

## **The Future of the NPT: A View from the Hill**

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I want to thank Jonathan Granoff of the Global Security Institute for inviting me and the Carter Center for hosting us. And I want thank all of you for traveling so far to join in this discussion.

Your subject could be not more timely. The risk of nuclear war may have receded, but it has been replaced by another threat that is all-too-likely, that of terrorists with nuclear weapons. In the first presidential debate last fall, the candidates concurred on one issue—both agreed that the gravest threat facing us is the threat of nuclear terrorism.

The wherewithal of nuclear terrorists is fissile materials, enriched uranium and weapons-grade plutonium. Fortunately, Uranium 235 is extracted in an enrichment process that is difficult to replicate and not easy to conceal, and Plutonium 239 requires a reactor and a chemical separation process. These are resources that terrorists cannot easily acquire. But there is a vast supply of nuclear weapons and materials already made, left over from the Cold War, which in Russia is not nearly so secure now as when it was deployed or stored during the Cold War. Lax controls make for what Senator Lugar calls "a vast supermarket of nuclear weapons, materials, and components. " As Senator Kerry pointed out in the debate, "some 600 tons of unsecured nuclear material remain in the former Soviet Union. " He went on to add, "At the rate we are currently securing it, it will take 13 years to get rid of it. " Senator Kerry spelled out our dilemma. On the one hand, we recognize

the gravity of the threat. On the other, we seem to be moving at a glacial pace to avert it.

If only a minute fraction of the fissile material already made fell into the hands of terrorists or rogue elements, there is little doubt what they would do with it. Those who struck on 9/11 may have lacked chemical, biological, or nuclear weapons, but they did not lack the malevolence to use them. In the words of Bill Perry, al Qaeda would use fissile materials "without warning, without remorse, and without fear of retaliation. "

This threat is not alarmist; it's reality. Nuclear weapons could be exploded on our soil, in our capital, or in a seaport or a major city, or in a regional city, like Atlanta, caught off-guard. This is not an American problem, though we are more fixated on it because of the catastrophe on 9/11, but what could happen here could happen anywhere, from Madrid to Bali.

We find ourselves, therefore, in a new arms race: one between terrorists trying to acquire nuclear weapons and our trying to stop them.

This makes the Nuclear Non-Proliferation Treaty more essential than ever, but it also puts the treaty on the spot and raises the question: Is the NPT adequate to the task? On the right, critics say that the treaty is toothless, that bad states flout it with impunity, and that good states are badgered with inspections to prove compliance, when their compliance is never in doubt. Critics point to the irony that the International Atomic Energy Agency (IAEA) enforces the treaty, but has no enforcement powers. The IAEA can only report discrepancies to the United Nations. Inspection is supposed to deter proliferation through international pressure and opprobrium. To reinforce the intentions of the parties, the NPT did set up an

inspection regimen called "safeguards. " But IAEA inspectors have been confined mostly to declared sites, not suspect sites; and even if IAEA inspectors happen to find clandestine weapons activity, the NPT contains no formal provisions requiring the country to cease and desist.

In the aftermath of the Persian Gulf War, UNSCOM inspectors were astounded at the scope of Iraq's nuclear weapons program and the progress that Iraq, a suspect state, had made toward developing nuclear weapons, notwithstanding IAEA inspections. A "Strengthened Safeguards System" was set up in May 1995, giving inspectors the ability to make inspections without notice, to take environmental samples, to have greater access to clandestine sites. In May 1997 an "additional protocol" was developed to give inspectors still more access to a wider array of activities, information, and facilities.

In the meantime, two devious states, Iran and North Korea, exploited a "loophole, " a flaw in the fabric of the NPT. As part of the basic bargain, the NPT allows nations that forswear nuclear weapons to develop nuclear power. While these states cannot make nuclear weapons, they have the right to build and operate nuclear reactors, and they can produce the enriched uranium to fuel those reactors. They can store spent fuel from these reactors, and they can reprocess the spent fuel. Their only specific obligation is to declare these plants to the International Atomic Energy Agency and allow inspections by the IAEA. This "closed fuel cycle" allows these states the capacity to produce the fissile materials, the *sine qua non* of nuclear weapons. Facilities used to enrich uranium for power reactors can be used to enrich uranium for weapons, and facilities used to reprocess spent fuel can process weapons-grade plutonium.

