

# Nuclear Zero: Agreement, Irreversibility, and the Timetable Problem

Bruce D. Larkin

Whether ‘global zero’ is achieved, or is not, historians will endeavor to trace the choices which led to the outcome. If zero is ‘not achieved yet’ or judged ‘unachievable’ the trace will center on decisions that flashed a red light or—worse—derailed the train. If zero is achieved the markers by which adequate consensus came into being (when politics gave denuclearization the green light) will appear to be explicable waystations on the track to nuclear zero.

The problem for those judging whether prohibiting nuclear weapons would be good policy, and then whether any proposed measure concerning nuclear weapons would enhance or diminish the likelihood that zero would be the outcome, is that the future effects of today’s judgments cannot be known. They can be asserted, they can be well-imagined by bringing reason to past experience, their likelihood can even be agreed, but they cannot be known. In other matters first steps can be taken, the results judged, adjustment made as needed, and follow-on steps agreed. But because nuclear stands as the ‘winning weapon’, because there are profound fears of judging wrong about one’s own security, nuclear is unlike other complex policy fields.

## *The Timetable Problem*

Barack Obama stands on the rail platform, green lantern in hand. Beside him a train full of nuclear policy specialists, military officers, politicians, officials, sherpas and knaves, of all countries, bags full of draft resolutions and briefing documents, readies for departure. Latecomers climb aboard. The Departures board says:

Bruce D. Larkin: Nuclear Zero: ... The Timetable Problem

Train to GLOBAL ZERO 19.46 [Delayed]  
via REDUCTIONS, PRECONDITIONS, TRANSPARENCY AND EXTENDED NEGOTIATIONS

Obama blows his whistle. Doors close. He swings the lantern.

What route will this train take? and on what timetable? The choices pose several tricky questions. At which other stations must the train stop? In what sequence? Is it a *condition* of reaching Station C that there be a prior ‘successful’ arrival at Station B—or can Station B be bypassed? Are there *preparations* which must be made (at, say, Station E and Station F) before it is safe even for the train to pass through on the way to its final destination? Are there Stations where the local Stationmaster would hold up the train if he could, convinced the Station would be better off if the train’s journey were to be abandoned? Is there doubt about the cargo to be loaded at some stations, and about whether some Stations have held cargo back? To what extent can the route map, and timetable, be improvised *en route* and, if so, by whom and on what authority?

*Shall We ‘Go Slow’ or ‘Move Fast’?*

Getting to zero is a ‘big problem’. The usual approach, breaking a problem into its components, could work, but parts are many and contentious. Five dominate the others:

**Proliferation.** Must the ‘problem of proliferation’ be resolved before abolition can be seriously entertained? Or can non-proliferation only be secured by achieving abolition?

**Preconditions.** Does the only route, or the only safe and secure route, to abolition lie by way of defining and satisfying a number of preliminary conditions (such as transparency, non-proliferation, control of fissile material)? Or can a more direct approach to abolition be taken, which has the effect of showing how preliminary conditions can be satisfied?

**Universality.** Can an abolition regime tolerate ‘hold-outs’? Can the process of designing and bringing about an abolition regime tolerate ‘hold-outs’? Consider Israel, or India. Acknowledging the norms of universality, consensus, and voluntary commitment to disarmament obligations, what stance could and should be taken toward ‘hold-outs’?

**Demonstration.** Must preliminaries be shown to be robust ‘over a relatively long period of time’ before abolition can be

seriously entertained? Or would seriously entertaining abolition shorten the time required to show readiness to adhere?

**Collective Security.** Abolition will require a well-crafted ‘threat response’ to ensure security against any state or group that defects from the regime. Post-zero guarantees might be lodged in a system of *collective security*. With respect to (a) authoritative decision to enforce abolition and (b) how to effect those decisions by force, if necessary, what is the relative balance to be struck between *prior assurance* (being persuaded before abolition is instituted that the regime is adequately specified and adequately armed) and *reliance on political means* (evidence-based judgment and pragmatic choice of action, after abolition is instituted, in the face of noncompliance)?

Each of the issues just identified turns on two *contrary* positions for both of which persuasive arguments can be made. One view says ‘go slow’. The second argues that it is better to commit to ‘prompt, prudent, pragmatic denuclearization’: as agreement to global zero becomes closer the reasons adduced to ‘go slow’ will dissolve.

To summarize, these are

ISSUE	Obstacles: ‘Go Slow’	‘Prompt, Prudent’
<b>Proliferation</b>	Solve cases and institutionalize assurances	Solve via abolition
<b>Preconditions</b>	Meet weighty catalog of preconditions	Use agreement on zero to create or sidestep ‘preconditions’
<b>Universality</b>	‘Hold outs’ block road to zero	‘Hold outs’ are drawn into agreement to zero
<b>Demonstration</b>	Long, thorough demonstrations of mechanisms and ‘good faith’ required	Only as much demonstration is required as takes place before consensus for zero.
<b>Collective Security</b>	A high level of ‘prior assurance’ must precede surrendering nuclear weapons and placing reliance on ‘collective security’	If pragmatic tests are met, post-zero glitches can be solved by political means, including resort to warranted & authorized use of force

In practice, obstacles must be addressed. The distinction between ‘go slow’ and ‘prompt’ approaches is that ‘go slow’ takes hard tasks as reasons why global zero can only be a ‘long-term’ or

‘eventual’ goal, a ‘vision’, even ‘for a future generation’, while the ‘pragmatic, prompt’ approach assumes that with political skill and imagination the hard tasks can be addressed *well enough* that global zero can be agreed, on terms that respect the need for security, liberty, and socio-economic justice.

### *Irreversibility*

It would be very hard—probably impossible—to achieve global zero if governments could freely undo the commitments made by their predecessors.

Imagine the politics if governments could insist on new provisions, new concessions, threatening non-participation if refused. The deal would always be on the brink of falling apart. Inside each country opponents of zero would run free.

Enter the principle of *irreversibility*. In the language of the 2000 NPT Review Conference, “The principle of irreversibility to apply to nuclear disarmament, nuclear and other related arms control and reduction measures.”<sup>1</sup>

Of course, it is easier to win a state’s commitment to treaty obligations if the treaty itself provides a way out. That is the purpose of treaty provisions for withdrawal. GW Bush, in declaring that the United States would no longer be bound by the ABM Treaty, said that he was exercising the withdrawal provision.

But as unilateral withdrawal would vitiate the purpose of creating a universal nuclear prohibition, a Nuclear Weapons Convention would probably stipulate a method of amendment but also that states could not abandon commitments without consent of the other parties.

Now nuclear weapons and precursors are the subject of numerous agreements and negotiations. Is irreversibility to be built into all of these? The NPT Review language applies only to “nuclear disarmament, nuclear and other related arms control and reduction measures.” What of other agreements, such as those to provide fuel for civil reactors? Some terms are purely commercial, but others—such as those stipulating return of spent fuel to the

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<sup>1</sup> “The Conference agrees on the following practical steps for the systematic and progressive efforts to implement Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons ... ” of which irreversibility is ¶ 5. NPT Review Conference. Decision of the 2000 NPT Review Conference, April-May 2000. §15. Programme of Action (Next Steps) on Nuclear Disarmament.

source—are precautions against diversion of fissile material. These ought to be subject to irreversibility.

We learn from cases. North Korea committed to the NPT, but then withdrew ... and suspended its withdrawal ... and ten years later withdrew again. Having joined the IAEA, it withdrew. Article X of the NPT specifies that

1. Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. ...

This provision mirrors standard withdrawal provisions of many other treaties. The IAEA Statute also offers a right of withdrawal.

Withdrawal itself is a ‘reversion’. States seeking to mitigate the effects of a member’s withdrawal, or render withdrawal less attractive, or render withdrawal of a member less damaging to the regime, have urged a new provision that members must give up any equipment or materials to which they gained access by virtue of their membership. They may ‘revert’, but their material circumstances must also revert.

Iran, too, has made undertakings and then withdrawn. It signed the Additional Protocol (IAEA INFCIRC/540) in 2003 but in February 2006 informed IAEA that “its voluntary commitment to implement the AP [Additional Protocol] had been suspended ...” but not its being bound by its earlier safeguards agreement.

