



ULRICH BARTOSCH, GÖTZ NEUNECK, ULRIKE WUNDERLE (EDS.)

The Russell-Einstein Manifesto – 60 years on

Remember Your Humanity and Forget the Rest!
Challenges facing Nuclear Disarmament

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With a foreword by Jayantha Dhanapala and contributions by Egon Bahr, Ulrich Bartosch, Susanne Baumann, Reiner Braun, Agnieszka Brugger, Klaus Gottstein, Otto Jäckel, Harold Kroto, Götz Neuneck and Jürgen Scheffran

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The Russell-Einstein Manifesto – 60 years on. Remember Your Humanity and Forget the Rest. Challenges facing Nuclear Disarmament; Ulrich Bartosch, Götz Neuneck, Ulrike Wunderle (eds.)

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Tel. (+49) 30 21234056 E-Mail info@vdw-ev.de Web www.vdw-ev.de

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Foreword

JAYANTHA DHANAPALA



Photo: Götz Neuneck, 2015 (Part of a larger picture)

Jayantha Dhanapala (Archive Foto; Part of a larger picture)

The historic London Manifesto – the foundation document of the Pugwash Conferences on Science and World Affairs – was issued in London on 9 July 1955 by Bertrand Russell at the height of the Cold War and ten years after the end of World War II. The signatories included eleven pre-eminent intellectuals and scientists, including Albert Einstein, who signed it just days before his death on 18 April 1955.

This welcome and timely collection of essays on the Manifesto commemorates one of the earliest instances in the nuclear age of scientists and intellectuals speaking truth to power. Pugwash as a global movement has consistently practiced this policy since its inception in 1957. In 1995 it was awarded the Nobel Peace Prize jointly with Joseph Rotblat, as the citation reads –

“for their efforts to diminish the part played by nuclear arms in international politics and, in the longer run, to eliminate such arms.

It is fifty years this year since the two atomic bombs were dropped on Hiroshima and Nagasaki, and forty

years since the issuing of the Russell-Einstein Manifesto. The Manifesto laid the foundations for the Pugwash Conferences which have maintained a high level of activity to this day. Joseph Rotblat was one of the eleven scientists behind the Manifesto and has since been the most important figure in the Pugwash work.

The Conferences are based on the recognition of the responsibility of scientists for their inventions. They have underlined the catastrophic consequences of the use of the new weapons. They have brought together scientists and decision-makers to collaborate across political divides on constructive proposals for reducing the nuclear threat.

The Pugwash Conferences are founded in the desire to see all nuclear arms destroyed and, ultimately, in a vision of other solutions to international disputes than war. The Pugwash Conference in Hiroshima in July this year declared that we have the opportunity today of approaching those goals. It is the Committee's hope that the award of the Nobel Peace Prize for 1995 to Rotblat and to

Pugwash will encourage world leaders to intensify their efforts to rid the world of nuclear weapons.”

In a world with approximately 15,395 nuclear weapons among nine countries, where global military expenditure in 2016 was as high as U.S. \$1,686 billion, the relevance of the London Manifesto is all too clear.

Never before has a U.S. President caused so much disruption to normal policy and threatened strategic stability with his reckless statements and actions. A toxic mix of populism, nationalist bigotry, protectionism in trade and intolerant racist exclusivism is challenging the post World War II liberal democratic international order which the U.S. helped to create

and underpin. While a U.S. Nuclear Posture Review might well be expected there is no policy statement so far on the Trump Administration’s nuclear policies, except for the extravagant boast that the U.S. should have the greatest arsenal and that the more nuclear weapon states in the world there are the better – a wild extension of Kenneth Waltz’s theory that some proliferation can help keep international peace. We have therefore no reliable guidance on Trump policies.

The Chicago-based ,Bulletin for Atomic Scientists‘ made their reaction abundantly clear by moving the Doomsday Clock to 2 ½ minutes to Midnight– such is their dire perception of the risk of nuclear war under Trump.

Jayantha Dhanapala quoted the press release of October 13, 1995 by the Norwegian Nobel Committee. Cf. http://www.nobelprize.org/nobel_prizes/peace/laureates/1995/press.html

Preface by the Editors

ULRICH BARTOSCH, GÖTZ NEUNECK, ULRIKE WUNDERLE

On July 9th 1955, Bertrand Russell handed over to the press a statement on nuclear warfare that became known as the Russell-Einstein Manifesto:¹ It points out the absolute, irrevocable disaster linked to this new type of warfare. The text is based on conversations with scientists, including Albert Einstein, who signed the declaration during the last days of his life. The declaration was signed by ten Nobel Prize laureates, most of them scientists.² They not only demanded the abolition of nuclear weapons, but of war in general, urging governments “to find peaceful means for the settlement of all matters of dispute between them.” By publishing the declaration, scientists took a political stance. The first sentence already stated their main reason: “In the tragic situation which confronts humanity, we feel that scientists should assemble in conference to appraise the perils that have arisen as a result of the development of weapons of mass destruction, and to discuss a resolution in the spirit of the appended draft.”

The Pugwash movement has since

held many annual conferences, workshops and panel discussions to contribute to the peaceful settlement of disputes and the abolition of weapons of mass destruction (WMDs).³ The German Pugwash group and many German experts took part in these, providing concrete studies, suggestions and expertise within the VDW framework that forms the basis of the German Pugwash Group.⁴ Since its foundation in 1959 the VDW (Vereinigung Deutscher Wissenschaftler; Federation of German Scientists) has been committed to and advocating responsible science by encouraging scientists from different academic disciplines to critically reflect upon the various social consequences and implications that their research may have on society and to use their expertise to contribute to a public debate. At an international level, the Pugwash activities became the foundation of various arms control treaties and steps towards disarmament. They helped to end the Cold War. In 1995, the Pugwash movement and its founder and moving spirit, Joseph Rotblat, were jointly awarded the

Nobel Peace Prize “for their efforts to diminish the role of nuclear weapons in international politics and, in the longer run, to eliminate such weapons.”⁵ The number of existing nuclear weapons has since dropped significantly, but not decisively. Now as before, extended deterrence remains the key element for the justification of keeping horrendous weapons stockpiles.

On the occasion of the 2005 and 2010 anniversaries of the Russell-Einstein Manifesto, the VDW highlighted the dangers emanating from the halting nuclear disarmament process and continuous proliferation of modern military technology. The Nagasaki Declaration of the Pugwash Council of November 2015 not only stressed the utter devastation caused by the bombs, but also appealed to world leaders to listen to the hibakusha, the over eighty-year-old survivors of the nuclear inferno of Hiroshima and Nagasaki and to work towards the abolition of nuclear weapons.⁶

On July 9th 2015, precisely 60 years after the publication of the Russell-Einstein Manifesto in London, an expert discussion was held in Berlin to document the current situation regarding nuclear disarmament and to provide a platform to discuss the next steps in the disarmament process. The event was organised by the

VDW and the German Pugwash group in connection with IPPNW, IALANA, NatWiss – Verantwortung für Frieden und Zukunftsfähigkeit and the German-Japanese Peace Forum.

In his introductory speech, Prof. Ulrich Bartosch, then chairman of the VDW, stressed the ongoing responsibility of scientists that results from the creation of the nuclear bomb: “It was the result of scientific curiosity and technical know-how (...) They were therefore under obligation to unite beyond all political differences to discuss and avert the danger.” This would involve “new ways of thinking” and an unconventional approach to long-established views. In a short video message, Prof. Harold Kroto, Nobel laureate for Chemistry of 1996, referred to his close relationship with Pugwash founder Jo Rotblat, advocating the return to humanitarian values. “Remember your humanity and forget the money”, was his variation on the original Manifesto theme. Prof. Klaus Gottstein, who had been a long-term Pugwash delegate for VDW and a member of the Max-Planck Society, began his historical introduction with reference to the first conference in 1957 that took place in the small Canadian fishing village of Pugwash. His long-term experience as an insider allowed him to give insights into the mechanisms and effectiveness of

the Pugwash method of earlier years. The same mechanisms still exist. They are based on scientific insight into the matter that is passed on and discussed in mediating talks, thus contributing to the resolution of conflicts. In addition, governments receive advisory information and the public can get involved. It is also a declared aim to “familiarise independent scientists with the details of the problems at hand so that they can use their expertise effectively.” Prof. Jürgen Scheffran looked in detail at individual contributions of scientists in research groups and on conferences (some of which were held in Germany), which helped to slow down the arms race. Scheffran ended his talk with the following words: “Knowledge without responsibility is as problematic as responsibility without knowledge.”

At the centre of the Berlin conversations was the keynote speech by the former minister of the Brandt government, Prof. Egon Bahr. At the suggestion that he could deliver his speech sitting down, the 93-year-old responded in his own way. He stood up, firmly holding his manuscript and delivering his speech with impressive presence and aplomb. He was introduced as the Father of Common Security by the current Pugwash delegate of the VDW, Prof. Götz Neuneck. He took his audience on a fascinating

geostrategic journey from the origins of the concept in the Palme Commission, the end of the Cold War right up to an analysis of the crisis now affecting the relationship between the superpowers, including the Ukraine conflict. Bahr emphasised the role of scientists: “The Russell-Einstein Manifesto marks a revolution in the sense that scientists warn against a danger and politicians must find an answer.” At the time, the danger was the H-bomb and unrestricted nuclear armament. At the height of the Cold War, politicians accepted that scientists developed a network named after its foundation location, the village of Pugwash, and that its members took personal responsibility for analysing the dangers to our world and exerted a moderating influence. “Undeniably Pugwash achieved a lot because the group created trust and curtailed negative developments.” Looking at current developments, Egon Bahr urged today’s scientists to keep an eye on the dangers of cyberwar.

Egon Bahr’s speech was concise, political and full of memories, but above all, it was up-to-date and forward-looking. These were the words of somebody who wanted to name and address the most urgent issues of today’s world, somebody who saw the cooling of relations between Russia and Europe and Germany in par-

ticular as a dangerous development. There was a sense that he felt it was his duty to do what was in his power to improve relationships with Russia. Very soon after our conference, Egon Bahr travelled to Moscow to fulfil his mission. Having returned from this journey, the great German peace-builder died in Berlin on August 19th 2015. This news came as a shock to us all, and participants of the symposium of July 9th will remember him as a committed and demanding analyst of current developments. His contribution to the Russell-Einstein Manifesto anniversary was his last public speech held in Germany.

On January 9th 2009, Egon Bahr published an opinion column in the International Herald Tribune together with Helmut Schmidt, Richard von Weizsäcker and Hans-Dietrich Genscher, making the case for a nuclear free world.⁷ They were all politicians with contacts to the German Pugwash group or at least with an interest in its work. Their voices are sadly missing in today's European and global debate. They said: "Our century's keyword is cooperation. No global problem - be it the issue of environment and climate protection, providing for the energy needs of a growing world population or tackling the financial crisis - can be resolved by confrontation or the use of military force." The last of the Great

Four, Hans-Dietrich Genscher, died on March 31st 2016. In the preface of his last book *Meine Sicht der Dinge* (my view of things), Genscher, against the background of the breakdown of trust between the West and Russia, writes: "Is peace in Europe now going to die in a piecemeal fashion? Arms control and disarmament elicit condescension, while the use of language is becoming increasingly militarised. We are just at the beginning of a development that still seems manageable. But for how long?" He explicitly champions further nuclear disarmament. "(...) I believe it is necessary now to return to the disarmament culture that enabled the building of trust between East and West in the late 1980s."⁸

Genscher continues: "In my view, talking about Germany's responsibility means that we, who renounced the use and possession of weapons of mass destruction in the Two-plus-Four Agreement, must now work in close consultation our allies to establish an ambitious disarmament plan that will fill our common European home with a new spirit. This requires new thinking and the ability to recognise and encourage new developments."

"To think in a new way" is also a maxim of the Russell-Einstein Manifesto, which must be acted upon to overco-

me the current standstill in every respect. This was one of the purposes of the meeting that has been documented here.

After the talks, a panel discussion and a debate with the audience highlighted the different approaches and positions of important German stakeholders which we publish in this volume. Deputy Commissioner for Arms Control and Disarmament, Susanne Baumann, explained the position of the German government. She advocated rapid progress in conventional disarmament and arms control. She also agreed that a ban on nuclear weapons was needed, but thought this could not be achieved in the near future.

