social consequences. For example, current efforts to develop GM maize that produces non-edible industrial chemicals or pharmaceuticals are of grave concern because maize is an open pollinated, widely cultivated staple crop.

(4) Mechanisms are needed to ensure access, by all sectors of society, to complete and appropriate information on agricultural and biotechnology developments and applications to all sectors of society. Of particular importance for evaluating and monitoring these is the deposit of, and

access to, viable biological materials and detailed sequence information of the new genetic constructs of all GMOs.

(5) Multiple strategies employing traditional and newly developed technologies, capacities and institutions, rather than over-reliance on one particular technology, need to

be evaluated and promoted to ensure socially and ecologically sustainable agriculture. Strategies such as niche marketing, inter-cropping, precision and integrated farming, and techniques to conserve germplasm should be promoted and supported.

(6) Informed participation by the agricultural, consumer and other sectors of society in the decision-making process regarding GMOs requires greater transparency, accountability and credibility on the part of scientists, government and the private sector.

Given the complexity of the subject and its evolving nature in light of new scientific and technological developments, the Pugwash Conferences organized a second workshop that was held at the Hotel Nacional in Havana, Cuba from 1–4 April 2004. Pugwash is grateful to our Cuban colleagues and hosts—including Orlando Fundora Lopez and Nestor Acosta Tieleles of the Cuban Pugwash Group, and Carlos Borroto Nordelo and Merardo Pujol of the Center for Genetic Engineering and Biotechnology—for their warmth and hospitality.

More than 30 scientists and specialists in agricultural and biotechnology issues participated in the workshop, coming from 10 different countries. A good deal of effort was given to invite participants representing a wide range of views, including skeptics of GMOs from academia and government to proponents from government and industry. Rather than summarize the disparate views that constituted the workshop discussion, Pugwash is making available the extremely informative power point presentations that were given during the workshop. These are listed in the following section, and are available both on the Pugwash website and on CD-Rom by contacting the Pugwash office in Washington, DC, at pugwashdc@aol.com.

Pugwash is very grateful to the Christopher Reynolds Foundation of New York for its support of the workshop in particular, and of the concept of free scientific exchange and travel between countries in general.

Workshop Powerpoint Presentations

FRIDAY, 2 APRIL 2004

1. Terje Traavik, "Late Lessons from Early Warnings: Once More?"
2. Carlos G. Borroto, "Agricultural biotechnology; Research and development in Cuba"
3. Robert Horsch, "Plant-Made Pharmaceuticals (PMPs)"
4. Norman C. Ellstrand, "Unintended movement of genes producing industrial biochemicals in plants"
5. Merardo Pujol "Prospective Engineering of Risk Management in Plant-Made Pharmaceuticals: A Case Study."

SATURDAY, 3 APRIL 2004

1. Moises Burachik, "Risk Analysis And Biosafety Of GMOS"
2. Lesley Blancas, "Possible negative consequences of unintended trans-

gene flow from crops to their wild relatives or crop landraces"

3. Jose Rodriguez, "Biosafety Regulatory Framework In Cuba"
4. Ing. Agr. Carlos Camaño, "Food Safety Applied To Foods Derived From Modern Biotechnology"
5. Rodrigo Artunduaga Salas "Overview of Biosafety Regulatory Frameworks in LAC Countries"
6. Mario Pablo Estrada, "Genetic Modified Fish Research in Cuba"
7. Nicolás Medina Basso and Ondina León Díaz, "Biotechnology and sustainable agriculture: biofertilizers and biopesticides"
8. Jose Luis Ramirez, "United Nations University, Biotechnology Programme for Latin America and the Caribbean"

9. Carlos Muñoz Schick, "The Necessity Of Strategic Alliances For The Development Of Biotechnology: An Experience In Chile"
10. Renato Andreotti, "Tick control using a novel vaccine. Current situation and perspectives."

SUNDAY, 4 APRIL 2004

1. Martha Krebs, "GMO and US Public Perception: Near Term Impacts"
2. Rebeca Martínez, "Cuban GMO Vision"
3. David J. Ellar, "Public perceptions and balanced information on GMOs: Where has it gone wrong?"
4. Tromsø, Norway Course "Holistic Risk Assessment of Genetic Engineering and Genetically Modified Organisms"



International Student/Young Pugwash announces the publication of the first issue of its *Journal on Science and World Affairs*, a bi-annual, peer-reviewed publication. Go to the ISYP website, at www.student-pugwash.org for more information.



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Third Pugwash Workshop on Asian Security

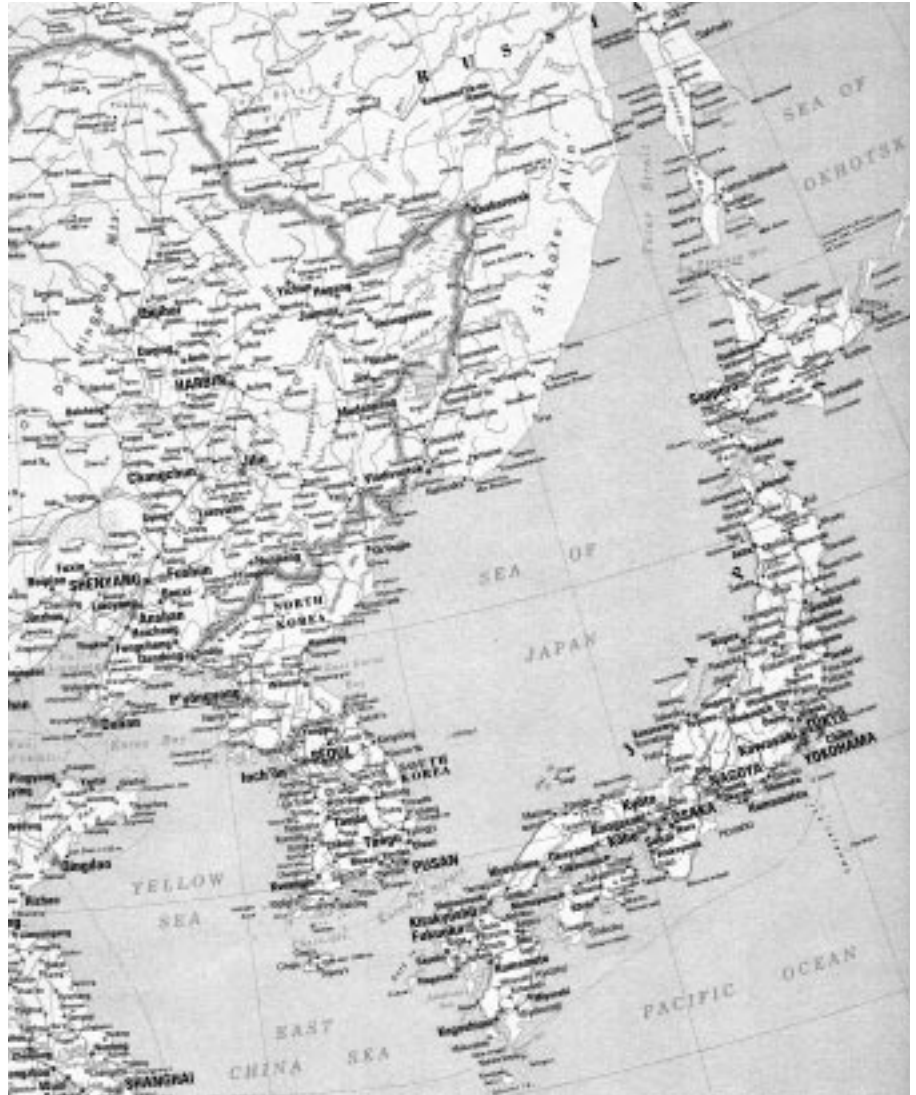
Beijing, China, 13–16 April 2004

Report

by Mark B. M. Sub

The Third Pugwash Workshop on East Asian Security was held in Beijing at the Daiyutai Hotel, 13–16 April, 2004, as a follow-up to the First Pugwash Workshop held in Seoul, South Korea, in April 2001 and the Second in March 2002 in Beijing. More than 30 participants from the US, Japan, Russia, Italy, Germany, China, and North and South Korea actively took part in the workshop. As last time this third workshop was exceptionally well organized and hosted by the Chinese Pugwash Group and the Chinese Peoples' Association for Peace and Disarmament (CPAPD).

The meeting was not only timely but urgent due to the long impasse over the North Korean nuclear issue. Active participation of all parties concerned including North and South Korea made the workshop a useful forum in building confidence and fostering mutual understanding. Shortly after the workshop, the North Korean leader, Chairman Kim Jong Il, only two weeks after a visit by U.S. Vice-President Dick Cheney, paid a surprise visit to China raising high hopes for an early negotiated solution to the nuclear problem. He conferred with the Chinese leaders and expressed his willingness to seek a diplomatic solution to the crisis and committed North Korea to the third



round of the six-party talks. Now it is certain that the third round of the six-party talk will be held by June this year to find a negotiated solution to the problem. Washington and Pyongyang have both assured the Chinese leadership that they hope to resolve the North Korean nuclear crisis peacefully with the ultimate goal of a nuclear-weapons free Korean

peninsula. If the two sides work together and press on with six-party talks, there is much hope for a peaceful end to the 19-month-old standoff.

The overall theme of this workshop was how to end the Cold War between the US and North Korea, and to create a new security framework of dialogue in order to resolve the nuclear issue peacefully.

Situation on the Korean Peninsula

The first session dealt with the situation on the Korean peninsula assessing some positive and negative developments.

On the positive side, it was reported that private as well as official contacts and visits between North and South Korea increased since the June 2000 summit between Chairman Kim Jong Il and President Kim Dae Jung. The current government is actively following this policy of rapprochement and reconciliation. In spite of the current nuclear crisis, these contacts are expanding cooperation between the two Koreas. More people in South Korea feel confident that the nuclear issue can be resolved peacefully through dialogue and engagement with North Korea. Many new communications spurred up in spite of the crisis and direct dialogues even on sensitive issues established, even as the US continues to reject broad engagement with North Korea. But an increasing number of young South Koreans regard the US as greater threat than North Korea and view the US military presence in South Korea as the root cause of tension and instability in Korea.

On the negative side, the frequent US-South Korean military exercises were mentioned as a security threat by North Korean participants. They argued that these exercises not only increase tension but also greatly damage the North Korean economy. The recent relocation plan of the US bases in South Korea to outside of North Korean artillery range was interpreted as a US plan to attack North Korea. It was pointed out that as anti-US sentiment is growing in South Korea and inter-Korean relations are improving, major adjust-

ment in the US-South Korean military alliance is needed.

Another problem mentioned was the construction of a dam by North Korea near the border to generate electricity that has caused much environmental damages as well as economic losses in South Korea. In response to the dam, South Korea constructed a dam to prevent any damages which might be caused by an accident. Participants from North and South Korea agreed that there must be better communication and mutual exchanges of information to prevent such problems in the future. A South Korean participant mentioned that the money could be used better to help the North Korean people instead of wasting it on precautionary measures.

On the nuclear crisis

The second session was devoted to the on-going nuclear crisis in Korea. Although the first nuclear crisis could be averted by diplomatic efforts between the US and North Korea, hostility and mutual distrust between the Korean War enemies still persist. After the Geneva Framework Agreement in 1994, North Korea agreed to freeze its nuclear facilities and to remain in the NPT regime. The US started to supply heavy oil to North Korea as compensation for the loss of energy. The two light water reactors (LWR) under financial commitments of South Korea, Japan and the EU which were to replace the North Korean reactors started later than expected. The Clinton administration, however, failed in fulfilling the Geneva Agreed Framework with North Korea, especially the lifting of sanctions and normalisation of relations. U.S. President Clinton envisioned visiting North Korea near the



Korean participants.

end of his term of office in order to strike a deal on the nuclear and missile issues with North Korea. Due to the circumstances, however, he left office without settling these security issues with North Korea.

For his successor President Bush the agreement reached under Clinton was not acceptable. The Bush administration branded North Korea as a member of the “axis of evil” in early 2002 and even rejected bilateral talks. The US regarded North Korea as a candidate for a pre-emptive military strike which intensified North Korea’s distrust of the US. The new North Korean policy under President Bush was isolation, sanction and regime change.

The second nuclear crisis erupted in October 2002 when the US charged that North Korea was working on a clandestine uranium enrichment program (HEU) for nuclear weapons which it allegedly admitted during the special envoy James Kelly’s visit to North Korea. North Korea rebuffed this allegation and insisted that it had never admitted to the US allegation that it had such HEU program nor that it pursued such program. North Korea states that it had only assured that it is entitled to acquire even more powerful weapons to defend itself against the US hostility. The US stopped delivery of heavy oil to North Korea, as North Korea had allegedly violated

Pugwash Delegation to North Korea, April 17-20, 2004

Secretary General of Pugwash Conferences on Science and World Affairs, Prof. Paolo Cotta-Ramusino and member of Pugwash Council, Dr. Mark B.M. Suh visited Pyongyang from April 17th to 20th at the invitation of the Korean National Peace Committee and exchanged views on security developments in the region. They also discussed about future Pugwash activities in the region with the Vice-Chairman of the Korean National Peace Committee, Kim Jin-Bom, and Secretary General, Kim Song. North Korea expressed interest in hosting the fourth Pugwash workshop on East Asian Security early next year in Pyongyang.



PIINTEC facilities in Pyongyang



Left: In front of the State Guest House in Pyongyang with one of the North Korean hosts and Secretary General Paolo Cotta-Ramusino. Right: Visited the English Language Training Program conducted by the PIINTEC at the People's Study House.



Left: Visiting the PIINTEC in Pyongyang. Right: Pugwash Delegation with the host, Kim Song.

the 1994 Geneva Framework Agreement by having the HEU program, and demanded immediate stop of the clandestine nuclear activities. North Korea responded by restarting its reactor which had been frozen since 1994 and asked the IAEA inspectors to leave the country. In addition, it declared on January 10, 2003 that it is leaving the NPT effective from the next day.

North Korea demanded direct bilateral talks to resolve the issue but the US insisted on complete dismantlement of clandestine nuclear activities before any talk could begin. The Korean peninsula was again focal point of an international crisis and military tension increased. North Korea seriously believed that the US would strike even before the invasion of Iraq. With the escalation of military tension between the US and North Korea, China called on the US and North Korea for direct negotiations to resolve the issue.

The Six-party talks and their prospects

In April 2003 China succeeded in bringing the two conflict parties together and the first round of the three-party talk was held in Beijing. The US and North Korea, however, came to Beijing expecting the other side would make a compromise first and refused to negotiate directly, but they agreed to engage in multilateral talks. The US stressed its position that North Korea must first destroy all its clandestine nuclear activities before any negotiation could start. North Korea insisted that the US must stop its hostile policy toward North Korea and sign a peace treaty to end the long hostility.

From May 2003 North Korea somewhat softened its hard-line atti-

tude towards the US and agreed to join a multilateral forum including all parties in the region. China hosted the first six-party talk in Beijing in August 2003 where the US, China, North Korea, South Korea, Japan and Russia attended. Although this first round of multilateral forum failed to reach any settlement, it was a success as they agreed to meet again. The US and North Korea failed to negotiate directly during the meeting.

After intense diplomatic efforts by China supported by South Korea and Russia, the second round of the six-party talk finally took place in Beijing in February 2004 and brought some concrete results. North Korea proposed to freeze and eventually dismantle its nuclear facilities in return for the security guarantee that the US must promise not to attack and to deliver some economic compensation for its energy losses. South Korea proposed to offer economic assistances in response to the nuclear freeze which was supported by China and Russia. All parties agreed to continue the dialogue process and to have the third round of the talk before June 2004. In addition, they agreed to have some working group meetings prior to the talk in order to narrow some differences on how to end the stand-off. These working group meetings are expected to clarify complex technical issues such as HEU and CVID.

Although there is still a long way to go until a negotiated solution to the nuclear issue can be found, all parties agreed that there is no other alternative to the multilateral forum in resolving the nuclear problem peacefully.

The key to success of the multilateral approach very much depends on the US stance that North Korea



Chinese, North and South Korean participants.

should completely, verifiably, and irreversibly dismantle all its nuclear activities before any negotiation can start. North Korea should show more flexibility in its demands for immediate stop of hostile policy and signing of a peace treaty by the US. It should also consider and accept security guarantees offered by other countries in the region. Even one US participant admitted that CVID has been the US policy under President Bush towards North Korea from the beginning and this leaves little room for diplomatic negotiations. North Korean participants demanded the US to make a bold switchover in its stance and take a trustworthy practical action, as North Korea has already proposed to freeze and dismantle all its nuclear activities even including the peaceful use of nuclear technology, in order to ultimately sustain the Korean peninsula as nuclear-weapons free.

In search of sustainable peace and stability

The third session was devoted to the prospect of sustainable peace and stability in North East Asia. All agreed that a peaceful resolution of the nuclear crisis and the ending of hostile relations between the US and North Korea are the keys to sustain-

able peace and stability in the region. In addition to great expectations of the six-party talk process, there was a serious discussion on the applicability of the Libyan model to North Korea. It was mentioned that 9 months long secret and direct negotiations between Libya and GB as well as the US were the key to success in the Libyan case. A South Korean participant urged that the US should negotiate directly with North Korea, and South Korea should play a mediator role in order to strike a deal similar to the Libyan case. But the North Korean participants rejected this approach because the situation in Korea is different and the model is not applicable, as the US must end its hostile policy towards North Korea and sign a peace treaty replacing the armistice agreement. North Koreans stressed that the Korean War was still not over and needs to be terminated first peacefully.

The two US participants who are experienced in dealing with North Korea for many years told the North Koreans that there were many missed opportunities in the past. According to them, North Korea missed these windows of opportunities, mainly due to its inflexibility and misunderstanding. They urged North Korea not to wait until the change of administration in the US but to be prepared for the next window of opportunity.

In the final session there was an open discussion on the feasibility of the six-party talks as a new security framework for the region. Although the benefits of such an institution in the region were mentioned, however, due to the uncertainty of the multilateral dialogue process and the military tension on the Korean peninsula, it

was clear that it is still premature to talk about such a security mechanism in the region. In the meantime, neutral institutions such as Pugwash Conferences on Science and World Affairs could and should continue to provide a forum for informal dialogues among experts and policy makers to build confidence and to improve the security environment.

All in all, the workshop was a success as many renowned experts from all countries concerned got

together and shared background information as well as different perspective on various issues. It was clear that there are different perceptions on threat and security interest, especially on the nuclear issue; therefore, such dialogue is much needed in order to better understand each other's position. The workshop certainly contributed much in building confidence and in understanding the complex issues affecting regional

security and stability. Immediately after the workshop, Secretary General of Pugwash, Prof. Paolo Cotta-Ramusino, and Pugwash Council member, Dr. Mark B. M. Suh, visited North Korea in order to seek further dialogue with North Korean authorities and to discuss about future Pugwash activities in the region. The Fourth Pugwash Workshop on East Asian Security was agreed to be held in Pyongyang in the near future.

