

British Pugwash Group

Annual Report of the Executive Committee 2012

The British Pugwash Group is the UK associate of the **Pugwash Conferences on Science and World Affairs**, an international network of scientists and others concerned about the social impact of science, with particular emphasis on abolishing weapons of mass destruction and war. With its reputation for absolute integrity and lack of nationalistic bias, Pugwash helped to make possible international agreements such as the Partial Test Ban Treaty, the NPT, the ABM Treaty, the Conventional Forces in Europe Treaty and the Chemical and Biological Weapons Conventions.



L. to R.: John Finney, Götz Neuneck (Germany), Claudia Vaugn (Rome office) and Sverre Lodgaard (Norway) having a break with Piotr Tchaikovsky during the International Pugwash Executive Committee meeting in Moscow.

In addition to its work to help create the conditions for, and to encourage progress towards a nuclear-weapon-free world, Pugwash is also engaged in dialogue to build bridges between the US and Iran, in the Middle East, North Korea, Afghanistan and Kashmir. Together with one of its founders, Joseph Rotblat, it was awarded the Nobel Peace Prize in 1995.

British Pugwash activities range from private meetings with officials to regular public discussion meetings; and from in-depth publications and books to letters to newspaper editors. We also work in collaboration with other institutions and NGOs with similar aims.

Following our review of British Pugwash strategy in 2011, during the past year we have sought to implement the decisions which we took then. We are continuing to give top priority to:

- **Nuclear weapons-related issues** with particular emphasis on the UK position. We remain concerned that the UK Government's continuing intention to proceed with the renewal of its submarine-based Trident nuclear weapons system seriously undermines its position in calling for movement towards a world free of nuclear weapons. Nick Ritchie, the Secretary of our Executive Committee, will launch a book entitled *A Nuclear Weapons-Free World? Britain, Trident and the Challenges Ahead* at a public meeting immediately following our AGM on 12 March 2013, at which the government policy will be discussed (see also Publications below).
- **Non-proliferation and disarmament issues**, particularly our work on the Disarmament Institute concept (and topics within that agenda, such as verification of nuclear weapon dismantlement), nuclear-weapon-free zones (e.g. MEWMDFZ), and Chemical/Biological Weapons issues.

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During the year we published a report entitled *Verification of Nuclear Weapon Dismantlement: Peer review of the UK MoD programme*, which is described below. On both of these topics we are agreed that an important part of our work is raising public awareness, and we have continued to work on this through the WMD Awareness Programme.

- At our 2011 review, we also decided that British Pugwash should seek to expand into two areas of public policy which are of particular concern to the younger generation today – environmental and energy policy. Our first step in relation to environmental policy was to organise a public meeting on **Planetary Boundaries** – how humankind can live sustainably on this planet.

This very successful meeting was reported in our 2011 Annual Report. Arising from that meeting, we decided to take a first step into energy policy, and in October 2011 we set up a Working Party to produce a report on **Pathways to 2050** – to define what might be possible energy policies for the UK, consistent with its international commitments on carbon emission reduction.

Their work has proceeded throughout 2012, and has culminated in a report which is being launched at a public meeting on 14 February 2013.

This report summarises many of the activities of British Pugwash during the calendar year 2012. More details can be found on our website: www.britishpugwash.org

1 Projects

Verification of nuclear weapon dismantlement

One specific topic which is potentially within the scope of a Disarmament Institute is the verification of compliance with international agreements involving the dismantlement of nuclear weapons. Verification has proved to be a stumbling block on the path towards such agreements, partly because influential groups or individuals may cast doubt on the *bona fides* of

the party offering to dismantle some weapons. So the verification techniques used have to be highly reliable, and proof against malpractice of all kinds.

Unfortunately, the design of suitable procedures is complicated by (perhaps over-strict) interpretations of the Non-Proliferation Treaty, under which the 'dismantling' nation is prohibited from revealing to anyone (even international inspectors) any information which might assist a third party in the design of such weapons.