Agnieszka Brugger, Member of the Bundestag, Spokesperson for security and disarmament and chairwoman of the Defence Committee and the sub-committee for disarmament, arms control and non-proliferation, championed the objectives of the Humanitarian Initiative who argues that it is time to ban the use of nuclear weapons under any circumstances. The step-by-step security policy approach and the global ban requested by a coalition of 150 UN Member States clearly go in a different direction and are colliding in the short run. Brugger demanded that the German government insisted on the withdrawal of

NATO's tactical nuclear weapons and made the case for more "vision, creativity and courage". Reiner Braun, co-spokesman for Cooperation for Peace and co-president of the International Peace Bureau in Geneva, criticised that nuclear powers insisted on their right to possess nuclear weapons and keep modernising their nuclear arsenals. He asked for a grassroots détente policy and unilateral disarmament. Finally, IALANA chairman Otto Jäckel appealed to the German federal government to take a stance regarding the approximately 20 nuclear weapons stationed in Germany and asked Germany to refuse to participate in any use of nuclear weapons. Such participation would amount to a war crime, and Germany should put an end to any form of nuclear participation. The following discussion with the audience was confrontational and showed that the dividing line between partisans of the Humanitarian Initiative and an arms control approach has widened.

Since the commemoration on July 9th 2015 in Berlin the international situation has been deteriorating significantly. The Syrian war seems to be never-ending causing many innocent casualties. The fighting in Afghanistan and Iraq is as bloody as ever and the armed conflict in the Eastern Ukraine is not solved. Then Foreign Mi-

nister Frank-Walter Steinmeier said in June 2015 in Stuttgart: “Peace in a world which makes its own rules. Peace in which conflicts arise over the negotiating table and no longer over the flashes of machine gun fire. That was the founding idea of the United Nations, and its task is not complete, certainly not in a world which seems to have come loose from its moorings.”⁹ The current volume cannot handle all the future challenges, but it is in the spirit of the Pugwash movement to redouble the efforts to contribute to arms control and disarmament, crisis management and war prevention especially where nuclear weapons are involved.

Obviously, the task ahead has not become easier during the last years. Newly elect US President Trump seems not committed to invest in any kind of coherent future crisis diplomacy casting doubts on key arms control accords such as the N-START treaty or the JCPOA agreement of the EU3+3 with Iran. Moral maxims such as those extolled in a letter by Pope Francis in December 2014, can be generally agreed upon. The pope emphasised that “nuclear deterrence and the threat of mutually assured destruction cannot be the basis for an ethics of fraternity and peaceful coexistence among peoples and sta-

tes. The youth of today and tomorrow deserve far more.”¹⁰

How can an effective policy be put into practice? Finding the route to a world without nuclear weapons requires new thinking, courage and unity. After Obama’s Prague speech, Sam Nunn said that the top of the mountain, a nuclear-free world, was now in sight. One would like to add that there are several routes to the top and detours, pauses and even failures are possible. In any case, a lot of strength is required, and the seriousness of the danger must first be realised so as not to avoid the necessary efforts. This is the legacy Egon Bahr leaves us in his last public speech in Germany. The urgency of the situation was also the motive for the authors of the Russell-Einstein Manifesto. The manifesto ends with the following perspicuous words:

“There lies before us, if we choose, continual progress in happiness, knowledge, and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal, as human beings, to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death.”

All contributions in this documentation represent the authors’ views as of July 9, 2015, first published in June 2016. In view of the central role Egon Bahr’s and Harold Kroto’s texts played in the discussion at the time, the other authors agreed not to update their own texts, thus giving a historic snapshot of the challenges facing nuclear disarmament 60 years after the Russell-Einstein Manifesto.

Eichstätt, Hamburg and Berlin, July 30th 2017
Ulrich Bartosch, Götz Neuneck, Ulrike Wunderle

¹ See the original text at: <https://pugwash.org/1955/07/09/statement-manifesto/>

² See: Sandra Ionno Butcher: The Origins of the Russell-Einstein Manifesto by Sandra Ionno Butcher: Pugwash History Series #1, May 2005 https://pugwashconferences.files.wordpress.com/2014/02/2005_history_origins_of_manifesto3.pdf

³ See the Pugwash Homepage: www.pugwash.org

⁴ See: Götz Neuneck: Die Pugwash Conferences on Science and World Affairs. Ein Beispiel für erfolgreiche “Track-II-Diplomacy” der Naturwissenschaftler im Kalten Krieg, in: Christian Forstner, Dieter Hoffmann (Hrsg.): Physik im Kalten Krieg. Beiträge zur Physikgeschichte während des Ost-West-Konflikt, Springer Spektrum, Wiesbaden 2013, p. 243-263.

⁵ http://www.nobelprize.org/nobel_prizes/peace/laureates/1995/

⁶ See: <https://pugwash.org/2015/11/05/2015-nagasaki-declaration/>

⁷ See the article which appeared in print on January 9, 2009, in The International Herald Tribune <http://www.nytimes.com/2009/01/09/opinion/09iht-edschmidt.1.19226604.html>

⁸ Hans Dietrich Genscher: Meine Sicht der Dinge, Berlin 2015, p. 10 (translation of the passages by Renate FitzRoy).

⁹ Speech by Foreign Minister Frank-Walter Steinmeier entitled “The World has come loose from its Moorings”; on the occasion of the Deutscher Evangelischer Kirchentag, Stuttgart; http://www.auswaertiges-amt.de/EN/Infoservice/Presse/Reden/2015/150606_Kirchentag.html

¹⁰ Message of his Holiness Pope Francis on the occasion of the Vienna Conference on the Humanitarian Impact of Nuclear Weapons (7. Dezember 2014), see: https://w2.vatican.va/content/francesco/en/messages/pont-messages/2014/documents/papa-francesco_20141207_messaggio-conferenza-vienna-nucleare.html



Photo: Pugwash Conferences on Science and World Affairs, 1955

Press conference in London on July 9th 1955: Bertrand Russell (right) reads out the Russell-Einstein Manifesto

Russell-Einstein Manifesto – 60 years on

Opening address by the VDW Chairman

ULRICH BARTOSCH

“We appeal, as human beings to human beings: Remember your humanity, and forget the rest”

I feel privileged and honoured to welcome you all to this event commemorating the 60th anniversary of the publication of the Russell-Einstein Manifesto, and I am the first person to quote a core sentence of the manifesto that will possibly be repeated in the various contributions many times over: “We appeal, as human beings to human beings: Remember your humanity, and forget the rest”

This sentence from the manifesto contains the pinnacle of human wisdom in a nutshell, but can it be more than just a pipe dream? The message has been expounded in many guises through religion, the arts and philosophy throughout the history of human culture. However, it often met with condescension and ridicule. Unperturbed, the manifesto even promises: “If you can do so, the way lies open to a new Paradise“. Is it worth then, to revisit the pipe dream, considering that the document, written in 1955, was conceived under completely different

circumstances. Is it worth it now that the final threat seems to be unfounded “if you cannot, there lies before you the risk of universal death”?

It is apparently well worth it – otherwise none of you would have accepted the invitation for today’s conference. Good evening, ladies and gentlemen. On behalf of the cooperating organisations NatWiss, IALANA, IPPNW, the German-Japanese peace forum, the German Pugwash section and VDW, I would like to extend a warm welcome to all of you. I dare say a revisit is even more urgent, or we would not have such illustrious company in our discussions tonight. It is a particular honour to us to welcome the erstwhile Brandt cabinet minister Professor Egon Bahr and Professor Klaus Gottstein in our midst. I am sure all other participants will understand that I welcome you both before all others. Dear Egon Bahr, we are delighted to see you here, and many thanks to you, dear Klaus Gottstein, for coming all the way to Berlin. In my view, your presence at our meeting underlines that we are dealing with a serious issue. In this context,



Photo: Leonard Bartosch, 2015 (Part of larger picture)

Prof. Dr. Ulrich Bartosch (VDW Chairman 2009–2015, centre) in conversation with Prof. Dr. Klaus Gottstein (left) and Prof. Dr. Hartmut Graßl (right)

Gottstein sometimes quotes Joseph Rotblat saying that time has become very precious because he had very little left. It was therefore important to use it for the things that needed to get done. Is commemorating the Russell-Einstein Manifesto one such thing?

The manifesto demanded nothing less than a new way of thinking. It gave mankind just one dramatic choice – either war would be abolished or humankind would face extinction. Being able to change the world through thinking was a key hypothesis shared by Russell, Einstein, Rotblat and eight other signatories of the manifesto. Can we really change the world through our thinking? Such idealism may seem preposterous and naive, disconnected from reality. History seems to teach us a different lesson.

And yet the signatories had learned from their experience that scientific thinking had changed the world profoundly. The military application of nuclear research enabled humans to destroy their own race. It was the result of scientific curiosity and technical know-how. The punchline is that not only did self-destruction arise as a possibility, it even seemed the most likely outcome, and it was the scientists who were aware of the danger. They were therefore under obligation

to unite beyond all political differences to discuss and avert the danger. What might have seemed an idealistic political concept of overcoming war was the only realistic option left in realpolitik.

The realistic idealism of the signatories was shared by other scientists. A few days later in Germany, on July 15th 1955, the Mainau declaration was published out of the same concern. One of its main proponents was co-founder of the VDW, Carl Friedrich von Weizsäcker. He was also involved in the wording of the 1957 Göttingen declaration and took later part in two Pugwash conferences that took up work as a direct result of the manifesto. We will soon learn more about it.

These are important and interesting milestones, but what makes them relevant today is that the demands of the manifesto have lost none of their urgency. There has not been a single hour when human beings could have believed that the danger had been dealt with. Although we have been experiencing peaceful changes – where else but in Berlin can you be more aware of it – but the possibility of war is still with us. It may have come as a surprise to many that war has become established as a political instrument in Europe again. Are we aware of the dangers associated with it? “People scarcely realize in imagination that

the danger is to themselves and their children and their grandchildren, and not only to a dimly apprehended humanity”, warns the manifesto. The dangers are as real as ever and the situation has become more complex. Sixty years after their predecessors, Nobel laureates launched another Mainau declaration at their 2015 meeting, this time to bring home to the public that climate change is a danger that rivals nuclear apocalypse. Both require new ways of thinking and concerted action. The security aspect of climate change is a special focus of Prof. Jürgen Scheffran’s work. A warm welcome to you, Jürgen. We will also discuss the abolition of nuclear weapons. Our competent panel will be chaired by Prof. Götz Neuneck, whom I would like to thank for the preparation of our meeting. The other members of the panel will be introduced later. I welcome Ambassador Susanne Baumann, Deputy Federal

Commissioner for Disarmament and Arms Control at the German Federal Foreign Office, Agnieszka Brugger, member of the German Bundestag, Reiner Braun, co-chairman of the International Peace Bureau and Otto Jäckel, chairman of IALANA. Many thanks to you all for your involvement and collaboration.

Ladies and gentlemen, we will first show a video message by Professor Harold Kroto, Nobel laureate of 1996. A close ally and friend of Joseph Rotblat for many years, he will look at the world from Rotblat’s perspective. Before passing on the baton to NatWiss chairman Nina Knöchelmann, who will facilitate tonight’s discussions, I would like to thank the team that prepared tonight’s event – in particular Lucas Wirl, Pascal Luig and Dr. Ulrike Wunderle.

I wish us all helpful thoughts and good discussions – thank you all again for coming.

60 Years Russell-Einstein Manifesto: Video message referring to Joseph Rotblat and his mission*

HAROLD KROTO

It is a great honour to be asked to open this conference. Probably as good as any reason is that in the last few years of his life I became a close friend of Jo Rotblat, who I consider one of the two or three great men that I have got to know well, but only in the last few years of his life when I interviewed him. I have interviewed to a lot of people, but I think these are the most important interviews that I have ever done.

I often use part of his Nobel Lecture when I talk to young people about responsibility. I have often gone to Lindau, where some of the people who are really movers and shakers of the world meet, who will get to the positions of major responsibility.

I think things have changed since Jo and Pugwash tried to change the world. I think what has happened is that governments are no longer in control. Big business is now in control. Young people who are in positions of power, they are responsible – and

with that power responsibility is very important – they have to now direct their efforts to change the attitudes of the people who would have the big business.

I am reminded of one of the great lines of Jo, which is „Remember your humanity and forget the rest“. I just love that statement, that comment, and I use it very often. Because we see that industry now making money seems to be more important in controlling the way that countries and people behave. It is a big problem because I think many of them, not only have they forgotten their humanity, I am not sure they ever had any.

This conference should start to think very carefully about whom they should direct their attention to. My view is that it is the leaders of industry.

And one sees that when, for instance, just recently a humanitarian comment was made by a minister of a particular country, a humanitari-



Photo: Leonard Bartosch, 2015 (Part of larger picture)

Prof. Dr. Harold Kroto's message is shown at the conference.

*Video message to the conference on July 9th 2015 with the support of IALANA, presented to the public on YouTube.de with an introduction by Reiner Braun, managing director of IALANA, <https://www.youtube.com/watch?v=8vWXYRBdRZA>

an comment with regard to another country that is very low down on the list of human rights. The country in question broke off relations. And who was to complain about this? It was the business community within the country of that minister that complained that they are going to lose their money that they were going to make.

