

**Oslo Talk**  
**February 26, 2008**  
**Sidney D. Drell**

Secretary Shultz and I were motivated to organize the first conference at Hoover on "Implications of the Reykjavik Summit on its Twentieth Anniversary" by a growing concern. With the spread of nuclear know-how and material, we are facing an increasing danger that the deadliest weapons ever invented will be acquired by ruthless national leaders or by suicidal terrorists. Under such circumstances, nuclear deterrence will become decreasingly effective and increasingly hazardous as a policy. Furthermore, the steps the international community is talking to address these threats do not adequately respond to this danger.

We considered two questions: What will it take to rekindle the vision of a world free of nuclear weapons that President Reagan and General Secretary Gorbachev brought to their remarkable summit at Reykjavik in 1986? Can a worldwide consensus be forged on a series of practical steps leading to major reductions in the nuclear danger?

A consensus was reached at that conference that the vision of Reykjavik is not only realistic. It is also an important compass to help accomplish the urgent steps that we identified as essential for reducing nuclear danger, both today and in the long term.

At a second conference one year later, just four months ago, the goal of a world free of nuclear weapons was reaffirmed and specific steps toward that end were described in considerable detail, as reported in *The Wall Street Journal* last month.

Over the next two days, I look forward to learning your views on this most important subject. It is essential to hear from you, and to understand what you, our colleagues from nations around the world, think, from your perspective and experience. Are we on the right track with our priorities and recommendations? Are there any issues we have missed or misinterpreted as you see them? It is essential that we join together in a global effort in order to make serious progress in reducing nuclear dangers and ultimately achieving a world free of those deadly weapons.

Here are 8 steps that we propose to be taken this year, in 2008, with the leadership of the U.S. and Russia, as possessors of 95% of the world's nuclear warheads, to greatly reduce nuclear danger in the short-term and get us started on the path to a world free of nuclear weapons. These steps are both practical and urgent.

- *Extend key provisions of the Strategic Arms Reduction Treaty of 1991.*
- *Take steps to increase the warning and decision times for the launch of all nuclear-armed ballistic missiles, thereby reducing risks of accidental or unauthorized attacks.*
- *Discard any existing operational plans for massive attacks that still remain from the Cold War days.*
- *Undertake negotiations toward developing cooperative multilateral ballistic-missile defense and early warning systems, as proposed by Presidents Bush and Putin at their 2002 Moscow summit meeting.*

- *Dramatically accelerate work to provide the highest possible standards of security for nuclear weapons, as well as for nuclear materials everywhere in the world, to prevent terrorists from acquiring a nuclear bomb.*
- *Start a dialogue, including within NATO and with Russia, on consolidation the nuclear weapons designed for forward deployment to enhance their security, and as a first step toward careful accounting for them and their eventual elimination.*
- *Strengthen the means of monitoring compliance with the nuclear Non-Proliferation Treaty (NPT) as a counter to the global spread of advanced technologies.*
- *Adopt a process for bringing the Comprehensive Test Ban Treaty (CTBT) into effect, which would strengthen the NPT and aid international monitoring of nuclear activities.*

In addition, on a longer term scale, it will also be necessary to:

- Undertake further substantial reductions in U.S. and Russian nuclear forces beyond those recorded in the U.S.-Russia Strategic Offensive Reductions Treaty. As the reductions proceed, other nuclear nations would become involved.
- Develop an international system of controls to manage the risks of the nuclear fuel cycle.
- Complete a verifiable treaty that prevents nations from producing nuclear materials for weapons (FMCT) and controls existing materials (FMCI).
- Turn the goal of a world without nuclear weapons into a practical enterprise among nations, by applying the necessary political will to build and international consensus on priorities.
- *Extend key provisions of the Strategic Arms Reduction Treaty of 1991.*

Much has been learned about the vital task of verification from the applications of these provisions. However the treaty is scheduled to expire on Dec. 5. 2009. The United States and Russia must get to work on extending the essential monitoring and verification provisions of this treaty. The U.S. and Russia should also complete as soon as possible the reductions agreed upon in the 2002 Moscow Treaty on Strategic Offensive Reductions. This agreement limits each of the 2 countries to 1700-2200 operationally deployed strategic nuclear warheads by the end of 2012, but puts no limits on non-

deployed ones. In a post-Cold War world it is hard to imagine credible targets for so many nuclear weapons.