By an exchange of letters Iran agreed to be bound by a change in Code 3.1 of Subsidiary Arrangements to safeguards, but in March 2007 declared it would cease to implement the modified Code 3.1. (This move was foregrounded in assessing whether Iran was or was not bound to have earlier informed the IAEA of the second uranium enrichment facility, under construction near Qom, revealed in September 2009.)

Was Iran’s turning commitments on and off, at its own discretion, in keeping with international law? Would Iran’s actions embolden any state which sought advantage by abandoning a formal undertaking earlier made?

### *Where Are the Negotiations Taking Place Today?*

Picturing sites of negotiations, whether intermittent or ongoing, is in part recording formal negotiations known to us and in part an

exercise in imagination. Illustrations: the sequence of every-five-year NPT Review Conferences, and Preparatory Conferences in some intervening years; and every year the United Nations General Assembly meets from September, entertaining resolutions on nuclear weapons. These recurring events, and the successive IAEA Board of Governors' meetings, mark out a calendar.

Under the UN Charter the Security Council has “primary responsibility for the maintenance of international peace and security.” This is an expressly delegated task. The Members “confer” this responsibility, and in carrying it out the UNSC “acts on their behalf.”<sup>2</sup> Its unprecedented special meeting on 24 September 2009, under the gavel of Barack Obama, voted a unanimous resolution on the agenda item “Maintenance of international peace and security, nuclear proliferation, and nuclear disarmament.” The resolution begins

The Security Council, Resolving to seek a safer world for all and to create the conditions for a world without nuclear weapons, in accordance with the goals of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), in a way that promotes international stability, and based on the principle of undiminished security for all ...<sup>3</sup>

but does not commit to zero. More importantly, however, it is a further step in the Council being seized of issues centered on nuclear weapons, their proliferation, and the risk of their use as a terror weapon.

The five ‘recognized’ nuclear weapon states—the N5: United States, Britain, Russia, China and France—have acknowledged their special position and common concerns. They have met privately on nuclear matters.<sup>4</sup> As Permanent Members of the UNSC they meet and converse with the other members behind closed doors, as they did on 18 September 2009 in coming to an agreed text of UNSC 1887. Their obvious centrality has two sides: if all agreed to zero it would be a major step, but if any one refused, that would be a major barrier.

<sup>2</sup> Charter of the United Nations, Article 24.

<sup>3</sup> UNSC Resolution 1887 (2009).

<sup>4</sup> As noted in Bruce D. Larkin, *Nuclear Designs: Great Britain, France, and China in the Global Governance of Nuclear Arms* (New Brunswick, New Jersey: Transaction Publishers, 1996), p. 164. In 1991 the Five twice held publicly acknowledged private meetings, one concerning non-proliferation.

The question whether Israel, India, Pakistan and—even—North Korea are to sit down with the N5 to discuss achieving global zero already perplexes. They must be included, so long as they have nuclear weapons ... but the N5 resist adjusting the NPT to regard any of them as a “nuclear-weapon state” and so legitimize their unwillingness to forego nuclear weapons.

There exist scores of treaties, agreements, and formal undertakings about nuclear weapons and their delivery systems. Each creates a defined—partial, focussed, chartered—regime. Examples include the NPT itself, the IAEA Statutes, states’ acceptances of safeguards, the CTBT, regional treaties (e.g. ‘zones of peace’ and their protocols), multilateral arms control agreements (e.g. Nuclear Suppliers’ Group, Missile Technology Control Regime), and unilateral commitments (such as the GHW Bush and Gorbachev measures of September and October 1991). To maintain, sometimes expand, these agreements and undertakings requires ongoing politics: every substantive issue provokes distinct positions, which the regime participants must negotiate among themselves, within government, and with domestic constituents and ‘interests’.

Mapped around negotiations inside and among governments is a sphere occupied by advocacy organizations, study centers, and individuals: the engaged sectors of ‘civil society’. A few derive from, and obtain support from, governments: SIPRI, the WMD Commission (Blix Commission), International Commission on Nuclear Nonproliferation and Disarmament (a joint Japanese-Australian initiative), and joint UK-Norwegian project on verification, for example. UNIDIR reflects an agreement not on policy but to favor systematic study. These have the advantage of access to participating governments.

Long-standing private organizations include the Carnegie Endowment for International Peace and the Pugwash Conferences on World Affairs. The influence of private groups depends largely on the quality and imagination of their studies. Collaboration of the Nuclear Threat Institute and the four former US officials who in January 2007 voiced the compelling need for abolition illustrates a fresh effort to gain impetus for global zero. Within all of these groups there is ongoing discussion of what issues should be addressed, what positions taken, and what strategies and tactics best serve the organizations’ objectives.

How can these multiple ‘sites’ of the nuclear conversation *orchestrate themselves* to render global zero an acknowledged option? to create fertile conditions for denuclearization? to bring about abolition?

### *An Advocate*

Movements for change are typically identified with a single advocate, a proponent who is thought to *lead* a diverse coalition to the outcomes attributed to it.<sup>5</sup> A political or sociological study of any successful movement would conclude it was widely based, a movement whose ‘time had come’, ‘overdetermined’ by circumstance, but the fact remains that a *decisive* role is typically accorded to one person, or two or three, without whom, it is widely believed, the fortunes of the movement would have been radically different, and much less.

From the 1940s to 1990s many spoke knowledgeably and eloquently about the dangers of nuclear weapons, but even the reputations of Bertrand Russell and Albert Einstein did not mean that their words alone could place denuclearization on the global agenda.<sup>6</sup> If there was a breakthrough, it lay in Mikhail Gorbachev’s proposal that all nuclear weapons be eliminated by the end of 1999.<sup>7</sup> And yet it failed to be taken up, and the subsequent Reagan-Gorbachev discussions in Reykjavik ended in impasse. If Gorbachev’s proposal was prophetic, he is nonetheless far from having influence, without honor in his own country. But he was the first head of a nuclear weapon state to make a serious proposal for denuclearization.

After eight years in the desert of the GW Bush presidency, the United States elected a president who had paid attention to nuclear weapons and their implications. Barack Obama declared in a speech in Prague soon after his election that

<sup>5</sup> Gandhi and Indian independence. Chaim Weizmann and the creation of Israel. Robert Schuman and the vision of a united Europe. Arvid Pardo, arguing that “The seas beyond the limits of national jurisdiction are the common heritage of all mankind,” a position embodied in the UN Convention on the Law of the Seas. Gro Harlem Brundtland and ‘sustainability’. Within the United States, but with global resonance, Stephen Schneider, and James Hansen, and Al Gore on global warming.

<sup>6</sup> though Russell and Einstein sought to do so. See the Russell-Einstein Manifesto (9 July 1955). <http://www.pugwash.org/about/manifesto.htm>

<sup>7</sup> Mikhail Gorbachev, 15 January 1986. *For a Nuclear Free World* (Moscow: Novosti Press Agency Publishing House, 1987), pp. 9-22.

The existence of thousands of nuclear weapons is the most dangerous legacy of the Cold War. ... So today, I state clearly and with conviction America's commitment to seek the peace and security of a world without nuclear weapons. (Applause.) I'm not naive. This goal will not be reached quickly — perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change. We have to insist, “Yes, we can.” (Applause.)<sup>8</sup>

He then set out a series of steps the United States would take. (We will look at his proposals below.) The United States would lead by example. Barack Obama was in place to sparkplug, symbolize, and give direction to the drive for “a world without nuclear weapons.”

Obama's initiative at the 24 September 2009 UNSC meeting led to UNSC Resolution 1887, which endorses a number of nonproliferation steps. Obama, however, framed it as a “commitment” to abolition: “The historic resolution we just adopted enshrines our shared commitment to the goal of a world without nuclear weapons.”<sup>9</sup>

It remains to be seen how many other governments and government leaders, especially those adorned with nuclear weapons, will take up Obama's calls for abolition. Reportage had it that France had caviled at including support any stronger than “*Resolving* to seek a safer world for all and to create the conditions for a world without nuclear weapons ... ” where the operative phrase is ‘create the conditions’. *Le Monde* told of French differences with its peers.<sup>10</sup>

But of course it makes perfect sense to ‘create conditions’. Moreover, some steps to do so intersect plainly with non-proliferation measures, for which there are wider constituencies fearing new atomic states and ‘nuclear terrorism’ ... but not necessarily drawn at all to giving up nuclear weapons.