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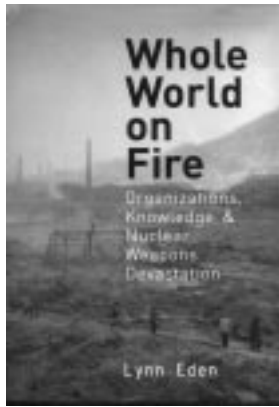
B O O K S :

Peace Women

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Whole World on Fire:
Organizations, Knowledge & Nuclear Weapons Devastation

By
LYNN EDEN

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Ithaca, New York, USA

WHOLE WORLD ON FIRE focuses on the questions of how and why the U.S. government failed to predict nuclear fire damage as it drew up plans to fight strategic nuclear war. The answer, Eden demonstrates, lies in how organizations frame the problems they try to solve. Her book shows how well-funded and highly professional organizations, by focusing on what they do well and systematically excluding what they don't do well, may build a poor representation of the world—a self-reinforcing fallacy that can have serious consequences.

Ensuring Security In Space: Enhancing Stakeholder Cooperation

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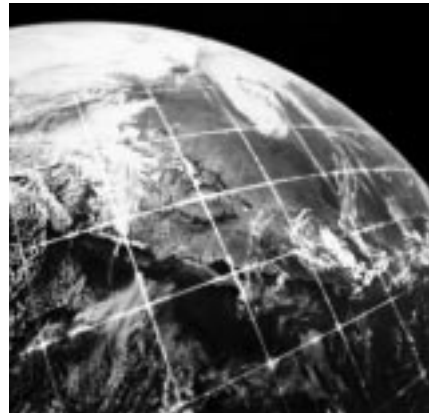
MONTEREY INSTITUTE OF INTERNATIONAL STUDIES' CENTER
FOR NONPROLIFERATION STUDIES

PUGWASH CONFERENCES ON SCIENCE AND WORLD AFFAIRS

22–24 April 2004 • Washington, DC

The goal of this conference was to bring together a broad representation of space stakeholders to discuss methods for enhancing the security of space assets through international cooperation. In particular, the sponsors hoped to raise awareness in the wider U.S. space community of the benefits of multilateral approaches in space. Rather than rehashing what is becoming a polarized debate between two ends of a broad spectrum, the aim was to flesh out the wide swath of middle ground where international actions can be taken that would help ensure safe and secure space operations for all users, whether military, civilian or commercial.

The conference saw a wide range of presentations, covering issues such as space debris, traffic management,



frequency allocation, military uses of space, the role of the space industry, and the importance of space security to emerging space powers. A priority was placed on international participation, with the

hopes that participants would form relationships from which the kinds of security approaches discussed during the conference could be cultivated.

Texts of the conference presentations have been printed as a special fall issue of the space policy journal, *Astropolitics*.

A copy of the journal can be ordered online at www.astropolitics.org/



Agenda

THURSDAY, APRIL 22

5:30 pm Registration/Reception

6:30 pm Dinner

FRIDAY, APRIL 23

7:30 am Informal Breakfast

8:30 am Introduction and Opening Remarks

8:45 am Panel: *Ensuring Safe Use of Space*

“Collision Avoidance and Improving Space Surveillance,” **Dr. William Ailor**, principal director, Center for Orbital and Reentry Debris Studies, The Aerospace Corporation

“Traffic Management Rules for Space Operations,” **Dr. Petr Lála**, co-chair of the International Academy of Astronautics study group on space traffic management.

Discussant: **Michael Krepon**, president emeritus, The Henry L. Stimson Center

10:15 am Coffee break

10:30 am Panel: *Ensuring the Future: Building Confidence and Avoiding Conflict*

“Military confidence building,” **Dr. Randy Correll**, Science Applications International Corporation

“Non-Offensive Defenses,” **Philip J. Baines**, senior policy advisor for Science and Technology, Arms Control and Disarmament Division, Dept. of Foreign Affairs and International Trade, Government of Canada

Discussant: **Dr. Clayton Chun**, professor of economics, U.S. Army War College, and USAF (ret.).

12:00 pm Lunch Speaker: **Richard DalBello**, president, Satellite Broadcasting and Communications Association.

1:30 pm Panel: *Defining Space Security*

“How to judge global space security,” **Susan Eisenhower**, Chairman of the Eisenhower Institute, Washington, D.C.

“What space security means to emerging space powers,” **Dr. Narayana Moorthi**, director of Launch Vehicle Programmes at the Indian Space Research Organization.

Discussant: **Leonard David**, reporter, *Space.com*

3:00 pm Coffee break

3:30 pm Panel: *Improving the Space Environment*

“Debris mitigation and prevention: how to build a stronger international regime,” **Dr. Lubos Perek**, former director of the U.N. Office of Outer Space Affairs

“Spectrum allocation issues for global satellite communications,” **Carlos Nalda**, Council, Steptoe and Johnson, LLP

Discussant: **Dr. Dennis Papadopoulos**, professor of physics, University of Maryland

6:00 pm Adjourn

6:30 pm Informal dinner for out of town participants

SATURDAY, APRIL 24

8:00 am Informal breakfast

8:30 am Panel: *Enhancing Space Cooperation: the Role of Civil and Commercial Space*

“Civil space and international cooperation,” **Joseph Wood**, deputy assistant administrator for exploration, NASA

“Protection of critical commercial space infrastructure,” **Richard Buenneke**, senior policy analyst, Aerospace Corporation

Discussant: **Clayton Mowry**, president, Arianespace, USA

10:00 am Coffee break

10:15 am Panel: *New Solutions, New Mechanisms*

“Beyond today’s regimes,” **Nafizah Goriman Khan**, director, Malaysian National Space Agency.

“Alternatives for today,” **John B. Rhineland**, senior counsel, Shaw, Pittman, Potts & Trowbridge, and Board Member, Lawyers Alliance for World Security; and **The Hon. Philip E. Coyle**, CDI senior advisor and former Assistant Secretary of Defense and Director DoD Operational Test and Evaluation.

Discussant: **Bob Lawson**, senior policy advisor, Department of Foreign Affairs, Canada.

12:15 Adjourn

12th Pugwash Workshop on the Middle East: *Prospects for a WMD-free Zone*

Washington, DC, 23 June 2004

Report by

Jeffrey Boutwell

In cooperation with the Woodrow Wilson International Center for Scholars, the Pugwash Conferences held a one-day meeting on 23 June 2004 on the prospects for moving towards a Middle East free of weapons of mass destruction. The meeting was held at the Woodrow Wilson Center in Washington, DC, and Pugwash is grateful to Amb. William Miller, Dr. Haleh Esfandiari, and the staff of the Wilson Center for their hospitality and cooperation.

A total of 46 participants from eight countries attended the meeting, which consisted of two panel sessions. The first panel addressed current realities in the Middle East regarding conflict, politics and WMD, while the second panel explored the prospects for a Middle East WMD-free zone.

Conflict, Politics and WMD in the Middle East

Discussion began by emphasizing the importance of identifying the strategic imperatives that motivate countries to seek to acquire weapons of mass destruction. Historically, such imperatives have included calculations of survival, balance of power, political, and prestige. Different countries will have different combinations of motivations, however, and

accurately understanding these is important to substantially reduce the motivations for acquiring WMD in the first place.

The discussion of Iran's possible motivations for acquiring a nuclear capability focused on (1) Iran's perception of external threats, most notably from two nuclear powers, the US and Israel; (2) of Iran being in the middle of an intensely unstable region, ranging from the Middle East through the Persian Gulf to Afghanistan and South Asia; (3) the need to protect Iran's territorial integrity; and (4) the experience of Iran being the victim of WMD (chemical weapons) during the Iran-Iraq War in the 1980s.

It was emphasized that the different domestic roots of Iran's foreign policy—revolutionary Islam, moderate Islam, and Iranian nationalism—are all important in shaping debate in

Iran on nuclear issues. At the moment, four broad schools of thought on nuclear issues can be identified: (1) those opposed to even civilian nuclear power; (2) those who are pro-NPT, with full access to civilian nuclear power technologies; (3) those who link civilian nuclear power to security, through indigenous fuel-cycle capabilities; and (4) those who advocate withdrawal from the NPT and Iran's acquisition of nuclear weapons. Despite four very disparate camps on nuclear issues, however, it should be emphasized that Iranian policy is not solely driven by any one faction, but is the result of a broad-based discussion across Iranian society.

Participants discussed how to resolve the current policy dilemma between Iran and the international community on its nuclear capabilities. Strategies mentioned included: international guarantees on supplying fuel



to and removing nuclear waste from Iranian power reactors; an end to discriminatory treatment of Iran by putting equal pressure on Israel in advocating a WMD-free Middle East; security guarantees for all in the region; economic incentives, including WTO membership, for Iran; and the introduction of sophisticated analysis of security issues, in Persian, in order to deepen debate in Iran.

While the Syrian government denies having weapons of mass destruction, some US officials label Syria as a major WMD threat. The truth is likely in between. Regarding Syrian security perceptions, however, it was stressed that Syria feels itself surrounded by the US (in Turkey and Iraq) and Israel. The latter being a nuclear power, Syria felt compelled in the 1980s to narrow the asymmetry in power by developing a chemical weapons (CW) capability. Moreover, with Syrian conventional military forces eroding, CW are seen as a necessary deterrent. Syria also feels itself singled out by the US, and believes that American policy must treat countries equally and do far more to achieve Israeli-Palestinian and Middle East peace so as to negate the need for regional states to develop WMD.

There are strong feelings in the region about American 'exceptionalism' when it comes to US support for Israel and the Sharon government. Participants advocated the need for increased international aid and support to help establish a stable regional order in the Middle East (à la post-war Europe). Continued disorder in the region, coupled with the risk of terrorist acquisition of WMD, could have disastrous consequences.

The "constructive ambiguity" surrounding Israel's nuclear weapons

posture was thought to be neither 'constructive' nor 'ambiguous'. Nonetheless, public support in Israel for the need to rely on nuclear weapons for Israel's existential security remains very strong, and the country is not likely to give up that deterrent any time soon. In addition, it was noted that Israel continues to be made a scapegoat for continued instability and the lack of modernity in Arab countries. A rejoinder noted that, if Israel committed itself to an equitable peace settlement with the Palestinians, it could call the bluff of Arab authoritarian governments who continue to blame Israel for all the ills of the Arab world.

There was lengthy discussion of the interaction between progress towards peace and stability in the Middle East on one hand, and the creation of a WMD-free Middle East on the other. Is the latter entirely dependent on the former, or can the two proceed in parallel, with mutually reinforcing steps between them? One proposal called for Israel to admit its nuclear deterrent and announce reductions in its nuclear forces, to the level of a minimum deterrent, as a confidence-building measure.

More broadly, it was noted that some positive developments have occurred towards a Middle East free of weapons of mass destruction, notably in Iraq and Libya, but also in terms of clarifying Iranian intentions and IAEA efforts to achieve a solution. The question now is how to maintain this modest momentum. One step could be greater explication of Israel's conditional support for a WMD-free Middle East. Conversely, Iranian acquisition of nuclear weapons would be a major setback, and Iran's neighbors in particular

need to join the international community in speaking out on the issue.

In examining other aspects of strategies to promote a WMD-free Middle East, various *disincentives* to the acquisition of nuclear, chemical and biological weapons were mentioned. First, it was noted that possession of such weapons are no guarantee against state collapse, witness the Soviet Union. Second, various UN resolutions (nos. 687, 1441, and 1540) at a minimum strengthen international norms against acquiring WMD, particularly in the context of the Middle East. And third, nations that currently possess, or seek to possess, nuclear weapons in particular need to be mindful of the associated risk that such proliferation will likely make it easier for terrorist, non-state groups to acquire such weapons.

Prospects for a Middle East WMD-free Zone

The second session began with an overview of efforts to promote a WMD-free zone in the Middle East, beginning in 1974 with a Middle East nuclear weapons-free zone proposal submitted to the UN General Assembly by Egypt and Iran. This was followed in 1980 by agreement in principle from Israel on such a concept, but only if implemented through direct negotiations. In 1990, Egypt broadened the proposal from nuclear to all weapons of mass destruction, and this was followed in 1994 by a draft treaty from an Arab League expert group. The 1995 NPT Review Conference endorsed the concept of a WMD-free zone in the Middle East, several Arab countries joined the NPT regime in 2000, and there was a further resolution on these issues to the UN Security Council in 2003.

Discussion returned to the basic dilemma, how to move forward with attempts to eliminate WMD in the Middle East in the absence of an Israeli-Palestinian peace agreement in particular, and broader reconciliation between Israel and her neighbors in general? The Middle East was noted for being the 'black hole' of arms control agreements, yet peaceful relations between states has not been a necessary pre-condition for arms control and confidence-building agreements. The US and Soviet Union signed the Biological Weapons Convention (BWC) in 1972, long before the end of the Cold War. Similarly, could Israel not sign and ratify the BWC and the Chemical Weapons Convention as a means of making progress that could be reciprocated by the Arab states and Iran? There was much support in the discussion for a series of mutually-reinforcing steps that could help build momentum toward a WMD-free Middle East. Similarly, verification and transparency measures will be exceedingly important, and much work needs to be done now to explicate them.

There was also discussion of how to reduce the motivations for acquiring such weapons in the first place, or giving them up if already possessed. Security architectures for the region, external security guarantees, even extending the US nuclear umbrella to countries in the Middle East were all mentioned. One question was whether Israel might be more willing to give up its nuclear weapons if by doing so a comprehensive framework was put in place that greatly reduced the risk of terrorist groups in the region acquiring such weapons through state sponsors. The point was also made that distinctions need to be made between nuclear weapons on the one hand, and chemical and biological weapons on the other, with priority given to eliminating nuclear weapons.

Other points mentioned included focusing on controlling nuclear materials in the region, e.g., instituting safeguards at facilities such as Dimona in Israel and at similar facilities in the Arab countries and in Iran. Proposals were made for internationalizing the supply of nuclear fuel and

the receipt of nuclear fuel waste for all countries, including Israel, similar to the concepts advanced for ensuring Iran of a supply of nuclear fuel should that country wish to proceed with a civilian nuclear capability under full IAEA safeguards.

The session concluded by returning to the basic issue of ways that Middle East peace and disarmament could reinforce each other. Given ongoing conflict in the region, unilateral measures will be difficult for any country to undertake, thus the importance of identifying mutual and reciprocal measures that could begin to build a modicum of trust between the parties while advancing the goals of ending the Israeli-Palestinian conflict, building stable relationships between Israel, the Arab countries, and Iran, and promoting public confidence in such relationships. To that end, a proposal was made for a UN-sponsored conference on creating a WMD-free zone in the Middle East that could explore modest concrete steps that could advance the goal of a more peaceful and stable region.

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12th Pugwash Workshop on the Middle East: *Prospects for a WMD-free Zone*

New York, NY, 23 July 2004

Report by

Adam Judelson

On June 23, 2004, Pugwash held a meeting at the Woodrow Wilson Center in Washington, DC on the issue of the Middle East and Weapons of Mass Destruction (Pugwash meeting no. 296). Given the inability to attend of participants from Iran's Mission to the United Nations, because of US government travel restrictions, Pugwash felt it important to hold a follow-on meeting in New York that could more fully explore Iran's position on these issues and the prospects for moving towards a Middle East free of weapons of mass destruction. The July 23 meeting was held at the offices of the Rockefeller Brothers Fund in New York, and Pugwash is grateful to Priscilla Lewis and the staff of the Rockefeller Brothers Fund for their hospitality and cooperation.

A total of 22 participants from four countries attended the meeting, which consisted of a single panel session and discussion. The panel addressed regional threat perceptions, nuclear energy production, and international concerns over existing and future nuclear weapons in the Middle East and Persian Gulf region.

Regional themes

Discussants argued that the best approach to Middle East disarmament and nonproliferation is through incremental steps, rather than through comprehensive frameworks. Attaining the signatures and ratification of countries in the region of the NPT, the Additional Protocol and other treaties forbidding WMDs must be considered as a fundamental goal. WMD procurement, as a general rule, is counterproductive and destabilizing for states in Middle East. As a matter of deterrence, conventional forces have amply kept the peace, whereas nuclear weapons draw considerable negative international attention not conducive to economic progress and social development and most importantly to peace.

Regarding the future of the non-proliferation regime, the situations of the various Middle Eastern States provide different models by which to evaluate how best to strengthen non-proliferation strategies. The fact that Israel already has a nuclear weapons capability only complicates the future and represents a formidable obstacle to disarmament in the region.

With Iraq and Libya no longer poised on the threshold of acquiring nuclear weapons, Iran is now a central issue confronting the IAEA and the United Nations in terms of the viability of the NPT. With Iran asserting its right to pursue a civilian

nuclear program, in conformity with the NPT, the issue becomes one of how to ensure that this civilian nuclear capability stays clearly separated from a military nuclear capability.

Iranian policies

Iranians strongly believe in their right to acquire and develop nuclear technologies. Despite Iran's extensive oil and natural gas reserves and production capabilities, the Iranian leadership asserts that nuclear power holds great promise. While it is true that, in terms of energy yield, "one pound of uranium has as much energy as three million pounds of coal," this incredible generating power comes with serious drawbacks: nuclear power plants are expensive, radioactive waste is difficult to dispose of safely, and working on such plants without total disclosure attracts extremely negative international attention. Despite these disadvantages, Iran seems bent on pressing ahead to complete its nuclear reactors at Bushehr. Despite strong pleadings from the international community, Iran plans to continue Bushehr, because, as one participant noted, "Iran won't be pushed around."

At the forefront of international concerns is the belief that Iran's nuclear facilities may be intended for weapons purposes rather than for energy production. Some participants

disagreed with these perceptions, arguing that Iran's nuclear aspirations include only visions of efficient energy production capabilities. In addition to a desire for nuclear energy, motivations for proceeding with the Bushehr reactor also stem from an Iranian aversion to being submissive to external pressures (particularly Western ones). Iranians purport to be ready to comply with all international demands regarding nuclear weapons, but refuse to derail their energy production efforts.

In defense of Iran's alleged peaceful motivations, some discussants noted that the bomb would actually be counter-productive for Iran's security. Informal polls taken show that many Iranians believe that nuclear weapons have no strategic value for Iran's security. In a country where 70 percent of the population is under the age of 30, and where priority needs to be given to development, jobs, and economic stability, the domestic and external costs associated with pursuing nuclear weapons would undermine Iran's future. In this regard, what Iran needs most is stability and a fuller integration into the international community.

Weapons-grade enrichment

Discussion shifted back and forth between national prestige and energy as the main motivations for Iran's nuclear program, and both need to be taken into account in determining how to deal with Iran's nuclear policy.