- *Take steps to increase the warning and decision times for the launch of all nuclear-armed ballistic missiles, thereby reducing risks of accidental or unauthorized attacks.*

Reliance on launch procedures that deny command authorities sufficient time to make careful and prudent decisions is unnecessary and dangerous in today's environment. Developments in cyber-warfare pose new threats that could have disastrous consequences if the command-and-control systems of any nuclear-weapons state were compromised by mischievous or hostile hackers, particularly during a crisis. Near-term procedural modifications in the launch process could reduce the risk of a catastrophic nuclear accident close to zero. As trust grows in the U.S.-Russian relationship, further steps could be implemented in time, by introducing mutually agreed and verified physical barriers in the command-and-control sequence.

Such actions would send an important – and hopeful – message to the world that reliance on these weapons is diminishing.

- *Discard any existing operational plans for massive attacks that still remain from the Cold War days.*

In today's world, with the U.S. and Russia having formally declared that they are allied against terrorism and no longer perceive each other as enemies, it is an obsolete policy to interpret deterrence as requiring mutual assured destruction (MAD).

- *Undertake negotiations toward developing cooperative multilateral ballistic-missile defense and early warning systems, as proposed by Presidents Bush and Putin at their 2002 Moscow summit meeting.*

This should include agreement on plans for countering missile threats to Europe, Russia, and the U.S. from the Middle East. In addition work to establish the Joint Data Exchange Center in Moscow, that agreed to at that 2002 Summit should be completed. Reducing tensions over missile defense will enhance the possibility of progress on a broader range of nuclear issues so essential to our security. Failure to do so will make it much more difficult. As a first step the disagreement between the United States and Russia as to where to base such a system – the U.S. has initiated plans for Poland and Czechoslovakia – needs to be resolved.

- *Dramatically accelerate work to provide the highest possible standards of security for nuclear weapons, as well as for nuclear materials everywhere in the world, to prevent terrorists from acquiring a nuclear bomb.*

Nuclear terrorism is a real and urgent threat. There are nuclear weapons materials in more than forty countries around the world, and there are recent reports of alleged attempts to smuggle nuclear material in Eastern Europe and the Caucasus. If a terrorist group were able to obtain highly enriched uranium (HEU), it is plausible they could make a crude nuclear explosive. The most effective tool for reducing this risk is to strengthen security for all nuclear weapons and weapons-usable materials worldwide. Preventing theft for nuclear weapons and materials would also block a major shortcut for states seeking nuclear weapons.

The U.S., Russia and other nations that have worked with the Nunn-Lugar programs, in cooperation with the International Atomic Energy Agency (IAEA), should play a key role in helping to implement United Nations Security Council Resolution 1540

- *Start a dialogue, including within NATO and with Russia, on consolidating the nuclear weapons designed for forward deployment to enhance their security, and as a first step toward careful accounting for them and their eventual elimination.*

These smaller and more portable nuclear weapons are, given their characteristics, inviting and perhaps the most likely targets for terrorist groups to attempt to acquire.

During its 60<sup>th</sup> anniversary celebration in 2009, NATO could decide to achieve a new strategic concept with the goal of zero deployed nuclear weapons in Europe. This would of course require resolving disagreement over conventional force deployments and the CFE Treaty.

- *Strengthen the means of monitoring compliance with the nuclear Non-Proliferation Treaty (NPT) as a counter to global spread of advanced technologies.*

More progress in this direction is urgent in view of the global spread of advanced technology, most visible in uranium enrichment technology. It could be achieved through requiring the application of monitoring provisions designed by the IAEA to all signatories of the NPT (i.e. Additional Protocols allowing challenge, on-site, timely inspections of suspect activities). Presumably such further reductions on activities will call for balancing them with incentives, a non-trivial problem.

- *Adopt a process for bringing the Comprehensive Test Ban Treaty (CTBT) into effect, which would strengthen the NPT and aid international monitoring of nuclear activities.*

As of today the CTBT has been signed by 178 states ratified by 144. To enter into force, it must be ratified by 44 states deemed nuclear capable. 35 have done so but nine are still holding out. They are China, Egypt, Indonesia, Iran, Israel, and the United States; plus three states North Korea, India, and Pakistan who have yet to sign the Treaty. As for the United States, the treaty's first signatory in 1996, our conference called for a timely bipartisan congressional review. Since we first considered and failed to ratify it in 1999, there have been extensive improvements of the international monitoring system for identifying and location treaty violations. It now has roughly 90% of its 321 facilities in place, and it impressively displayed its sensitivity in rapidly location, identifying and measuring the yield of last years test by North Korea. We also made considerable technical progress over the past decade in maintaining high confidence in the reliability, safety, and effectiveness of the nation's nuclear arsenal under a test ban. The Comprehensive Test Ban Treaty Organization is putting in place new monitoring stations to detect nuclear tests – an effort the U.S. should urgently support even prior to ratification.