This is an indication of the problems of the future. My motto for this conference and for people with responsibility for saving the world is – we should take it from Joseph Rotblat: „Remember your humanity and forget the money.“

Looking back on the Pugwash approach*

KLAUS GOTTSTEIN



Photo: Leonard Bartosch, 2015 (Part of larger picture)

Prof. Dr. Klaus Gottstein (right) during the panel discussion with Prof. Dr. Egon Bahr

Many thanks to Götz Neuneck and the VDW board for inviting me to look back and talk about the Pugwash approach in the context of commemorating the Russell-Einstein Manifesto. The VDW is particularly well-placed to commemorate the Russell-Einstein Manifesto that was drafted by Bertrand Russell and then made public at a press conference in London this day 60 years ago. The manifesto was seminal to the Pugwash conferences, in which the VDW since its foundation acted as the German Pugwash delegation. In the early years, it represented West Germany only.

The Russell-Einstein Manifesto warned against the lethal threats to humankind from the nuclear weapons of the superpowers, in particular after the invention and testing of the H-bomb. Six days later, on July 1955, 18 Nobel laureates from all over the world responded to an initiative by Otto Hahn and launched the Mainau Declaration, which also warned of the dangers of nuclear armament. Otto Hahn was also one of

the signatories of the Declaration of the Göttingen Eighteen, drafted by Carl Friedrich von Weizsäcker and published in April 1957, condemning deliberations by Adenauer and Strauß to equip the Bundeswehr with nuclear weapons.

Although these warnings against the devastating consequences of a nuclear war have many similarities, there is a major difference between the Russell-Einstein Manifesto on the one hand and the Mainau Declaration and many other later calls for maintaining peace in the atomic age and for nuclear disarmament, on the other hand. Russell was not satisfied with appealing to decision makers to behave rationally, but he also appealed to experts in the relevant sciences to come together and work out new ways to overcome obstacles that stood in the way of abolishing nuclear weapons and maintaining peace. He took concrete steps to organise such a meeting of scientists and looked into funding sources and a suitable venue. In the end, Russell decided to accept

*Speech given on July 9th 2015

an offer by industrialist Cyrus Eaton, who was prepared to finance the meeting as long as it was held in his birthplace, Pugwash in Canada. And this is where the first Pugwash Conference on Science and World Affairs took place in July 1957.

The declaration by the Göttingen Eighteen also went further than a call for politicians to take action or refrain from action, as so often happens in political life. What made the declaration of eighteen leading German nuclear researchers stand out was the concrete commitment they made by stating that “none of the signatories would be prepared to take part in the production, testing or use of nuclear weapons in any form whatsoever.” This made quite an impact! The declaration had another concrete outcome – the foundation of the Federation of German Scientists VDW by other scientists – mainly physicists – who had not been invited to sign the Göttingen declaration, but supported it and wanted to work towards an end to the nuclear arms race and the dangers it entailed for humankind. Some signatories of the Göttingen declaration, in particular Carl Friedrich v. Weizsäcker and Werner Heisenberg, could be persuaded by its founders to collaborate in the VDW.

The Pugwash conference of 1957 had been a success, discussing in pa-

rallel and plenary sessions topics like *hazards arising from the use of atomic energy in peace and war, control of nuclear weapons and the social responsibility of scientists*, which are as relevant today as they were then. The results of the consultations were then published in a comprehensive declaration.¹

It was decided in the end that this type of conferences should be continued. When the VDW was founded it was clear that their aims were largely congruent with those of the Pugwash conference and its successors. Over the years, groups of Pugwash participants formed in several countries and there was a consensus that VDW would take over this function for Western Germany, although not all VDW members became ‘Pugwashites’.

The second Pugwash Conference took place in the Canadian winter resort Lac Beauport in spring 1958. Weizsäcker took part. The conference lasted for 12 days and discussed *The dangers of the present situation, The means of eliminating the immediate dangers* and *The means of relaxing tension*. The papers, along with the proceedings, filled four volumes with nearly one thousand pages.

In the following years, the Pugwash approach to conferences began to prevail in the VDW. It meant that existing expertise was harnessed or

working groups came up with thoroughly researched results that were then passed on to international decision makers and the public to make them aware of the enormous destructive potential of nuclear warfare and of the risk of inadvertently or erroneously triggered nuclear attacks. Such attacks could be launched in the erroneous belief that a hostile attack was already on its way. Research also included an accurate assessment of the limited effectiveness of measures planned by governments to protect and help the population in case of a nuclear disaster.

There was another important contribution the Pugwash conferences made to consolidating the precarious peace during the Cold War with its recurrent crises – the use of existing good relationships that the Academies of Science and national scientific societies enjoyed, even at times when official contacts between governments had broken down. Unnoticed by the public, scientists were able to exert a kind of second-track diplomacy by meeting with their colleagues from the other side of the Iron Curtain and airing the options for a continuation of official inter-governmental negotiations that had ground to a halt or broken down, and by trying to find out what steps towards solutions would be acceptable for

both sides. The Pugwashites were intent on understanding fully their own government’s position. They could then explore how this position could be made palatable to the other side or what alternatives or compromises would be possible.

Both sides informed their governments about how the meeting had gone and what results had been achieved. The governments were then free to test officially the practicability of the suggestions without mentioning the Pugwash source.

When I was the spokesman of the German Pugwash group, I met, at the German Ministry of Defence, with General Altenburg, then Inspector General of the Bundeswehr, to discuss the German position on questions of disarmament in order to enable me to start from established facts at a Pugwash conference to be held in Poland. Several talks were held with officials in the Foreign Office, and in one instance, one of them took part in a Pugwash workshop in Geneva.

Some federal governments appreciated what Pugwash had to offer. Thus, Foreign Minister and Vice Chancellor Willy Brandt invited three eminent VDW members (Konrad Raiser, Eberhard Menzel and Hellmut Glubrecht) to exchange views on the results of the great Ronneby Pugwash conference in 1967. He asked Pug-

wash delegates to convey a more accurate interpretation of the German position on the draft to the Treaty on the Non-Proliferation of Nuclear Weapons to their Eastern counterparts.

In October 1967, Horst Afheldt talked about the results of the Ronneby conference to the commanders of the Military Academy of the German Armed Forces and the Army Officers College as well as other leading officers at a meeting at Haus Rissen. In August 1977, a great Pugwash conference was held in Munich and opened by the Federal Minister for Research and Technology Hans Matthöfer. His Ministry enabled the VDW to fund the conference, while Federal President Walter Scheel, Chancellor Helmut Schmidt and UN General Secretary Kurt Waldheim sent addresses to the delegates. In 1989, President Richard von Weizsäcker awarded Professor Joseph Rotblat the Knight Commander's Cross of the Order of Merit of the Federal Republic of Germany to mark his 80th birthday and in recognition of his achievements for détente and arms control.

It is fair to say that since their onset in 1957, the Pugwash conferences with their special approach played an important part in crisis management and détente during the Cold War and have contributed towards the negotiation of important agreements on

arms control and trust-building. These include the Partial Test Ban Treaty of 1963 that outlawed all nuclear tests in the atmosphere, under water and in space, as well as the Nuclear Non-Proliferation Treaty of 1968, the Anti-Ballistic Missile Treaty (ABM) of 1972, the Biological Weapons Convention of 1972, SALT (Strategic Arms Limitation Talks) and the CSCE (Conference on Security and Cooperation in Europe). The VDW enabled German scientists to take part in these important developments through their Pugwash connections. This, in turn, had the effect that the annual conferences and working sessions of the VDW often dealt with topics similar to those discussed at Pugwash conferences and workshops so that these were made accessible to more German scientists. But also the reverse occurred: Sometimes insights from VDW meetings reached the international Pugwash circuit through VDW delegates.

Over time, the scope of Pugwash conferences became larger. They no longer were completely restricted to what was the main concern at the time of the Russell-Einstein Manifesto, nuclear armament, disarmament, stability measures in crisis situations and non-proliferation of nuclear weapons. These remained at the heart of the Pugwash movement, but

were complemented by issues such as chemical and biological weapons, conventional armament and the arms trade, as well as general issues of maintaining peace and global security, including regional and ethnic conflict resolution. All these topics enriched the agenda of Pugwash conferences, symposia and workshops. They also included sustainable development in the Third World, population growth and migration, the destruction of the environment and the waste of energy. These global problems have the potential to threaten the security of today's population as well as future generations and were therefore included in the VDW's agenda soon after its foundation.

According to Rotblat, the objectives of the "Pugwash movement", as The Pugwash Conferences are often called, can be summarised under three aspects:

(1) Advise governments by presenting them options on how to resolve crises peacefully and find viable solutions to arms control and disarmament.

(2) Familiarise independent scientists with the details of the problems at hand so that they can use their expertise effectively.

(3) Alert the public about imminent threats so that they can develop an understanding for solutions that might at first sight be unpopular, but are necessary. The public may then be able to support politicians who are prepared to implement such measures.

The current dangerous conflicts in the world provide plenty of scope for applying the Pugwash approach. May it continue to be successful.

¹ These details and some of the following ones on the first four Pugwash Conferences can be found in J. Rotblat, *Scientists in the Quest for Peace*, The MIT Press, Cambridge 1972.

Science and Peace*

JÜRGEN SCHEFFRAN



Photo: Lucas Wirl, 2015 (Part of larger picture)

Prof. Dr. Jürgen Scheffran during his talk on science and peace

The end of the Second World War marks a watershed in the German history of science and for many scientists also a personal watershed. A large number of scientists and engineers played a key role in the war efforts under the Nazi regime and some have become guilty of war crimes. German engineers who had been involved in the V2 missile programme went on to help the USA and the USSR to develop their missile systems and attained questionable reputation, whereas the situation of physicists involved in the German nuclear weapons programme took a completely different direction. In comparison to their rivals working on the US Manhattan Project, they had failed, either deliberately, as Werner Heisenberg later suggested, or due to faulty calculations and a lack of equipment. Their detention in Farm Hall at the end of the war did not bring the full truth to light, but highlighted the inner conflicts and worries of some nuclear researchers. They were able to continue their work

under restrictions after the war, in the hope that nuclear fission could now be used for peaceful purposes.

The 1950s saw the Cold War unfolding, and the nuclear arms race threatened peace and life on Earth. A number of eminent scientists began to unite against the increasing danger of a new war. These included Bertrand Russell and Albert Einstein, whose manifesto was published on July 9th 1955 and warned in resolute terms against a nuclear disaster, calling for sustainable ways to avert it. The co-signatories, one of whom was Joseph Rotblat, who had left the Manhattan Project in 1944, established the international Pugwash movement in 1957. Pugwash used contacts between scientists to mediate in the East-West conflict.

In Germany, too, scientists became increasingly aware of their social responsibility and went public. Only a few days after the Russell-Einstein Manifesto, several Nobel laureates, including Otto Hahn as one of the

*Talk given at the meeting of July 9th 2015, based on an article by the author in the journal *Wissenschaft und Frieden* (2005/4), which has been modified and updated

initiators, published the Mainau declaration that warned against the misuse of nuclear energy and took a stand against nuclear armament. When the German Chancellor Konrad Adenauer and his Defence Minister, Franz-Josef Strauß considered equipping the Bundeswehr with nuclear weapons, the scientific elite protested. On April 12th 1957, the Göttingen declaration, initiated by Carl Friedrich von Weizsäcker, was published, giving voice to 18 nuclear researchers who opposed German nuclear weapons. The government tried to discredit the scientists as out of touch, but the declaration found a resounding echo in the press and was well received by the peace movement. The initiative of the Göttingen 18 led to the foundation of Vereinigung Deutscher Wissenschaftler (Federation of German scientists, VDW), the German branch of the international Pugwash organisation. The VDW has been awarding its Whistleblower Prize for many years to scientists who flag up dangerous developments and are prepared to take personal risks in doing so.

In the 1950s and 60s, the international scientific community and the peace movement focused on nuclear tests. The fallout from these tests caused radioactive contamination of the environment. One scientist in particular took the lead in the campaign

to stop nuclear tests – the chemist and co-signatory of the Russell-Einstein Manifesto, Linus Pauling. He drew up a petition that made the public aware of the health implications of radioactive fallout. The campaign proved successful and led to the ban of all nuclear tests in the atmosphere, under water and in space in 1963. Underground testing, however, was not covered by the ban. Pauling was awarded the Nobel Peace Prize in 1962 for his contribution, having already received the Nobel Prize for Chemistry in 1954.

The 1960s also saw the establishment of peace research institutions, such as the Peace Research Institute Oslo (PRIO) or the Stockholm International Peace Research Institute (SIPRI). In Germany, peace research became important within the wider context of the student rebellion and as a result of the social-liberal coalition government. The Arbeitsgemeinschaft für Friedens- und Konfliktforschung (German Association for Peace and Conflict Studies, AFK) was founded in 1968 as a coordination centre for peace research, while the Deutsche Gesellschaft für Friedens- und Konfliktforschung (DGFK), founded in 1970, ensured that state funding was available for peace research. Further institutions emerged, such as the Peace Research Institute Frank-

furt (PRIF) and the Institute for Peace Research and Security Policy at the University of Hamburg (IFSH). Scientific aspects were also part of the peace research debate, particularly at the Max Planck Institute founded by von Weizsäcker in Starnberg (Max-Planck-Institut zur Erforschung der Lebensbedingungen der wissenschaftlich-technischen Welt). In 1971, it published the study *Kriegsfolgen und Kriegsverhütung* (consequences and prevention of war), which set scientific standards for the assessment of the effects of nuclear war.