During 2011, the UK MoD invited British Pugwash to carry out an independent peer review of the work which MoD has carried out during the past decade in this area, and to comment on its future plans. As part of this programme, in March 2011, we held a workshop jointly with the UK MoD, involving participants from Government, British NGOs and Universities, on "Verification of nuclear weapon dismantlement: where next for the UK?". This one-day workshop gave a group of invited experts an opportunity to comment on the achievements of recent UK work on verification, and on plans being developed for future UK work in this area.

Following this workshop, during 2012 a team of experts assembled by British Pugwash was briefed by experts from AWE and MoD on their programme, and was able to ask questions in the light of those briefings. This involved getting sufficient security clearance to be given access to selected documents. We submitted our report on this work to MoD, and published it as an open report in November 2012 (see Publications below). This report was widely circulated, and we have been asked to present it at an international meeting of the International Panel on Fissile Materials at Chatham House in 2013.

Pathways to 2050: Three possible UK energy strategies

In July 2010 the Department of Energy and Climate Change published *2050 Pathways Analysis*. This document sets out its view on the range of possible energy policy strategies which would enable the UK to balance its supply of and demand for energy between now and 2050 without reneging on its commitment to reduce our emissions of greenhouse gases by 80 per

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cent by 2050. The department also published software which would help individual members of the public to construct their own preferred 'pathway'. Since then, Prof David MacKay, Chief Scientific Advisor to DECC, appealed to the British public to engage in "grown-up conversations" on this subject.

In October 2011, British Pugwash launched a project to provide information in support of a public debate on this issue, covering its technical, economic, environmental, social, safety, nuclear proliferation and other aspects. Recognising that consensus on a single way forward would be very difficult to achieve, we invited experts to 'champion' three credible options, ranging from High Nuclear to High Renewables. The resulting report will be formally launched at a public meeting on 14 February 2013, where the options will be debated. We hope this document will help the UK to reach a speedy consensus on the best strategy, and move rapidly to implement it.

WMD Awareness Programme

This Pugwash-led collaboration with other NGOs (www.wmdawareness.org.uk), funded generously this year by the Joseph Rowntree Charitable Foundation and the Network for Social Change, aims to reach out to the public on nuclear weapons issues. A series of events organised throughout the year all carried the message that nuclear abolition is possible and that, right now, we have a unique opportunity to progress towards this goal. The events are carefully tailored to resonate with different key audiences, and in 2012, included the following:

The annual **Joseph Rotblat Memorial Lecture** at the Hay Festival (see Discussion Meetings below).

The Tricycle Goes Nuclear

In early 2012, the Tricycle Theatre – a popular arts venue in North London – ran a "Nuclear Season" of plays, films and exhibitions relating to nuclear weapons. The WMD Awareness Programme collaborated extensively on various initiatives to add value to the programme.

2012 Euroscience Open Forum, Dublin

In Dublin, we ran a session entitled "Lost in Translation" at the July 2012 **Euroscience Open Forum** (a major science-focused event held every two years and attended by up to 5,000 people). It



Ted Shea, Amb. Peter Jenkins, Randy Rydell with the actors in "A Walk in the Woods" during a post-play discussion with the audience at the Tricycle Theatre

posed the question of why scientists frequently fail to get their messages across on key issues such as nuclear disarmament and climate change, and looked at how we can frame our messages to create resonance with the intended audience.

NPT: Reaching Consensus Project

Following two rounds of interviews and meetings with key diplomats at the NPT Preparatory Committee and then the IAEA General Conference, key findings were put forward for discussion at a small 'Round Table' in New York during the UN First Committee. Diplomats from 15 countries took part with the objective of providing a forum for constructive dialogue, where delegates could gain a shared understanding of each other's perceptions and attempt to plant the seeds towards finding creative ways forward for the NPT Review Conference in 2015.

1,000 Reasons Campaign – Summer 2012

Over the summer we used the origami crane as a means of engaging 18-30 year olds with the ongoing issue of nuclear weapons, in particular the imminent renewal of Trident. Three approaches were used:

- creating an animation that told the story of the cranes, and distribution to the target audience (the film has been watched by over 15,000 people);
- installing a thousand cranes at music festivals and using this as a means of promoting the animation;
- starting a twitter campaign, with one reason for not renewing Trident being posted each day over 1,000 days. That takes us to 2016 when the final decision on the successor programme for Trident will be made.