In order to ensure that Iranian enrichment capabilities do not exceed those needed for civilian power purposes, there have been international proposals that Iran purchase its reactor fuel from Russia. Iranian officials have rejected such proposals, saying they do not want to be subjected to

potentially inflated prices and the uncertainties of a single, external source of supply. There have also been calls that Iran implement "proliferation resistant technologies." For example, there is the once-through fuel cycle, which lowers the amount of highly enriched plutonium produced during energy production by eliminating the reprocessing component of the fuel cycle. Since Bushehr already makes use of low enriched uranium (under 20%), adding another technical proliferation barrier could make Iran's nuclear activities even safer while preserving energy production possibilities.

Providing the means whereby Iran could pursue these more proliferation-resistant technologies would help demonstrate whether the Tehran's main objective is civilian nuclear power or the ability to develop nuclear weapons. On the one hand, Tehran has indicated a willingness to send its spent fuel to Russia, and thus Iran remains frustrated that its civilian reactor project has garnered so much criticism, especially when Iran is a party to the NPT and has signed (but not ratified) the Additional Protocol. On the other hand, the fact remains that, once operational, Bushehr could produce an estimated 30 bombs worth of plutonium each year.

Exceptionalism

During the roundtable discussion, much criticism surfaced of Western policies and especially double-standards in dealing with Israeli nuclear weapons on the one hand and the prospect of additional nuclear weapons states in the region on the other. Participants criticized US policies that are seen as imbalanced in terms of sanctions vs. incentives; i.e.,

that sanctions are imposed on countries like Iran that may be moving toward acquiring nuclear weapons, when no such sanctions are levied on Israel, which already has them. Moreover, many in the world feel that the US and other nuclear weapons states are not moving expeditiously enough to fulfill their NPT obligations to greatly reduce their own nuclear weapons arsenals.

This last contention was disputed by some, who pointed to the agreement in 2002 by Presidents Bush and Putin to reduce their respective nuclear arsenals by two-thirds, down to between 1,700 and 2,200 warheads each, by 2013. This effort, received in the United States with bipartisan support, will certainly prove, it was argued, to be a positive thrust toward nonproliferation objectives.

Whether or not one believes that the major nuclear weapons states are fulfilling their NPT obligations to greatly diminish the role of nuclear weapons in their defense policies, it was pointed out other countries will find it difficult to take significant first steps towards a Middle East free of WMD's so long as Israel maintains its current nuclear arsenal. Not surprisingly, the issue of Israeli 'exceptionalism' dominated much of the discussion. Participants argued that "If Israel does not have to disarm, why should Iran? Or any country in the Middle East?" Should Arab states and Iran rethink their participation in international treaties to which Israel is not a full party? Regarding the issue of threat perceptions, some participants claimed that the security environment for which Israel acquired such weapons no longer exists. The so-called existential threat to Israel is a myth, many argued.

Others countered that the existential existence of Israel is still challenged by many in the Islamic world, despite a great reduction in the conventional military threat faced by Israel from earlier decades. Islamic extremists in a number of political and terrorist organizations throughout the region continue to challenge Israel's right to exist as a Jewish state in the Middle East, and many of these organizations receive substantial support from countries in the region. Of course, it can be debated whether Israel's nuclear deterrent has any utility in protecting Israel from these extremists; indeed, many argue that Israel's nuclear weapons are counter-productive, as they provide a ready pretext for others in the region to acquire such weapons.

Complicating all discussions of how to reach the goal of a WMD-free Middle East is the conundrum of whether peace in the region first requires progress on WMD, or whether a resolution of outstanding issues between Israel, her Arab neighbors, and Iran is the prerequisite for progress on eliminating weapons of mass destruction.

One suggestion proposed for resolving this conundrum was to extend the nuclear umbrella (presumably that of the US) to all states in the region as a means of reducing the incentives of any one state for either keeping or acquiring nuclear weapons. Others dismissed this pro-

posal, arguing that extending the nuclear umbrella to the Middle East would contradict the very goal of establishing a region free of weapons of mass destruction.

A fundamental difficulty of dealing with nuclear issues in the region is the very different nature of the states whose policies are key to advancing the cause of non-proliferation. While Israel is considered 'exceptional' for the free ride it enjoys on nuclear weapons issues, Iran in some ways is an 'exceptional' state as well for its support of groups that deny Israel's right to exist. In addition, policymaking decisions in Iran are far less transparent than in many other countries, thus complicating international understanding of basic motivations. For all these reasons, Iran is treated differently from a Japan or Sweden when it asserts its right to full access to civilian nuclear power technologies.

Confidence building measures and future relations

Discussants did agree that confidence building measures must be undertaken by the United States and Iran to improve relations in an effort to avert a world with even a single additional nuclear weapons state. Suggestions for cooperative efforts between both states and non-governmental organizations included:

1. Exchanging best practices on the protection of dangerous nuclear material;

2. Cooperating on issues of common interest, particularly quelling terrorism, i.e. cooperating on border crossing and monitoring technologies;

3. Scientist to scientist talks, similar to those between the US and Soviet Union up through the 1980s that helped lay the groundwork for cooperation rather than competition with the end of the Cold War;

4. Opening emergency lines of communication, and establishing cooperative watch centers etc.;

5. Encouraging NGOs to translate strategic analyses and literature into Arabic and Farsi to help span the cultural chasm that currently impedes full and open dialogue;

6. Continuing efforts at track II dialogues that promote transparency and confidence-building.

Progress on creating a Middle East free from weapons of mass destruction will require patience and numerous incremental steps that, over time, can serve to establish a minimum level of confidence between the parties. In parallel with efforts to resolve the Israeli-Palestinian conflict and the promotion of regional security frameworks, the Middle East region could move away from the chilling prospect of future conflicts involving the use of nuclear weapons.

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Threats without enemies: the security aspects of HIV/AIDS

A second exploratory workshop

Mabula lodge, near Warmbaths, Limpopo, South Africa, 25–28 June 2004

Hosted by:
South African Pugwash Group

Report

*compiled by Gwyn Prins
assisted by Barry van Wyk and
workshop participants,
edited by Euníce Walker*

On entering the new millennium, the Pugwash Council considered how to interpret the basic mission of the Movement in view of many new threats to international peace and security. These new threats—of which HIV/AIDS is a case in point—cannot easily be attributed to a specific enemy, if at all: they are threats without enemies and the more insidious for this fact.

Aware of this, the Pugwash Council agreed to the proposal made by the South African Pugwash Group to convene two exploratory workshops to examine different dimensions of the HIV/AIDS pandemic as a security issue.

The first of these workshops took place in the Western Cape province of South Africa in February 2004. The report and selected materials are available online.

The second workshop delved deeper into and extended the agenda of the first. Seventeen experts gathered at Mabula Lodge in the Limpopo province of South Africa in late June 2004 to engage the Pugwash principle

of “thinking in a new way” on the HIV/AIDS pandemic. Pugwash gratefully acknowledges support provided by the Rockefeller Brothers Fund for this project.

As is the convention at Pugwash gatherings, the workshop was held under the Chatham House Rule on a non-attribution basis with all the participants representing themselves as individuals only. Disciplines represented at the workshop included political science, military and historical studies, virology, medical physiology, surgery and general medicine, national intelligence analysis, development economics, biochemistry, security analysis, defence planning and humanitarian assistance. Through the lens of the Pugwash Mission, these disciplines were focused onto a wide agenda, described below. As the workshop progressed, it was generally felt that the very act of combining disciplines that would otherwise rarely if ever meet, produced absorbing, informative sessions and novel insights. The workshop also gave rise to practical outcomes and an agreed impulse for a further workshop to review progress in 2005.

HIV/AIDS as a security issue

Professor Gwyn Prins of Columbia University and the London School of Economics and Political Science

(LSE) introduced the opening session. He set the context for the workshop and primarily described the evolving policy debate on the construction of HIV/AIDS as a security issue.

In 2005, it will be the fifth anniversary of the UN’s formal recognition of HIV/AIDS as a security issue. With the passing of Resolution 1308 on 17 July 2000, the Security Council forged a direct and formal link for the first time between its responsibility for maintaining international peace and security and the HIV/AIDS pandemic.

It was argued that, in a narrow construction, HIV/AIDS needed to be considered on a par with other conventional defence or security issues especially in the regions currently worst afflicted. The military, police and other key civil servants are in the very eye of the storm: as other aspects of governance and civil society are weakened by the vicious spiral of poverty and pandemic illness, the importance of these agents normally becomes enhanced. However, in sub-Saharan Africa, precisely these agents are preferentially affected. An illustration of this debilitating process was the example given of Ugandan soldiers who were sent to Cuba. Upon arrival it was established that a large proportion were HIV-positive.

HIV/AIDS poses a serious

methodological test for security analysts. By definition, the epidemic requires a multivariate analysis. As a long-term phenomenon—HIV/AIDS is savagely unusual in that it hits three generations simultaneously and, based on epidemiologist Professor Roy Anderson's calculations, will challenge humanity over a minimum of 130 years—it falls completely outside the attention span of policy makers and politicians. It is thus difficult to persuade policy makers to entertain the requirements for HIV/AIDS analysis, for these are not always commensurate with the dictates of "common sense" or conventional instincts. Yet, the analysis dimension of the HIV/AIDS pandemic is vital and was further discussed during two sessions towards the end of the workshop.

South Africa, it was noted, is currently at the epicentre of the HIV/AIDS pandemic. It was argued that, consequently, South Africa's response is not only important for its own progress and survival, but that the success or failure of the encounter between one of the world's most important current social experiments and this pandemic has wider global significance. South Africa—where a degree of moral courage and maturity is evident—is definitely a suitable place for a constructive debate on and engagement of the security concerns associated with HIV/AIDS.

Current statistics indicate that the first wave in Southern Africa is now approaching the end of its first phase. The "death" phase follows. A rising second wave of the global epidemic is set to confront the Asian sub-continent soon, as well as North-East and West Africa. Ironically, the epidemic in Ethiopia is currently exacerbated by the *cessation* of the conflict with

neighbouring Eritrea. During the conflict, soldiers were physically confined by the war, but with the advent of peace, soldiers and followers have returned home and have taken the disease with them. This observation was met by the weary despondency of one participant: the epidemic is caused by war; the epidemic is also caused by peace, he noted. So what should be done?

Further examples were given of the complexity of the issues involved in the pandemic. The downplaying of the scale of infections in India by the government AIDS commission led by Mrs Datta-Ghosh when compared to the opinion of most international experts is of a different source to the "denialism" encountered in South Africa, where the country's President is on record doubting the aetiological mechanism linking HIV to AIDS. This is not the case in India; rather the impulse appears to be a mixture of national pride with irritation about foreigners' decreeing what should be done. The impending threat of HIV/AIDS to the sub-continent, however, makes the present moment cru-

cial in trying to contain HIV/AIDS.

It was emphasised that the gross number of infections does not necessarily correlate to the scale of the security threat. It is not the absolute number of infected people that is crucial, but rather the prevalence rate. Beyond this, once the situation is openly and accurately described, a second hurdle must be overcome. Increasingly, as a result of money from PEPFAR (the current US President's Emergency Plan for AIDS Relief for the 14 most affected countries) and from the Global Fund (importantly, also leveraged in part by PEPFAR), it is now not a lack of money that becomes the problem, but rather a lack of capacity to absorb and apply such funds quickly and in large enough quantity in many affected regions relative to the task at hand. Money will always have some effect, but it can dangerously morph into a distorting and disruptive corrupting agent, rather than a means for salvation and relief. Despite the refusal of many AIDS activists, such as Professor Jeffrey Sachs (who advises Kofi Annan on the UN's Millennium



Andy Mogotlane, Col. A.J. Loubser, Bob Mtonga

Development Goals) to accept the point fully, capacity-building in the face both of the loss of skilled personnel and the preponderant role of the informal over the formal sectors in the political economies of many post-colonial new states, has become an international facet of HIV/AIDS intervention that is increasing in importance and that cannot be avoided.

During the second wave of the global HIV/AIDS epidemic—of specific significance to the broader construction of security in sub-Saharan Africa, and more widely via the oil markets—HIV/AIDS is set to have a substantial impact on Nigeria. Currently, the country seems to have prevalence rates similar to those in South Africa in the mid-1990s (11–13%). At the same time, West Africa is set to become strategically much more important to the United States, primarily due to its informal but increasingly well-publicised strategy of diversification of oil supplies. Currently, 14% of US oil is imported from West Africa. If the international price of oil remains consistently above US \$20 bbl (at the time of writing, the price is spiking to unprecedented levels of more than twice this), West African offshore oil will become profitable and will perhaps supply as much as a quarter of US oil within 15 years. As a result of intensified exploration, more new oil reserves have been found in and off the Congo and Niger deltas than anywhere else in the world in recent times. The increased strategic importance of West Africa, however, will occur concurrently with the second wave of the HIV/AIDS pandemic in Africa, specifically in this region. There will undoubtedly be a severe “tipping point.” When the new roy-

alty income coincides with rising infection rates and eroding governance and civil society functions, will this income be used as a force for good, or will it simply help to pour petrol onto the flames of civil war that have subsided but have never been quenched, for example, in the Congo basin?

Central and Eastern Europe are also in the second wave. The Eastern

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and Central European epidemic has been greatly exacerbated by another irony: the liberalisation of society (*glasnost*) following the collapse of the USSR. Increased promiscuity resulted from this collapse, and the epidemic also spread outwards from the emptying prison systems where it had brewed among drug users and as a result of homosexual sex. In the “stans” of the former Soviet Union, oil and AIDS are becoming conjoined, in a similar way as in West/Central Africa.

The third wave of the global HIV/AIDS epidemic is the one that will confront China. The workshop was reminded that the aetiology was quite different, with the role of blood-selling in the 1990s an unusual driver in the Chinese countryside.

Knowledge of HIV/AIDS and its virological, epidemiological, political

and social constructs has been steadily increasing for the last 25 years. Now, however, the dimension of HIV/AIDS as a security issue has been added. Richard Holbrooke, the former US Ambassador to the UN, was the first to call for the recognition of HIV/AIDS as a security issue and was instrumental in the passing of Resolution 1308 of the UN Security Council.

Countries with advanced HIV/AIDS epidemics may face particularly severe challenges arising from grave reduction in the average life expectancy. The will of people to reproduce comes increasingly into question. Yet, the history of Southern Africa reflects people with the most phenomenal capacity to survive, to live physically and socially, and to maintain the coherence of the moral community in the face of extraordinary stress. After surviving apartheid and its distorting effects in the region, this resolve now has to be applied differently to face the challenges of HIV/AIDS. While acknowledging the strength of this sad inheritance, one participant cautioned several times of the danger that the mobilization of social and political energies might be compromised or deflected if the language used to portray the threat posed to society was not carefully attuned to local sensibilities. This, he suggested, was an important part of the success in the popular mobilization in Uganda.

Professor Prins then introduced another issue that was to run prominently throughout the workshop. Policy makers are only activated by indicators and warnings that signal thresholds. An HIV/AIDS prevalence rate of more than 10% has recently been suggested (by David Gordon, now Deputy Director of the US

National Intelligence Council) as a threshold to trigger the collapse of a state. Yet, the validity of the 10% threshold is open to debate, since a 10% prevalence in Botswana, for instance, did not trigger the collapse of society. In effect, as Gordon himself has stated, the 10% threshold concept requires engagement and debate on political, social and micro-biological levels.

HIV/AIDS statistics: thoughts about knowledge, complexity, cost and value

The problems and potential of the rapidly evolving world of HIV/AIDS statistics, including the question of establishing validated indicators and warnings, were examined in the next session. Professor Tony Barnett, ESRC Professional Research Fellow of the Development Studies Institute, London School of Economics, introduced the session.

What most epidemiological statistics seek to represent, Barnett maintained, is seroprevalence, i.e. the percentage of a susceptible population known or assumed to be infected with a disease agent. It follows, therefore, that the course of the epidemic depends on the relation between the density of susceptible people and the density of infectious individuals. The critical variables to probe are whether the epidemic curves indicate a generalised or a concentrated epidemic; whether they are rising or declining; at what rate they are fluctuating; when they will peak; and whether endemic disease progression might result in “aftershocks” or new outbreaks.

HIV/AIDS epidemics can be classified as *low-level* (in which no single group has a prevalence rate of more than 5%); *concentrated* (in which

prevalence rates among pregnant women in urban areas remain under 1%, but certain high-risk groups have breached the 5% prevalence rate); and *generalized* (in which prevalence among pregnant women remain consistently above 1%).

In low-level and concentrated HIV/AIDS epidemics, prevalence estimates are based primarily on surveillance data collected from intravenous drug users, sex workers, men who have sex with men, STI clinics, mobile groups, and pregnant women attending antenatal clinics. For the prevalence rate to be determined, an estimate of the size of each of these groups also needs to be provided.

Generalized HIV/AIDS epidemic prevalence rates, however, are based primarily on surveillance data collected from pregnant women attending antenatal clinics. This data is then assumed to be broadly similar to HIV/AIDS prevalence among men and women aged between 15 and 49 in the community. What these estimates do not consider, however, is the probability that HIV-positive women are less likely to attend antenatal clinics. They also make certain distinct assumptions on the number of sexual partners of men and women. It is important to note that risk behaviour never occurs in a vacuum, but always in a risk environment, and this environment can aggravate or alleviate risk behaviour to various degrees. Indeed, this point is quite vital, and Barnett stressed the degree to which the vulnerability of at-risk populations is closely linked to the scope of their life choices; and the poorer people are, the more restricted these choices become. Poverty puts people at risk from HIV/AIDS, especially from cruelly vulnerable constructions of sexuality: male machismo as a means of coping with

danger and powerlessness; young women driven to sell unprotected sex for mere survival.

There has been much heated debate, especially in South Africa, on the reliability of the statistics underpinning key policy choices. Much of the criticism is misinformed, Barnett maintained, and he therefore spent some time explaining how the estimates are constructed. Nothing was secret, he explained. The models utilised and the assumptions incorporated into the estimation of national HIV/AIDS prevalence rates are peer reviewed, in the public domain and widely debated in various journals and media. Once national HIV/AIDS prevalence estimates have been determined, they are compared with community and population surveys. The data is then incorporated into the UNAIDS database and, in conjunction with UN Population Division data, is then utilised to compile global epidemic estimates of new infections, mortality and prevalence rates using the Spectrum model. The US Bureau of Census is an especially important global resource. It maintains an online HIV/AIDS surveillance database, which forms the basis for the UN country sheets and global report.

Contrary to the suggestions of conspiracies by Rian Malan (who had agreed to attend the first workshop but then, without prior explanation, failed to appear to defend his take on the issue), all HIV/AIDS statistics are peer reviewed and are progressively being refined. As with all data, however, “accuracy” is within a range, and as with all models, the outputs vary according to the assumptions that are incorporated. One key question to probe is whether the prevalence rates are showing upward or downward trends.