At the beginning of the 1980s, when the debate over nuclear weapons and Euromissiles preoccupied Europeans, scientific and technical aspects became crucial. Eventually, mid-range missiles were installed in 1983, the same year when US President Reagan held his “Star Wars” speech, which, in turn, launched the Strategic Defence Initiative (SDI), a space-based anti-missile system.

As a result of the peace movement, the Krefeld Appeal and widespread large demonstrations, students and academics became more interested in the interaction between science, war and peace, among them many natural scientists. Many universities held seminars and multi-disciplinary lectures – making war and peace part

of their curriculum. There were meetings and exchanges between student peace activist groups all over Germany, complemented by the Forum Naturwissenschaftler für Frieden und Abrüstung (forum of scientists for peace and disarmament) which was founded in Münster

Science-focused activities culminated in the Mainz conference entitled “Verantwortung für den Frieden” (Responsibility for Peace) on July 2nd and 3rd 1983 and the declaration of the Mainzer 23, which had a wide media echo. More than 3,000 participants came together in Mainz to discuss a wide range of topics, including Pershing-2, SS-20 and cruise missiles, their accuracy, the possibility of a first strike, nuclear tests, the consequences of nuclear war, chemical and biological weapons, militarisation of space, military research, the ambivalence of science and dual use of technology, arms control and disarmament.

In this environment, scientists contributed important arguments to the peace debate. A key aspect was the clarification and communication of complex matters in weapons technology through seminars such as *Physik und Rüstung* (Physics and Armament), a brochure on SDI that was widely distributed, a series of wall newspapers or the magazine *Wissenschaft und Frieden*, giving great at-

attention to scientific aspects of peace. The Mainzer 23 declaration and the Münster Forum gave rise to the scientists initiative Verantwortung für den Frieden (“responsibility for peace” – changed now to “for peace and sustainability”), the organisation known as NatWiss. They organised many conferences, promoting the commitment for peace in science, the public domain and politics. At the Göttingen congress against the militarisation of space in July 1984, a draft treaty to restrain the military use of space was presented which was also discussed in the German Bundestag. The debate about the SDI programme led to an increasing internationalisation of the movement, in particular at the Hamburg congress in 1986, where over 4,000 participants came together to critically focus on the arms race and to develop ways out of it. A transatlantic satellite link demonstrated how international the movement had become.

Things were looking hopeful then because of the changes in the Soviet Union, brought about by Mikhail Gorbachev’s politics of Glasnost and Perestroika as well as the improvement of relationships between the superpowers that led to some first successes in disarmament, the fall of the Berlin Wall and the end of the Cold War.

This was the time when scientific

peace research in Germany became increasingly professionalised. Young natural scientists who became involved in the peace movement as students later made their own contributions to peace research. As developments in physics were driving the arms race, it made perfect sense to look at alternatives and solutions from an expert’s perspective. A role model was found in the community of critical scientists in the USA, some of whom had been involved in building the bomb in the Manhattan Project, and later put their expertise to good use in arms control. These associations include the Union of Concerned Scientists, the Federation of American Scientists and the Bulletin of the Atomic Scientists with its Doomsday Clock. They played a decisive part in the criticism of the SDI plans and the development of a space-based missile defense system that was at the top of the agenda in the 1980s.

Conducive for arms control research in Germany was the grant by the Volkswagen Foundation since 1984 that helped to involve young scientists in peace research. Some could thus write their doctoral thesis on peace-related topics in sciences and mathematics. From 1988, entire research groups were funded, giving rise to the Interdisziplinäre Arbeitsgruppe Naturwissenschaft, Technik

und Sicherheit (Interdisciplinary Research Group Science, Technology and Security - IANUS) at the Technical University Darmstadt, the Center for Science and International Security (CENSIS) at the University of Hamburg, the Schleswig-Holsteinisches Institut für Friedenswissenschaften (SCHIFF) in Kiel and the Bochum Verification Project. They founded the Forschungsverbund Naturwissenschaft, Abrüstung und internationale Sicherheit (Research Association for Science, Disarmament and International Security - FONAS). The FONAS expert discussions provided a suitable platform for passing on scientific expertise to political decision-makers, and the Physics and Disarmament Working Group was established within the Deutsche Physikalische Gesellschaft. New funding opportunities came with the German Foundation for Peace Research (DSF), which was established on FONAS’s suggestion. One of its greatest achievements was a chair funded by the DSF at the Carl Friedrich von Weizsäcker-Zentrum für Naturwissenschaft und Friedensforschung (ZNF) at the University of Hamburg. The integration of research and teaching made it possible to attract young scientists to peace research and to offer peace-oriented Master degrees at the Universities of Marburg and Hamburg.

The 1990s began with a sense of euphoria about the possibility of a peace dividend, but along came new challenges for peace. In the disorder after the Cold War several regions plunged into chaos and conflict, including the Iraq wars and the breakup of Yugoslavia, the terror attacks of September 11th and today’s crises in the Arab world and Ukraine. At the same time, there have been advancements in the technology of warfare and automated warfighting, in nuclear weapons and missiles proliferation, and the militarisation of outer space. In addition to the classical topics in peace research, the possible impacts of environmental and climate change became subjects of research on peace and international security. After the Rio Earth Summit, sustainable development and sustainable peace turned into major fields of research.

These were the topics on the minds of the founders of the International Network of Engineers and Scientists for Global Responsibility (INES), which demonstrated the newly-found unification of the scientific community at their Berlin conference in 1991. In a similar vein, the International Network of Engineers and Scientists Against Proliferation (INESAP) was founded in 1993. At the NPT conference in New York in 1995, they published a preliminary report entitled

„Beyond the NPT - A Nuclear-Weapon-Free World“, the result of collaboration among 50 scientists from 20 countries, including Joseph Rotblat, who received the Nobel Peace Prize in the same year together with the Pugwash movement.

After the presidency of George W. Bush, the demand for the abolition of nuclear weapons became more urgent, in the world of science as in politics. The call for disarmament clashed increasingly with the rapid dynamics of technology that leads to ever-new weapons. The Revolution of Military Affairs has expanded to all areas of warfare. Since it has become easier to wage a war, the threshold for starting a war has been lowered. The arms dynamics and network-centric warfare penetrate ever further, extending into space with satellites, anti-satellite weapons and missile defence systems, automated drones and robots embedded into our daily lives, while micro-, nano- and biotechnology conquer the smallest spaces. Computers, the Internet and mobile communication systems occupy virtual spaces in human communication. Cyberspace

transforms the entire society into a potential warzone, where citizens are spied upon like potential combatants and any action to prevent it is seen as a hostile act. The penetration of all spaces as possible conflict zones results in all research being relevant to warfare.

To deal with the ever growing complexity of ambivalent civil-military interconnections, new scientific concepts are required at the intersection between science and peace. Such concepts include preventive arms control, a civil clause for academic institutions (research for peaceful purposes only), and a participative approach to technology design. The aim is to curtail dangerous developments in technology, influence conflicts on technology and lead to more transparency and trust in the sciences. A primary concern is the inextricable link between scientific expertise and responsibility for the societal consequences and securing peace in the tradition of Einstein, Rotblat and Pauling. Knowledge without responsibility is as problematic as responsibility without knowledge.

My experiences with scientists and the new challenges for European security – opportunities for arms control and disarmament*

EGON BAHR



Photo: Lucas Wirl, 2015 (Part of larger picture)

Prof. Dr. Egon Bahr talks about opportunities for arms control and disarmament

In preparation for the first international conference on behalf of the United Nations in which Moscow participated, its chairman Olof Palme had asked me to reflect about security in the atomic age. I duly began to think about it with rather worrying results that contradicted all received wisdom about security. If it was true that both the West and the East had a second-strike capability in an atomic confrontation, then both would run the risk of being attacked with incalculable and unacceptable consequences. This would make traditional hopes for victory in a war futile. Who strikes first will be the second to die and must be mad enough to accept their own extinction. In other words, the theory of deterrence had become defunct.

In practice, this meant that the two parties would only be safe as long as their security was not put to the test. In more abstract terms – being

safe from each other could only be achieved by working together. I found this idea so revolutionary that I ran it past a neutral authority – Carl Friedrich von Weizsäcker. His sharp intellect would decide the matter. The answer came quickly – the only trouble with my idea was, he said, that he had not thought of it first. I then sent my reply to Olof Palme and gave it the name "Common Security", which became also the title of Palme's report to the Secretary General of the United Nations.

I would like to add a little anecdote. After the sessions, I used to meet up with the Soviet delegate Yuri Arbatov to discuss domestic issues of our countries. I remember that at one meeting in London, Arbatov mentioned a person in Moscow whom we in the West might call a rising star, Mikhail Sergejevich Gorbachev. When I enquired what his responsibilities were, he replied that he was in charge of ag-

*Redefassung zur Veranstaltung am 9. Juli 2015, veröffentlicht von IALANA auf YouTube.de unter <https://www.youtube.com/watch?v=UNgIyBxjwVU>

riculture. I immediately decided the name was not worth remembering – after all, nobody in Germany in charge of agriculture could be called a rising star. Later, when I met Gorbachev for the first time when he had become Secretary General, it struck me that he described the Palme Commission's views with incredible aplomb. It was refreshing to have a ping pong-style dialogue in the Kremlin rather than having to listen to endless monologues. Within twenty minutes, we had discussed the complex topic of foreign and defense policy and arms limitation and when I enquired after the domestic agenda, my impression was that he did not have a fixed schedule, but followed two principles – Perestroika and Glasnost. When I expressed my surprise to Arbatov, he said he had told me in London about his friend Gorbachev, whom he always consulted about the Commission meetings. This had now shaped his thinking and was to secure his place in the history of the 20th century, as having brought about the most significant agreement on the elimination of mid-range missiles and the most comprehensive restriction of conventional weapons in history.

Let us take a big leap in time to spring 2008, when an elite alliance formed across parties, including Kissinger, Shultz, Perry and Nunn, and

proposed to the incoming president a new American policy that would move towards a world free of nuclear weapons. This move was supported by four Germans – Richard von Weizsäcker, Helmut Schmidt, Hans-Dietrich Genscher and myself. We pointed out that the American plans for an anti-missile system in Poland should be reconsidered and that there were 20 American nuclear bombs in Germany yet to be removed.

In 2009, the new president Obama had to admit that on the one hand, the USA were ready to embrace a world without nuclear weapons, on the other hand, reality had caught up with politics and the risk of a nuclear attack had increased.

“If we believe that the spread of nuclear weapons is inevitable, then in some way we are admitting to ourselves that the use of nuclear weapons is inevitable”.¹ Following this irrefutable argument, the US continued to expand its nuclear capacities. This holds still true in 2015 and has become even more complicated since the emergence of new nuclear powers.

To be clear – forty-five years have passed since the publication of the Common Security report, and yet the deterrence theory is still very much alive, although not applicable. In addition, differences between Europe

and Asia come into play. While in Europe, there are tried and tested mechanisms that involve Washington and Moscow, in Asia, many other factors come into the equation that allow nuclear powers to buy as many weapons as they can pay for Washington and Moscow without having the same comparable influence for in Europe.

In our old continent we had already reached an important element of “Common Security” in 1997 when we signed the NATO-Russia Founding Act. Nowadays we would consider ourselves fortunate if we had a piece of sustainable bilateral information policy in place.

From an analytic perspective, there is a striking resemblance between the Kennedy-Khrushchev and the Obama-Putin constellations. Khrushchev and Kennedy came to the conclusion that there should not be a war between the two superpowers. Berlin, Germany and even Europe were not worth fighting over in view of over-arching geostrategic problems. This became the foundation of a stable status quo – peace in spite of the Cuba crisis, and the Germans were able to pursue their own interests under the secure umbrella of the allied powers. This led to German reunification. There is a similar understanding between Obama and Putin – no war between us, not for Ukraine, let

alone Crimea, in the face of major geostrategic problems that can only be solved in collaboration.

Surprisingly, the geostrategic conflict zones have more or less remained the same: Syria, Israel, Iraq, Iran, Afghanistan and outer space. When it comes to space, Moscow is a reliable partner. Five days after the explosion of an American spaceship, a Russian resupply spaceship was launched, which is more or less immediately.

In the past few years, we have learned that if a political agreement is to be reached, Germany, France and Poland must be involved and the OSCE has a role to play in its implementation. And then there are the Big Two. They accepted their responsibility in the real world, as regular contacts between Obama and Putin and their foreign ministers show. Their military and political capacities remain decisive in and for Europe.