Also necessary on a longer time scale:

- *Undertake further substantial reductions in U.S. and Russian nuclear forces beyond those recorded in the U.S.-Russia Strategic Offensive Reductions Treaty. As the reductions proceed, other nuclear nations would become involved.*

A scenario for further substantial reductions discussed at the conference could begin by lowering the number of operationally deployed strategic nuclear warheads permitted under the Moscow Treaty from roughly 2000 to 1000, followed by a second stage of reductions down to 500 (with another 500 in a responsive force). A third stage would limit the two countries to a strategic nuclear force with a total of 500 war heads, all in responsive force, and none operationally deployed. At some point, commitments will be required from other nuclear powers to limit their nuclear forces – including greater transparency and inclusion in a regime of monitoring and verification. [In order to move beyond U.S. and Russian reductions towards a world with “zero” operationally deployed nuclear forces and – ultimately – a world without nuclear weapons.]

- *Develop an international system of controls to manage the risks of the nuclear fuel cycle.*

The growing worldwide demand for energy to meet civilian needs and aspirations has led to a resurgence of interest in building nuclear reactors to provide energy for the increased civilian demand. This will inevitably lead to an increase in the potential for the spread of sensitive nuclear fuel cycle technologies through enrichment of uranium at the front end and reprocessing spent fuel at the back end of the fuel cycle. This, of course, will pose a challenge to efforts to prevent nuclear proliferation. International mechanisms, such as a

fuel bank, will have to be devised that will guarantee the availability of the low-enriched uranium required for power reactors is available at the going market price that the fuel will remain under appropriate multilateral controls; and that the spent fuel will be removed to internationally operated facilities. Otherwise, individual nations that develop the indigenous infrastructures to power a civilian reactor will increase substantially the number of latent nuclear weapon states, further challenging the current nonproliferation regime. This will require a global effort including a package of incentives that advanced nuclear countries can offer to nonnuclear nations as an alternative to their initiating sensitive fuel-cycle activities. This also raises the sensitive issue of what to do about existing national infrastructures in the current nuclear weapons and weapons capable nations.

- *Complete a verifiable treaty that prevents nations from producing nuclear materials for weapons (FMCT) and controls existing materials (FMCI).*

This is another difficult but important challenge that will require jump-starting negotiating efforts that have been stalled for at decade and more. It will require developing mechanisms to verify and enforce the cut-off in production and the controls over existing material. It will also be necessary to develop and implement technical alternatives to using highly-enriched uranium in research and commercial installations around the world.

Eventually these three last most ambitious steps will create daunting demands on intelligence for monitoring full compliance with their provisions. This will occur when nuclear forces are reduced to much smaller numbers, most, if not all, in a non-deployed responsive force; when international control of the entire fuel cycle for civilian nuclear power is established; and when fissile material controls and production cut-offs are negotiated. It is very encouraging to me to hear the Secretary of State for Defense of the United Kingdom, Des Browne, call for his government working in cooperation with Norwegian defense establishment to focus on verification of nuclear disarmament. In this he joins with his government's former Foreign Minister Margaret Beckett to turn the United Kingdom into a role model and testing ground for determining requirements for the verifiable elimination of nuclear weapons. That is just the kind of serious work commitment that will be required.

- *Turn the goal of a world without nuclear weapons into a practical enterprise among nations, by applying the necessary political will to build an international consensus on priorities.*

I see this last step as the most difficult challenge – one that is politically demanding and highly charged. The preceding steps that I outlined are building blocks for creating a safer world. They appear to be, at least initially, a collection of fairly technical points; or

what Michael Quinlan terms “disarmament mechanics”. But soon enough, as they progress, they must face up to political conditions of growing complexity and difficulty. Indeed the path ahead is so deeply entwined with, and dependant upon, political cooperation on a global scale, with nations both friendly and otherwise, we are led to conclude that vision of Reykjavik is an essential part of the process. Unless this bold vision is embraced these steps alone are very unlikely to be perceived as fair or urgent. We would be seen as preserving the current situation of a two-tier system with some states with nuclear weapons and others restricted to remain without them. Persisting with this concept is becoming less and less viable in a world with the spread of nuclear technology and knowledge.

---

Our conclusions and recommendations as stated in the Wall Street Journal articles drew enthusiastic responses from around the world that have given great encouragement to those of us involved. They also generated concerns from those who view escaping from the nuclear deterrence trap to be both impractical and undesirable. Although there is broad agreement with them on the steps we have proposed they view giving credence to the Reykjavik vision of a world free of nuclear weapons to be a delusion that will distort the practical steps I have listed and create a barrier to progress.

It will take hard work to prove them wrong.