HIV/AIDS is a long-wave disaster because it has such a long incubation period in which the major shaping influences are rooted and growing before the magnitude of the crisis becomes clear and before any significant response can be launched. It is therefore of crucial importance to establish these trends by using the available statistics.

To understand the implications of HIV/AIDS statistics, it has to be recognized that a conventional economic approach to the assessment of impact has distinct limitations. These limitations have security implications because they affect how resources are distributed and they impact the assessments of urgency and of timescale. In the 1990s, environmental issues suffered a similar fate, when conventional economics systematically excluded from view the “externalities” of costs. Here, as there, the need is to make the “externalities” visible “internally”. As participants noted, this is similar to what Green Economics seeks to do (in the successive volumes of the *Blueprint for Sustainable Economics* edited by David Pearce and colleagues during the 1990s). In large measure, the issue is also similar to that which has plagued development economics, which fail to take account of the nature and role of the “informal sector.”

As an example of the partial picture given by a conventional economic assessment, a book entitled *The impact of HIV/AIDS on labour productivity in Kenya* (by Fox et al) was used as illustration. The book delineates the corporate bottom line, and does not adequately concern itself with “external costs.” It illustrates how Kenyan workers often bring unrecorded “helpers” along, as decreased attendance and output may

put sick workers in jeopardy of losing their jobs, and also imposes financial burdens on employers. With “only” a 6% national HIV/AIDS prevalence rate in Kenya (a more robust figure calculated from national sero-survey data than the previous UNAIDS estimate of 15% extrapolated from those attending antenatal clinics), HIV/AIDS is taking its toll on commercial agriculture in Kenya and affecting the income of workers and the foreign exchange earnings of the country.

This implies a serious impact on economic costs. But who really carries those costs? Kenyan tea pickers, for instance, are eligible for paid sick leave and annual leave and receive a service gratuity upon reaching ten years of service for the same company. Yet, they are not entitled to receive retirement, death or disability benefits. Moreover, in the commercial sector in 2003, the monthly income of a Kenyan tea picker was US \$48. The reality is people working for low incomes with little in the way of social support beyond their own households and communities until they have worked for ten years for the same company. This may be a very difficult threshold for most people to achieve. In addition, workers on Kenyan tea plantations support their dependants and are supported by them in turn. In other words, their presence in the tea estate is intertwined with complex processes of social and economic reproduction elsewhere.

What of excluded “external” costs? When the non-wage sector is unable to function effectively because of a disease, a whole series of costs accrue to Kenyan society, as indeed to any society under threat from this epidemic. These costs are impossible or very difficult to calculate and may include the costs of dying and of sub-

sequent orphan care. Losses of social infrastructure also carry a steep price. In the longer term, costs further accrue to communities and to the country as a result of large numbers of poorly socialized people who have grown up as orphans.

Another example of excluded costs refers to so-called “hedonic losses”. This describes costs incurred as a result of the emotional trauma and the loss of happiness associated with HIV/AIDS. The inclusion of hedonic losses in economic calculations will inevitably alter the benefit-to-cost ratio of standards of care. In addition, the hedonic effects of large numbers of orphans on the future of any region are bound to be severe. Apart from hedonic losses, the loss of relational goods (i.e. relationships viewed as “goods” and thus lost relationships as a consequence of HIV/AIDS viewed as “costs”) also needs to be considered. In this regard, the variables of cost against return, value measured against benefit, the time period, and the unit of analysis all need to be weighed up.

What can be said then of the responsibilities of conventional economists? Their problem is familiar. Science asks strictly delimited questions, and hence many economists strive to maintain the “scientific” status of their answers. In offering policy advice, economists and politicians either forget the strict limitations of their arguments or extend them inappropriately, or they exclude variables as external to their necessary dataset, which are then ignored, and may lapse into denial by allocating variables to certain “externalities” that remain unanalysed.

In conclusion, it can be said that HIV/AIDS statistics reflect the normal problems of sampling and repre-

sensitivity, but that the urgency and severity of the subject make it especially important to clarify any issues. This must be done in a way that will deny those who seek to avoid confronting the pandemic the opportunity to hide behind supposedly confusing data. It was put forward that HIV/AIDS projections depend on model assumptions, and that these, the data and the models are peer reviewed. If prevalence rates are high and/or curves are rising, the impact must be fully analysed: both the “internalities” and the “externalities” must be in view. Conventional economic techniques, however, tend to underestimate costs and to exclude many vital but non-quantifiable effects of the impact of the epidemic. This, in turn, will by implication limit understanding of the impact of HIV/AIDS and may therefore dull or delay an urgent awakening to its security implications.

HIV/AIDS and the military

The third session of the workshop was introduced by SANDF Colonel Andre Loubser who stressed, as is made clear in his paper accompanying this report, that he expressed personal opinions and only employed data already in the public domain. Loubser indicated that the correct starting point was to match capacity to need. He thus maintained that it was imperative for the military to ensure that it possessed the capacity to fulfil its mandate. The military’s mandate in South Africa is closely tied to the state’s intentions of establishing South Africa as a regional power, and expectations have been raised regionally and internationally for South Africa—with its perceived legitimacy and economic capacity—to fulfil this role. Yet, the military



Capt. Andrew Gibson, a physician's assistant assigned to the 6th Medical Group, examines a young Nigerian girl.
(USAF Photo by Tech. Sgt. Chance Babin)

also has an HIV/AIDS epidemic to contend with, and for this reason the SANDF does health assessments of all new recruits to ensure a healthy deployable force. An HIV test is one of the criteria, as are all other medical conditions that can incapacitate an individual to deploy. This policy is not entirely consistent with the human rights-based approach currently employed in South Africa. However, once an existing member of the SANDF tests positive for HIV, this is managed like any other chronic disease.

The challenges facing the Southern African Development Community (SADC) include the development of effective governance and the creation of a collective security management system in Southern Africa. The creation of the African Union (AU) has underscored various positive opportunities and challenges, but the African continent remains hampered by instability, food insecurity and a poor health capacity, with most governments having neither the will nor the physical capacity to effectively address the HIV/AIDS epidemic.

However, the internal security situation in South Africa is relatively stable, even though the persistence of corruption, crime, right-wing extrem-

ism, unemployment, HIV/AIDS, and perceived problems with transformation, land redistribution, border control and service delivery remain causes for concern.

With South Africa committed to strengthening regional peace and security, the South African government dedicated itself to the planning and execution of peace missions. In this regard, the SANDF would be involved in security projection and intervention in order to facilitate regional conflict resolution. Yet reports in the media (including that subsequent to the workshop, which reported the findings of the Engelbrecht Commission, reproduced below) have projected an HIV infection rate in the SANDF of between 40% and 90%, although a Comprehensive Health Assessment exercise in SANDF units placed the HIV infection rate in the region of 17 to 20%. The assessment also revealed, ominously, that the greatest rate of infection was prevalent among those members aged 25 to 33, thus comprising the rank groups Lieutenant to Lieutenant-Colonel in the officer's grouping and Sergeant to Warrant Officer in the NCO grouping. According to the British All Party Parliamentary Group, approximately 25% of middle management in the SANDF is infected.¹

The implications for deployment and budgetary considerations are painfully obvious and, unless a new approach to the policy for manning force levels in the SANDF is adopted, the financial burden needed to address the HIV/AIDS epidemic in the military is simply unsustainable. In discussion it was argued that if the SANDF will only be capable of deploying one brigade within five years—a calculation made by ana-

lysts by combining the profile of HIV/AIDS infections with the reductions in the overall scale of the military establishment—this will have many implications outside the country, including in regional contexts where South African forces might be expected to take a leading role; for the ambitions of the AU to take on greater responsibilities, for example in the way that it is seeking to address the Darfur crisis in Sudan; for non-regional states that may otherwise have to pick up the short-fall; and hence for the ambitions of the UN to broaden the base of international crisis prevention, peace enforcement and peacekeeping. Moreover, Loubser observed, the implications of exposing HIV-infected individuals to health threats during operational deployment abroad and the resultant strain on logistical services are grave.

The current SANDF policy for the management of HIV/AIDS is principally focused on education and prevention, measures against the discrimination and victimisation of people living with HIV/AIDS, the care and support of those affected and infected, as well as monitoring, surveillance, research and coordination, and intersectoral cooperation. Thus the SANDF disseminates information in HIV/AIDS workplace programmes and mass awareness programmes. As a preventive approach, the SANDF is also engaged in the Masibambisane (Beyond Awareness) campaign to inform, encourage and educate members of the SANDF on HIV/AIDS. It draws on the assistance and expertise of external partners in intervention programmes in the SANDF, and has included HIV/AIDS education and training in the military as part of its mainstream curriculum.

Complete sexual abstinence is considered to be an unachievable goal, and hence the most effective intervention method that the SANDF could employ would be to advocate sober, safe sexual practices. The frank speaking of President Museveni of Uganda with his officers was mentioned and commended in discussion. Abstinence should be seen as a bonus—and this is also the focus of another intervention programme implemented by the Chaplaincy. The SANDF is currently also engaged in Project Phidisa, a clinical research project focused on the management and treatment of HIV infection among uniformed members of the SANDF and their dependants. Although it is important to keep soldiers healthy, it is also essential to the national mission to guarantee that the competence of the security function of the state is conducted reliably by healthy soldiers. This forces a confrontation with the difficult issues of prioritisation, but Loubser was clear in his mind what the priority should be, uncomfortable though this may be. Although the human rights of individuals should be considered, the needs of the state must be given the appropriate weight in this instance.

The SANDF is the state organ used by the government of South Africa to conduct its internal and external security operations. Hence the first priority of the SANDF is to maintain its ability to fulfil this task. HIV/AIDS impacts significantly on this primary responsibility of the SANDF, and thus it is imperative that a strategic approach should be adopted to address HIV/AIDS in a holistic manner in order to ensure that the self-supporting combat-readiness of the military is safeguarded. The emphasis in the management of

HIV/AIDS should be geared towards prevention, and the young officer and NCO (new recruits) should be the primary targets for a mandatory informal and formal preventive training programme. Moreover, life skills training should also be incorporated into this training programme, which in itself should be of a continuous nature and geared to changing attitudes and not only to education. While recognizing the sensitivity of the suggestion (which was extensively and soberly debated by workshop participants) this long-term policy might also be supplemented by a short-term policy in which skilled persons could be drawn into—or most likely be drawn *back* into—the SANDF. This policy should be geared towards the primary operational needs of the organization and might force a delay in the process of making the organisation more representative of South African society. Pragmatism in addressing the security functions of the state is essential. In short, the unprecedented challenge to manage HIV/AIDS in the military requires a bold and unique approach.

In the face of the debilitating effects of HIV/AIDS in the military, the workshop reviewed a variety of options. In particular, it debated the value of making more comprehensive use of private military companies. Yet, the use of these companies was rejected partly due to the fact that there is no legal basis for using them. Maintaining centralised command and control was considered to be operationally very difficult in such a scenario. The more extensive use of retrenched personnel would be a better and more cost-effective option and could best be achieved through temporary or reserve re-enlistments.

The workshop extensively debated

the question of the human rights of serving soldiers. It was observed that all soldiers, when joining up for military service, agree to forego certain liberties, but that in return they expect adequate protection from the authorities that owe them and their families a special duty of care, as signing up for military service does not entail the abrogation of all civil liberties. A specific contract, however, could be signed for specific occasions, because the maintenance of command and control remains essential.

The question of the speed with which the SANDF can match the “colours” of the “rainbow nation” in contrast with simply having the personnel who can “do the job” is a difficult one. Overall, workshop participants declined to see these as mutually exclusive choices. Either end of the spectrum, exclusively, is in fact unacceptable. Other parts of the SANDF are far less involved in HIV/AIDS issues, especially the navy and the air force. The obvious question that needs to be asked is therefore the one with which Loubser began: “what exactly is the SANDF needed for?” Regional tasks will definitely feature prominently in any answer to this question. This triggers a further question: “what type of a country is South Africa?” It is in fact geopolitically and culturally a Western country, but one that has a moral and geopolitical leadership role in its region by virtue both of its transformation into a genuinely multicultural society and because of its unquestioned economic predominance.

Some new environmental medical and virological aspects of HIV/AIDS

The fourth session of the workshop was introduced by Linda McCourt-Scott, from the Department of Bio-

logical Sciences, University of Surrey, and the Department of Community Health, University of Stellenbosch. The presentation was entitled, “Is a deficiency of selenium exacerbating the HIV epidemic in South Africa?” McCourt-Scott introduced the workshop to new and potentially encouraging dimensions in research on the medical aspects of prevention, focusing on the role of one key micro-nutrient.

Selenium is an essential trace mineral required for immune function, antioxidant protection and thyroid hormone metabolism. The South African recommended daily allowance (RDA) for selenium is 55 mcg for adults, although there is some dispute over the sufficiency of this value. Dietary selenium intakes across the world range from high to low, depending on the levels and bioavailability of soil selenium in different geographical areas. Current intakes in the UK and much of Europe, for instance, are well below recommended levels, primarily because of low soil selenium bioavailability due to acid rain and other factors. In addition, many people rarely eat foods that are high in selenium (i.e. brazil nuts, kidney, liver, shellfish and fish) and are therefore mainly dependent on cereal crops as a source of selenium. However, selenium levels in plant foods vary widely depending on the amount and bioavailability of selenium in the soils in which they are grown. While animals require selenium to grow and reproduce, plants do not require this trace element and can therefore thrive in selenium-deficient soils.

There is a dearth of data on selenium levels in plants, animals and humans throughout Africa. The few studies that have been done, suggest

that selenium deficiency in Africa appears in areas with higher rainfall and where the soils are predominantly acid and/or high in iron—all factors that reduce selenium bioavailability. These also represent the main areas in which crops will be grown. With regard to South Africa, extensive areas of selenium deficiency in grazing animals have been identified in kwaZulu-Natal, Gauteng, Mpumalanga and the Western Cape. One small study found that selenium deficiency appeared to be a problem among people living in the former Transkei and Ciskei. An analysis of cereal crops grown in South Africa has shown low selenium content and suggests that dietary intakes may therefore be generally low, especially among populations primarily dependent on plant foods.

Selenium is a critical nutrient in determining the course of HIV/AIDS because of its role in immune function and antioxidant protection. Research suggests that the HI-virus hijacks the host’s supply of selenium for its own antioxidant protection, thereby inducing or exacerbating a selenium deficiency with increasing disease progression. This has dire consequences as it has been conclusively demonstrated that selenium deficiency is associated with much faster disease progression in HIV-infected adults. In addition, selenium-deficient HIV-positive adults are 20 times more likely to die from HIV-related complications than those with adequate selenium status. Moreover, selenium deficiency confers a much greater mortality risk than deficiency of any other nutrient investigated. Recent research also suggests that selenium deficiency may increase the infectiousness of HIV-positive women. Selenium supplementation



Andy Mogotlane, Col. Xolani Currie, Lynne Webber, Tshepo Dibe (Gwyn Prins in background)

dramatically improves T-cell function and reduces apoptosis (cell death), and could therefore prove a valuable treatment adjunct in HIV/AIDS.

Selenium is required for the antioxidant enzyme glutathione peroxidase, a major protective enzyme against oxidative stress. Evidence suggests that HIV-1 infected patients are under chronic oxidative stress, which contributes to several aspects of HIV pathogenesis. A recent study demonstrated that selenium blood levels below 135mcg/L in HIV-infected drug users on antiretroviral therapy were associated with a three times increased risk of mycobacterial (tuberculosis) disease. Levels above 100mcg/L are considered adequate under normal conditions suggesting an increased need for selenium in HIV disease.

It has also been shown that relatively harmless RNA viruses quickly become virulent in a selenium-deficient host. The first crossing over of the HI-virus to humans occurred in the selenium-deficient population of Zaire/DRC, and other dangerous viruses have also emerged from this selenium-deficient area.

Human selenium deficiencies can be corrected through the addition of

selenium to fertilisers, through food fortification, and by taking selenium supplements.

Nutrition as a whole, McCourt-Scott maintained, is a Cinderella aspect of medicine, but it represents an important treatment modality to help support immune function and delay the progress of HIV-related disease. This is especially relevant to the huge numbers of HIV-infected people living in sub-Saharan Africa who will never have access to antiretroviral therapy.

Selenium is important in prolonging the clinical latency stage of HIV/AIDS. Selenium deficiency can be both a cause and effect of disease progression. HIV-positive people with selenium deficiency encounter faster HIV progression and greater mortality, morbidity and infectiousness. It is therefore essential that the selenium status of populations throughout Africa, especially where the HIV/AIDS epidemic is raging, is urgently assessed and dealt with appropriately. Indeed, if the present indications of the research reported by McCourt-Scott are confirmed, selenium supplementation may be a highly cost-effective intervention, because it would strengthen the underpinnings of more general

human security in circumstances where they are stressed already. The mechanism for this would be quite familiar to those involved with public health interventions. Improved resistance to initial infection abates the progression of the epidemic, longer clinical latency abates the socially destructive effects of premature deaths, and both these repair damage to the fabric of civil society. Furthermore, the net reduction in demand on the health budget alleviates the pressure to ignore or to downgrade other public health threats. Finally, a cheap and generalized intervention like selenium supplementation of fertilizers is the most equitable way to support the health status of even the very poorest individuals, since the action is not dependent upon treatment of individuals. Thus there can be a powerful reinforcement of social security. Together these actions relieve the pressures driving towards a traditional security crisis.

The workshop was excited by this work, and plans for accelerated field research in South Africa through collaboration by some participants was one of the practical outcomes arising from the meeting.

Dr Lynne Webber, Clinical Virologist for Lancet Laboratories and associate lecturer at the University of Pretoria and Medunsa, added a different but essential dimension in a riveting presentation that introduced the HI-virus as a (female) personality as a way of dramatising its remarkable ingenuity. This led to a discussion on immuno-biological genetics at the workshop.

This presentation served to raise one of the thorniest of the moral dilemmas about current medical responses to the virus. Because the demands of compliance with a treat-

ment regime of antiretrovirals (ARV) are so severe, and the likelihood of patients being able to meet these unforgiving standards so open to question, it must be frankly understood that “she” (the virus) might employ exposure to ARV like athletes use a training session: to familiarise “herself” with obstacles and to become stronger. Concerns were raised that the impending government antiretroviral treatment (ART) programme might most predictably produce a more drug-resistant virus. Nevertheless, this treatment rollout is currently the best that can be done about HIV/AIDS.