University Film Nights

During 2012, we have been holding 'film nights' at various universities, often in collaboration with existing film societies. The usual format has been to show our own short "Don't Buy It!" films before a showing of "Dr. Strangelove", followed by discussion.

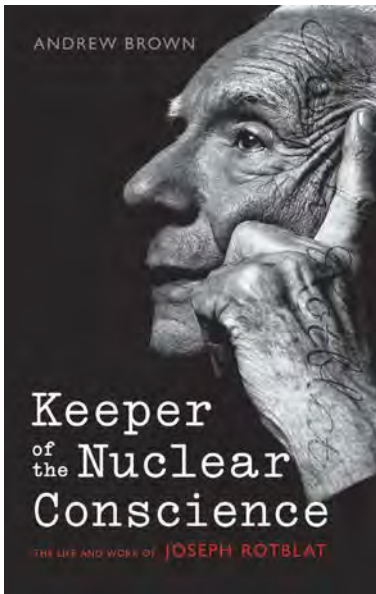
Members of the Programme staff continue to engage with decision makers at all levels, both within the UK and internationally.

2 Discussion Meetings

Keeper of the Nuclear Conscience

British Pugwash, together with Oxford University Press, launched Andrew Brown's biography of Joseph Rotblat, *Keeper of the Nuclear Conscience* on 8 February at a packed meeting in University College London.

Andrew Brown described Joseph Rotblat as a post-enlightenment visionary who will matter for generations to come. In Brown's view, Rotblat's legacy is relevant today, when there are still many obstacles to the elimination of nuclear weapons. He concluded that Rotblat and his colleagues excelled in "slow history – painstaking



deep analysis and explicit consideration of unintended consequences and the perceptions of others. Those charged with these onerous tasks in future would do well to study Rotblat's contributions, even when he was wrong."

Paul Rogers, Professor of Peace Studies at

the University of Bradford, recalled Rotblat's key role in establishing Bradford's Department of Peace Studies and his inspirational relationship with younger generations. Professor Rogers

argued that Pugwash had an important role in breaking the mindset dominated by the so-called "balance of terror". Pugwash was later able to influence key voices around President Gorbachev, persuading him that Russia could not sustain this "balance of terror". Today, Rogers considers that the world has moved from the "edge of the abyss" of nuclear confrontation to a "slippery slope" of proliferation and risks of war. This presents massive dangers which will require "wisdom to exceed our own capacity for destruction". He sees movements such as Pugwash as having an important role in providing guidance to decision makers on these issues.

Sandra Ionno Butcher, Director of the Pugwash History Project, highlighted the mix of pragmatism and idealism in the approaches developed by Joseph Rotblat and his Pugwash colleagues. They were pioneers of "Track-2 diplomacy" – bringing together influential people to move negotiations on when they become blocked at the highest levels. Rotblat's belief in public engagement wherever it was relevant, particularly with young people, led him to develop the WMD Awareness Programme and PeaceJam UK, where young people work with Nobel laureates (see p. 7).

The lessons of Fukushima

Just prior to the first anniversary of the Fukushima earthquake and tsunami, Dr Mike Weightman, who is responsible for the independent regulation of the safety and security of the UK nuclear industry, addressed a Pugwash discussion meeting at University College London on 20 February. His international fact-finding mission to Japan in May 2011 on behalf of the IAEA informed his October 2011 report on the issues raised for Japan. He particularly stressed the health, social and economic implications of the disaster. These included the loss of access to land, reduced energy sources and loss of confidence both in nuclear power as an energy source and the Japanese government's record in handling the crisis.

On the implications for the UK nuclear industry and the lessons to be learned, he argued that UK nuclear systems are different from those in Japan. He nonetheless stressed the importance of enhancing technical safety measures and

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preparedness, increasing transparency and enhancing the safety culture within the industry. He posed two final questions:

- Was the Fukushima disaster an institutional and cultural failure rather than a failure of science, engineering or people?
- Do fears about the hazards and consequences of nuclear power relate more to the potential social, political and economic impact than physical harm to people?