<sup>8</sup> Remarks by President Barack Obama. 5 April 2009. [http://www.whitehouse.gov/the\\_press\\_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/](http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/)

<sup>9</sup> Remarks by the President at the United Nations Security Council Summit on Nuclear Non-Proliferation and Nuclear Disarmament. United Nations, New York. 24 September 2009. [http://www.whitehouse.gov/the\\_press\\_office/Remarks-By-The-President-At-the-UN-Security-Council-Summit-On-Nuclear-Non-Proliferation-And-Nuclear-Disarmament/](http://www.whitehouse.gov/the_press_office/Remarks-By-The-President-At-the-UN-Security-Council-Summit-On-Nuclear-Non-Proliferation-And-Nuclear-Disarmament/)

<sup>10</sup> Natalie Nougayrède, “La France vote mais exprime avec force ses divergences,” *Le Monde*, 26 September 2009.

States, non-state entities, and individual adepts have each crafted, or will craft, a selection of nuclear initiatives to which they will accord priority and attention. Some may be particular to the party concerned. Many will be drawn, however, from a short list of candidate proposals around which some consensus is being formed, or at least *attempted*. In the next section we will compare three such short lists. Then we will look at the sketchy timetables that seem to have some traction.

*Proposals: Short Lists*

*UNSC 1887*

We will take UNSC 1887 as our organizing baseline, and then compare its calls to those of Sam Nunn, George Shultz, William Perry and Henry Kissinger.<sup>11</sup> UNSC 1887 typically ‘calls upon’ States to take actions, but does not *mandate* them.

<b>Topic</b>	<b>Text of UNSC 1887 [Quoted or Key Points]</b>
4. NPT universalisation	“4. <i>Calls upon</i> all States that are not Parties to the NPT to accede to the Treaty as non-nuclear-weapon States so as to achieve its universality at an early date, and pending their accession to the Treaty, to adhere to its terms;”
5. NPT Article VI	Calls on NPT Parties to effect Article VI, and “all other States to join in this endeavour;”
7. CTBT	Calls on all States to sign and ratify the CTBT, and to not test.
8. FMCT	Calls on CD to negotiate a fissile material production ban.
13. Export controls	“ <i>Calls upon</i> States to adopt stricter national controls for the export of sensitive goods and technologies of the nuclear fuel cycle;”
14. Reactor fuel	“ <i>Encourages</i> the work of the IAEA on multilateral approaches to the nuclear fuel cycle, including assurances of nuclear fuel supply ...”
15a. Safeguards	“ <i>Calls upon</i> all non-nuclear weapon States party to the NPT that have yet to bring into force a comprehensive safeguards agreement or a modified small quantities protocol to do so immediately.”
15b. Additional protocol (INFCIRC/540)	“ <i>Calls upon</i> all States to sign, ratify and implement an additional protocol ...” which would enable IAEA to inspect any site of activity suspected to be in violation of the NPT.

<sup>11</sup> Nunn, Shultz, Perry and Kissinger, in January 2007 and January 2008, made a concise case for abolition and steps toward it.

16. Noncompliance with safeguards	“Encourages States to provide the IAEA with the cooperation necessary for it to verify whether a state is in compliance with its safeguards obligations, and <i>affirms</i> the Security Council’s resolve to support the IAEA’s efforts to that end, consistent with its authorities under the Charter;”
17. NPT withdrawal	Notes “ongoing discussions” of what States Parties could do in response to a withdrawal, “and <i>affirms</i> that a State remains responsible under international law for violations of the NPT committed prior to its withdrawal;”
18. Supplier clawback	“Encourages States to require as a condition of nuclear exports” that withdrawal or breach of safeguards would grant supplier right to insist on return of “nuclear material and equipment ... as well as any special nuclear material produced through the use of such material or equipment;”
21. Re terrorism	“Calls for universal adherence to the Convention on Physical Protection of Nuclear Materials and its 2005 Amendment, and the Convention for the Suppression of Acts of Nuclear Terrorism;”
23. UNSC 1540 (2004)	“Reaffirms the need for full implementation of resolution 1540 (2004) ... ”
24-27. Security &c.	Re security of nuclear materials. Illicit trafficking. Prevention of “proliferation financing and shipments ... ”

The chart omits obvious and anodyne provisions. Note that, with exceptions, the provisions call for *actions by States*. Many address state inaction perceived to prevent non-proliferation measures from achieving their sought intent.

Paragraph 16, however, carries a message from the Security Council: if there is suspicion that safeguards are being violated, and if the IAEA is impeded in its effort to determine whether that is so, then the Council is resolved to “support” the IAEA. On one reading this is a threat to draw on the Council’s substantial Charter authority to act for the “maintenance of international peace and security.” On another reading Paragraph 16 is nothing but a weak gesture of its authority, unlikely to be drawn upon in any specific standoff with a suspected violator.

#### *Nunn, Shultz, Perry, Kissinger*

In their original January 2007 version, Nunn et al. say that “We endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal ... ” Of paramount importance—“first and foremost”—they urge a “joint enterprise” with the governments of the other nuclear

weapon states. Their aim is “agreement” on the “urgent steps” to “lay the groundwork for a world free of the nuclear threat.” Abolition is a goal, and this is only the beginning. This is “groundwork” time:

What should be done? Can the promise of the NPT and the possibilities envisioned at Reykjavik be brought to fruition? We believe that a major effort should be launched by the United States to produce a positive answer through concrete stages.

First and foremost is intensive work with leaders of the countries in possession of nuclear weapons to turn the goal of a world without nuclear weapons into a joint enterprise. Such a joint enterprise, by involving changes in the disposition of the states possessing nuclear weapons, would lend additional weight to efforts already under way to avoid the emergence of a nuclear-armed North Korea and Iran.

The program on which agreements should be sought would constitute a series of agreed and urgent steps that would lay the groundwork for a world free of the nuclear threat. Steps would include:

- Changing the Cold War posture of deployed nuclear weapons to increase warning time and thereby reduce the danger of an accidental or unauthorized use of a nuclear weapon.
- Continuing to reduce substantially the size of nuclear forces in all states that possess them.
- Eliminating short-range nuclear weapons designed to be forward-deployed.
- Initiating a bipartisan process with the Senate, including understandings to increase confidence and provide for periodic review, to achieve ratification of the Comprehensive Test Ban Treaty, taking advantage of recent technical advances, and working to secure ratification by other key states.
- Providing the highest possible standards of security for all stocks of weapons, weapons-usable plutonium, and highly enriched uranium everywhere in the world.
- Getting control of the uranium enrichment process, combined with the guarantee that uranium for nuclear power reactors could be obtained at a reasonable price, first from the Nuclear Suppliers Group and then from the International Atomic Energy Agency (IAEA) or other controlled international reserves. It will also be necessary to deal with proliferation issues presented by spent fuel from reactors producing electricity.
- Halting the production of fissile material for weapons globally; phasing out the use of highly enriched uranium in civil commerce and removing weapons-

usable uranium from research facilities around the world and rendering the materials safe.

- Redoubling our efforts to resolve regional confrontations and conflicts that give rise to new nuclear powers.

Achieving the goal of a world free of nuclear weapons will also require effective measures to impede or counter any nuclear-related conduct that is potentially threatening to the security of any state or peoples. ...

We endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal, beginning with the measures outlined above.

### *Barack Obama's Remarks to the United Nations*

In his remarks to the United Nations General Assembly and the UN Security Council in late September 2009 Barack Obama emphasised the nuclear issue:

I have outlined a comprehensive agenda to seek the goal of a world without nuclear weapons. In Moscow, the United States and Russia announced that we would pursue substantial reductions in our strategic warheads and launchers. At the Conference on Disarmament, we agreed on a work plan to negotiate an end to the production of fissile materials for nuclear weapons.<sup>12</sup>

He declared non-proliferation and abolition as the first of four “pillars ... fundamental to the future”:

First, we must stop the spread of nuclear weapons, and seek the goal of a world without them.

and laid out these steps the United States will undertake:

We will pursue a new agreement with Russia to substantially reduce our strategic warheads and launchers. We will move forward with ratification of the Test Ban Treaty, and work with others to bring the treaty into force so that nuclear testing is permanently prohibited. We will complete a Nuclear Posture Review that opens the door to deeper cuts and reduces the role of nuclear weapons. And we will call upon countries to begin negotiations in January on a treaty to end the production of fissile material for weapons.