Once a person is on ART, the viral load does indeed recede, but in order to escape the ARVs, the virus already hiding in the genital tracts could follow the career of syphilis and retreat further to the eyes and brain. Recent studies have shown that, within days of HIV infection, “she” (the very capable and superbly designed virus) has already penetrated into the peripheral nervous system. What does this really mean? HIV “hides” away in the nervous system and uses this anatomical region as a “sanctuary site.” It also gives “her” easy and immediate access to the central nervous system (the spinal cord, brain and eyes) where she can lie virologically dormant or evoke physiological and immunological mischief. In short, the ARV rollout programme has both self-evident short-term benefits and potential long-term adverse consequences. Epidemiologically, the best single medical intervention in South Africa is the prevention of mother-to-child transmission. The second most effective medical intervention would be one that empowered women to protect themselves from infection

during sex without the man’s knowledge and in the absence of (or refusal to use) barrier contraception. Viricidal pessaries and creams—even, from some recent Australian research, as simple as the presence of lemon juice in the vagina—could be beneficial in combating a disease which, for mechanical reasons, is one that infects women more often than men.

The development of a vaccine capable of entering and destroying the “power house” of the virus remains a tremendous challenge. The problem lies in the sophistication of the virus’s chameleon-like ability to change its protein coatings with extraordinary frequency, thereby frustrating the ability of vaccines to recognize the target. It is doubtful whether even a concept for the design of a core vaccine is yet identified. However, French advances in developing vaccines that can activate the guardian functions of mucosa were very promising.

These observations led to a vigorous discussion of the social construction of sexuality. It was evident that the employment of the various pharmacological female defence options were predicated upon an assumption of failure to control or curb male sexual demands for unprotected sex (demands painfully documented in Campbell’s field work from Summertown, *Letting them Die*). It all raised a bleak picture of the state of war between the sexes when it is so difficult—even impossible—for the terms of sexual intercourse to be negotiated. Yet, this appears to be the state of affairs in many places. The exceptions thus become vitally important cases for close study—an issue that was returned to in the final session.

Webber made it perfectly clear that, in the human timescale, the HI-

virus will never go away. The virus comes from an ancient (millions of years old) viral family: those retroviruses that have actually evolved along with the development of the cell itself. Retroviruses are thus ubiquitous and humans even have endogenous retroviral “footprints” integrated into their own DNA genome. Does HIV understand mankind’s own immune response and the only defence against viral destruction superbly, and will she always have the “upper hand” in her attempts to evade the immune response? Treatment is currently the best option against the virus, and potent new drugs and technologies are constantly becoming available. Yet, intervention cannot stop at treatment alone: the preventive message has to be stronger.

Webber posed a further problem: “Why has HIV-infection, in all its aspects, become different from any other viral infection?” She illustrated this dilemma by using examples of other viral infections to show that HIV, in the discipline of Medical Virology, is really not unique and shares many of “her” features with other viral infections. A few examples were given to drive home the message. No human herpes viral infections can be “cured,” and these infections stay with the host for life. Certain slow acting neurodegenerative viral infections also have long incubation periods, possibly taking years to kill or damage the host. The Hepatitis B virus (HBV) is a sexually transmitted, as well as a bloodborne infection and 10% of individuals become permanent viral disease carriers. Interestingly, HBV also has the reverse transcriptase enzyme, which indicates that this enzyme is not a unique strategy of HIV alone.

One of the participants in the workshop reflected on the reasons why HIV/AIDS has come to be treated in a different way from any other disease. HIV, the participant maintained, first appeared in homosexual communities in the 1980s, and thus from the very outset the disease was politicized. In effect, with HIV/AIDS, the period of death is deferred long enough to permit considerable further transmission, but short enough to impact significantly on the social structures of a society and a household. It is the length of time from incubation to morbidity to death that is decisive with HIV/AIDS. It is a disease that hits two reproductive and one generational group, and there is thus resonance between the natural cycle of the virus and the natural cycle of society.

HIV/AIDS modelling and analysis

The fifth session of the workshop was presented by Professors Gwyn Prins and Tony Barnett, and was entitled “Operational Analysis and Strategic Analysis techniques: what can they bring?” The session included a presentation in absentia of a sequel paper to that presented at the February Pugwash workshop by Dr Lorraine Dodd, Senior Operational Analysis modeller and mathematician in QinetiQ, a company in the British Defence Science Community.

The underlying basic requirement for analytical methods is to track and explain reliably the relationship between social and political coherence and the experience of pandemic disease. Hence four integral questions need to be addressed in all cases: What *has* happened? What *might* happen? What *could* happen? What *should* happen? The main question, then, for analytical methods is as follows: *What are the appropriate*

modes of analysis to grip this diverse data and make it tractable for effective policy response?

Firstly, the context must be characterised for the purposes of bounding the primary system dynamics and defining the dimensions of the situation space so that effects of interventions can be formally modelled in terms of situation attributes (i.e. number of HIV-positive individuals, HIV incidence rate, HIV prevalence rate, etc.).

The situation attributes must be amenable to quantification (so that they can be used as inputs to secondary dynamic simulations to calculate knock-on effects or impacts), and must also be qualified. Qualification is highly subjective and consists of cost evaluation, which must then produce acceptability assessments (i.e. being OK or not-OK depending on who you are). This process can now be overlaid across the situation space to produce a “cost landscape” (with, for example, certain regions of the landscape space demarcated as “no-go” regions). The analysis can be based on benefits or utility rather than cost: then the desired end-states would be hilltops rather than valleys (this is a little cryptic).

The knock-on impacts will include such effects as a reduction in the strength of the workforce; these are among the invisible “external costs” that Barnett had earlier suggested must be brought into any realistic cost/benefit calculation. Knock-on effects will be more difficult both to quantify (as they are based on complex models of projection) and to qualify. Knock-on effects can be estimated using influence dynamics via “softer” analysis methods that may also include, for example, effects on social morale, community spirit and national pride.

The landscape across which intervention paths can be explored is now charted formally. The landscape is not static and will be subject to changes. In some cases it might be easier to change perceptions of costs and belief systems than it would be to change the situation attributes themselves. Such interventions often create conditions rather than establish end-states whose effects are naturally enduring because they lie in a “real” low-cost region. There is a fundamental assumption that in designing intervention actions, the attempt is at all times to move toward regions of lower cost than the current position.

There may also be firm boundaries such as budget limitations or policy constraints. These can be imagined as forming “brick walls” or out-of-bounds regions on the landscape. Other structural constraints could form easy-going, low-cost “roads” across the landscape. All of these features of the landscape can themselves be the focus for intervention actions. Actions must be formally translated through the medium of a programme of controlled and coordinated activities into targeted changes in situation attributes, and the control space must be fully understood. Intervention actions can then be represented and laid-out formally as routes across the landscape. In this way, actions are literally charted as changes in situation attributes. Put differently, these mapped options are ingredients in forming a plan of campaign to achieve particular effects.

The generating of options for intervention should initially be an unconstrained creative exercise, but should be done after the situation appraisal, in the full and rational knowledge of the landscape over

which any novel paths are being charted. It is vital that the knock-on effects are formally explored because these are the meta-attributes that could form sudden catastrophic cliff-edges in the landscape.

It is because of its capacity for surprising effects—and the AIDS/security nexus explored earlier is a challenging example—that as ill-understood, as socially explosive a phenomenon as this long-wave pandemic demands both dynamic trend analysis and the “snap shot” arresting and problem-posing that scenario methods provide. Such scenario methods were the subject of the final session.

Thinking like a fox (and not a hedgehog)

The sixth and final session of the workshop was presented by Clem Sunter, Chairman of the Anglo American Chairman’s Fund, and was entitled “AIDS modelling and options for action.” In it he outlined the Anglo American Corporation’s analysis of the HIV/AIDS epidemic in South Africa and discussed the ways in which the mining conglomerate had reacted to its understanding of the threat. Taking the title of his recent book from Isaiah Berlin’s famous distinction between the hedgehog (who knows One Big Thing) and the more flexibly minded fox (who can think laterally and creatively), Sunter advocated the virtues of using scenario planning to think like a fox around and beyond the obvious.

Sunter explained that, in common with dynamic trend analysis, scenario planning had a prime information requirement: knowing what you do NOT control. This is what should therefore be considered first. He plotted the situation space thus:

	CONTROL		
UNCERTAIN	Options under your control	Measures Measurable outcomes	CERTAIN
	Key uncertainties Scenarios of outcomes	Scope of the game Players of the game Rules of the game	
	NO CONTROL		

From this he proceeded to define the scope of the HIV game thus, in terms of agents:

PREVENTION

1. Churches (Ugandan case)
2. Teachers
3. Parents
4. Community leaders
5. Charismatic leadership (Museveni)
6. NGOs (e.g. lovelife)
7. Business

TREATMENT

1. Govt SA ART
2. Business (AA has infrastructure)
3. NGOs

CARE

1. NGOs (Noah, Starfish, Heartbeat)
2. Govt (welfare grants)
3. Business (CSR programmes)

And added to this its rules:

1. That HIV leads to AIDS (whatever maverick opinion may say)
2. That it is mainly heterosexually transmitted: so young women are most at risk—the Botswana survey data now finds 50.1% in the 23–29 age cohort to be HIV+
3. That it has a delayed impact
4. That local action counts

These remarks scoped one of the three biggest challenges (unemployment, the HIV epidemic and the issue of land redistribution) presently facing South Africa. When considering the HIV pandemic on its own, South Africa is faced with several certainties and uncertainties. It is these uncertainties that present the biggest challenge: the two key uncertainties are the rate of infection and the response

to the epidemic, with a third wild card thrown in, that of a possible cure and/or vaccine in the future.

Using the two key uncertainties, as well as the actors, scope and rules displayed above, an HIV game board can be constructed to illustrate different scenarios that could occur in South Africa as a result of the present HIV/AIDS epidemic.

	HIGH INFECTION RATE		
WEAK RESPONSE	Graveyard shift SA NOW X	Mass medication 5m x US \$1 500 pppa = US \$7.5bn = R60bn: COSTLY/RISKY	STRONG RESPONSE
	Early days	Response plus Ugandan ABC (Abstain, Be faithful, use Condoms)	
	LOW INFECTION RATE		

Presently, with the high rate of infection and the overall weak response of the country’s government, South Africa finds itself in the upper left quadrant of the game board, aptly named the “graveyard shift,” as the death phase of the epidemic is entered. A strong response by government, like mass medication, as in the present ART rollout programme, should shift the scenario over into the right upper quadrant. The cost of such medication has been calculated at US \$1 500 per person per year, and the government plan is to treat 5 million HIV-infected people in this way (R60 billion rand in total). The pitfalls of high cost and compliance with the programme are just some of the inherent risks in relying too heavily on this scenario on its own to curb infection rates. This leads to a third scenario of a strong response of mass medication coupled to other even stronger responses, that could actually drive the infection rate down, thus moving the epidemic into the lower, right sector of the HIV game board. Such a strong response will rely heavily on the so-called ABC approach to prevention. With the Ugandan experience in mind, the emphasis should largely be on “abstaining” (A), with lesser emphasis on “be faithful” (B) and “use condoms” (C)—unlike the present situation in South Africa, where this prevention drive to date has highlighted C, the use of condoms, only. It is only with a combined strong treatment response and an enormous, effective prevention drive that South Africa will move from the graveyard shift, with all its dire consequences, into a better position and in so doing get a meaningful handle on this epidemic. Sunter described HIV as a miniature weapon of mass destruc-

tion. It leaves everyone with tragic choices.

Sunter had earlier emphasized in his discussion of the available agents, the special importance of churches. They were, he suggested, greatly underestimated in importance if the key requirement was to achieve modifications in the socialization of young people. The point resonated with other participants who noted that the role of churches in bringing about a change in sexual politics in Uganda seems to have been pivotal.

.....
With the Ugandan experience in mind, the emphasis should largely be on “abstaining” (A), with lesser emphasis on “be faithful” (B) and “use condoms” (C).
.....

The age of first intercourse has now risen for young women and their ability to control both sexual debut and the terms of subsequent sex, have improved. None of this is the result of conventional medico-social information. The implication for South Africa, it was suggested, was that the role of the African Zionist churches as agents of socialization, for example, needed to be better understood and valued.

The fourth scenario, the so-called “early days,” of a low infection rate and weak response can best be demonstrated in a remote town like Upington in the Northern Cape province of South Africa, which is off the beaten track and, more importantly, off a main trucking route.

As for Anglo American, the corporation had done nothing about

HIV/AIDS during the 1980s. During the 1990s, the corporation launched prevention programmes. It was only in 2002, however, that the corporation launched comprehensive prevention and treatment programmes for its employees. In 2004, it added to this response by engaging in corporate social investment programmes. Some participants expressed surprise that even with Sunter’s warnings at hand, it had taken the board so long to act.

Some of the key findings of the HIV/AIDS intervention at Anglo American could be instructive on a larger scale. To be most effective, any HIV/AIDS response programme must be driven personally by the most senior officer, e.g. the CEO, of a company. Key performance indicators should measure HIV/AIDS intervention programmes. It can be effective, furthermore, to tie the attainment of these indicators to the remuneration of project leaders. The Voluntary Counselling and Testing programme at Anglo American has seen only 7 to 8% of the staff coming forward to make use of it. In short, such programmes need a proactive champion and a steering committee. Of the entire Anglo American workforce of 134 000 employees, it is estimated that 34 000 employees are currently HIV positive. Yet, only 1 300 employees are on treatment, while 5 000 are actually supposed to be on treatment.

In 1986, Sunter maintained, Anglo American had only four HIV-positive employees. This was the first year that HIV/AIDS was talked about at Anglo American. The reason that there was such belated action was that people at first did not see any discernible effects of HIV/AIDS (i.e. increased absenteeism). The hardest

thing in business is to convince people to spend money on preventing something invisible and intangible. One participant observed that this, in a nutshell, is the way in which a long wave and stealthy solvent of social cohesion, with apparent suddenness, can precipitate destructive trends that can in turn produce threats to international peace and security. But the suddenness is only apparent, not real. Foresight is required; and with foresight and appropriate strategic analysis techniques, warnings and indicators can be fashioned that will work.

Themes, actions, implications

The past two and a half decades have sprung upon the Southern African region—already heavily under stress—the cruel, unexpected and undeserved burden of HIV/AIDS. However, these are exciting times. The workshop heard of cutting-edge possibilities in immuno-nutrition and of viral research that enables everyone to know the enemy better. It learned of new antiretroviral drug development and (as important) innovation in delivery and compliance: the initiation of creative yet functional intervention programmes has also arrived. So—as is the mark of revolutionary moments in history: “It was the worst of times. It was the best of times.” In this regard, South Africans deploy great resources of social resilience, forged in the long hard years of apartheid and tempered by the healing qualities of reconciliation that underpin the achievements of the last decade. The leading edge of this first wave is thus occurring within a social experiment with significant implications for the global community. At the same time, South Africa is called to exercise regional leadership in the context of a deepen-

ing crisis of governance as the post-colonial state settlement unravels in many parts of tropical Africa. At this very moment, its own military instrument is fractured by the impact of HIV/AIDS, and thereby weakened. The pandemic therefore has both a formal, narrow security dimension and a broader, social security dimension—together they compose a truly formidable threat to global security for the foreseeable future.

The Mabula workshop sought to bring to bear the widely multidisciplinary expertise of those gathered within the spirit of the Pugwash Movement: to think in a new way in the face of new dangers to humanity. This report has sought to summarise the principal features of the way in which this new security agenda is unfolding. It ends with a summary account of main points, and a list of steps that workshop participants believe the Pugwash Movement should now take.

Summary of main points in each session

HIV/AIDS as a security issue

- HIV/AIDS is acknowledged as a threat to international peace and security. It should be considered on the same level as conventional defence and security issues in those regions worst hit by the pandemic.
- The difficulty of dealing with HIV/AIDS in political policy-making as a result of its impact over an exceptionally long timespan was underscored.
- The rising second wave of the global epidemic will have a particular security impact in regions such as West Africa where the production of oil becomes lucrative at the time when the epidemic starts to reach crisis proportions.

- The challenge to define thresholds for the epidemic that could activate policy makers requires thorough debate on political, social and microbiological levels.

HIV/AIDS statistics: thoughts about knowledge, complexity, cost and value

- Most epidemiological statistics seek to represent the percentage of a susceptible population known or assumed to be infected with a disease agent (i.e. seroprevalence).
- Statistical models and assumptions are consistently peer reviewed, in the public domain, widely debated and progressively refined. Prevalence estimates are also extensively compared with other surveys.
- Because of the long incubation period of HIV/AIDS it is crucial to establish whether prevalence rates show upward or downward trends.
- A conventional economic approach to assess the impact of HIV/AIDS has security implications if it is used to define the distribution of resources and the establishment of issues such as timescale and urgency. Because of the limitations of this approach, it is difficult to view the “externalities” of costs.
- External costs are extremely difficult to calculate and include costs that accrue to communities and countries over time, such as those as a result of poorly socialized people who grew up as orphans as a result of HIV/AIDS.
- It is crucial to analyze the impact of HIV/AIDS when prevalence rates are high and/or curves are rising. This should bring vital invisible and unquantifiable costs in view, on the same level that conventional economic issues are considered.

HIV/AIDS and the military

- The SANDF is facing serious challenges as a result of the high rate of HIV infection among its soldiers. The state's intention to establish South Africa as a regional power is inextricably intertwined with the military's ability to fulfil its mandate. HIV/AIDS seriously undermines this ability.
- The SANDF's HIV/AIDS management policy currently focuses mainly on education, prevention, anti-discriminatory measures, monitoring, research, cooperation and coordination.
- Long-term intervention should focus on changing attitudes and not only on education.
- In the short term, skilled people could be (re)drawn into the SANDF to ensure that it can continue to fulfil its mandate nationally, regionally and internationally.
- South Africa is geopolitically and culturally a Western country with a moral and geopolitical leadership role in the region. In this context, the SANDF will be crucial in fulfilling regional tasks as part of its *raison d'être*.

Some new environmental medical and virological aspects of HIV/AIDS

- Selenium, an essential trace mineral, is a critical nutrient in determining the course of HIV/AIDS. Selenium deficiency is associated with much faster disease progression and greater mortality risk in HIV-infected adults. It may also increase the infectiousness of women. Nutrition, including selenium supplementation, can therefore have a positive impact on people living with HIV/AIDS.

- In discussing immuno-biological genetics, the danger was emphasized that the severe demands of compliance with a treatment regime of ARVs may lead to people being unable to meet them, thus producing a more drug-resistant virus. Treatment, however, remains the best option against the virus, but without a stronger preventive message, the outlook remains bleak.

HIV/AIDS modelling and analysis

- In HIV/AIDS modelling and analysis, the context must first be characterized so that the effects of interventions can be modelled in terms of the attributes of the situation. The latter must be quantifiable and qualified. It is then overlaid across the situation space to produce a "cost landscape," with the analysis then based on benefit and utility rather than cost. Knock-on impacts are then estimated also by using "softer" analysis methods. This provides the landscape across which interventions can be explored.
- The generation of intervention options should initially be an unconstrained creative exercise, but only after the situation is fully appraised. The formal exploration of knock-on effects is important as these could form sudden catastrophic cliff-edges in the landscape.
- The nexus between HIV/AIDS and security demands a dynamic trend analysis precisely because of its capacity to produce surprising effects.