Joseph Rotblat Memorial Lecture 2012

This year's lecture at the Hay Festival on 10 June featured **Dr. Rose Gottemoeller**, Acting Under Secretary for Arms Control and International Security in the Obama Administration and Chief Negotiator for the new START treaty. Gottemoeller honoured Joseph Rotblat's contribution to disarmament, explaining that his tireless campaigning helped to establish nuclear abolition as an acceptable policy goal. She outlined progress made towards "nuclear zero" in recent years – most notably President Obama's Prague Agenda and the new START treaty. She used these as a platform to imagine how future technologies and social media might help overcome obstacles to global disarmament, particularly the problem of verification – ensuring that any one country doesn't "cheat".

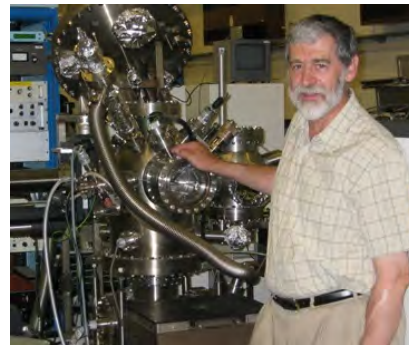
Generating clean energy from sunlight and maintaining biodiversity

On 10 October, Professor Peter Weightman from Liverpool University's Department of Physics addressed a British Pugwash discussion meeting on this complex topic.

The growth of the world's human population and the consequent demand for energy has led to an increase in CO₂ in the atmosphere and a loss of biodiversity that is likely to lead to a "sixth extinction". Both of these developments must be countered, or their consequences mitigated, if the human population is to continue to grow and current lifestyles are to be maintained or improved.

Professor Weightman argued that not only are these two problems linked by human population growth, but that they pose challenges, some of the solutions to which require similar advances in scientific research. The challenges include the need to improve our existing understanding of

Professor Peter Weightman in his laboratory at Liverpool University



the basic physics of chemical and biological processes, and develop new experimental techniques to study them. "At a theoretical level, scientists need to develop their understanding of how complex systems operate in nature, and of non-equilibrium thermodynamics. These are probably the most difficult problems we face."

Sunlight is one of the few sources of clean energy with the potential to satisfy our needs. Professor Weightman reviewed what needs to be done to realise the potential of several forms of energy generated from sunlight (e.g. photovoltaics and artificial photosynthesis) in order to meet future needs for clean energy and maintain biodiversity. Solar power, he argued, is do-able but requires more efficient solar cells.

The challenges to this solar pathway are still very great but if met, would, Weightman contended, both advance scientific theory and support biodiversity. "If we want to understand how biological systems are organised and how we may maintain biodiversity, we have to have a theory of the flow of free energy through this open system. We have to learn how to control the dynamics and the non-equilibrium thermodynamics, which are the same intellectual problems we need to solve to make solar cells and artificial photosynthetic systems. Intellectually the problem is the same but what we apply it to is different, so if you make progress in one, you can apply it to the other."

A Middle East Weapons of Mass Destruction Free Zone

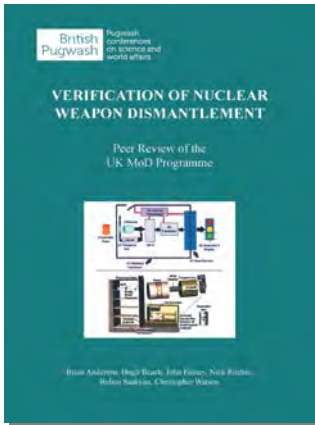
On 19 November, the Seventh London Conference on this important and difficult issue was organised by the Centre for International Studies and Diplomacy at SOAS, and co-sponsored by British Pugwash.