However, personal tensions increased between the two leaders ever since Obama described Russia as a regional power, which was absolutely unacceptable for Putin and forces him to show that there can be no resolution of the Ukraine conflict without or against him.

My hypothesis is that Obama had a Freudian slip, as he probably had Brzezinski's analysis at the back of his mind, which stated that Russia with-

out Ukraine would only be a regional power. What is more important is that both countries are determined not to wage war against each other. The conflict is therefore reduced to a kind of peaceful war. Putin can be assured that he will remain in power longer than Obama in the White House. Hence, his long-term perspective is towards 2017, while the short-term perspective is to fulfil the Minsk II agreement completely by the end of the year. The Americans have more power to influence this than the Russians. It is not worth speculating over a possible failure.

Now to the only new element in the geostrategic situation, the Islamic State. Obama uses the word war in this context and Putin calls himself his ally. This is intriguing, as more Chechens and other Islamic groups from countries east of Russia right to the Chinese border join Islamic State as active fighters than join from all West European countries. So far, Putin as a possible natural ally in the fight against the Islamic State has not been part of political calculations.

It may well be that the common fight against the Islamic State could become reality sooner than Common Security through the abolition of all nuclear weapons.

The Russell-Einstein Manifesto marks a revolution in the sense that

scientists warn against a danger and politicians must find an answer. At the time, the danger was the H-bomb and an unrestricted nuclear arms race. At the height of the cold war, politicians accepted that scientists developed a network named after its founding location, Pugwash. Its members took personal responsibility in assessing dangers for our world. They had a mitigating influence. Undeniably Pugwash achieved a lot because the group created trust and curtailed negative developments.

It could, however, not stop international terrorism. The attacks on the World Trade Center in New York and the Pentagon were used by the NSA to expand its worldwide operations to an unimaginable degree – all justified by the war on terror.

Meanwhile, a new area has developed by science, which is digitisation and electronic information. It is now possible to carry out cyber-attacks across borders which cannot be prevented. Obama admitted that this is the case, and often, it is not even possible to find out who launched an attack and how to retaliate. Such attacks have been put to the test when supposed Iranian efforts to build a nuclear bomb were delayed by several years through a cyber-attack. We still do not know who was behind it. Another example is Russia blocking

Estonia's digital network for days. Such attacks are aptly named "cyber war".

The same technology that can be used peacefully to provide a vast number of benefits for civilised life and communication also has sinister applications in war. The technology cannot be abolished. Digitisation without borders cannot be packed in a box and forgotten or de-invented. The Internet is here to stay.

Distinguishing between risks and benefits has become a global task, if ever there was one. In order to keep everybody safe, countries that have the ability to wage a cyber war should perhaps appoint experts who work out binding security for all. A small

group of masterminds with knowledge, a healthy distrust and intelligence would be given the task of working together instead of against each other. They should come up with a result that can be accepted by all parties as verifiable and secure. This could turn potential adversaries into partners that share the same interest.

As a by-product, the NSA would no longer have to fight terrorism, but concentrate on industrial espionage, which, as we know, is a never-ending story.

At any rate, our meeting to commemorate the 60th anniversary of the Russell-Einstein Manifesto must not ignore the digital world and its lurking dangers.

¹ Obama speech given in Prague on April 5, 2009 http://www.huffingtonpost.com/2009/04/05/obama-prague-speech-on-nu_n_183219.html



Photo: Leonard Bartosch, 2015 (Part of larger picture)

Prof. Dr. Egon Bahr, Dr. Ulrike Wunderle, Pascal Luig and Reiner Braun (from left)

Discussion: Current challenges
to the abolishment of nuclear weapons

Introduction for the Panel: What are the challenges nuclear disarmament is facing? – an analytical update

GÖTZ NEUNECK



Photo: Leonard Bartosch, 2015 (Part of larger picture)

Prof. Dr. Götz Neuneck (centre) in conversation with Prof. Dr. Egon Bahr (left) and Prof. Dr. Ulrich Bartosch (right)

“Let Nagasaki be the last” are the opening words of the Nagasaki Declaration of the Pugwash Council of November 5th 2015. The declaration that found a resounding echo in the Japanese media continues as follows: “Seventy years after the destruction of Hiroshima and Nagasaki, we are still faced with the imminent dangers posed by thousands of nuclear warheads. (...)The menace of nuclear weapons is still growing. Nuclear disarmament is stalled. Conflicts are multiplying. Stockpiles of weapon-usable materials are increasing worldwide. The risks of intentional or accidental nuclear weapons use will always exist until nuclear weapons are legally banned and eliminated and weapon-usable materials are disposed of safely.”¹

Former defense secretary Bill Perry recently commented: “The risks of a nuclear catastrophe – in a regional war, terrorist attack, by accident or miscalculation – is greater than it was during the cold war and rising.”² In 2015, Hans-Dietrich Genscher wrote: „The danger of nuclear weapons proliferation is particularly great in this

age where wars are increasingly waged by non-government agents.”³ But how did this come about? What is the current state of affairs and what can be done?

In 2013 there have been approximately 17,270 nuclear warheads globally, 4,400 of which are ready to be deployed immediately.⁴ While other categories of classical weapons of mass destruction, i.e. B and C weapons have been banned internationally through conventions, this is only partially true for nuclear weapons.⁵ The use of nuclear weapons is not generally banned by international law, but has become a customary taboo as well as morally largely unacceptable. However, an outright ban, as demanded by the Humanitarian Initiative, is hampered by new political tensions, a recent shift towards the acceptability of nuclear weapons, military doctrine and Cold War thinking.⁶ This is compounded by the erosion of the existing arms control structure that had been introduced during the Cold War and has not been significantly revised over the past ten years.

While 184 countries renounced the possession of nuclear weapons as part of the Non-Proliferation Treaty (NPT) of 1970, nine countries, including the P5 nations USA, Russia, the United Kingdom, France and China, have viable nuclear weapons. The USA and Russia have over 90 percent of the approximately 17,270 nuclear weapons in the world. Approximately 10,000 nuclear weapons are part of military arsenals, while approximately 6,000 warheads are still awaiting destruction. Both Russia and the USA do not rule out a first strike. They have been disputing the purpose of introducing strategic missile defenses. Even the stockpile of the minor nuclear powers France (300 warheads), China (260), and the United Kingdom (225) would be enough to cause catastrophic damage. In Article VI of the NPT, P5 members are committed “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.”⁷ However, for the time being, there are no official negotiations between the USA and Russia, and there is not even the hope that these will resume soon. In 2013, US President Obama had made an offer to Russia in Berlin. This inclu-

ded reducing the US warheads by a third in a next negotiation step. Then both sides would have a cap of 1,000 warheads—still several times as much as other nuclear powers have.

Besides the states without nuclear weapons and the nuclear powers included in the NPT there are four de facto nuclear powers that form a third category – India, Pakistan, Israel and North Korea. So far, they could not be persuaded to join the NPT. This three-tier system destabilises the entire NPT regime in the long term because the representatives of the two former categories have very different rights and obligations.⁸

Is the search for a world free of nuclear weapons condemned to failure?

In his Prague speech in 2009, President Obama raised hopes and expectations worldwide that a world free of nuclear weapons would be achievable. A global debate began whether and how this could be achieved. The first positive result was the conclusion of the New START treaty that came into force in 2010 and is still being implemented by both parties. Other initiatives such as the Comprehensive nuclear Test Ban Treaty (CTBT) or the Fissile Material Cut-off Treaty, however, have ground to a halt in the past years.

Hope for nuclear disarmament has turned into concern about a further build-up of nuclear arms. All P5 countries are now modernising their missile launching systems. The USA have scheduled a Trillion dollars to be spent on new submarines, jet bombers and cruise missiles over the next three decades. Russian military services have been testing ICBMs and are introducing new submarines. A new torpedo that can carry a nuclear warhead is said to be under development. Bombers capable of carrying nuclear weapons have been resuming their patrol flights. Nuclear fighter units were on standby during the Ukraine crisis. France and the United Kingdom have introduced new nuclear submarines or are in the process of doing so, while China and Russia respond to the US missile defense with the introduction of multiple warheads and multiple independently targetable re-entry vehicles. It cannot be ruled out that nuclear testing will resume. New military concepts such as Prompt Global Strike or the increased use of space technology pose a long-term threat to strategic stability.⁹

Four scenarios that involve the use of nuclear weapons seem plausible, with different, but in any case catastrophic effects: (1) a global nuclear war, (2) the unintended use of nuclear weapons, due to an accident or faulty

calculations, (3) regional nuclear war, (4) the use of nuclear weapons by non-government actors

The risk of a global nuclear war may be low, but in view of the high stockpiles of nuclear weapons and the possibility of regional conflicts spiralling out of control, it cannot be ruled out and would be fatal. The use of several hundred nuclear weapons would be the end of modern civilisation. Dozens of accidents and careless handling of nuclear weapons have been observed in recent times. During the Cold War, we came close to deployment of nuclear weapons in 1962 (Cuba crisis), 1983 (Serpukhov-15 bunker incident) and 1995 (false alarm triggered by a Norwegian research rocket), which was ultimately prevented by good luck and restraint.¹⁰

The nuclear arms race is continuing unabated, not only at a global level, but nuclear weapons could also be deployed at a regional level. The arms race between India and Pakistan is intense, involving missile launching systems and nuclear warheads. Both China and India are developing their own anti-missile systems and Pakistan has begun to deploy tactical nuclear weapons to offset the dominance of conventional Indian forces. North Korea has carried out four nuclear tests, accelerating a regional arms race in Asia. A subma-

rine-launched missile has recently been fired. Iran also resumed missile testing. It took 10 years to negotiate a successful deal with Iran, resulting in the Vienna agreement, Joint Comprehensive Plan of Action (JCPOA) on July 14th 2015. It established a mechanism of continuous verification and conflict solution efforts that could stop Iran from developing a military nuclear programme for 10-15 years. However, we cannot be certain that this would decisively slow down the arms race in the Middle East, as the stockpiling of arms as well as the establishment of anti-missile systems by the USA in the region progresses.

The attacks on Brussels on March 22nd 2016 made it clear once again that nuclear terrorism is a threat. Apparently, jihadists are keen on getting their hands on nuclear installations. Not all of them are secure from violent attacks. Four nuclear security summits have been held in 2010, 2012, 2014 and 2016 in order to „secure all vulnerable nuclear material around the world within four years” and thus prevent the misuse of weapons-grade material.¹¹ Although much has been achieved during this time, there are no comprehensive, legally binding international standards applying to all nuclear material. With nuclear power stations, security very much depends on their type and in-

built security mechanisms. Civilian plutonium stocks are increasing all over the world, while military stocks of weapons-grade material do not diminish. East Asia is an area where stocks of separated plutonium may increase again in the future. China and Japan have become increasingly involved in nuclear reprocessing. Collaboration with Russia in cooperative threat reduction has ground to a halt.

Weakened arms control – challenges for European security

In the aftermath of the Ukraine crisis, which could not be brought to a peaceful end yet, the debate about new tactical nuclear weapons in Europe has gained new momentum. These are nuclear warheads that are not covered by any treaty and their exact number is unknown. The word “tactical” is a euphemism because these are weapons with several times the explosive force of the Hiroshima bomb. President Vladimir Putin has been using nuclear rhetoric on more than one occasion and made the nuclear threat part of the political game. Russia breached the Budapest Treaty of 1994 which guaranteed Ukraine territorial integrity for the return of nuclear weapon stocks to Russia. Today, approximately 200 tactical nuclear weapons belonging to the USA are in still in place in five European NATO

countries, while Russia hoards 2,000 tactical warheads in her storages, the reason being NATO’s conventional supremacy. There are plans in the USA to replace free-falling B61 nuclear bombs by new strategic and tactical variants. Production is scheduled to start in 2019. There are also calls in the US for new nuclear weapons to be positioned in Europe. This would unleash a new fatal kind of arms dynamics on European territory and ultimately a new arms race.¹² At the Munich Security Conference in 2016, the Russian Prime Minister Dmitry Medvedev warned that relations between the USA and Russia were sliding back into a new Cold War.

In addition, according to the US State Department, Russia violated the Washington Intermediate-Range Nuclear Forces Treaty (INF) of 1987 when testing a new intermediate-range vehicle. No more details have become publicly known. The bilateral INF treaty bans the production, testing and deployment of mid-range missiles and cruise missiles (double-zero option) in Europe. Russia, in turn, expresses inter alia concern at the anti-missile defenses in Europe, which could be equipped with offensive missiles.

The Treaty on Conventional Forces in Europe (CFE) of 1992 was suspended by Russia in 2007 and then by

NATO. Technically, there is no longer an exchange of data between Russia and NATO that would allow to check whether the upper limits laid down in the CFE treaty have been reached. The Adapted CFE of 1999, which is more elaborate in content, was ratified by Russia, but not by all Western states. Although the Vienna Document included a wide range of trust-building and security-enhancing measures, there were no major restrictions on holding military exercises to intimidate the opposite side in a region. What remains in force and usable is the Treaty on Open Skies, which enables OSCE members to carry out a quota of control flights with crew members from member states flying over the observed member state’s area and taking photographs.