I will also host a summit next April that reaffirms each nation's responsibility to secure nuclear material on its territory, and to help those who can't -- because we must never allow a single nuclear device to fall into the

<sup>12</sup> White House. Remarks by the President to the United Nations General Assembly. 23 September 2009. [http://www.whitehouse.gov/the\\_press\\_office/Remarks-by-the-President-to-the-United-Nations-General-Assembly/](http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-to-the-United-Nations-General-Assembly/)

hands of a violent extremist. And we will work to strengthen the institutions and initiatives that combat nuclear smuggling and theft.

All of this must support efforts to strengthen the NPT. ...<sup>13</sup>

At the Security Council the next day Obama repeated the points made to the General Assembly.<sup>14</sup>

### *The British Emphasis on 'Conditions'*

Soon after Barack Obama's election Britain issued a paper titled "Lifting the Nuclear Shadow: Creating the Conditions for Abolishing Nuclear Weapons."<sup>15</sup> The paper is simply worded, a summary of UK declaratory policy on nuclear disarmament. It continues the position outlined by then Foreign Secretary Margaret Becket speaking in Washington in June 2007. Abolition of nuclear weapons is treated as an objective, but an 'ultimate' goal, before which a number of daunting prerequisites must be met. The paper also paraphrases positions which illustrate the range of different views among specialists and public, enabling it to suggest complexity without being required to resolve it.

To be fair, British claims are largely unexceptional, sound acknowledgment of the difficult tasks ahead to achieve a convincing path to zero. For example, they say that "Securing agreement to a global ban will involve persuading those who are covered by a nuclear deterrent that it is in their security interests to give it up." Yes. Certainly. But there are 'go slow' advocates who lean on the asserted 'necessity' to maintain 'extended deterrence', and it would not be helpful if the British language served their argument, or was understood to mean that as long as Israel claimed that it needed nuclear weapons it could veto serious moves toward zero.

What of the three specified conditions that distinguish Britain's position?

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<sup>13</sup> *Ibid.*

<sup>14</sup> White House. Remarks by the President at the United Nations Security Council Summit on Nuclear Non-Proliferation and Nuclear Disarmament. 24 September 2009.

<sup>15</sup> United Kingdom. Foreign and Commonwealth Office. *LIFTING THE NUCLEAR SHADOW: Creating the Conditions for Abolishing Nuclear Weapons*. 2009.02.04 <http://www.fco.gov.uk/resources/en/pdf/pdf1/nuclear-paper>

This emphasis is repeated in the Queen's Speech to Parliament of 18 November 2009: "My Government will work towards creating the conditions for a world without nuclear weapons, including addressing the challenges from Iran and North Korea."

- a) establishing a watertight regime to prevent nuclear weapons from spreading to more states or to terrorists, at the same time as exploiting the peaceful benefits of nuclear energy
- b) reducing arsenals and constructing an international legal framework which progressively tightens the constraints on nuclear weapons
- c) addressing the technical, political and institutional challenges of moving from small numbers of nuclear weapons to none at all in a way which will enhance rather than destabilise national and international security

Can any abolition regime be ‘watertight’? Of course zero will require remarkable capacity to discourage, prevent, preclude, and if necessary respond to significant violation. Violation, however, will always be possible.

‘Reducing arsenals’ may be useful, but should not be a process to buy time. It is required to satisfy NPT Article VI, but it is not the main point of Article VI.

Moving from small numbers to zero is not a hard problem, *if there is agreement to go to zero*. There are technical intricacies, and the institutional resources to make that move and then safely and effectively maintain zero must be designed and put in place.

Each—‘watertight’ non-proliferation, reductions, ‘international legal framework’, and solving the ‘small numbers’ problem—is then expanded with particular sub-conditions. Concern that desiderata may be being prepared to be *necessary conditions* stems from paragraphs like this:

Among other proposals for strengthening safeguards are: widening the range of materials covered; increasing the frequency of inspections so that diversions would be detected more rapidly; and lowering thresholds to ensure the detection of the diversion of smaller quantities of material. Such steps would be expensive but might eventually be needed to provide the confidence necessary to enable a worldwide ban on nuclear weapons.<sup>16</sup>

Assessing proposals for immediate negotiations on a “universal, verifiable and legally-binding agreement to ban all nuclear weapons” Britain dismisses the notion, saying that

... most of the states with nuclear weapons, including the UK, while accepting that some form of such an agreement is likely to be necessary in due course to establish the final ban, consider that it would be premature and potentially counter-productive to focus efforts on it now when the many other conditions

<sup>16</sup>

*Ibid.*, p. 18.

necessary to enable a ban have yet to be put in place. Words alone will not rid the world of nuclear weapons.

which misrepresents advocates of a Nuclear Weapons Convention, who want not ‘words alone’ but the prompt negotiation of a ban on terms which could win universal agreement.

If Britain is only endeavoring to be rigorous and careful in approaching denuclearization, no one could fault that. But if British concern draws energies into ‘conditions’ in a way that takes eyes off the goal and how to get there ‘promptly, prudently and pragmatically’, then it will have done a disservice.

### *Timetables*

Only one approach to global zero foregrounds a timetable: that states should commit to a ‘time certain’ for zero. India has long insisted on states’ committing to zero by a specific declared date. Or perhaps India has taken refuge in the mantra of a ‘time certain’, because it deflected attention from India’s unreadiness to join the NPT, yet allowed India to appear to be urging abolition.

Skeptics insist that agreement to zero can only come out of extended negotiations, for which no deadline makes sense. A ‘timetable’ emerges as states agree.

Still, it is reasonable for us to ask how proponents of negotiating abolition imagine the duration of their task. And what sequence or orchestration of interim measures do they envisage? With answers to these questions we could better understand the options on offer. So we ask ‘what place does strategy assign to time?’.

### *January 1986: Gorbachev’s Call for Abolition by 2000*

On 15 January 1986 Mikhail Gorbachev proposed abolition by the end of 1999.<sup>17</sup> The program of abolition, to **begin in 1986**, was to proceed in three stages [highlighting added]:

[Stage 1] “Within the next 5 to 8 years” the U.S. and USSR cut to one half “the nuclear weapons that can reach other’s territory.” They would adopt and implement a decision to rid Europe of medium-range

<sup>17</sup> Mikhail Gorbachev, “Statement by the General Secretary of the CPSU Central Committee, Moscow, 15 January 1986,” in *For a Nuclear Free World* (Moscow: Novosti Press Agency Publishing House, 1987), pp. 9-22. The full text is at <http://www.learnworld.com/DRAFTS/DRAFT.2000.10.08.Xian.html>, Appendix B.

missiles.<sup>18</sup> Britain and France would pledge “not to build up their respective nuclear arsenals.”

[Stage 2] To begin “no later than 1990 and last for 5 to 7 years.”

[2a] The “other nuclear powers” would join the process.<sup>19</sup> The U.S. and USSR would now take steps “aimed at eliminating their medium-range nuclear forces” and freezing tactical systems.

[2b] After the U.S. and USSR achieved “50 per cent reduction of their respective armaments,” all nuclear powers would eliminate their tactical nuclear weapons. Tests would stop.

[Stage 3] Stage 3 would begin “no later than 1995.” Eliminate all nuclear weapons by the end of 1999. A “universal accord” barring nuclear weapons. “Special procedures” for destruction of weapons and delivery vehicles. Verification.

Gorbachev spoke expressly of a negotiated ‘timetable’:

The programme would envisage clearly-defined routes and reference points, establish a specific timetable for achieving agreements and implementing them and would make the negotiations purposeful and task-oriented. This would stop the dangerous trend whereby the momentum of the arms race is greater than the progress of negotiations.

and added that “the sooner this programme is translated into practical deeds, the safer life on our planet will be.”

*April 2009: Obama Speaks in Prague*

Barack Obama announced his commitment to “a world without nuclear weapons” in Prague on 5 April 2009. He avoided any deadline—and in so doing insulated himself against any charge of ‘failure’. He then set out a ‘trajectory’, a direction, and identified several preliminary and partial measures the United States would undertake. He began:

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<sup>18</sup> Primarily the intermediate-range missiles that were later banned by the INF Treaty. The translator is not recognizing here the common Western distinction between medium-range and intermediate-range missiles.