3 Publications

History pamphlet

A new pamphlet outlining the history of Pugwash and the role of British Pugwash was produced in February. It is available online at <http://www.britishpugwash.org/documents/Pugwash-historyFINAL.pdf> or on request from the Pugwash office.

Verification report



Verification of Nuclear Weapon Dismantlement: Peer Review of the UK MoD Programme

Brian Anderson, Gen. Sir Hugh Beach, Prof. John Finney, Dr Nick Ritchie, Prof. Ruben Saakyan, Dr Christopher Watson

This report gives a brief summary of early work on this subject (largely in the US), and then focuses on the activities of UK MoD since its programme took off in 2001, following the UK government's announcement at the 2000 NPT review conference that it was engaging in such work. That programme has sought to define the procedures which would ensure that a country engaged in a dismantlement programme does in fact carry out its declared dismantlement activities, without in the process revealing any nuclear weapon design information to the inspectors, thereby potentially violating the terms of the NPT. The procedures have to involve chain-of-custody and information barrier techniques. Some difficult questions about the effectiveness of such inspections remain open. The report is available online at <http://www.britishpugwash.org/documents/BPG%20Verification%20Report.pdf> or on request from the Pugwash office.

Forthcoming: British Pugwash, *Pathways to 2050: Three possible UK energy strategies* (February 2013)

Dr Nick Ritchie, *A Nuclear Weapons-Free World? Britain, Trident and the Challenges Ahead* (March 2013)

For updates on developments relating to the **UK and US Trident replacement programmes**, follow Nick Ritchie's Twitter feed at

<http://twitter.com/UKTrident>

4 International Pugwash Activities

International Pugwash Responsibilities

John Finney is a member of the Pugwash Council and Executive Committee and also convenes the Standing Pugwash Working Group on the Social Responsibility of Scientists. Robert Hinde serves as a trustee of the Geneva-based Pugwash Foundation. Sandra Ionno Butcher is Director of the Pugwash History Project.

International Pugwash Discussions

John Finney and Robert Hinde participated in the inaugural workshop of the re-formed Social Responsibility Working Group that was organised by French Pugwash colleagues in Paris on March 14-15. On behalf of Pugwash President Amb. Jayantha Dhanapala, John also took part in the Extraordinary Meeting of the UNESCO World Commission on the Ethics of Scientific Knowledge and Technology (COMEST), on which Pugwash has a seat. A subsequent activity proposal for an expert scoping workshop to look into the feasibility of developing a framework of ethical principles for development and use of military robotics was agreed, for which funding has been generously provided by Network for Social Change and the Marmot Charitable Trust.

John Finney also participated in an International Pugwash workshop at Thinkers' Lodge in Pugwash, Nova Scotia (where the first Pugwash workshop was held in 1957). Organised by Canadian Pugwash, the workshop attempted to apply Strategic Foresight techniques to several scenarios for a secure world without nuclear weapons, leading to some interesting discussions and insights into possible ways forward to a nuclear-weapon-free world.

International Pugwash held a consultation in London in September on the Iranian nuclear issue, which also addressed prospects for

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negotiations and the planned Helsinki meeting on a Middle East WMD Free Zone. British Pugwash was represented by Gen. Sir Hugh Beach, Amb. Peter Jenkins and Christopher Watson.

While attending a meeting of the Pugwash Executive Committee in Moscow in November, John Finney took part in two Pugwash discussions organised as part of the Sixth Russian Congress of Political Science: on International Cooperation in the Arctic Region and Contemporary Problems of Disarmament and Non-proliferation of Nuclear Weapons. He presented a paper on attitudes and political debates in British society on UK nuclear weapons issues at the latter session.

5 Other Meetings and Conferences

- Christopher Watson attended the EU Non-proliferation Consortium Conference in Brussels 3-4 Feb 2012.
- Christopher Watson attended a meeting at the Royal Society on 12-13 March on "Nuclear Energy in the 21st Century".