The European Phased Adaptive Approach (EPAA) is a major bone of contention between Russia and NATO and the USA.¹³ In Russia’s view, the sea-based (so far 4 destroyers equipped with an Aegis combat system) and land-based (Poland and Romania) deployment of anti-missile defenses undermine Russia’s strategic potential. Invitations for collaboration were turned down by both sides. The USA always maintained that their phased build-up of interceptor missiles against incoming warheads from the Middle East was directed against

the Iranian threat. Without naming any target countries, in its Lisbon declaration, NATO declared anti-missile defense as the new mission of the alliance, but failed to publish a convincing threat or concept analysis. President Obama said in his 2009 speech: "If the Iranian threat is eliminated, we will have a stronger basis for security and the driving force for missile defense construction in Europe will be removed."¹⁴

The fundamental disagreement between the USA and Russia about the future of strategic stability when numerous interceptor missiles would be introduced remains unresolved and there is a risk of long-term obstruction of any steps towards disarmament. As a matter of fact, development of all sorts of missile defense systems is open-ended and only restricted by cost and technology. Conventional precision delivery systems such as supersonic projectiles that are being developed in the USA and have so far occupied a niche do not fall under an arms control mechanism and are perceived as a new threat by Russia and China.

What can be done?

There is currently very little hope for nuclear weapons states to get back to disarmament negotiations, although this is a commitment made

in Article 6 of the NPT. The debate on whether a world free of nuclear weapons is achievable has also come to a standstill, although UN Resolution 1887(2009) explicitly endeavours "to seek a safer world for all and to create the conditions for a world without nuclear weapons." The debate about sustainable peace in Europe has stalled. In the preface of his book, Hans Dietrich Genscher asks whether peace in Europe is now dying a slow death. Arms control and disarmament are topics that are no longer taken seriously, while military terms are taking over our language. In times of crisis like these, arms control offers an extensive set of tools for minimising conflict and preventing war. Genscher demands that Germany should develop an ambitious concept for disarmament and return to the culture of disarmament. The establishment of an Open-Ended Working Group (OEWG) in Geneva gives some reason for optimism, trying to bridge the two different approaches of a universal ban on the one hand and arms control on the other. Progress is urgently needed on the following topics:

(1) Nuclear disarmament: The USA and Russia must return to a constructive and comprehensive dialogue about the strategic stability of their nuclear weapons stocks and include missile defense systems and emerg-

ing conventional delivery systems. The number of warheads is enormous and should be reduced drastically to below 1,000 warheads per side. This could then be halved again. The smaller nuclear powers should limit their stockpiles and sign a no-first-use agreement. The P5 nations should discuss and implement de-alerting measures or the verification of the destruction of not-needed nuclear weapons. A global debate on a legally binding interpretation of Art. VI of the NPT is overdue.

(2) CTBT and FMCT: The Comprehensive Nuclear Test Ban Treaty (CTBT) could be strengthened by a declaration from its signatory states supporting a twenty-year test moratorium and the ratification process could be initiated. Countries with an interest in the matter could work out a Fissile Material Treaty that would provide general, legally binding standards on inventories of nuclear weapons-grade material, its storage and destruction. This would include data exchange on nuclear weapons-grade material produced as well as verification of secure storage of declared nuclear material.

(3) European security: NATO and Russia must re-enter a dialogue with each other, introduce effective crisis management and strengthen the Vienna Document. A new framework

for the moribund CFE contract must be established together, as the agreed ceilings for the main weapons systems are de facto still adhered to. Continuous verification enhances stability and predictability in Europe. The NATO-Russia Foundation Act that outlaws the deployment of "substantial combat forces" should be discussed and reaffirmed. It is possible to achieve collaboration with Russia in terms of anti-missile systems. Russia demands legally binding guarantees from the USA that they will restrict their anti-missile systems. In view of the US Congress's ideological position, they cannot be expected to give such guarantees, but NATO could do so.

(4) Regional security: After the conclusion of a nuclear deal with Iran and the destruction of chemical weapons in Syria, the debate on a weapons of mass destruction-free zone (WMDFZ) in the Middle East could be revived. Countries should join forces to enforce the implementation and verification of regional WMDFZ treaties. Individual Middle East states such as Israel, Iran and Egypt could ratify the treaty.

(5) New conventional delivery weapons with a wide range and high precision, such as new cruise missiles and supersonic projectiles are under development. So far, neither weap-

ons export control nor arms control regulations are taking account of these developments. Cruise missiles, supersonic projectiles and anti-satellite weapons could be included in the “Hague Code of Conduct“. Bilateral agreements between states possessing nuclear weapons are also a practical option.

¹Nagasaki Declaration of the Pugwash Council, November 5, 2015, see: <https://pugwash.org/2015/11/05/2015-nagasaki-declaration/>

² Quotation from: The Guardian, January 7th 2016, see: <http://www.theguardian.com/world/2016/jan/07/nuclear-weapons-risk-greater-than-in-cold-war-says-ex-pentagon-chief>

³Hans-Dietrich Genscher: *Meine Sicht der Dinge*, Berlin 2015, p. 10

⁴See also the statistics of the Stockholm International Peace Research Institute: *SIPRI Yearbook 2013: Armaments, Disarmament and International Security*, Oxford 2013.

⁵With the exception of the Advisory Opinion des International Court of Justice (ICJ), which stated in 1996 that the use of nuclear weapons is not compatible with the rules of humanitarian international law. However, no agreement could be reached on whether this applies to all cases.

⁶Over 150 countries take part in the initiative, see also: Tom Sauer, 1 April 2015: „The NPT and the Humanitarian Initiative: Towards and Beyond the 2015 NPT Review Conference, p.3“ (PDF). DeepCuts Working Paper Nr. 5, April 2015 http://deepcuts.org/images/PDF/DeepCuts_WP5_Sauer_UK.pdf

⁷Text of the Non-Proliferation Treaty: http://www.dgvm.de/fileadmin/user_upload/DOKUMENTE/Abruestung/NVV.pdf

⁸The NPT is also the key element of a non-proliferation regime that encompasses various informal groups involved in arms export control („Nuclear Suppliers Group“) as well as measures by the IAEA to support non-proliferation.

⁹See for instance James Acton: *Prompt Global Strike: American and Foreign Developments*, Testimony before the House Armed Services Subcommittee on Strategic Forces, Carnegie Endowment for International Peace, 8. December 2015, <http://carnegieendowment.org/files/20151208-JamesActon-testimony.pdf>.

¹⁰See list of nuclear accidents: https://en.wikipedia.org/wiki/List_of_military_nuclear_accidents

¹¹For an overview, see the Factsheet der Arms Control Association: <http://www.armscontrol.org/factsheets/NuclearSecuritySummit>

¹²See the relevant debate involving Egon Bahr; Götz Neuneck: *Against Renuclearising Europe in: Forum: NATO and Russia, Survival*, Vol. 57 (2), S. 130–139.

¹³For more details, see: Götz Neuneck, Christian Alwardt, Hans-Christian Gils: *Raketenabwehr in Europa*. Baden-Baden, Nomos-Verlag, 2015 (in German only).

¹⁴Remarks by President Barack Obama, Hradcany Square, April 5th 2009 <https://www.whitehouse.gov/the-press-office/remarks-president-barack-obama-prague-delivered>

¹⁵UN-Resolution 1887, 24 September 2009 „to seek a safer world for all and to create the conditions for a world without nuclear weapons“.

¹⁶However, the P5 do not participate in the OEWG.

Nuclear disarmament in difficult times

SUSANNE BAUMANN



Photo: Lucas Wirl, 2015 (Part of larger picture)

Susanne Baumann during the panel discussion with Prof. Dr. Götz Neuneck

The Review Conference of the Non-Proliferation Treaty in 2015 made one fact very clear – the NPT signatory states can only agree to disagree when it comes to disarmament. An increasing number of states demand that nuclear weapons should be outlawed in view of their effects in humanitarian terms. They argue that their mere existence poses an incalculable risk to humanity.

From a German perspective, this humanitarian impulse is an important driving force in the debate on nuclear disarmament which has all but disappeared from public awareness. We are convinced that never again, nuclear weapons should be used and everything possible must be done to avoid accidental detonations. Any responsible state would agree. However, it is also true that since the negotiation of the Comprehensive nuclear Test Ban Treaty (CTBT) 20 years ago, not much has happened in terms of multilateral disarmament. The permanent gridlock at the Geneva Disarmament Conference forces us to explore alternative routes. At the same time, nuclear weapons still play an

important role in debates on national security. For instance, Russia stepped up her nuclear rhetoric dramatically, even directly or indirectly threatening to use nuclear weapons during the Ukraine conflict. NATO very wisely showed restrained in its response to these provocations, not least due to German influence. However, there is a consensus in the alliance that a credible deterrence must be maintained as long as nuclear weapons threaten our security.

In other words, in our debate, both the humanitarian as well as the security approach are valid and neglecting one or the other will not help the cause of systematically reducing nuclear stockpiles all over the world.

We have seen a trend towards polarisation within the Open-Ended Working Group on nuclear disarmament, which was established in 2016 as a result of a UN resolution and holds meetings in Geneva. Countries like Germany have come under attack because their NATO membership discredits them as advocates of nuclear disarmament. Many participants demand a ban on nuclear weapons,

following the example of the Ottawa Convention on Landmines and the Oslo Convention on Cluster Munitions. This would have the effect that nuclear powers – regrettably, all of them decided not to take part in the OEWG – would adopt a ban sooner or later.

We, too, would like to see faster progress in nuclear disarmament. However, the analogy between nuclear weapons and landmines is inadequate, and the important conventions on B and C weapons were only achieved by involving the countries that possessed such weapons. There is no doubt about it – one day, nuclear weapons need to be banned. But from our perspective, this is more likely to happen at the end of a long process rather than at the beginning. After all, the road to a nuclear-free world is a major tour de force that requires enormous efforts. As the leaders of the Global Zero campaign Henry Kissinger, William Perry, Sam Nunn and George Shultz, put it so neatly: “A world without nuclear weapons will not simply be today’s world minus nuclear weapons.”

The latest provocations by North Korea illustrate what blackmail potential even a few nuclear weapons have in the hands of an unscrupulous regime. India and Pakistan – both non-signatories of the NPT – contin-

ue to stockpile nuclear weapons and rely on a policy of nuclear deterrence. And it is not just South Asia that calls for new collaborative security mechanisms if deterrence policy is to become a thing of the past.

On a more positive note, the Vienna agreement between the E3+3 and Iran succeeded in defusing the most dangerous non-proliferation crisis and thus preventing a nuclear arms race in the Middle East. At last some piece of good news for nuclear disarmament, as disarmament and non-proliferation are two sides of the same coin. If the non-proliferation regime leaves loopholes, it will undermine nuclear disarmament. If you want to achieve global zero you must also commit to the nuclear non-proliferation treaty. There is no other legally binding basis for nuclear disarmament and non-proliferation.

In the OEWG, we want to raise awareness of the importance of a political security framework and the primacy of the NPT. It would serve the interest of all parties if positions at the OEWG became less entrenched, but agreement could be reached on recommendations that could be discussed constructively with nuclear powers in the run-up to the next review meeting in 2020. The issue discussed at the OEWG – possible risks associated with nuclear weapons -

can only lead to results if the dialogue with nuclear powers is resumed, rather than having a conversation between non-nuclear states.

Although conventional armament control is not a topic discussed at the OEWG, the trust and security-building steps in the Vienna Document and the Open Skies Treaty are important for progress in nuclear disarmament. Conventional arms control in Europe must be urgently modernised so that it can cope better with crises. The new geopolitical situation with its security implications and the latest technological developments must be taken into account. Advances in technology make it necessary to consider not only

quantity, but also quality and operability of tanks and artillery, for example. Nuclear disarmament comes into the equation because Russia claims to have insufficient conventional capacity and therefore rejects a new round of talks on nuclear arms control, such as the Berlin offer by President Obama in June 2013. We are using our position as chair of the OSCE to make realistic suggestions so that the debate can move forward. Taking the arguments of the other side seriously, being open to dialogue and developing pragmatic solutions – as was the approach of the great bridge-builder Egon Bahr.