<sup>19</sup> Gorbachev does not spell out who are the “other nuclear powers.” Israel is not mentioned, but a “universal accord” in 1986 would have had to include not only Israel but also India and South Africa.

I state clearly and with conviction America's commitment to seek the peace and security of a world without nuclear weapons. (Applause.) I'm not naive. This goal will not be reached quickly — perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change. We have to insist, 'Yes, we can.' (Applause.)

Now, let me describe to you the **trajectory** we need to be on. First, the United States will take concrete steps towards a world without nuclear weapons. To put an end to Cold War thinking, we will reduce the role of nuclear weapons in our national security strategy, and urge others to do the same. ...<sup>20</sup>

On one key preliminary he insisted on urgency and fixed a deadline:

[W]e must ensure that terrorists never acquire a nuclear weapon. This is the most immediate and extreme threat to global security. One terrorist with one nuclear weapon could unleash massive destruction. ...

So today I am announcing a new international effort **to secure all vulnerable nuclear material around the world within four years**. We will set new standards, expand our cooperation with Russia, pursue new partnerships to lock down these sensitive materials.

but as 'secure' and 'vulnerable' imply judgments open to different understandings, negotiation to accomplish this goal will certainly prove interesting.

#### *September 2009: Obama Speaks to the United Nations*

Speaking to the UN General Assembly, President Obama set down one marker, confirming he would "host a summit next April [2010] that reaffirms each nation's responsibility to secure nuclear material on its territory."<sup>21</sup> A day later he told the UN Security Council that in January 2010 the United States would call on all to end production of fissile material for weapons. He reminded his listeners of the NPT Review Conference in May 2010. The next year would be "absolutely critical" in efforts against "the spread and use" of nuclear weapons.

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<sup>20</sup> Remarks by President Barack Obama, Hradcany Square Prague, Czech Republic, 5 April 2009. [http://www.whitehouse.gov/the\\_press\\_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/](http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/)

<sup>21</sup> Barack Obama. Remarks by the President to the United Nations General Assembly, United Nations, New York. 23 September 2009. [http://www.whitehouse.gov/the\\_press\\_office/Remarks-by-the-President-to-the-United-Nations-General-Assembly/](http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-to-the-United-Nations-General-Assembly/)

The next 12 months will be absolutely critical in determining whether this resolution and our overall efforts to stop the spread and use of nuclear weapons are successful. And all nations must do their part to make this work. In America, I have promised that we will pursue a new agreement with Russia to substantially reduce our strategic warheads and launchers. We will move forward with the ratification of the Comprehensive Test Ban Treaty, and open the door to deeper cuts in our own arsenal. In January, we will call upon countries to begin negotiations on a treaty to end the production of fissile material for weapons. And the Non-Proliferation Treaty Review Conference in May will strengthen that agreement.<sup>22</sup>

*International Commission on Nuclear Nonproliferation and Disarmament: As of April 2009*

*[In a revision of this paper on 3 January 2010 a second section on the work of the ICNND has been added, reflecting on the ICNND Report published on 15 December 2009. The original text drew selectively from Co-Chair Evans' discussion of the Commission's work in April 2009. By not omitting the original section in this revision I make plain that the timetable question was in broad, public discussion at least as early as April 2009.]*

In 2008 the Australian and Japanese governments collaborated in initiating the International Commission on Nuclear Nonproliferation and Disarmament, co-chaired by former Australian Foreign Minister Gareth Evans and former Japanese Foreign Minister Kawaguchi Yoriko.<sup>23</sup> At this writing the Commission has not yet completed its report, which will recommend steps and a timetable, but in April 2009 Gareth Evans spoke of his expectations.<sup>24</sup>

Evans posits a 'short term' ending in 2012, and specifies steps he hopes are completed before and during the 2010 NPT Review Conference. He chooses 2025 as the year before which the move to

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<sup>22</sup> President Barack Obama, United Nations, New York. 24 September 2009. [http://www.whitehouse.gov/the\\_press\\_office/Remarks-By-The-President-At-the-UN-Security-Council-Summit-On-Nuclear-Non-Proliferation-And-Nuclear-Disarmament/](http://www.whitehouse.gov/the_press_office/Remarks-By-The-President-At-the-UN-Security-Council-Summit-On-Nuclear-Non-Proliferation-And-Nuclear-Disarmament/)

<sup>23</sup> <http://www.icnnd.org/>

<sup>24</sup> This section reports Gareth Evans' remarks to a panel at the Carnegie Endowment for International Peace Nonproliferation Conference, Washington, D.C., 6-7 April 2009. Highlighting added. <http://www.carnegieendowment.org/events/?fa=eventDetail&id=1313&prog=zgp> [This summary also appears in this *Journal*, Appendix B.]

actual abolition is unlikely, and sets out measures to be undertaken in the years leading to 2025. Of abolition he insists that

It's important, in the middle of all this realism, however, about getting to the **beyond 2025** final zero, to keep our basic idealism intact. The ultimate goal must remain one – the ultimate goal that we must never lose sight of is the elimination of nuclear weapons and the effective outlawing of nuclear weapons from the planet.

The rationale for that goal I think must again also never be lost sight of. It was very well articulated I think by the original Canberra Commission and rearticulated as the central motif of the Blix Commission, namely that so long as any country has nuclear weapons, others will want them; so long as any country has nuclear weapons, they're bound one day to be used by accident if not design, and any such use would be catastrophic.

The **short-term aims and hopes** include CTBT ratification before the NPT Review Conference, 'rearticulation' of the 13 Steps of the 2000 NPT Review, and measures to strengthen the NPT. For 2009-2010 he lists several agenda items: START follow-on, strategic dialogue with Russia and China, CTBT, fissile material control, securing loose materials, Iran and the DPRK, and US nuclear policy (including acknowledgment that deterrence is the only nuclear mission).

#### **Medium-term aims:**

In terms of the medium term, which for present purposes we're thinking about as the period running through to about 2025, the basic object, as we're thinking about it again at the moment, is to both set and get to a target, minimalist vantage point – we're still wrestling with the appropriate metaphor but I'll leave that discussion to one side – a minimalist vantage point which would be characterized by **dramatically reduced numbers of warheads**, and we're still debating what those numbers should be, whether it's possible to have any actual numbers or would it only be a formula, but certainly dramatically reduced; secondly, dramatically reduced deployment of any of the weapons left in existence; thirdly, nothing anywhere on high readiness – on high launch readiness; and fourthly, common acceptance in military doctrine that the only purpose of nuclear weapons is to deter their use by others.

Again, whether or not no-first-use should be part of that kind of military doctrine or whether that's an add-on or more emotional and real-world utility is something the commission is wrestling with. But we believe, I think in our preliminary discussions, that getting to a result like this with **very low numbers, very little actual deployment, nothing on high readiness, and a common**

<sup>25</sup> Kyodo, "Eliminating Nuclear Threats: A Practical Agenda," *The Japan Times*, 19 October 2009. Draft report titled "Eliminating Nuclear Threats: A Practical Agenda for

doctrine accepting that there's no other purpose for these things in their potential use of tools other than to deter others from using nuclear weapons, we think that that would be a very much better world than the one we have at the moment, and one that is achievable within a time certain by a date certain, and for present purposes, 2025 seems to be workable.

To summarize: Evans' short-term is 2009-2010, his medium term "about 2025," and then "elimination of nuclear weapons" and their prohibition, the goal "we must never lose sight of," would be reached at some yet indeterminate point after 2025.