Thinking like a fox (and not a hedgehog)

- Scenario planning is about knowing what you do NOT control.

- The two key uncertainties about HIV/AIDS in South Africa are the rate of infection and the response to the epidemic.
- South Africa is in the so-called "graveyard shift" where only a strong treatment response and an effective prevention drive will be able to shift it into a better position.
- The role of the churches in modifying the socialization of young people is of crucial importance in addressing HIV/AIDS.
- On a corporate level, interventions benefit from being driven by top management, with programmes managed by proactive champions.

Issues requiring further exploration

- The domestic and regional security consequences of an AIDS-weakened, or an AIDS-protected SANDF;
- The further understanding of the potentials of immuno-nutrition to enhance social security;
- The ethical dilemmas that ARV treatments pose, especially for attempts to introduce enhancements of human rights;
- The integration of dynamic and scenario-planning analyses to better understand potential AIDS futures; and
- Beyond the AIDS/security nexus, using the Pugwash tradition of linking analysis to action to convene a longer "oblong table" of analysts and key agents in the AIDS campaign, particularly from among church leaders, carers and community groups.



Workshop participants

Endnote

¹ Subsequent to the Mabula workshop, the following article was published in the press, providing more up-to-date information that serves to underscore the point being made. “SANDF Unveils Shock AIDS Data” by Jani Meyer. *Sunday Independent*, 1 August 2004, p. 1.

The combat readiness of the South African National Defence Force (SANDF) is under threat, with the latest results of an AIDS project showing that an overwhelming 89 percent of those soldiers who volunteered for testing were HIV-positive. The SANDF is also losing at least 400 000 working days a year because of the disease. This was disclosed at a five-day conference held in Richards Bay this week. Sixteen African countries attended the conference, which was a collaboration between the SANDF and the United States. The aim is to establish the rate of infection and the effects of anti-retroviral treatment on South Africa’s military forces. In the first six months of the project 1 089 soldiers volunteered to be tested, of whom 947 were found to be HIV-positive. The average age of the

sample was 34, and 60 percent of volunteers were married. South Africa cannot test soldiers without their permission. Rear-Admiral JG Engelbrecht said infected soldiers in the early stages of the disease were absent for an average of 20 days a year. This increased to 45 days for soldiers displaying symptoms, and a minimum of 120 days for those with full-blown AIDS. Conservatively, 18 940 days will be lost by the 947 soldiers identified on the programme. The SANDF’s official figure for HIV/AIDS-infected soldiers stands at 23 percent, but AIDS specialists have set a more realistic figure of 40 percent, or about 28 000, infected. With the figure of 23 percent infection, 338 000 days are lost. However, if the figure is closer to 40 percent then the number of working days lost each year rises to a staggering 560 000 days. With the SANDF in the process of downgrading its troop levels—the army has reduced its complement from 100 000 to 70 000—its future looks bleak. Engelbrecht said the government had to decide whether to remove the infected soldiers from combat roles, or whether to remove them when they became too ill to function.

South Africa cannot test soldiers without their permission, except those who accept postings to United Nations missions. The SANDF expects 50 000 soldiers to be tested for HIV during the next five years. Those who test positive will be able to enrol in a programme called Project Phidisa at six army sites around the country. The first tests were carried out on January 19 at No 1 Military Hospital, Pretoria, and at the military base in Mtubatuba. SANDF members infected with HIV/AIDS received their ARV drugs for the first time on February 2. Four additional sites will be opened at No 2 and No 3 Military Hospitals, in Phalaborwa and Umtata, before the end of this year. The Phidisa project was partly prompted by the cabinet’s decision on August 8 last year to provide comprehensive health care for people with HIV and AIDS. The project’s medication budget for this year alone is more than R2-million and it covers only members on the programme. According to Phidisa’s data management co-ordination and operations centre director, Colonel Jabulani Msimang, the project’s budget for the rest of the year is more than R4 million. While the Phidisa project will be used in researching the effects and effectiveness of anti-retroviral drugs, it also paints a clearer, if stark, picture of the extent of AIDS in the armed forces. With South Africa increasingly becoming involved in peacekeeping efforts in the rest of Africa, the risk of exposure to the disease is also increasing. There are 3 000 South Africans doing duty in the Democratic Republic of Congo and other parts of Africa. The UN requires soldiers to be tested before they are deployed on UN missions, effectively sending only healthy soldiers out of the country. This week’s conference painted a very bleak picture of the fighting fitness of the SANDF and highlighted the urgent need for intervention before the army itself succumbs to the country’s greatest enemy—AIDS.

UK Pugwash

The WMD Awareness programme

Hitherto Pugwash has focused on influencing Governments, and its effectiveness has depended on its reputation for absolute scientific integrity. With the end of the Cold War Pugwash can consider an enhanced emphasis on achieving its aims by a second method which was mentioned both in Bertrand Russell's letter that led to the founding of Pugwash (5 April 1955) and in the Russell-Einstein Manifesto, namely influencing public opinion.

Since 2002 Nobel Peace Laureate Professor Sir Joseph Rotblat has publicly and repeatedly voiced great concern about the British public's lack of knowledge of the dangers of the continued existence of nuclear weapons¹. In response, several (currently 14) concerned organisations² have been working together with the aims of (a) raising public awareness of present nuclear weapons policies, and (b) shifting public perception towards the feasibility of a secure world free from the threat of nuclear weapons and nuclear war.

Accordingly we initiated a collaborative awareness project by involving other groups already in the business of influencing public opinion. In pursuing this course we hope to influence public opinion by disseminating established facts while at the same time maintaining Pugwash's reputation for impeccable scientific integrity. The result is the WMD Awareness Programme.

The group realised early on that new approaches were needed if we were to be effective in informing and ultimately involving the public, a view that was strongly endorsed by early public opinion research that the group undertook. A further period of 'constructor group' research³ was conducted in early 2004 on security issues that were of present concern to the public. The results provided a 'map' that we did not have before of attitudes to nuclear weapons, WMD and other security issues. In particular, it showed that the issue was not a simple bipolar one ('you are either for us or against us'), but that attitudes fell into three categories. The first of these—the 'abolitionists'—were very aware of the problems and were likely to have supported organisations such as CND in the

past. A second group—termed the 'resigned' in the research—believes that there is nothing they can do about security issues. Nor do they need to do anything because it is not their place to do so: more expert people are in charge. A third group—the 'sceptics'—have a high level of concern about global insecurity, which they see as driven by a breakdown in trustworthiness of politicians, coupled with a policy of belligerence on the part of the US and UK.

It is on this latter group that the programme has decided to focus. Following the guidelines that emerged from this research, we have developed a new and comprehensive communications strategy that underpins the continuing work of the programme.

Programme Outline

The programme aims to raise public awareness of present nuclear weapons policies, and through increased involvement to shift public perception towards the feasibility of a secure world free from the threat of nuclear weapons and nuclear war. As the research has shown quite sharply, raising awareness is not a straightforward thing to do. However, further discussions with the consultants we employed have shown us a way forward.

One strong message that came from the research was that nuclear weapons issues *per se* were not only of limited interest to the population generally, but raising directly such issues activated a 'frame' which enabled people—and also the media—to dismiss the issue as being no longer relevant. After all, nuclear weapons were an issue of the Cold War, and the Cold War is over, isn't it? Such 'framing' responses are sociologically well-established reactions⁴ that must be avoided if we are to make progress—a point which many concerned organisations have failed to grasp in their own work. In contrast, the issue that was uppermost in people's minds was the so-called 'War on Terror'. There was also a significant worry about the possible use of WMD in terrorist attacks.

In order to find a way of getting nuclear weapons related issues across in this apparently infertile environment, the research identified 'cross-over' issues that fall

between the 'War on Terror' and nuclear weapons issues. Examples of such issues include the threat from WMD, no first use of nuclear weapons, the destabilising development of 'mininukes', 'dirty' bombs, and not using nuclear weapons against non-nuclear weapons states. Taking into account also cross-over issues specific to our target group of 'sceptics', we have formulated a comprehensive communications strategy under the title 'Come Clean about WMD'. The elements of this strategy are as follows.

Proposed communications strategy

Stage One (September 2004 to March 2005) aims to change the framework and get the attention of the 'frightened sceptics' using the theme: 'Come Clean about Weapons of Mass Destruction'. Specific ways of engaging the public and raising discussion include publicising a series of 'demands' such as:

- calling on the UN to (a) create a global inventory of all WMDs and their production sites, and (b) oversee an international guardianship for all WMD sites;
- calling on all states to comply with international treaties on WMDs.

There will be phased release of information from experts addressing relevant issues such as: What are WMDs? Who decides what a WMD is? What are the differences between nuclear, chemical and biological weapons? Where are they? Who owns them?

If this phase generates enough publicity, and people begin to understand at least what a WMD is, then it would follow naturally that the next phase would be how to contain and control the possible use of these weapons—either by states or by terrorists who manage to get hold of them.

In *Stage Two* (January 2005 to August 2005), having gained the attention of our target audience and led them to realise that nuclear weapons are by far the most dangerous WMD, we will shift the focus to nuclear weapons. The exact timing of this will depend on the success of the first stage in raising awareness and establishing a knowledge base on WMD issues, and we will have to monitor very carefully the public response to the Come Clean website and our other activities.

We propose to include information on the following points:

- The role of nuclear weapons in the "War on Terror".
- The development of mini-nukes and other nuclear weapons.

- The threat to use nuclear weapons first in an international crisis.
- International law and treaties on WMD, including a particular focus on the NPT Review Conference in May 2005.
- Continue the 'Come Clean about WMD' theme by inviting people to let us know locations, factories, sites etc to add to a world map on the website, with a particular focus on nuclear weapons.

Stage Three (August 2005 to May 2006) will develop the concept of real security as the context within which nuclear weapons and all other weapons of mass destruction will be abolished and eliminated. This could include a very interactive element where we ask people to send us their vision of Real Security in the 21st Century which we could then use as the basis of a 'People's Charter/Charter 21'.

Strategy implementation

Being realistic about the likely funding available, any public information programme has to be designed to be extremely cost-effective: we cannot hope for large sums to finance major advertising campaigns. Professional advice has convinced us that success can be achieved through well-designed low cost methods, taking advantage of electronic ('web based') resources to make the information available, coupled with periodic high profile events that attract the media and stimulate the free (or relatively inexpensive) publicity that can periodically raise awareness of critical issues involved. We aim to get the whole project to 'go viral'—to the extent that we can raise interest in the target group so that the issues become matters of discussion in pubs, homes, and wherever people talk together.

Accordingly, the programme is moving forward in three main directions:

1) A series of VIP events. These will be run periodically (about every three months) to raise related issues in the public arena. They will be focused on internationally recognised and respected personalities to highlight the urgency of the issues. Between these high profile events, the Programme's Media Group will work with contacts in the media and parliament to continue to bring and keep the issues to the fore.

2) An interactive web site that is frequently enhanced, giving reliable information on weapons of mass destruction, with an emphasis on nuclear weapons issues. The website will use unfolding events to focus on appropriate

aspects of the issues, and continue to inform with reliable and trustworthy information.

3) Provision of teaching materials for secondary schools, to fit with the UK's Citizenship Curriculum and aimed at 15–16 year olds.

1. Public and media events

These will be held periodically to continue to raise awareness in the public arena of the issues involved. Where possible, they will be linked to significant international events.

The first of these events launched the programme in London on September 23rd 2004. We were delighted that President Gorbachev agreed to be the focus of this, which included a number of associated school and media events. At a public meeting, he addressed problems of 'Global Security in the 21st Century'. The media coverage we obtained was extremely good and extensive, not only on UK radio and television, but also in the foreign press world-wide.

High-profile events such as this will be our means of reaching out to the public periodically, informing them on the truth about WMD, particularly nuclear weapons, and showing them how WMD can be abolished and a more sensible way of resolving conflict reached. Others are being planned for the future involving cultural, political, and religious figures who can reach out to specific sections of the UK population. Mohammed El Baradei will lead our second event (focussed on the NPT) in March 2005, and Bishop Desmond Tutu, Robert McNamara and Arundati Roy have already offered their services for future events.

Attendance at these events by school pupils will be encouraged; the response from schools with respect to the Gorbachev event has been very good indeed.

2. Interactive website.

The research demonstrated very clearly a general lack of awareness of nuclear weapons issues, as well as of other so-called WMD—chemical and biological weapons. It also demonstrated a public need for good quality 'unspun' information from reliable sources. The website, www.comeclean.org.uk, which went live at midnight on 22 September—just prior to the launch event—is providing this reliable peer-reviewed information. It contains maps showing the location of WMD world wide and is interactive, enabling visitors to add their own information. It also encourages people to get involved through one of the collaborating groups. There is also wide-ranging infor-

mation on WMD and special materials to back up the teaching modules (see below).

The frequency of visits to the site exceeded not only our expectations, but also those of the commercial web design company that helped us put it together. We have also had many positive comments on the site from colleagues from all over the world.

3. Curriculum development.

The programme is providing teaching materials to fit with the UK school Citizenship Curriculum. We have aimed the material at 14—16 year olds. The modules cover aspects of global security and WMD, particularly nuclear weapons. Through this aspect of the programme, we have an opportunity to implement the recommendations of the UN Study on Disarmament and Non-Proliferation. The material is designed to encourage pupils to find out about WMD, who has them, the effects of the different kinds of WMD, the treaties surrounding them, and to promote discussion and debate on the moral and social questions around these issues.

Six modules have been written by a professional consultant and these are being trialled in the coming academic year. Taking on board the feedback from teachers on these trials, the package will be re-evaluated and modified as appropriate, and distributed in good time to be used widely in the following academic year. We will also hold workshops for teachers of the Citizenship Curriculum to guide our approach.

Programme funding.

The initial seed funds obtained from Greenpeace UK, British Pugwash and the Institute of Law and Peace enabled us to cover basic set up and running costs, and a full time Project Coordinator. In September 2003, further funds awarded by the Joseph Rowntree Charitable Trust enabled the work to continue. Additional funds from an anonymous donor were made available to finance the second—critical—research exercise on which the final strategy was based, while a further grant from the Network for Social Change was used largely for the website development and the preparation of the educational materials. A grant from International Pugwash enabled us to get the Gorbachev launch event off the ground. This event itself brought in further funding, both in cash and in kind, and included a further generous anonymous donation that has allowed us to go ahead with the El Baradei event mentioned above. We have just heard (December 2004) that a

further grant from the Joseph Rowntree Charitable Trust has been awarded to the Programme, which now, for the first time in its existence, has its funding assured for a full twelve month period.

Summary.

This collaborative programme between 14 concerned NGOs aims to raise public awareness of nuclear weapons issues and of alternative ways of achieving real security in the 21st century.

From small beginnings, we have made major strides over the past twelve months. Central has been the mapping of the psychological and social landscape of the nuclear weapons issue. This has informed our formulation of a public communications strategy that we are now implementing. Our professionally-designed website, a central element of our strategy, went live at midnight on 22nd September 2004. The programme itself was launched on 23rd September 2004 by a public meeting in London at which President Gorbachev initiated a new debate on how we can achieve global security in the 21st century.

This event will be followed by other high profile media events to periodically raise public consciousness on WMD (specifically nuclear weapons) issues, events which will be backed up by reliable information on the continually developing web site. In the periods between these events, we will be working also through contacts in the media and parliament to continue to bring the issues to the fore in ways that will impinge on the public's awareness. Finally, we are producing six teaching modules on aspects of

WMD and international security which are about to be trialled in a number of schools.

In addition to the specific programme itself, this work has, through trying to develop and use new thinking and approaches to the nuclear weapons issue, been instrumental in reinvigorating parts of the concerned NGO community. With core funding assured for the next twelve months, we are in an excellent position to maintain the momentum that the programme has created and to begin to implement the main phase of the programme at this critical time.

John Finney and Robert Hinde

5th December 2005.

Endnotes

- ¹ For example, see the text of his public address at the Halifax Pugwash meeting in July 2003.
- ² Abolition 2000 UK, Atomic Mirror, BASIC, British Pugwash Group, CND, Greenpeace UK, Medact, Movement for the Abolition of War, Oxford Research Group, Pax Christi, Quaker Peace and Social Justice, Student/Young Pugwash, VERTIC, World Court Project.
- ³ We are very happy to share these results with other interested groups. It should be borne in mind however that the results are not necessarily transferable across national boundaries, and we would urge similar research to be undertaken elsewhere.
- ⁴ We would appreciate comments and advice from professionals in sociology and psychology who have experience of these models. Were concerned NGOs to work more in the Pugwash tradition of making use of professional knowledge in trying to get their messages across, they might well be able to significantly improve their effectiveness.

BOOKS

Human Aggression: *A Multifaceted Phenomenon*

By

J. MARTÍN RAMÍREZ

Published by Centreur Publishers
Madrid, Spain

Report on International Student/Young Pugwash

The previous months have been an important period of consolidation for International Student/Young Pugwash. During this time, our community has undertaken innovative projects with the purpose of introducing ISYP to a new generation of scientists and leaders and assuring continuity of our community for years to come.

The projects led by ISYP are ingrained in the success of our recent conference, which preceded the 54th Pugwash Conference on Science and World Affairs in Seoul, South Korea. At this event, the Executive Board of ISYP commenced a change in the direction of the community, from promoting schemes centered on the discussion of current topics to focusing on the mechanisms through which positive and widespread changes can be achieved.

In this category we encounter several important endeavors. The leading one in this respect is the 2005 ISYP Conference in Hiroshima, Japan. The Organizing Committee of this event (comprised of the Executive Board of ISYP, plus Wakana Mukai, Satoe Nakahara and Ryoko Kusumi of Japan) has chosen to center the discussions on the search for novel ways to link the theories of world security and conflict resolution to practice, from individuals and local governments to international institutions and global corporations. As part of this objective, the now annual ISYP Sir Joseph Rotblat Symposium will focus on the discussion of the necessary mechanisms for the constitution of a true culture of peace.

Overlapping the 2005 Conference and other ISYP projects is the Global Youth Challenge, a concept originated within the Canadian Pugwash Group by Stephanie and Robert Reford McCandless. The Global Youth Challenge is intended to function as a forum for the discussion of global issues among the broader youth community. Among others, the Challenge has the objective of establishing strong intergenerational bonds between the emerging and consolidated generations of leaders in order to empower the former to face the challenges of the future.

This specific project is seeking the endorsement of several outstanding global institutions, including the United Nations through the Secretary-General, the World Bank Group, and other members of the UN System. Support for this initiative has been provided by Sir Joseph Rotblat,

Prof. MS Swaminathan, Newton Bowles and the Canadian Pugwash Group, among others.