Nuclear disarmament and a world free of nuclear weapons are the lynchpin of German foreign policy

AGNIESZKA BRUGGER



Photo: Lucas Wirl, 2015 (Part of larger picture)

Agnieszka Brugger during the panel discussion with Prof. Dr. Götz Neuneck

Nuclear disarmament and a world free of nuclear weapons must be the lynchpin of German foreign policy, assuring security and peace. More disarmament and weapons control would make the world a safer place. Like many surveys in the past, a new publication by Forsa in March 2016 shows that the vast majority of German citizens is in favour of a withdrawal of US nuclear weapons deployed in Germany. However, this is a wish that remains unfulfilled. Apart from the Iran deal that came about after years of difficult negotiations, good news on nuclear disarmament remain few and far between. Not only did repeated nuclear testing by North Korea lead to justified worldwide protest, but reluctance to engage in disarmament talks and the expansive modernisation plans of nuclear powers do not raise much hope that we will soon see big steps towards a nuclear-weapons-free world. At the same time, an upward spiral in the conventional arms race and nuclear threats against the background of the Ukraine crisis and the failed review conference on the NPT last year made

us aware that nuclear weapons will not go away and pose a real threat.

We must not be discouraged by the new challenges and problems emanating from this situation. They are there to show us that we must continue to discuss new ways and options of promoting nuclear disarmament – now more than ever. It is all the more important that strong personalities will stand up for a world free of nuclear weapons, for trust-building measures and more arms control. With its former ministers Egon Bahr, Hans-Dietrich Genscher and Dr. Guido Westerwelle, Germany lost three politicians who were committed to international disarmament and put their heart into it. Egon Bahr made the case for a dialogue with Russia in the context of disarmament. His vision and determination made a historic contribution to world politics. Former German Foreign Minister Guido Westerwelle had disarmament high on the agenda during his period in office.

However, after the failure of the NPT Review Conference in 2015, we are now confronted with a rather sobering and worrying state of affairs

as far as disarmament is concerned. It looks as if a conference on the establishment of a nuclear-free zone is not achievable in the near future. Over 25 years after the end of the Cold War, threatening nuclear rhetoric has returned to Europe. Russia as well as NATO flex their nuclear muscles and invest huge sums in the modernisation and stockpiling of their nuclear arsenals, while mutual distrust is growing. It is true that conditions looked more promising in the past than they do now, but precisely because it is difficult, now is the time for CDU/SPD government to take action and look for new ideas and initiatives to breathe new life into the disarmament debate.

The Humanitarian Initiative, for instance, is an impressive movement led by a great number of countries and a very active civil society. Their objective is to ban the use of nuclear weapons under any circumstances. After all, it does not matter whether their use is intentional or accidental, the deployment of nuclear weapons would have catastrophic consequences for our health, environment, social cohesion and the future of mankind. No country would be able to cope with such a disaster. At the last NPT Review Conference, when these new ideas and initiatives clashed with outdated thinking and cynical realism,

regrettably, the German government joined the latter camp. The reason given was that as a NATO member, Germany would be unable to support the Humanitarian Initiative. This excuse is particularly unconvincing because three NATO members – Norway, Denmark and Iceland – were among the 159 states supporting the Humanitarian Initiative.

When at the 70th General Assembly of the United Nations in December 2015, a vast majority voted for four resolutions on a ban on nuclear weapons, Germany's government remained firmly on the sideline as far as disarmament was concerned. Rather than joining the large majority of states that spoke out and condemned the use of nuclear weapons in a credible stance to promote nuclear disarmament, Germany abstained twice and voted twice against starting the process towards a worldwide and long overdue ban on nuclear weapons, taking the side of the nuclear powers. With its voting behaviour, the German government slows down the dynamics of the debate, blindly following the logic of nuclear powers who have been blocking any progress in nuclear disarmament for years. Any claims that the German government is pursuing nuclear disarmament therefore seem hardly credible under the current coalition of CDU/CSU and SPD.

Furthermore, the German government likes to give the impression that it has nothing to do with these horrendous weapons of mass destruction. However, approximately 20 US nuclear weapons are still stored in Germany. In Parliament and when questioned by MPs, the government pretends to have no information. However, as a member of NATO, the government is informed about US plans on the modernisation of nuclear weapons that are deployed in Germany. In fact, they will pay nearly 31 million dollars for the renovation of the nuclear storage facilities at Büchen air base. The coalition intends to use further millions of taxpayers' money to modernise the German Tornado carrier systems. As far as the withdrawal of nuclear weapons from German territory is concerned, the SPD failed spectacularly, given all the promises and announcements made in the past. Together with us, the Green Party, they still demanded a withdrawal in 2013. Foreign Minister Steinmeier tries to play down the updating of US nuclear weapons as "life-extending replacement of material". At the same time, it must be obvious to anybody in their right mind that it is highly unlikely that weapons that have been modernised with an investment of billions will be abolished in the near future. What the German govern-

ment does is accelerating the nuclear arms race in Europe, missing the opportunity to make the withdrawal of US nuclear weapons a clear signal for disarmament and a nuclear-weapons-free Germany.

Seventy years after nuclear bombs were dropped on Hiroshima and Nagasaki, it is high time to make these weapons of mass destruction a thing of the past. The time has come to take further courageous steps to realise the vision of a nuclear-weapons-free world. Nuclear bombs do not make our world a safer, but a far more dangerous place.

Nobody ever said that disarmament policy would be easy, especially since one is dealing with the most dangerous and unfortunately also the most prestigious of weapons humans have developed. It would, however, be simply idiotic to stand by and watch this nuclear madness spiralling out of control. Disarmament policy needs vision, creativity and courage. It needs members of society that are committed to the cause and a clear voice and attitude from politicians. We have now reached a state of affairs where nuclear weapons are being used as a threat, and it would be up to Germany to send a clear signal that not only the use, but even the threat of using such weapons of mass destruction is unacceptable. It is high time that the Ger-

man government stood courageously and resolutely by the vast majority of states and developed a roadmap towards a world without these cruel weapons of mass destruction. Germany must take a clear stance and not hide behind the nuclear powers.

Supporting the Humanitarian Initiative and ending the obstruction of multilateral votes, as well as the withdrawal of US nuclear weapons from Germany would be long overdue tokens of credibility and commitment to disarmament, peace and security.

Current challenges for the abolition of all nuclear weapons

REINER BRAUN



Photo: Lucas Wirl, 2015 (Part of larger picture)

Reiner Braun during the panel discussion

It seems to be a wall of stone – the uncompromising attitude towards the possession of nuclear weapons, shared by all nuclear weapons states, whether they are the official P5 or unofficial nuclear powers. The right to possess nuclear arms is apparently about to be written in stone in a comprehensive modernisation programme, as it is euphemistically called. Behind the euphemism hides a programme costing approximately 1 billion Dollars over the next ten years. It is also a euphemism because modernisation means the purchase of new strategic, miniaturised and thus more easily deployable nuclear weapons.

The expression “apparently about to be written in stone” also describes the dialectic process around the current debate on nuclear weapons. Never before has there been such an intense and fruitful debate about the initiation of negotiations leading to the abolishment of nuclear weapons.

This is underpinned by the following key points:

(1) the campaign initiated by the civil society and taken up by many

states focused on the humanitarian consequences of the use of nuclear weapons, which found broad international support culminating in the Austrian Pledge. The large majority of the international community supports this attempt at developing the initiation of an exit strategy.

(2) the growing international support for a treaty to ban nuclear weapons. Such a treaty cannot be the ultimate goal, but a step towards a comprehensive nuclear weapons convention, a legally binding international treaty with provisions for the verification of the abolition of all nuclear weapons.

(3) The establishment of the Open-ended Working Group as a result of the two above processes, which is trying in a UN context to move forward a thorough debate on how to solve the dilemma of further nuclear stockpiling on the one hand and how to cater to the interests of most countries to achieve a zero solution. The group work has so far been characterised by open, imaginative debates that could lead to majority decisions at various UN levels and perhaps even

trigger new negotiations;

(4) The court case filed by the Marshall Islands at the International Court of Justice against all nine nuclear powers. Looking afresh at the breach of international law, which was recognised in 1996, in light of modernisation and the Humanitarian Initiative will bring home the disastrous consequences. The court case and its results will highlight the moral impetus of the nuclear disarmament campaign. The open exchanges during the public hearings made that clear.

(5) The worldwide protest against modernisation, which is now directed against the weakest nuclear power, the UK, where, against the will of the population and the protest of all parties except the Conservatives (and even there, a small rebel group has formed), modernisation is pushed through. The mass demonstration by the CND with 80,000 demonstrators was the most impressive peace initiative in Europe over the past years with an impact on the peace movements of other countries. They all stand together in the battle against nuclear

modernisation in their countries.

We must hold on to our protest against the double standards that govern German politics, where on the one hand, a world without nuclear weapons is welcomed, but on the other, all steps mentioned here that could open negotiations were opposed. This contravenes international agreements and the government's position on nuclear sharing clearly violates the NPT signed by Germany. The current German government seems to be completely oblivious to the decision by the German Bundestag on withdrawing the completely superfluous and only destabilising nuclear weapons the USA store in Büchel. We have not heard one critical word about the modernisation of the US nuclear arsenal in Büchel.

The peace movement and the anti-nuclear weapons movement must be prepared for the long haul. Think of Albert Einstein. Entering into negotiations about the abolition of all nuclear weapons is a challenge and can only be achieved by more and even bolder initiatives.

Phasing out nuclear energy and nuclear disarmament – contradictions and missed opportunities in German policy-making

OTTO JÄCKEL



Photo: © by Schattenblick – www.schattenblick.de (Part of larger picture)

Otto Jäckel (Archive photo)

Laura Poitras, who received an Oscar for her documentary on Edward Snowden, *Citizen Four*, shows in her exhibition at the Whitney Museum of American Art in New York how heaven is turned into hell. One room shows a bed down location, which is military jargon for the location where a targeted person will be attacked. Poitras's installation has the feel of camping out at night under the starry sky. Poitras projects films of night skies above Pakistan, Somalia and Yemen to the ceiling in fast motion. The skies seem extremely busy with shooting stars and the spectator knows that some of these shooting stars will bring death to a certain number of people, but also to an uncertain number of people in their neighbourhood.¹

Article 57 of the 1st Protocol additional to the Geneva Convention on the protection of victims of international armed conflicts reads as follows:

“In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects. Those who plan

or decide upon an attack shall refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.”

The Peshawar High Court looked at drone attacks in the Afghan-Pakistani border region and concluded that innocent civilian victims by far outnumbered combatants killed. The Afghanistan Analysts Network comes to the same conclusion. The analysts evaluated ISAF press releases for the period between 1/12/2009 and 30/09/2011 and found that in 2,365 capture-or-kill raids, 3,873 people were killed, of whom only 174, i.e. 5 percent, were targeted combatants.² The drone war is thus a technical and systematic contravention of Article 57 of the Protocol additional of the Red Geneva Convention.

The drone war could not be fought without the relay station at US Air Base Ramstein near Kaiserslautern in

Germany. We know this from statements made by the courageous former drone operator Brandon Bryant, who also appeared at the NSA enquiry commission of the German Bundestag. He was awarded the Whistleblower Prize in Karlsruhe by IALANA Germany and the VDW in 2015. Over and above the relay station, Germany has been an active military participant in the war in Afghanistan. Security in the country is at its worst since 2001.

Now victims of wars that are waged from here flee from Afghanistan, Iraq and Syria, causing the most serious crisis in Europe since World War II. It is only men, women and children with nothing but the clothes they are wearing and seeking shelter in our countries who have triggered this crisis.

What will happen if one of these armed conflicts escalates further?

Just picture the complexities of the situation: German soldiers are on a mission to train Peshmerga troops in Iraq. These Kurds fighting IS receive military equipment from the USA and are supported by Russian war planes. They are then attacked by the Turkish army with tanks and artillery.

What we have seen over the past weeks is more than just playing with a huge fire. Each of the open or festering conflicts in the Middle East,

Ukraine or in the South China Sea have the potential to escalate. Humans have always known that once war breaks out, all hell is let loose. In such a spiral of violence, the danger arises that the threshold for using nuclear weapons will further decline. In a televised interview, Russia's president Putin deliberately mentioned that he had been thinking about his option of using nuclear weapons during the Crimea crisis.

When Eckart von Klaeden, now Daimler's chief lobbyist, was foreign affairs spokesman for the CDU/CSU in the Bundestag, he explained in a debate in 2009 that it made sense for Germany to be involved in nuclear warfare as part of NATO, as it might be necessary to use nuclear bombs against Iran.

Politicians and military leaders who keep planning and practising the use of nuclear weapons in their nuclear defence planning committees and manoeuvres might be tempted to use them in the end. This is all the more likely, as the USA are building a completely new version of a nuclear bomb, B61-12. It is a guided missile with adjustable explosive yield and high accuracy. It will be introduced by 2020. Twenty of them have been scheduled for use by the Taktisches Luftwaffengeschwader 33 (Tactical Air Force Wing 33) of the German Air

Force and replace their predecessor bombs at Büchel in the Eifel Mountains. I have now been working on international law and nuclear armament for several decades, and so far, nobody was able to explain to me how the stockpiling of US nuclear weapons in a German air base and the continuous training of German pilots for the use and launch of these weapons can be compatible with the Nuclear Non-Proliferation Treaty. Article II of the Non-Proliferation Treaty says:

“Each non-nuclear-weapon State Party to the Treaty undertakes not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.”