A draft presented at the fourth session of the Commission in Hiroshima 18-20 October 2009, obtained by Kyodo, reflects Evans' expectations, although the anticipated short-term would be set at 2010-2012. The Commission hopes to report in early January 2010.<sup>25</sup>

*International Commission on Nuclear Non-proliferation and Disarmament: Report of 15 December 2009*

*[Section added as a revision, 3 January 2010]*

In prefacing the ICNND Report<sup>26</sup> co-chairs Kawaguchi Yoriko and Gareth Evans connect a *timetable* with a requirement to be "realistic" and "pragmatic":

Central to our approach is the sense that the debate needed to focus squarely on specific action plans - short, medium and longer term - and that, above all, those plans have to be realistic. Idealistic, yes; pushing the envelope beyond most governments' comfort zones, yes; but also pragmatic, recognizing the many obstacles - political, practical and technical - that would need to be surmounted, and adjusting time-frames and ambitions accordingly.<sup>27</sup>

A tension between movement and delay, "pushing the envelope" and 'realism', recurs throughout the Report. The issue is not to applaud or reject that tension, or the Commissioner's making pragmatism a "central" choice, but to understand it, and to assess its place in the Report. In that vein, it may help to cite other

<sup>28</sup> ICNND. Report. Co-Chairs' preface. p. xi.

<sup>29</sup> ICNND. Report. p. 204, ¶ 19.1.

<sup>30</sup> ICNND. Report. p. 5, ¶ 1.8.

<sup>31</sup> ICNND. Report. p. 61, ¶ 6.7.

contexts in which the Commissioners appeal to ‘realism’ and ‘pragmatism’.

Before doing so, however, completeness requires recording that the Commissioners repeatedly stress the goal of complete elimination of nuclear weapons. For example, they write

What we hope will be clearly apparent to everyone is the sense of urgency we feel about the need to tackle the problems here described, and our determination to keep clearly in sight the ultimate goal. ... The international community can only rest when we have achieved a world without nuclear weapons, and be confident that it will remain that way.<sup>28</sup>

The unequivocal objective of the longer term agenda - pursued with real passion and a sense of urgency, not just passive lip-service - must be to get from the minimization point to a world of zero nuclear weapons.<sup>29</sup>

The only complete solution to the problem of nuclear weapons is to achieve their complete elimination ...<sup>30</sup>

It is against that backdrop that they insist on ‘realism’ and ‘pragmatism’. This registers in part as an “incremental approach”:

Those who advocate elimination need to break the process into manageable steps, countering perceptions that it is a leap into the unknown. That is the approach taken in this report, perhaps too cautious for some, but realistic: the number of diverse states that must cooperate to make nuclear abolition feasible is too great, and the issues too complex, to allow anything but incremental movement. Here as elsewhere in public policy, inertia tends to be the norm, major change the rarity, and sustaining major change extraordinarily difficult. The real alternative to an incremental approach is not more rapid change, but stasis. But doing nothing is not an option.<sup>31</sup>

... an abrupt change is not what most serious advocates of nuclear disarmament propose. What is required is the progressive delegitimation of nuclear weapons, with states working to reduce the role of these weapons in their security policies, focusing first on getting to a minimization point where a global zero will be within

<sup>32</sup> ICNND. Report. p. 67, ¶ 6.28.

<sup>33</sup> ICNND. Report. p. 167, ¶ 17.14.  
20.13 and 20.14.

<sup>34</sup> ICNND. Report. p. 217, ¶¶

reach, and only then on their total elimination, recognizing that each stage will take many years to achieve.<sup>32</sup>

The Commissioners can argue at the same time that there is a need to be moving, but that a key process will take a long time. Consider this balancing act:

While the U.S. and Russia must lead the way down on numerical reductions, the other nuclear-armed states will by definition have to follow ... [S]etting parameters for negotiations will take unprecedented effort. These are not reasons to avoid or delay the challenge, but for starting to come to terms with it now. The process will be long, drawn-out and is likely to occupy the whole of our medium-term time frame [to 2025] ...<sup>33</sup>

and a further indication of the Commissioners' view of how the world works:

**Strategy.** If policymakers are actually to be moved to action, their knowledge of a problem and general willingness to address it has to be accompanied by a clear sense that there is a productive way forward. The dilemma for those concerned to achieve a world free of nuclear weapons is that too often in the past the strategies proposed have been either too ambitious to be credible - like having all nuclear-armed states negotiate now to give up all their weapons by a certain date - or too modest either to inspire hope that this goal could ever be achieved. Unless there is a very clear vision of what the ultimate objective is, small steps in arms control, however individually worthwhile, are likely to lack direction, purpose and pace, and be almost as much a distraction from the main game as a contribution to it.

In this Commission's judgment, there is no practical alternative to proceeding step by step rather than through one great, comprehensive single leap. But as we have sought to make clear in the action plans that we have formulated, we believe that it is important from the outset to articulate a very clear and sharp ultimate goal, and map the path - or, more accurately, multiple paths - to it in as much detail as it possibly can be, setting a number of target dates and benchmarks along the way. ...<sup>34</sup>

Is this just the voice of experience? of sweet reasonableness? of ordinary common sense, with which no 'serious' person could take issue?

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<sup>35</sup> CTBTO Preparatory Commission. <http://www.ctbto.org/the-treaty/status-of-signature-and-ratification/>

<sup>36</sup> On the partisan maneuvering in the Senate, see John M. Broder, "Defeat of a Bruce D. Larkin: Nuclear Zero: ... The Timetable Problem

I am strongly drawn to the Commissioners' presumptions about collaborative action in a complex world. But just as the Report turns again and again to difficulties and objections, and how they might be overcome and put aside, so I worry that any process is vulnerable to chivvying complaints, demands that 'conditions' be met, and other trees felled onto the road, barring advance. Or even deliberate sabotage. This is even more a risk when *unanimous agreement* is sought, or taken to be necessary. Every player has the opportunity, in those circumstances, to derail the train.

### *Assessing Preliminaries*

Where to begin? Four preliminary aims recur in immediate agendas: CTBT ratification, fissile material control, 'no-first-use', and universal commitment to enhanced safeguards (INFCIRC/540 Additional Protocol). However straightforward the case for commitment to each of these, there are states which have withheld assent. Should a well-conceived timetable feature these as priority next steps? Should we measure the likelihood that global zero can be reached (by, say, 2035 or 2025) by the readiness of states to adopt these measures?

#### *CTBT Ratification*

The Comprehensive Test Ban Treaty approved by the UN General Assembly and opened for signature and ratification stipulated that Entry Into Force would be reached when all of a list of 44 countries had ratified. At this writing (November 2009) 35 have done so: missing are China, North Korea, Egypt, India, Indonesia, Iran, Israel, Pakistan and the United States.<sup>35</sup>

Most salient is that after the Clinton Administration submitted the CTBT to the US Senate in 1997 for its 'advice and consent' as required by the US Constitution, the Senate on 13 October 1999 by a vote of 48 aye and 51 nay failed to obtain the necessary 67 (two-thirds of the Senators).<sup>36</sup> The GW Bush Administration chose not to submit the CTBT. The Obama Administration, by contrast, is actively seeking Senate approval.

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<sup>37</sup> [http://www.ctbto.org/fileadmin/content/treaty/treaty\\_text.pdf](http://www.ctbto.org/fileadmin/content/treaty/treaty_text.pdf)

What is the purpose of a CTBT? Article 1 §1:

1. Each State Party undertakes not to carry out any nuclear weapon test explosion or any other nuclear explosion, and to prohibit and prevent any such nuclear explosion at any place under its jurisdiction or control.<sup>37</sup>

Commitment to the CTBT would affect NWSs and NNWSs differently. Weapons states, with nuclear weapons in inventory, would be bound *not to use* even one of them. They could not explode a weapon in inventory to see if it worked. And they could not explode a nuclear device of novel design, or novel modification. Non-weapon states could not explode a newly-built nuclear device to confirm that it worked.

Of course, a NNWS that had already signed and ratified the NPT would be bound by the NPT not to build, and certainly not to explode, a nuclear device.

The force of the CTBT is therefore focused on (a) NNWSs not party to the NPT and (b) NWSs.

The CTBT has a certain force as a *norm*, even if it has not ‘entered into force’. Five of the nine whose required ratification is missing have signed: China, Indonesia, Iran, Israel, and the United States. Under customary international practice they should adhere to the terms. That is: their signature means something. On the other hand, the CTBT does not incorporate irreversibility. Article IX sets standard terms for withdrawal. So, roughly, states which have signed but not ratified are bound so long as they choose to be.

Three states that have tested a nuclear device—North Korea, India, and Pakistan—have not signed and are not parties to the NPT. For them, and for all NNWSs, the CTBT reinforces the norm against developing and testing nuclear weapons.