A further project is the Global Seminar Network, which seeks to make use of the high mobility within the Pugwash membership. In this case, members of the Pugwash community are invited to give talks to groups of students when traveling abroad in order to encourage a new generation of scientists and policy-makers to take part in the construction of a better world. Here, local ISYP groups act as coordinators for the seminars, finding both

a venue as well as possible sources of funds. The Global Seminar Network was inaugurated on December 8th in Mexico City with a conference titled "The Future of Global Disarmament" which had the participation of Francesco Calogero, Miguel Marin-Bosch, Alejandro Nadal and Juan Pablo Pardo. We encourage the Pugwash community to join in this project since it is a valuable method for letting new students know about the work, interests and future of the Pugwash movement.

Finally, the most tangible of our projects remains the ISYP Journal on Science and World Affairs, a biannual publication which will contain scholarly, peer-reviewed papers on the topics treated by the Pugwash community. The first issue is due to come out in December 2004 with contributions from Sir Joseph Rotblat, Bas de Gaay Fortman, William Marshall, Magdalena Kropiwnicka, Tom Borsen Hansen, Akira Kurosaki and others.

We would like to conclude by inviting the Pugwash community to visit the ISYP website at www.student-pugwash.org. There you will find more information on our activities and events for 2005.

Juan Pablo Pardo and Arthur Petersen

S T U D E N T



P U G W A S H

Report of the 2nd International Student/Young Pugwash (ISYP) Conference

Seoul, Korea, 3–4 October 2004

Introduction

The following document reports the discussions of 25 students and young professionals from 16 countries who participated in the 2nd Annual ISYP conference entitled “Towards a New Paradigm of International Governance.” Each participant presented a paper along one of the following topics:

- 1) Eliminating Nuclear Weapons
- 2) Interregional Cooperation and Security
- 3) Securing and Reinforcing International Institutions
- 4) Human Security and International Governance
- 5) Sustainability and Future Development

Two ISYP Working Groups were formed: *A* (composed of topics 1 and 2) and *B* (composed of topics 3, 4, and 5). The first two sections offer the rapporteurs’ report of Working Groups *A* and *B*, respectively. Section *C* provides an outline of the overarching themes that emerged from the plenary sessions following the working group discussions.

As students and young professionals we are grateful for the opportunity to share our thoughts with the Pugwash Conferences on Science and World Affairs. It is our hope that this report will contribute to enriching the ideas and actions of the Pugwash Community.

Furthermore, we would like to thank those who assisted us with the preparation of this document, particularly Brian Kirk, Ben Rusek, and Robert Sancton.

Tom Brown
Satoe Nakahara

Report on ISYP Working Group A

Facilitator: Rian Leith

Rapporteur: Satoe Nakahara

Group A included two topics: (1) Eliminating Nuclear Weapons and (2) Interregional Cooperation and Security. Due to overlapping concepts, these two topics were discussed in one working group, revealing the following themes:

1. Non-Proliferation and Disarmament

Some states believe that nuclear weapons create stability but in reality the possession of nuclear weapons destabilizes the global system.

Even the policy of *no first use* creates a situation where nuclear weapons are legitimate. The U.S. plays a key role in determining the success of non-proliferation initiatives. Current U.S. policy does not promote disarmament; rather, it encourages proliferation.

The recent South Korean revelation of experiments with enriched uranium demonstrates the effectiveness of the IAEA Additional Protocol. Environmental sampling provisions in the Protocol would have shown that South Korea had previously conducted experiments to enrich uranium to weapons grade levels. The revelation demonstrates the Protocol’s effectiveness as a nonproliferation mechanism. Nonetheless, the question arises: how can universal adoption of this protocol be achieved?

There is no alternative international law to the NPT to control states that seek to develop nuclear weapons; however, there are significant problems with the regime. There is an inherent discrepancy in the status given to declared nuclear weapons states and non-nuclear weapons states. In addition, there are few costs associated with breaking the provisions of the NPT.

Regional security organisations such as NATO should be given a more formal role in non-proliferation and disarmament agreements.

Conclusions and Recommendations:

- ISYP endorses the thirteen steps to nuclear disarmament that were recommended at the 2000 NPT Review Conference.
- ISYP endorses improved global and regional steps to nuclear disarmament.
- ISYP supports efforts to promote the adoption of a fissile material cutoff treaty to address the proliferation risks associated with the existence of military plutonium

stockpiles and the production of new material.

- ISYP encourages states to unambiguously articulate nuclear disarmament positions.
- ISYP promotes the development of a grassroots mobilisation regarding nuclear disarmament and non-proliferation along the lines of the nuclear freeze movement of the 1980s.
- ISYP encourages the European parliament to address the issues of nuclear disarmament and non-proliferation in relation to the nuclear weapons-hosting countries of NATO.
- ISYP supports initiatives that provide appropriate alternative livelihoods for people who work in nuclear weapons complexes.
- Pugwash should continue to support programmes that involve young people such as ISYP. Disarmament has proven to be a slow process; unfortunately nuclear weapons will remain a threat to peace and security for the foreseeable future.

2. Nuclear Weapons Free Zones

The responsibility for formation of some existing Nuclear Weapons Free Zones can be credited to the actions of citizens who were concerned about nuclear testing and the presence of nuclear weapons-equipped warships in their ports (e.g. New Zealand).

The development of South Africa's nuclear weapons programme occurred in secret. The programme was related to internal security issues and the South African government wanted to have a "trump card" to hold against the West. The first steps towards an African nuclear free zone were taken in the 1960s; however, to date, South Africa has not ratified the agreement.

Conclusions and Recommendations:

- ISYP should support governmental, non-governmental and civil society actors all over the world who work for nuclear disarmament and non-proliferation at local and regional levels through initiatives such as Nuclear Weapons Free Zones.

3. Nuclear Testing

Unfortunately the Comprehensive Test Ban Treaty (CTBT) has not entered into force and states should continue to move towards the ratification of the CTBT.

While possible future tests are expected to be underground, the Cold-War legacy of aboveground nuclear weapons testing continues: the victims of nuclear tests

tend to be poor and indigenous people. In the Marshall Islands the U.S. government provides small amounts of compensation for the victims of U.S. hydrogen bomb tests; however, this compensation changes their lives because they cannot follow their traditional ways of life and they have become dependent on these payments.

There is a small movement against nuclear weapons in the Marshall Islands but those people involved have limited resources for action. Recently, there have been some educational efforts to inform the indigenous peoples of the Marshall Islands about the dangers of nuclear weapons.

Conclusions and Recommendations:

- Pugwash should fund a student to attend the next conference from a zone impacted by nuclear weapons testing.

4. Missile Defence, Space Weaponisation and Expectations of State Security

The category of space weapons is difficult to define. Space weapons include those weapons that are physically located in space, such as lasers, but the category also includes those terrestrial weapons that can be used to attack satellites and other targets in space.

The failure of the ABM was symbolic—it was the first Cold War arms control agreement to collapse.

Missile defence systems may never work, yet the public continues to support such programmes for nationalistic reasons and other motivations. Any security achieved through missile defence is illusionary; ABM systems may seem like a simple way to deal with the danger but will have dangerous side effects. Deployments of missile defence and space weapons will likely lead to new arms races and new types of nuclear weapons.

Conclusions and Recommendations:

- ISYP should promote research to determine reasons, including cultural and psycho-social factors such as the quest for invulnerability, that lead people and governments to support missile defence and the weaponisation of space.
- ISYP should initiate public information campaigns about the real costs associated with missile defence and space weaponisation.

5. Korean Peninsula Nuclear Issues

Regarding South Korea's experiments with enriched uranium, the international community was initially concerned that South Korea might have a nuclear weapons pro-

gramme, but the scale and the frequency of these experiments suggest that no programme exists. The primary problem with these experiments was that they were clandestine and South Korea did not report these activities to the IAEA.

The Bush administration disengaged with North Korea when it came to power, and the U.S. appears to have pressured South Korea and Japan to stop their independent engagement initiatives.

North Korea feels threatened by U.S. statements and policies that are aggressive towards it. History shows that it is dangerous to isolate a country in this way.

More than two-thirds of South Koreans support the development of a domestic nuclear arsenal. It is widely believed that if Japan ever develops nuclear weapons then South Korea would likely do so as well. The existence of the U.S. nuclear security umbrella over Japan and the strong domestic opinion against nuclear weapons due to its unique history suggest that Japan will not soon follow this path.

Conclusions and Recommendations:

- ISYP should support state and non-state parties that seek to establish a nuclear weapons free zone in North East Asia.

6. The Middle East and Terrorism

External interventions in the Middle East have historically supported authoritarian regimes to promote regional stability at the expense of democratisation. Resultant injustices are likely one motivation for terrorists from the region.

Conclusions and Recommendations:

- ISYP suggests that analyses of terrorism should give attention to the historical contexts of societies in question.
- ISYP should consider organising a seminar to explore this issue in more detail.

Report on ISYP Working Group B

Facilitator: Arthur Petersen

Rapporteur: Tom Brown

Working Group B included three topics: (1) Securing and Reinforcing International Institutions, (2) Human Security and International Governance, and (3) Sustainability and Future Development. Due to overlapping concepts, these three topics were discussed in one working group. The discussions produced the following themes:

1. Importance of Local Solutions

It is essential to engage people in issues that affect them. Civil society must take responsibility for decisions made on its behalf and act where governments have failed. Information is a powerful force both to hinder development by its absence and encourage human security and democracy by its presence.

There are many excellent practical examples of the application of grassroots solutions. The work in the Information Village Research Project in Pondicherry, which brings information technology to the rural poor in India, demonstrates the importance of tailoring development projects to the situations in which they are applied. Governments cannot simply dump technology in villages without training people in the best ways to use it to their advantage; by showing villagers how to access information on weather conditions, crop growth, health advice and market prices for their goods, the local people made huge gains. Aid must be delivered at the local level.

There are also benefits to be reaped in conflict resolution. The Sustained Dialogue method brings together actual citizens of conflicting parties to discuss their grievances. Diplomatic negotiations at the national level do not and cannot always resolve the more intractable problems presented by ethnic and cultural conflict; this sort of peacemaking needs to be brought down to the human level. It is essential in such models to ensure maximal objectivity and correct representation of the opinions of the general public.

Although we recognised the place of local solutions for particular problems, government is needed at a higher level for issues that must be addressed by nations, such as trade.

Conclusions and Recommendations:

- Solutions at a local, human level can often be more productive than policy at a national or international level, for example in development or reducing ethnic conflict.

2. Methodologies for Engaging Civil Society

Education is the most important approach used to promote engagement in political and moral issues. By engraining peace and critical thinking in every aspect of teaching, we can hope to instil an attitude of respect for others in our civil society.

People must feel that they are global citizens before they start to engage with global issues, and to that end we must make sure that institutions such as the UN engage appropriately with civil society. NGOs can play a crucial part in representing many points of view to such international bodies, not just national interests.

This is not simply a matter of engaging people, because often they are already concerned about global affairs. The problem is the barriers that stop them participating: there is poor access to complete information and there are few public spaces in which they can present and discuss their views. There are several online forums that help to bring together disparate groups that span national borders, who may have more in common with each other than their countrymen. How do we represent the opinions of such groups to the world and let them have a voice?

Conclusions and Recommendations:

- ISYP must encourage peace education and the teachings of the responsibilities of global citizenship. We can use information technology effectively for this purpose, for example through ISYP's websites.

3. Current and Future Structures of International Institutions

The UN is remote and in need of a fairer representation of civil society and the different groups within it. A critical question was posed: how far should citizens be from their representatives? One suggestion was that a second parliament of elected officials could complement the general assembly. Is there a way of representing the new international networks of individuals that cross international borders, be they NGOs or the collective rural poor?

Some felt that the current structure of the UN offers the best pragmatic way for international government to progress. By strengthening international law and encouraging respect of the equality of nations we can better ensure peace. Others countered that the artificial construct of the nation-state serves to remove sovereignty from the people.

It was acknowledged that the UN must be more adaptable and sensitive to regional cultural differences that need

special engagement. Often sophisticated local analyses are ignored and more abstract academic policy is pursued instead. The example of the UN in the Democratic Republic of Congo is instructive in this matter. In the recent chaos in the Congo, informal micro-economical structures such as small trade networks existed, which contributed towards stability by creating interdependence. The UN's decision to criminalise such informal black market economies only destabilised the region further. The UN should concentrate on expanding the infrastructure of the country to allow easy communication and trade, as this is more likely to facilitate the creation of a lasting peace.

Energy is important to global development and impacts global security. The increasing use of nuclear plants in Finland, to compensate for the declining availability of fossil fuels, was one path explored to provide sustainable energy. North Korea's energy concerns are a major cause of discord in the East Asian region. The collapse in energy production in North Korea since 1990 has been dramatic and attending to the country's needs is vital to resolving the stand off, although the political barriers are great.

Conclusions and Recommendations:

- International institutions should improve their inclusion of civil society and NGOs in policy-making.
- The UN must be more adaptable and sensitive to regional cultural differences.

4. Information as a Spur for Development and Democracy

The example of Pondicherry, India, was typical of how information access can spur development. The importance of distributing information freely was considered crucial for advancement the world over, to reduce poverty and give people the resources necessary to exercise their own judgments on matters relevant to them. Accounts of personal experience are as important as more technical information.

Access to information is critical to a fully functioning democracy. With access to the same information governments have, citizens would be in the position to develop direct democracy along the lines of the democratic city-states in ancient Greece. The technology is sufficiently developed for fair tamper-free voting to take place online if the correct protocols are implemented. Governments should investigate the implementation of such democracy at the local level, where people are more closely connected to the issues at hand.

Conclusions and Recommendations:

- Free access to information is vital both to alleviate poverty and keep democracies healthy.

5. Responsibilities of Knowledge

The power of knowledge is a grave responsibility. The responsibility of those with knowledge to those without it was a recurrent theme in the papers presented to this working group. If information is presented incompletely, unrepresentatively or selectively then the ethical implications can be severe. Similarly we must be aware of the dangers of claiming that our information is objective, because we bring our own values and judgements to it. This means that knowledge holders must use their knowledge ethically.

Recent events have highlighted the precarious relationship between science and the formation of public policy. This issue arises in the context of advice made to governments on environmental issues and the precautionary principle. Scientists should try to quantify the risks of advice they give and work to present alternative analyses.

There is a need to acknowledge the limits of economic formalism. Mathematical models cannot be relied upon to give a full picture of the complexities of the world. Economists should be taught about the ethical implications of their theories on the ground.

The mass media has moral responsibilities when reporting the news. The media suffer from several biases, including adapting content to suit advertisers, from whom they often get much of their funding, pushing corporate interests and not challenging viewers with alternative models of the world.

The theme of responsibility recurred in our discussions of the legislation enacted to prevent terrorism since the September 2001 attacks. Because the legal and technical issues surrounding civil liberties are so complex, governments have been able to pass laws that would never stand up to close public scrutiny. Rather than abusing public ignorance politicians should try to reduce it by being transparent.

The need of those who receive information to exercise their critical faculties is also a vital partner to this process. It is not enough that scientists make a fair representation of the evidence supporting a particular course of action; responsibility falls on politicians to question and probe the evidence to find out what alternative views exist.

Similarly the multiple filters that the news passes through in the mass media require that citizens read

widely to get the best unbiased picture they can. The proliferation of alternative media groups makes it easy for citizens to get a wide selection of points of view, so we all have a responsibility to be informed.

Conclusions and Recommendations:

- Those with specialised knowledge have a moral responsibility to present the complexities and uncertainties of their work to the public.
- People should also engage with information presented to them to understand its nuances and biases.

C. Overarching Themes and Conclusions

In the plenary sessions that followed the working group discussions, several common themes emerged between the two groups:

We must find the appropriate levels to tackle issues that divide us, be they international, regional, national and/or local. In each case we must look at the specific circumstances of the problem to determine the best approach, which may not always be at the conventional state level.

We should promote awareness, both at the broader level of encouraging peace, understanding and humanity, and at the particular level of educating people about the details and contexts of global problems so they can make their own judgments. This relies on the sharing of information between diverse groups of people, which can be greatly facilitated by the use of information technology.

Because science affects the whole of society, policy makers must engage constantly with all sections of society, including and not limited to the scientific community, so that all voices are heard.

Throughout our discussions we never strayed far from a central theme: we must engage people in global affairs and encourage responsibility and thought in everything we do. In doing so we hope to approach a new paradigm of international governance.



Pugwash History Project

Update

by Sandra Ionno Butcher

This summer, Pugwash will celebrate the 50th anniversary of the Russell-Einstein Manifesto, the seminal document that jump-started the organization. To help commemorate the event, Pugwash will publish a monograph exploring the origins of the Manifesto. Drawing on research into the Pugwash archives, interviews, and many biographies and other sources, the monograph highlights the personalities involved with the Manifesto, and the reasons why it had such widespread, lasting impact.

This study is the first of a series of publications that Pugwash has asked me to write, delving into the organization's history. They are stepping stones on the way to a full-length history. The last history, *Scientists in the Quest for Peace* (1972), was written by Joseph Rotblat, who has been serving as a close advisor to this current project. We hope that these various publications (which will be posted on the Pugwash web site) will spur discussion within the Pugwash community, and draw out more details about the history from Pugwashites around the world.

In the coming months, I will write about the role Pugwash played in trying to end the Vietnam War, based on research into State Department archives, interviews with the key figures involved, and other primary resources. Former Pugwash Council member Venance Journé arranged a fascinating day for me in Paris so that I could interview Raymond Aubrac and Herbert Marcovitch about the creative proposals they shared with Ho Chi Minh, Henry Kissinger, and others; proposals which were treated seriously by Robert McNamara and others at the highest levels of both governments. (Thanks also to Serge Franchoo for serving as tour guide and interpreter!)

In the short-term, I also will write an article about the role Eugene Rabinowitch, one of the early Pugwash leaders and former editor of the *Bulletin of the Atomic Scientists*, played in helping to shape Pugwash. And I will write a piece about the first Pugwash Conference, held in Pugwash, Nova Scotia in 1957.

Over the past few years, I have collected many taped interviews from Pugwashites around the world. I hope to continue these interviews, and to build upon the research I have been conducting. The support of those within the Pugwash community is helping me to bring to light the ways in which Pugwash has worked over its impressive history, and providing a more rounded picture of why the organization received the 1995 Nobel Peace Prize. I am grateful to the Pugwash Council, which is making some of this work possible through a stipend.

My interest in the Pugwash history began in 1988, when I first went to work for Student Pugwash USA as an executive assistant (I later became their National Student Activities Coordinator and ultimately Executive Director for six years). I have also served as Senior Analyst and later Interim Research Director for the British American Security Information Council, specializing on nuclear weapons policy, and to a lesser extent on arms trade and European security issues. I have a B.A. in History (with honors) from Colgate University, in Hamilton, New York, and an M.Litt. in Strategic Studies from the University of Aberdeen, Scotland. This history project ties together many strands of my interests. I am working on this project part-time, while raising our 2-1/2 year old son.