To my mind, this is an unambiguous regulation anybody can understand. When I explain to Frau Baumann, Foreign Policy Advisor to Chancellor Merkel that the transfer of US nuclear bombs to German Air Force pilots would contravene Article II of the NPT, she replies that she will not discuss hypothetical questions. Nobody was planning to use nuclear weapons.

It is, however, not a hypothetical question because the threat of using nuclear weapons and their actual use are part of NATO's doctrine and so far, we have not heard that the German government has protested or declared that they would not participate.

Only once has Germany distanced itself from NATO, just before German reunification. Deputy Defence Minister Wimmer in the Kohl government had just returned from talks with the head of the Joint Chiefs of Staff of the US forces, who had informed him about the new good relationship with the Soviet Union. Within the context of a NATO military exercise, Defence Minister Rühle ordered him to act out a scenario where nuclear weapons were used against cities that were then in East Germany, Dresden and Magdeburg. He then rang Chancellor Kohl and asked permission to withdraw from the exercise, which Kohl granted.

It has never been reported since that a member of the German government had the moral courage to oppose NATO nuclear deployment

On the contrary: The actual behaviour of the German government raises considerable doubt whether its pledge to strengthen the non-proliferation regime and to promote disarmament is actually more than mere lip service.

I already mentioned the first example, military exercises with German pilots preparing for the use of American nuclear bombs. Second example: the German nuclear phase-out. Article 1 of the Atomgesetz (Nuclear Energy Act) now reads:

“The purpose of this legislation is to bring to an end the use of nuclear energy for the commercial generation of energy in an orderly manner and ensure that operations will be carried out in an orderly manner until operations cease.” (Article 1 AtG as of 31.8.2005)

And in Article 7, the decommissioning schedule of individually named German power stations was reviewed after the 2011 Fukushima disaster, with the nuclear power stations Isar 2, Emsland and Neckarwestheim 2 the last to be switched off by 31st of December 2022. (Article 7 AtG as of 31.8.2015)

However, why is it then that the uranium enrichment plant in Gronau and the fuel element factory in Lingen are not part of the phase-out programme? According to the German government, these two plants where uranium is enriched and fuel elements for nuclear power stations all over the world are produced will continue to operate with no time limit. How credible and consistent is a policy that says we are going to shut

down our own power stations, but continue to deliver nuclear fuel to your power stations with no time limit whatsoever?

There is a further interesting twist: If the uranium enrichment centrifuges would run a few days longer, Germany would have weapons-grade material to build its own nuclear weapons. This begs the question whether we need Gronau to keep this option open? In any case, the continued enrichment of uranium and production of fuel elements makes it possible to phase out the phase-out at a later date.

Third example: Germany's role in the diplomatic efforts to promote nuclear disarmament.

The Open-ended Working Group on Nuclear Disarmament, established by the United Nations, came together in Geneva a few weeks ago to negotiate a nuclear weapons convention that aims to ban nuclear weapons and ensure complete nuclear disarmament. Negotiating such a convention with the sincere will to reach an agreement is one of the obligations of nuclear powers according to Article VI of the NPT. This is what the International Court of Justice of the United Nations unanimously decided in its legal opinion of 1996 on the illegality of the threat of using, let alone of actually using nuclear weapons.

However, the five nuclear powers were absent from Geneva. Their conduct shows that they are not interested in fulfilling their treaty commitments that exist since 1/7/1968. What did the representative of the German government have to say? In his statement of February 22nd 2016, Ambassador Michael Biontino declared that Germany rejected negotiations at this stage because of changes in the security environment. A treaty could only be negotiated at the end of a process that should be initiated with small building blocks and a new detente policy between America and Russia.

It is this procrastination policy in nuclear disarmament (Obama: „Perhaps not in my lifetime“; Hilary Clinton: “Some day in some century“) that motivated the Marshall Islands to take the nuclear powers to the International Court of Justice for their violation of negotiation obligations. The first hearings at the ICJ in The Hague took place yesterday in the court case against the United Kingdom, India,

and Pakistan. In a first step, it must be established whether the court has jurisdiction in this case and the court case can go ahead. Well-known members of IALANA are part of the Marshall Islands legal team.

After the hideous war crimes of Hiroshima and Nagasaki, the USA turned the sky above the South Pacific islands that are normally associated with Mutiny on the Bounty and beautiful people wearing flower chains into a 12-year-long inferno, reaching its high point when the hydrogen bomb Bravo exploded on March 1st 1954. It had the explosive force of a thousand Hiroshima bombs. Part of the Bikini atoll and many other islands will remain uninhabitable for thousands of years. Women now in the third generation give birth to children with malformations never seen before.

Is the former foreign minister of the Marshall Islands, Tony de Brum, not right in saying enough is enough! We do not want any other people to experience our fate?

¹ Richter, Peter, Laura Poitras' Drohnenkrieg, SZ, 5.2.2016, <http://www.sueddeutsche.de/kultur/2.220/kunst-verkehr-im-sternenmeer-1.2849299>

² Cf <https://theintercept.com/drone-papers/manhunting-in-thehindu-kush/>

Authors and editors

Prof. Dr. h. c. Egon Bahr, (1922–2015), was born in Treffurt near Torgau, and trained as an industrial management assistant. He first worked as a journalist (BZ, Allg. Zeitung and RIAS), then became press relation officer of the Mayor of Berlin Willy Brandt, and subsequently a high-ranking civil servant in the German Foreign Office Planning Commission. From 1969, *chargé d'affaires* for the Federal Government and chief negotiator for the treaties of Moscow, Warsaw, the Berlin transit agreement and the Basic Treaty between the two German states in 1972 for chancellor Willy Brandt. Member of the Bundestag (1972–92), Minister for Economic Cooperation (1974–76), General Manager of the SPD (1976–81), Director of the IFSH (1984–94), Member of the Palme-Commission (1980–82), various awards, books and speeches.

Prof. Dr. Ulrich Bartosch, studied political science and pedagogy and became Professor for Pedagogy at the Faculty of Social Work at the Katholische Universität Eichstätt-Ingolstadt. Since 2015 Chairman of the Scientific Advisory Board of the Vereinigung Deutscher Wissenschaftler (VDW); preceded by chairing the VDW 2009–15; took part in several Pugwash Conferences on Science and World Affairs as a member of the German Pugwash Group; research and publications on world domestic policy, participation and inclusion, the reform of universities and European education policy.

Susanne Baumann, born in Singen am Hohentwiel. Since April 2015 Deputy Commissioner for Arms Control and Disarmament. Baumann studied law at the Rheinische Friedrich-Wilhelm-Universität Bonn (1990–1992) and began her diplomatic training for the Foreign Services in 1993. She held various posts at the German Foreign Office, including a working group on future career perspectives in the Foreign Office (1994/5), the PR Department (1998–2002), parliament and government liaising department (2006–10), Armed Forces Staff BMVg (2010–11), Head of the Department for Disarmament, Weapons control and Non-Proliferation (2011–13) and Head of the Department for Security and Disarmament Policy – Bilateral relations with the USA, Canada, North-, West- and Southern Europe as well as Turkey (2013–2015). Postings abroad: Phnom Penh/Cambodia (1995/98), Prizren/Kosovo (1999–2000), Kuala Lumpur/Malaysia (2002–06).

Reiner Braun, Co-President of the International Peace Bureau (IPB) in Geneva. Born in Braunschweig, studied German, history and journalism, from 1982 coordinator of the Krefelder Initiative gegen den Atomtod (Krefeld initiative against nuclear death) managing director of Naturwissenschaftler für den Frieden (Scientists for Peace, 1987–2001). Founder member and until 2001 Executive Director of INES (International Network of Engineers and Scientists for Global Responsibility). 2003–05 involvement with the Einstein year project 2005 at the Max-Planck-Institute for the History of Science, managing director of VDW (2006–14), since 2006 managing director of the German and international branch of IALANA (International Association of Lawyers against Nuclear Arms). Author and editor of various books on peace and sustainability.

Agnieszka Brugger, Politician, since 2009 Member of the Bundestag for the BÜNDNIS 90/DIE GRÜNEN. Spokesperson for security and disarmament and chairwoman of the Defence Committee and the sub-committee for disarmament, weapons control and non-proliferation (18th legislative period). Focus of work: disarmament, arms export, non-military conflict resolution, deployment abroad, military procurement as well as the organisation and structure of the Bundeswehr. As well as being a Member of the Bundestag, student of political science, philosophy and public law at the University of Tübingen.

Dr. h. c. mult. Jayantha Dhanapala is a former United Nations Under-Secretary-General for Disarmament Affairs (1998–2003) and a former Ambassador of Sri Lanka to the USA (1995–97) and to the UN Office in Geneva (1984–87). He is currently the 11th President of the Nobel Peace Prize-winning Pugwash Conferences on Science and World Affairs; Deputy Chairman of the Governing Board of the Stockholm International Peace Research Institute (SIPRI) and on several other advisory boards of international bodies. As a Sri Lankan diplomat Dhanapala served in London, Beijing, Washington D.C., New Delhi, and Geneva, as well as represented Sri Lanka at several international conferences, chairing many of them including the historic NPT Review and Extension Conference of 1995. He was Director of the UN Institute for Disarmament Research (UNIDIR) from 1987–92. Dhanapala has received many international awards and honorary doctorates.

Prof. Dr. Klaus Gottstein, born in 1924 in Szczecin. Studied physics in Berlin, London, and Göttingen. PhD (Dr. rer. nat.) 1953 in Göttingen. Research (particle physics) in Göttingen, Bristol, Berkeley, Munich. Selection of past positions: board member of the VDW, spokesperson of the German Pugwash group, Director at the Max-Planck-Institute for Physics, science attaché at the German Embassy in Washington, executive secretary of the science forum at the CSCE, in charge of the German Union of Academies participating in the international Amaldi Conferences on International Security and Arms Control.

Otto Jäckel, lawyer; military service, then read law, German and politics at the Universities of Frankfurt/Main, Marburg and Gießen. Working as a lawyer since March 1983, with additional specialisations in administrative law (1986) and labour law (1993). Offices in Wiesbaden and Berlin. Many years' experience as a judge at the arbitration court of the German Boxing Association. Conference speaker on questions of international law in foreign and security policy and expert witness in hearings at the Bundestag. Chairman of IALANA Deutschland e. V.

Prof. Sir Harold Kroto (Ph.D.), (1939–2016) born in Wisbech, UK, British chemist. Ph.D. in 1964 at Sheffield University on studies on molecular spectroscopy. From 1967 research and teaching at the University of Sussex, where he became a Professor in 1985. From 1991 to 2001, he was Royal Society Research Professor. Knighted in 1996; awarded the Nobel Prize in Chemistry together with Robert Curl and Richard Smalley for discovering the carbon molecule C₆₀. Research in nanotechnology in his later years.

Prof. Dr. Götz Neuneck, trained as physicist (Diplom), PhD. in Mathematics (1995) and actually acting Co-director of the Institute for Peace Research and Security Policy at the University of Hamburg. Pugwash representative of the VDW and member of the Council of the “Pugwash Conferences on Science and World Affairs”, spokesman of the work group on physics and disarmament at the German Physics Society (DPG) as well as Representative of the Union of German Academies for the Amaldi Conferences. Since 2008 Director of the Master's Programme for Peace and Security Studies at the University of Hamburg. Earlier posts and activities included work at the Max-Planck Society in Starnberg (AG H. Afheldt; C.F. von Weizsäcker; H.-P. Dürr; 1985–88). From 1988 fellow at the IFSH directed by Egon Bahr, Dieter S. Lutz and Michael Brzsoka. Areas of work: arms control, nuclear disarmament, anti-missile systems, proliferation of militarily relevant technologies, arms control in space, etc.

Prof. Dr. Jürgen Scheffran, Professor at the Institute for Geography at the University of Hamburg. Since 2009 head of the research group Climate Change and Security in the ‘excellence cluster’ CliSAP. Research at the Centrum für Erdsystemforschung und Nachhaltigkeit (Centre for Earth System Research and Sustainability, CEN) focuses on: security risks, conflict and cooperation potential in the context of climate change, with a special focus on energy security, water usage, food security and migration. Other topics include disarmament and weapons control, technological impact assessment, responsibility in science and securing sustainable peace. Member of VDW, Natwiss, BdWi and INES.

Dr. Ulrike Wunderle, historian. PhD as part of the special research area “The experience of war” at the University of Tübingen, looking at US nuclear physicists as political advisors during the Cold War. From 2005, active member of the German Student Pugwash group and later the German Pugwash group. From 2009 to 2014 member of the advisory board of the Vereinigung Deutscher Wissenschaftler and from 2014 to 2015 managing director of the VDW. Since 2006 work as project director in education communication on matters of inclusion, social justice, German history and European politics.



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