A CTBT was originally conceived at a time when it was widely believed that a country would not rely on a nuclear design that had not been explosively tested. Were that true, a CTBT would have capped NWS designs and imposed a barrier to horizontal proliferation, the spread of nuclear weapons. Probable disappointment with the results of the 1998 Indian and Pakistani tests may have suggested caution in relying on their designs, but no doubt prompted efforts to improve those designs—and have prompted some calls for further testing. On the other hand, the bomb that destroyed Hiroshima had not been previously tested—

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<sup>38</sup> International Panel on Fissile Materials. [Draft for Discussion] A Fissile  
Bruce D. Larkin: Nuclear Zero: ... The Timetable Problem

and understanding of weapons design has become far more sophisticated since 1945.

What do these considerations mean for the worth of a CTBT today? In and of itself, a CTBT would not advance meeting the legal or technical requirements for global zero. It would not be a great shame if the CTBT were allowed to lie semi-dormant. But the CTBT is not 'in and of itself': it has become a marker whether key states which have so far failed to ratify, but especially the United States, are serious about achieving 'a world free of nuclear weapons'. And of course there must be doubt whether the US political system, and those of China, India, Pakistan, Israel and others, can be brought to join in abolition—or in any measures which effectively deny them access to nuclear weapons on demand.

It is clearly in the interest of the United States to ratify the CTBT, because its voice against nuclear proliferation will be blunted if the debacle of 1999 is repeated. But it would be a mistake to place undue weight on US Senate action. Objectively, the larger aims that will remain to be negotiated incorporate what is sought by a CTBT; and it is in that sense that a Plan B, skirting for the time being the two-thirds vote requirement in the US Senate, should find a place on any contingent timetable.

#### *Fissile Material Control*

The timetable must give utmost importance to fissile material control, but whether a Fissile Material Cutoff Treaty or a Fissile Material Control Treaty would be useful will depend on its exact provisions.

A treaty that forbade FM production but failed to control existing stocks would create three classes of states: those with only safeguarded civil FM or none at all, those with small NW inventories but plans for growth, and those with FM stocks (and nuclear weapons) that could be used to make renewed or additional weapons. A ban on FM production would freeze growing inventories where they stand. On the other hand, states with FM stockpiles, or weapons they could cannibalize and convert to newer designs, would only be constrained to the extent they declared holdings 'excess'. This could prove a bad bargain from the outset, undermining the principle that an abolition regime be judged fair, equitable, and in the interest of all. Why should Pakistan stop producing FM while the NPT N5 are free to use existing stocks however they choose?

A draft FM(Cutoff)T offered by the International Panel on Fissile Material<sup>38</sup> acknowledges legacy rights of the N5 under the NPT but otherwise anticipates FM coming under safeguards. The IPFM draft finesses arguments about whether a treaty should apply only to further production, or also control existing stocks. Its device: let the nuclear powers make a onetime designation of existing FM for use in weapons, the remainder to be declared ‘civil’ and placed under safeguards. FM recycled from weapons, but not declared ‘excess’, presumably remains ‘military’. The panel’s detailed account of types of fissile material and how they bear on bringing about, and securing, nuclear abolition is rich and helpful.<sup>39</sup> It remains to be seen, at this writing (November 2009), what the Obama Administration will propose in January 2010.

### *No-First-Use*

If all states committed to no-first-use, and would keep their word, there would be nothing to deter, and hence no reason to retain any nuclear weapons. Abolition. QED.

Acknowledging that the world is never that neat, we could say instead that if all NWSs committed to no-first-use, or declared that they would not use nuclear weapons unless another state did so first, there would be a strong policy argument to go to the next step, negotiating abolition. Why, then, is there a problem?

There are three main difficulties. First, believers in the inherent value of holding nuclear weapons *no matter what* oppose no-first-use as the camel’s nose for abolition. Second, advocates of nuclear missions other than deterrence—for example, deterring BW or CW use, or precluding defeat by conventional forces, or facing not-yet-invented ‘weapon X’ sometime in the future—insist the state should not give up first use. Third, critics insist no-first-use is nothing more than declaratory policy, revocable in an instant, and therefore at best mischievous.

Responses run along these lines. Unless a persuasive case for using nuclear weapons in defined hypothetical circumstances can be made out, rejecting no-first-use is a matter of faith, not reason.

<sup>40</sup> [http://www.iaea.org/OurWork/SV/Safeguards/sg\\_protocol.html](http://www.iaea.org/OurWork/SV/Safeguards/sg_protocol.html)

<sup>41</sup> [http://www.iaea.org/Publications/Factsheets/English/sg\\_overview.html](http://www.iaea.org/Publications/Factsheets/English/sg_overview.html)

There are, or can be created, non-nuclear responses to BW and CW; and as for 'weapon X', without knowing what that weapon might be it is unsound to argue that a nuclear 'ace in the hole' is necessary because of it. But yes: no-first-use is merely declaratory, and *therefore* the political, technical, and institutional measures to *ensure that first use is not possible* should be designed and carried out.

All in all, there is no good reason not to offer no-first-use assurances. In addition, no-first-use commitments militate against 'nuclear missions other than nuclear deterrence' and point the way toward a well-defined 'world without nuclear weapons'.

*Safeguards per INFCIRC/540 (Additional Protocol)*

The 1990-91 Gulf War led to discoveries of the extent of Iraq's efforts to build a nuclear bomb. Calls for greater IAEA authority to track possible NPT violations followed. A model for voluntary agreements between IAEA and its member states was drafted. Its terms, expanding IAEA safeguards, were circulated in IAEA Information Circular 540, and member states were invited to enter into negotiation of the enhanced safeguards agreements.

As of 6 October 2009 127 states had signed, and 93 had ratified, Additional Protocol agreements with IAEA.<sup>40</sup> The Additional Protocol

is a legal document granting the IAEA complementary inspection authority to that provided in underlying safeguards agreements. A principal aim is to enable the IAEA inspectorate to provide assurance about both declared and possible undeclared activities. Under the Protocol, the IAEA is granted expanded rights of access to information and sites.<sup>41</sup>

The IAEA's 150 member states (July 2009) include India, Israel, and Pakistan; India has signed, but not ratified, an INFCIRC/540 agreement. Israel and Pakistan have not signed. North Korea became an IAEA member in 1974 and withdrew in 1994. Iran is a member, and in 2003 signed an INFCIRC/540 agreement. But IAEA reported that on 6 February 2006

Iran informed the Agency that its voluntary commitment to implement the AP [Additional Protocol] had been suspended as of that date and that the

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<sup>42</sup> IAEA Annual Report 2006, p. 66. [http://www.iaea.org/Publications/Reports/Anrep2006/anrep2006\\_full.pdf](http://www.iaea.org/Publications/Reports/Anrep2006/anrep2006_full.pdf)

implementation of safeguards measures would be based only on its CSA [Comprehensive Safeguards Agreement].<sup>42</sup>

Since IAEA administration of safeguards is strictly homologous to the practices necessary to sustain an abolition regime, wider agreement—going to universal agreement—to an INFCIRC/540 Additional Protocol would importantly advance the prospects for abolition.

### *Concurrent International Fora*

Anything as complex and politically fraught as achieving global zero will best be pursued simultaneously in many concurrent fora, of which these are the most important:

- among the NWSs
- the UN Security Council
- the IAEA
- among states dedicated to attaining global zero
- between and among militaries of major states
- in specialized organizations, governmental and non-governmental, dealing in aspects of the nuclear question
- in ‘preparatory’ entities, anticipating zero

Almost all suggestions how to achieve zero begin with the nuclear weapon states, especially Russia and the United States. They do not need to agree even on the main terms, at the beginning, but they must agree that zero is attainable and that reaching zero is a priority, to be sustained until achieved.

This suggests some general observations about a ZNW timetable. A first aim—to which governments (and oppositions) could more easily agree—is abolition itself. We already witness that some governments emphasize not abolition, but ‘creating the conditions’ for abolition. The second step is to have on the table an alternative to present practice: a ‘clear enough’ and ‘defensible enough’ outline of a nuclear-free world. At any point states unwilling to make even a provisional commitment to that sketch must be asked ‘what are your concerns?’ and ‘what do you need to meet those concerns?’ This is very different from asking ‘what price do you believe we should pay to win your consent?’