Iran and North Korea have shown how states that set out to circumvent the NPT's ban on the production of nuclear weapons can exploit the right to build a nuclear

power plant. While seeming to remain within the terms of the treaty, they can gather the resources necessary to make nuclear weapons. They can then withdraw from the treaty with impunity, and build a nuclear arsenal. Bill Perry and Ash Carter have proposed a bold way to deal with this loophole, to which I will return, but having looked at the treaty's shortcomings from our vantage point, let's look next at the discontent that has arisen among non-nuclear states.

When the NPT was negotiated, three non-nuclear states (Germany, Italy, and Sweden) were reluctant to make it permanent because they doubted its efficacy and were concerned about the effects on nuclear power in their countries. The NPT was born, therefore, with a 25-year life, at the end of which the parties had the option of renewing the treaty for a term of years or making it permanent. When the parties met at the Review and Extension Conference in 1995, a number of the non-nuclear states expressed their dissatisfaction with the progress made by the nuclear states toward disarmament. Apparently, some states did not want to make the NPT permanent for fear of removing the incentive for the nuclear powers to disarm.

To allay these concerns, the parties negotiated a "Statement of Principles and Objectives for Nuclear Nonproliferation and Disarmament. " In order not to condition the legality of the treaty on optimal objectives not yet achieved, the Statement of Principles was understood to be a political declaration. But what it lacks in authority, it makes up for in breadth. It pledges the parties:

- \* To sharp reductions in nuclear arsenals and fulfillment of Article 6.
  
- \* To completion of a Comprehensive Test Ban Treaty.
  
- \* To negotiations to stop the production of fissile materials.

\* To more nuclear free zones.

\* To universality of membership in the NPT.

When the parties met five years later to review implementation of the Principles and Objectives, many non-nuclear states remained unsatisfied with the nuclear states' progress. Another document, without legal conditions but based on good faith, was produced to paper over the differences. The nuclear states' commitment to Article VI was stated to be "unequivocal, " and an express commitment was made to maintain in force the nuclear testing moratorium, pending ratification of the CTBT.

Thomas Graham, Clinton's emissary for nuclear disarmament, was closely involved in negotiations to make the treaty permanent, and in his words, in the year 2000, the parties "pulled a rabbit out of a hat. " Graham questions how much longer the nuclear states can temporize and hold the treaty together with "paste and promises. "

The NPT took effect in 1970, and today has almost 190 signatory states, the most parties of any arms control agreement in existence. It was reviewed in 1995, and extended indefinitely. The adherence of all of these parties to the NPT and the commitment to making the NPT permanent does indicate that the non-nuclear states feel more secure with the NPT than they would without it. By this and other measures, the treaty has been a success. During the 1960s, when the NPT was taking form, President Kennedy predicted that there would be 20 to 30 avowed nuclear states today, unless collective action was taken. Today, there are 8, if two tentative states, North Korea and Iran, are not included.

The NPT has helped countries give up nuclear weapons and seek alternative ways to ensure their security. Germany and Japan, both major powers, forswore nuclear weapons, and never recanted. South Korea and Taiwan were dissuaded, turned around by diplomacy. South Africa ran a clandestine program, but lifted the veil after majority rule, and invited inspectors to come and see how small and covert production facilities could be. Argentina and Brazil under military regimes both had secret nuclear weapons, but abandoned them and joined the NPT. Ukraine, Belarus, and Kazakhstan surrendered the Soviet weapons on their soil and joined the NPT. Libya not only opened up its enrichment facilities but turned the equipment it had purchased from A. Q. Kahn over to the United States.

So, the NPT, for all its shortcomings, can claim some signal successes. Granted, India and Pakistan and Israel all have weapons, and North Korea and Iran are not far behind, and both are a grave concern. But the NPT has enjoyed far more success than failure, and it provides some clear advantages for the United States.

First, the NPT marshals the world against nuclear weapons with a collective force that we could not muster on our own, and it provides a framework and forum for dealing with proliferation problems. The United States needs not just non-proliferation programs; we need non-proliferation partners, and the NPT helps supply that need.

Second, when cheating occurs, or non-compliance is found, the NPT confers what Kofi Anan calls the "unique legitimacy of the United Nations" on the steps that have to be taken. If the U.S. acts under the auspices of the NPT, the U.S. does not have to take unilateral, pre-emptive action.