6 The Pugwash History Project

The Pugwash History Project, run by the International Pugwash secretariat, brings information about the organisation's history to a wider audience. Project director, Sandra Ionno Butcher, maintains a [blog](#) that posts relevant material. Restoration work on [Thinkers' Lodge](#), in Pugwash, Nova Scotia, the site of the founding 1957 conference, has now been completed. Sandy serves as an advisor on the interpretative displays, and attended the opening ceremony for the restored Lodge. Phase Two of the restoration, is now progressing, including restoration of the "Lobster factory" as a dining hall and meeting space.

In May 2012 Sandy and Paolo Cotta-Ramusino participated in a workshop in Vienna, "Writing Pugwash Histories: From Hiroshima and Nagasaki to Kabul and Gaza".

British Pugwash, together with the Pugwash History Project, is working to organise and

digitise the extensive Pugwash photographic collection, together with the Pugwash newsletters, which document its activities from 1963 onwards. The work is being carried out by staff, Executive Committee members and volunteers. We hope that in future we will be able to put the photo database and a search facility for the Pugwash newsletters on the Pugwash History website. Special thanks are due to our interns – Nara Improta, Stuart Pallister and Ed Ross – without whose hard work this project would not have got started.

In November 2012, the archiving and cataloguing of the Pugwash element of the Rotblat archive were completed and delivered to the Churchill Archives at Cambridge University.

7 Other Public and Educational Outreach

PeaceJam UK

PeaceJam is an international education programme for schools and youth groups and is unique as it is the only education programme working directly with Nobel Peace Laureates. The UK affiliate, PeaceJam UK targets young people from all backgrounds in secondary schools or youth groups
<http://www.peacejam.org.uk/>

The PeaceJam annual youth conference is held every year at a UK university. Our laureate this year was the Argentinian teacher, professor of architecture, human rights activist and artist, Adolfo Perez Esquivel. In 1977 he was one of the 'disappeared' who was imprisoned and tortured by the Argentinean military. Amnesty International declared him their number one prisoner of conscience in 1978, which led to thousands of letters being written to the Argentinean government putting pressure on the Argentine military resulting in his release fourteen months later. He was awarded the Nobel Peace Prize in 1980 for his courage and incredible leadership for human rights and true democracy.

His measured, witty and honest answers to the many questions put to him by our students made it a most memorable weekend. As usual the weekend was also filled with many service projects and workshops with titles as diverse as

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Students and staff at the 2012 PeaceJam Conference at the University of Bradford

"Media Broadcasts", "Allotment Regeneration", "Graffiti for Social Change" and "Be the Change You Wish to See in the World". The conference this year was the last to be held at the University of Bradford, and we extend our thanks and gratitude to Bradford for seven wonderful years.

Work with the Rotary-funded Peace Scholars will go on. We have continued to develop our partnerships, particularly with the Rotary, whose members work with us and with teachers, delivering the PeaceJam 'Ambassadors' curriculum wherever teachers do not have the time, and have enabled us to extend the PeaceJam programme into schools in Wales and Scotland, the Channel Islands and Northern Ireland. Now The Mount secondary school for girls in York is the first school to bring the PeaceJam Ambassadors curriculum into their sixth form studies, looking specifically at ideas on peace, violence, social justice and oppression as part of their overall ethos of global thinking.

PeaceJam should not be seen as just an after-school activity but a serious pioneering attempt at international peace education, which is trying, to use the language of Joseph Rotblat, to change our culture from one of violence to one of peace. As such, we plan over the coming years to write a series of papers on our results and experiences.

British Student/Young Pugwash

British Pugwash has become aware that its traditional means of involving the younger

generation in its activities are no longer very effective in a world in which students largely communicate electronically. However, interest remains high, so British Pugwash is working in collaboration with the International Network of Emerging Nuclear Specialists and UNA UK to establish a new approach based on modern technology to encourage university students and young professionals to get involved in work on nuclear security issues.

British Pugwash Group Executive Committee 2012

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For PeaceJam: Sally Milne

For the WMD Awareness Programme: Carol Naughton; Luke Tredget

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British Pugwash Group

Ground Floor Flat, 63A Great Russell Street, London WC1B 3BJ

Tel: 0207 405 6661; email: office@britishpugwash.org

www.britishpugwash.org