Denuclearization will only work—be attainable and sustainable—if there is adequate agreement that it is in the *general interest*, in effect *in everyone's interest*. Under that circumstance negotiations are not framed as states' doing favors for others, or trading for others' assent, but as finding the terms by which all states can satisfy their fears and doubts *in their own interest*.

We imagine that these negotiations will center on the particulars of *assurance* (through transparency and ongoing verification) and the *political institutions and commitments to common security* (including how security will be assured if threatened). Assurance is largely, though not exclusively, a matter of access and technology. Common security is wholly a political matter, within as well as among states. It may and probably will prove useful to make some partial commitments before a complete regime has been negotiated. The NPT itself is an example of such a preliminary agreement. Similarly, some *unilateral commitments*, or undertakings to partners or institutions, will move negotiation forward. Ratifying the Additional Protocol, granting extended on-site inspection, is such a move. Any two states could establish between themselves how they would implement the 'satisfaction rule' (that either could have whatever access it required to satisfy itself that the other was not in noncompliance with denuclearization commitments).

At some point the timetable must show a 'date certain'. Or is that so? It is not so if by 'denuclearization' were meant the NWSs setting their weapons aside, adopting as policy that they would neither use nor prepare to use nuclear weapons, and the NNWSs granting that they would adhere to NPT requirements that they not create nuclear weapons. For in that case—call it 'denuclearization by practice'—there would be no moment at which the new regime came into being, but rather a growing conviction that the means to make and use nuclear weapons had been allowed to decay sufficiently that they posed no significant threat.

In my own view, it is best to have both an explicit regime incorporating the destruction of all nuclear weapons and the 'denuclearization by practice' which ongoing existence of a ZNW world would reinforce. Again a main term is *ongoing*, recognizing that politics must confront and deal with novel challenges, new uncertainties, and threatening initiatives. In that sense, ZNW implies a timetable without end.

*Domestic Politics, Domestic Negotiations*

To accomplish ‘Zero Nuclear Weapons’ each of the NWSs must craft sufficient internal support to achieve a timely ‘authoritative decision’ for zero. Preventing oppositions from barring the path to that ‘authoritative decision’ will be the most important political task; the means must be suited to each state. And each state presents fundamentally different issues.

*The Seven Most Important Questions*

Take the goal to be ‘preventing spread and use’, shorthand for nonproliferation, abolition and prohibition. Assume, for the moment, that means to prevent ‘spread’ will enhance and speed the drive for abolition and prohibition. That would mean, for example, foregoing measures to prevent ‘spread’ that would make it harder to achieve consensus to abolish, such as intrusive methods that a nuclear weapons state declared anathematic. What are the questions to answer, the tasks to define, the measures to design, to accomplish regime proof against ‘spread and use’?

These questions suggest actions and capabilities which could facilitate zero:

*[1] What nuclear weapons are there? How are they secured? And what capabilities exist to manufacture more?*

This is a matter of facts. There may be disagreements about the candor with which information is provided, and whether means to secure the weapons are ‘adequate’. In principle, however, the information on offer should be available to rational assessment of its *quality* and *sufficiency*.

*[2] What fissile material exists? And how is it secured?*

As in [1].

*[3] What capabilities are there to process uranium and plutonium, from what sources, to acquire further bomb-usable fissile material? Are these sources and facilities fully subject to INFCIRC/540 Safeguards?*

As in [1].

*[4] What negotiating practices and forums are required to address, and satisfy, reluctance to agree to zero?*

Consider three modes of bargaining: coercive refusal (forcing others to pay an unreasonable price for consent), reciprocity (compensation for costs and risks assumed in agreeing to a fair and mutual deal), and assurance (satisfaction of doubts that agreeing will require accepting unacceptable risks or costs).

If a state 'holds out', using its refusal of consent to extract blood money from other states, it is practicing coercion, taking advantage of the negotiations in order to 'win'. This is akin to blackmail or a protection racket, except that the blackmailer or racketeer threatens harm, whereas the coercive refuser threatens to deny a good.

What about reciprocity? In one sense, zero is good for all: everybody wins. But a state could claim that giving up nuclear weapons, or a nuclear power's 'nuclear umbrella', would force it to increase conventional armament in order to be secure. Should it be compensated?

Governments will want to know how they can be assured that no other state is preparing moves which would threaten them. What is required?

In addition to the concerns of governments *on the merits*, governments also must guard their political flanks against internal opponents *who may exploit the issue of 'national security' to endeavor to bring the government down*. Their arguments are likely to take the form that 'there are unacceptable risks'. Regime negotiators must take these arguments into account. What assurances can they offer?

*[5] What capacity will be required to provide convincing assurance that a suspected violation of the regime is NOT taking place?*

Prompt ‘anywhere, anytime’ inspection.

*[6] By whom will it be determined that that a suspected violation of the regime is taking place, or has taken place, and what action, if any, should then be taken?*

This is the most difficult problem of all. Time is of the essence. No government, no individual, comes to making the decisions with perfect impartiality.

Consider the possibility of two distinct bodies, the UN Security Council and a Nuclear Prohibition Commission. The UNSC would have its present “primary responsibility for the maintenance of international peace and security,” for which it could exercise all of its powers under the Charter. The Nuclear Prohibition Council, in contrast, would be confined to determining whether a suspected violation had taken place; and to that end it could deliver ‘protected inspectors’ to any germane location, placing that location under its control. As long as the sovereign state governing that location did not interfere with their actions, the ‘protected inspectors’ would not bring force to bear; but if the inspectors, or its armed units, were subject to interference or attack then force could be used to protect them and ensure that inspection proceed.

Such an arrangement has several advantages. It could be constructed to avoid a veto, ensure prompt action, respond to interferent force, but be limited to gathering the facts germane to an alleged violation and then ‘freezing’ the facilities or stocks at issue. It would establish facts and guarantee time for political negotiation of the alleged violation. By passing the question whether or not there were a violation to another body—the UNSC—the Commission could endeavor to remain ‘neutral’.

*[7] What shall be enforcement capacities of the regime? And how will it be assured that those capacities are in place and will act as ordered?*

A small dedicated military force plus explicit commitment of forces by member states would be always at the disposal of the

Security Council. As in [6], their missions could be limited initially to taking control of a suspect area and defending themselves as necessary, but that limitation could be removed if the UN Security Council judged it necessary. The Commission and Security Council would each assure itself that forces it is entitled to call upon are trained and ready.

### *Conclusions*

I have argued elsewhere that once the NWSs commit to ‘prompt, prudent, and pragmatic denuclearization’ the world could achieve ‘pragmatic zero’ within ten years. ‘Pragmatic denuclearization’ and ‘pragmatic zero’ mean that the terms of agreement, though not ‘perfect’, assure reasonable judges that the regime can be achieved and sustained, coupled to political methods to be drawn upon if at any point the regime confronts a threat that brings that ‘reasonable assurance’ into question. The commitment to ‘prompt denuclearization’ means that there is agreement to solve and implement ‘how’ tasks, rather than to become ensnared in ‘whether to’ arguments. And ‘prudent denuclearization’ implies viewing risks and obstacles realistically, never ignoring problems but using good sense to design convincing responses to them. And ‘ten years’ is not a short time, *if* there is good faith commitment to denuclearization.

It is in the interest of nuclear weapon holders to make that commitment, and will remain in their interest, to do so.

### *Abbreviations*

ABM	Anti-Ballistic Missile
CTBT	Comprehensive Test Ban Treaty
DPRK	Democratic People's Republic of Korea
FMCT	Fissile Material Control Treaty <i>or</i> Fissile Material Cutoff Treaty
IAEA	International Atomic Energy Agency
INFCIRC	[IAEA] Information Circular
N5	United States, Soviet Union, Britain, France, and China
NNWS	Non-Nuclear Weapon State
NNWSs	Non-Nuclear Weapon States
NPT	Non-Proliferation Treaty [Treaty on the Non- Proliferation of Nuclear Weapons]
NW, NWs	Nuclear Weapon (Weapons)
NWS, NWSs	Nuclear Weapon State (States)
SIPRI	Stockholm International Peace Research Institute
START	Strategic Arms Reduction Talks
UK	United Kingdom
UN	United Nations
UNIDIR	United Nations Institute for Disarmament Research
UNSC	United Nations Security Council
WMD	Weapons of Mass Destruction

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