I encourage members of the Pugwash community to contact me if you have any specific experiences or resources to share. Most of my research thus far has focused on the earlier days, but I am collecting materials on the more recent events as well. I am working with Professor Rotblat, Jeffrey Boutwell, and Sally Milne to help ensure that relevant documents end up finally in an established archive. I extend my sincerest thanks to all of you who have helped me gain a greater sense of the depth of the organization. As the adage says, "You can't know where you're going until you understand where you've been." In this important historical year for Pugwash, as we approach the 60th anniversary of the bombings of Hiroshima and Nagasaki, and as we seek to find ways forward at a time of great uncertainty and instability internationally, this project takes on even more importance.

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Martin Kaplan

Public health researcher and a prime mover in the Pugwash group

June 23, 1915–October 16, 2004

Martin Kaplan, who has died aged 89, was a pioneering researcher in public health whose concerns about the environmental implications of chemical and biological weapons led him to become secretary-general of the Nobel peace prize-winning Pugwash conferences, while holding a top post with the World Health Organisation (WHO).

Martin, whose work was mainly in the field of rabies, influenza and tropical diseases, was trained in veterinary science. He worked on and off for more than 50 years for WHO, and was its director of science and technology.

He was born in Philadelphia, the youngest of eight children whose parents emigrated from Russia in the 1880s. From childhood he had a passion for music: at the age of 11 he joined Hoxie's Harmonica Band, and won the Philadelphia championship for harmonica excellence. He pursued this interest for the rest of his life in a string quartet—he played the cello—which used to meet weekly at his home in Geneva.

After college, and training as a veterinarian, Martin ran an animal practice in Philadelphia. During the second world war, he joined the United Nations Relief and Rehabilitation Administration (UNRRA). On VE Day he sailed from Greece, on a Swedish freighter escorting six prize bulls donated by the Brethren Society of Pennsylvania for the purpose of restocking the cattle population of Greece.

He then set about establishing new laboratories and refurbishing old ones, producing much needed animal vaccine, as well as teaching new methods to the local professionals. This involved travelling to Cyprus and Lebanon to purchase Arab stallions and mules. When UNRRA closed

down, he joined the Food and Agriculture Organisation (FAO), doing similar work in several European countries, particularly Poland.

On returning home to the US, he was, for a brief period, dean of the school of veterinary medicine at what later became Brandeis University. He was chosen for this

post at the behest of Albert Einstein, who had the vision of creating an institution for learning in medical sciences, to countervail the practice of *numerus clausus*. This limited the access of Jewish students to universities in Europe and, from the 1920s, was a practice followed, unofficially, by some prestigious colleges in north-east America.

In 1949, Martin joined the nascent WHO in Geneva, where he set up a veterinary

division. In collaboration with scientists at the University of Wisconsin and the Wistar Institute in Philadelphia, he carried out early investigations on the flu virus in animals and birds.

At WHO he became director of science and technology, and, later, head of the office of research and development. He worked at WHO in various capacities, mainly as adviser to the director-general, until his retirement.

Martin's decision to remain in Europe, and not to return permanently to the US, was to a large extent influenced by the dismal happenings in the US during the McCarthy period. Several of his friends fell victim to the McCarthyite witch-hunt.

Martin's fate would have been similar since he would not have been willing to denounce to the House Un-American Activities Committee colleagues suspected of communist leanings. He lived until the end of his life on the shore



Martin Kaplan with Ruth Adams and Jennifer Leaning at the Pugwash workshop on public health in Havana, Cuba, November 1998.

of Lac Léman, in the Bellerive suburb of Geneva.

One of his neighbours there was Prince Sadruddin Aga Khan (obituary, May 15 2003). Martin became friendly with him and collaborated in a number of colloquia held by the prince on the threats posed by weapons of mass destruction and environmental pollution.

My links with Martin go back to 1955, to the proclamation of the Russell-Einstein Manifesto which gave rise to the Pugwash movement.

A few days after the proclamation he unexpectedly walked into my office in London saying: "I have heard about the new organisation of scientists you are setting up, and I have come to offer my help in whatever form you may need." And he meant this literally. From that day onwards, he never refused any request for help—and there were plenty of them.

The first major assignment was to organise, in 1959, in the Pugwash village of Nova Scotia, a conference on biological and chemical warfare. This was the first time that eminent scientists, experts in the field, from both sides of the Iron Curtain, met to assess the dangers posed by the use of weapons of mass destruction, and to seek means to prevent such use.

One outcome of this conference was to set up a Pugwash study group on chemical warfare, whose main task

was to facilitate the drafting of the Chemical Weapons Convention. When the CWC came into force, in 1993, the study group took up the task of its implementation. Most of the workshops were held in Geneva, and Martin was responsible for their organisation. As secretary-general of Pugwash, he set up and ran a study group on nuclear forces, which frequently met in Geneva between 1980 and 1997.

In total, Martin organised 52 Pugwash workshops. Much of the credit for the achievements of Pugwash, recognised by the award to it of the 1995 Nobel peace prize, must go to him.

Martin was a unique person; and in this increasingly selfish world of ours, he stood out as a beacon of friendship, generosity and, simply, goodness.

He is survived by Lenna, his wife of 60 years, a daughter and two sons.

Joseph Rotblat

Wednesday November 24, 2004

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Tributes to Dr. Martin A. Kaplan

Sir Joseph Rotblat, President Emeritus

Pugwash Conferences

1995 Nobel Peace Prize Laureate

Martin was a remarkable man; a wonderfully unique man. In this increasingly selfish world of ours, he stood out as a beacon of friendship, generosity and, simply, goodness.

I had the great privilege of knowing him and working with him for half-a-century. I'll never forget a morning in the early 1950s when, unexpectedly, he walked into my office in London and said: "I am Martin Kaplan. I have heard what you are doing and I've come to offer my help in whatever form you may need." And he meant this literally. From that day onwards he never refused any request for help, and, believe me, there were many of them. He helped me enormously in the setting up of the Pugwash Movement,

in which he later became one of the chief leaders, as Director-General and later Secretary-General, as well as being the Director of the Geneva Office. We made full use of his extensive knowledge and epidemiological data about the biological effects of exposure to radiation in assessing the risks of nuclear testing and the dangers of biological warfare.

But the realm of his concern was much broader. It embraced the whole of humankind which he knew was imperilled in this nuclear age.

Over the course of time our collaboration turned into a close friendship with him and his family. It gave me much happiness that I was able to offer advice in the professional careers of his sons Peter and Jeff, and to be considered a member of the family. In caring for humanity he did not neglect his nearest: he was a devoted husband and father. His passing away has deeply saddened his many friends all over the world. But more than that, it is a real loss to humanity.

Matthew Meselson, Harvard University
Jeanne Guillemin, Mass. Institute of Technology

Looking back, it was always Martin who was there for almost half a century, indefatigably inspiring and rallying his amazing network of friends and of allies in high places, privately and through Pugwash conferences and workshops, to seek effective international action against nuclear, biological and chemical weapons and against war itself. And it was Martin whose commitment and scientific insight at the World Health Organization, starting in 1949, provided world leadership in veterinary public health — emphasizing the crucial role of animal reservoirs in various human diseases and organizing a landmark cooperative international survey of animal sera that demonstrated and clarified the role of animal reservoirs in influenza. And it was always Martin and Lenna, whose warm friendship and humane culture continues to enrich us all.

Paolo Cotta-Ramusino, Secretary General,
Pugwash Conferences
Jeffrey Boutwell, Executive Director,
Pugwash Conferences

On behalf of the Pugwash Council and the entire Pugwash community, we would like to express our deepest admiration and esteem for Martin Kaplan. To Lenna and all the members of Martin's family, our thoughts and best wishes are with you.

Martin not only served as Secretary General of the Pugwash Conferences from 1976 to 1988, but was involved with Pugwash from its very earliest days, having attended the 3rd Pugwash Conference held in Kitzbühel, Austria in September 1958.

For more than 40 years, then, Martin was a central presence in Pugwash, contributing both insights about the human condition and the warmth of his personality to the Pugwash goal of creating a more peaceful and equitable world.

We will remember Martin for his steady guidance of Pugwash during his tenure as Secretary General, which spanned both the darkest days of the Cold War as well as the promising early years of the Gorbachev era. Through it all, Martin always reminded us of the primary need for open lines of communication and mutual respect, no matter what the differences between us. Because of him, Pugwash was able to weather many a storm—such as the

Warsaw Conference in 1982—that could have seriously undermined the long-term viability of Pugwash.

Mostly, we will remember Martin for his openness, candor, and friendship. It was these qualities above all that served him so well during his years as Secretary General. Pugwash was indeed fortunate to have such a friend, and we will miss him.

Francesco Calogero, former Secretary-General,
Pugwash Conferences

Pugwash, and the world at large, owe much to Martin Kaplan. He devoted a fair portion of his life to Pugwash. His long stewardship as Secretary General witnessed a significant growth of Pugwash's activities. It ran — from 1976 to 1988 — through the years of the Cold War up to the beginning of its end. To the extent Pugwash contributed to this evolution — as I do believe it did — much of the credit must go to him. It was subsequently my privilege — by serving as his successor through the years from 1989 to 1997 — to ripe the fruits of this development, the end of the Cold War.

The transition from his tenure to mine was extremely smooth, thanks to the human qualities of Martin. Indeed, thanks to his generously collaborative spirit, he had me involved in the running of Pugwash as soon as it was apparent that I was going to serve as his successor, well before I took formal charge of it. I can remember no circumstance in which we clashed, much as our professional backgrounds and styles differed somewhat, and sometimes also our political judgements were not quite in unison. But we both always believed that the main strength of Pugwash is to provide room for a frank exchange of views among individuals coming from differing geopolitical and cultural backgrounds and entertaining, in good faith, diverging opinions.

Now Martin is gone, after as full a life as anybody could wish. I hope and expect that there will be appropriate opportunities for others and for me to remember his achievements and the many facets of his personality more completely than I can now, when the sad news of his death reaches me as I travel in China; and that eventually — when a history of Pugwash will be written — his contributions to Pugwash and to conflict resolution, arms control and disarmament will be detailed as they deserved to be.

Let me just end by singling out what, in my recollection, was the most remarkable trait of his personality: his warmth in personal relations, his cultural open minded-

ness and generosity in listening to the point of view of others, his attention never to be offensive and yet to be firm when needed, entailing the capability to be a good manager as demonstrated throughout his professional life. And I will always remember, as a great lesson in human relations, his explanation of

the pleasure he derived from playing with friends as an amateur musician in a privately organized string quartet — a continuing avocation throughout his life — including the delicate balance of amicable yet rigorous relations



Martin Kaplan and one of his favorite pastimes

required to organize such an activity, which can be conducted only if, out of a circle of acquaintances, no less and no more than four individuals are made to convene at the right time, having comparable musical capabilities and the diligence — in the middle of active professional lives — to make in advance the right

amount of repetitions required to make the experience enjoyable for the group. It is this mixture of human qualities that were, in my recollection, the most endearing, but also the most formidable, aspect of his personality.

Sebastian Pease

1922–2004

A pioneer and advocate of nuclear power, he passionately opposed nuclear weapons.

Sebastian (Bas) Pease, who has died aged 81, was a distinguished physicist and a remarkable man. The director of Britain's fusion research programme at the United Kingdom Atomic Energy Authority (UKAEA) for many years, he was a leading member of the Pugwash Group, the international movement of scientists concerned about the social impact and misuse of science.

His scientific expertise and social conscience echoed his family background, with its Quaker roots. His paternal grandfather, Edward Reynolds Pease, was a co-founder of the Fabian Society and of the Labour Party. His father was a geneticist, while his mother was the daughter of Josiah C. Wedgwood, who became a member of the first Labour Cabinet. Pease was educated in the stimulating and liberal atmosphere of Bedales school and took a degree in physics at Trinity College, Cambridge.

In 1942, he joined the operational research unit at the headquarters of RAF bomber command, High Wycombe, where he worked on the development of "blind" bombing equipment and the use of aluminium "window" foil to deceive the German radar over the location of the D-day landings. He moved to the general physics division at Harwell in 1947 to work on solid-state research, producing some of the classic work on radiation damage and neutron diffraction.

His main work on controlled nuclear fusion started in 1955, when, still at Harwell, he became leader of the physics research section, and later came to play a leading role in the Zeta (Zero Energy Thermonuclear Assembly) research team, which worked on the containment of hot plasma in a toroidal (doughnut-shaped) magnetic field. (When the results of his work there were published, the *Daily Mail* placed him on its shortlist of the most attractive men in the world.)

The British fusion programme's work was transferred to Culham, Oxfordshire, in 1964, where he became division head and later, in 1967, Director of the Culham Laboratory. Budget cuts and difficult times followed, but he managed to ensure that Culham maintained a broadly based fusion programme, including the initiation of a pro-

gramme of commercial research in which Culham's skills were put to the needs of industry.

Notwithstanding the Cold War, Pease collaborated with Russian fusion experts, which was crucial in establishing the credibility of their tokamak—a pioneering plasma containment concept—claims. Pease formed a close and life-long rapport with their leader, Lev Artsimovich.

In 1970, he opened a dialogue with Euratom (the European Atomic Energy Community) on British participation in its programme, though Britain was not yet a member of the European Community. When Britain did join, in 1973, Culham became involved in the Joint European Torus working group (Jet), and Pease pushed for the tokamak experiment to have a more ambitious design objective, to achieve a full-scale demonstration of thermonuclear fusion. He was subsequently involved in a long political wrangle over the location of Jet, and deserves much of the credit for the eventual decision of the EU council of ministers in 1977 that it should be at Culham.

While Jet remains the world's leading fusion research apparatus, Pease was already pushing for its successor, Iter (international thermonuclear experimental reactor), itself now quagmired in geopolitical debate. He retired in 1988.

His many honours included election to the Royal Society in 1977 (he became a council member and vice-president), and the award of the Glazebrook medal, the premier award in Britain for physics, in 1989. However, with his exceptional combination of long-range vision and tactical skill, his outstanding contribution to the British fusion programme was as a manager of what had become "big science". In the nuclear debate, Bas was a cross-bencher—a strong advocate for the use of nuclear power, but equally opposed to nuclear weapons. He was a prominent member of the British Pugwash Group and a member of its international council when the Nobel Peace Prize was awarded jointly to it and its then president, Joseph Rotblat, in 1995. He contributed to a number of Pugwash publications, including one giving the case against the replacement of Trident.

Bas was very much a family man, His first wife, Susan, had five children, and he used to take the whole family, including grandchildren, on holiday—though was sometimes heard to mutter that “a round of ice cream would set you back.” Accomplished on both the clarinet and piano, he played in the Newbury amateur symphony orchestra. He also loved walking and entertaining his friends in his Berkshire home.

After Susan’s death in 1996, he married Jean, whom he had known at Culham. She died in 2000, and he married Eleanor, who survives him along with his three sons and two daughters.

Robert Hinde and Joseph Rotbat
[Guardian Newspaper, 2004]

Ted Taylor

1925-2004

Ted Taylor, a well-known member of Pugwash, died October 28, 2004 of coronary artery disease at the age of 79. Taylor was a nuclear physicist at Los Alamos after the second world war, revered as talented and creative in his work. Although motivated to develop atomic weapons by the thought that it would prevent the outbreak of another world war, his concerns about the work were deep and in 1956 he left the labs to work on peaceful applications of nuclear energy. Over the years he applied his skills to the development of nuclear medical imaging devices, and even a nuclear propelled spaceship called Orion. But eventually he came to feel that even the peaceful applications of nuclear energy were too dangerous. Freeman Dyson recalled that, “With [the Orion project] died Taylor’s dream that nuclear bombs could be used for a better purpose than killing people.”*

Ted Taylor was originally from Mexico City. He received his bachelor’s degree from the California Institute of Technology and a PhD in theoretical physics from Cornell in 1954. In the mid- to late-sixties he worked for the Defense Atomic Support Agency of the Department of Defense and after, the International Atomic Energy Agency, to improve the safety of nuclear stockpiles. He later served as a visiting professor at Princeton and the University of California at Santa Cruz, and was co-author of three books on nuclear proliferation and renewable energy.

Ted attended more than a dozen Pugwash meetings, the first being the 26th Pugwash Conference in East Germany in 1976 and most recently the workshop on *Nuclear Weapons: The Road to Zero*, held in London in 1996. He will be greatly missed by the Pugwash community.

*Joe Holley, “Theodore Taylor Dies; Tried To Redirect Nuclear Power,” The Washington Post, November 2, 2004. P. B06.

Sir Gordon Wolstenholme

1913-2004

Sir Gordon Wolstenholme, a pioneer in the field of medicine in the 20th century, died May 29, 2004 in London at the age of 91. Having studied at Cambridge University and the Middlesex Hospital Medical School, Wolstenholme joined the Royal Army Medical Corps in 1939 and later was commander of a military hospital in northern Italy, where one of his tasks was training doctors serving with Yugoslav partisans under Marshal Tito.

In 1949, Wolstenholme became the first director of the Ciba (now Novartis) Foundation in London, one of whose major tasks was to help strengthen cross-disciplinary

research in the fields of medicine and biology. Wolstenholme also served as an advisor on the restructuring of health care in countries such as Ethiopia (1963-74) and Venezuela (1969-78). He became president of the Royal Society of Medicine in 1978 and in 1988, at the age of 75, Wolstenholme founded Action in International Medicine.

Wolstenholme attended five Pugwash meetings over a 25-year period, from the 15th Pugwash Conference held in Addis Ababa, Ethiopia in December 1965 to the 40th Pugwash Conference in Egham, UK in September 1990.

Pugwash Council for the 2002–2007 Quinquennium

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Calendar of Future Pugwash Meetings

4–5 December 2004 Geneva, Switzerland	21st Pugwash Workshop on the <i>Implementation of the Chemical and Biological Weapons Conventions</i>
11–14 December 2004 Kathmandu, Nepal	Pugwash Meeting on <i>Jammu and Kashmir and the India-Pakistan Dialogue: The Prospects Ahead</i>
9–16 January 2005 Andalo (Trento), Italy	ISODARCO 18th Winter Course
16–17 April 2005 Oegstgeest, Netherlands	22nd Pugwash Workshop on the Implementation of the Chemical and Biological Weapons Conventions
29 April–1 May 2005 Pretoria, South Africa	3rd Regional Pugwash Workshop: <i>Threats without Enemies: The Security Aspects of HIV/AIDS</i>
22–27 July 2005 Hiroshima, Japan	55th Pugwash Conference on Science and World Affairs
30 September– 2 October 2005 Ajaccio, Corsica	3rd Pugwash Workshop on <i>Science, Ethics and Society</i> , held in conjunction with the Pugwash Study Group on Security Aspects of HIV/AIDS
November 2005 Nairobi, Kenya	Pugwash Regional Workshop on <i>Conflict in the Horn of Africa</i>
Summer/Fall 2006 Cairo, Egypt	56th Pugwash Conference on Science and World Affairs

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