This why Thomas Graham calls the NPT "the cornerstone of our security" and why Madeleine Albright calls it "the most important multi-lateral arms control agreement in history. "

The NPT has its faults, and is not the final answer, but in truth, there is no single solution: not preemption, not overt action, not covert action, not missile defense, not diplomacy, not deterrence, and not arms control alone. Arms control agreements like the NPT play a major role in non-proliferation, but arms control is like all the other tools. Each has its place, but each has its limits. The essential point, overlooked when the shortcomings of the NPT or other regimens are exposed, is that we need all of the above. The problem is so difficult, so daunting, that the solution has to be multi-layered.

So, how do we shore up the NPT and take it to the next plateau? Let's go back to that flaw or loophole, the closed fuel cycle. Here is what Ash Carter and Bill Perry propose: They would develop new provisions, probably as a parallel agreement, barring countries that do not now have the capacity of operating a fuel cycle from acquiring such capacity. Those states that do not now sell nuclear technology, or equipment, or reactor fuel would agree not to manufacture, store, or reprocess nuclear fuel, and would agree to inspections to ensure compliance. Those states that do sell nuclear technology or reactor fuel would agree not to sell any fuel or equipment or technology to any country that does not forgo the right to enrich and reprocess nuclear fuel. At the same time, those same countries would guarantee the reliable supply of nuclear fuel and the retrieval of spent fuel at competitive, perhaps subsidized prices, to countries consenting to this new arrangement.

Why would countries that want nuclear power consent to such a deal? Bill Perry and Ash Carter suggest that they may have no choice if the supplier nations form a phalanx and refuse to sell non-complying countries fuel or technology. Developing

the technology on their own would be costly, and any country truly interested in nuclear power should welcome a guaranteed source of fuel at a fair and reasonable price.

What about countries that supply nuclear technology? Why would they be interested? For the same reason they signed the NPT. No country should have any incentive to see the list of nuclear states grow longer. Another reason: money can be made in nuclear fuel services. Nevertheless, the 44 countries that make and sell the world's nuclear technology have shown little enthusiasm for this proposal.

Ash Carter suggests that we have a test case, a timely opportunity to try out this idea: Iran. Russia or the EU might offer to help Iran build nuclear power reactors, and supply the fuel, provided Iran agrees to depend solely on Russia or the EU for nuclear fuel services, and agrees also, of course, to IAEA inspection to assure strict compliance.

This sort of arrangement will not be easy to sell, and even if sold to NPT parties, it will not be easy to administer, but it would tighten a loophole in the NPT and impede the spread of fissile materials. The fuel cycle loophole is not a recent discovery. The issue has been addressed three times in past years, but never resolved because the stakeholders have never reached consensus. But with Iranians and North Koreans both exploiting the treaty, the issue is no longer hypothetical.

To move a solution, more is needed than favorable mention by the President at the War College or tentative discussion among the G-8. Nothing short of a change in climate will be needed, with more carrots than sticks as impetus.



To pick up where the last treaty review left off, and propose a quid pro quo to which the non-nuclear parties would respond, the Senate could ratify the Comprehensive Test Ban Treaty, but I seriously doubt that ratification is within the art of the possible, at least not now. Ratification for a limited time, or ratification subject to the right to withdraw, is an alternative, but probably not a viable one in the Senate today. The tragedy of the last vote on ratification was not just that the vote was lost; but that the argument was lost as a result of pushing for a vote before being ready. It would be a mistake to push for another vote and lose it too.

The United States has maintained the testing moratorium, and is investing heavily in "stockpile stewardship" as an alternative to testing. These are steps that the non-nuclear states should not weigh lightly. Unfortunately, the Bush Administration and Congress have detracted from their significance with a law that shortens the lead-time for test readiness from 36 months to 18, an idea opposed off-the-record by the national labs on the ground that it would siphon support from stockpile stewardship.

The testing moratorium remains in place, and the Bush Administration insists that it has no plans at present to resume testing, but the Nuclear Posture Review leaves that door wide open. Although the United States has pledged in the NPT to reduce the role of nuclear weapons, the Nuclear Posture Review portrays our military as a triad, one leg of which is nuclear weapons, and it does not mince words. The NPR states: *"The need is clear for a revitalized nuclear weapons complex that will: ...be able...to design, develop, manufacture, and certify new warheads in response to new national requirements; and maintain readiness to resume underground nuclear testing if required."* Were you to read this document the first time, you would check the date to see if it was written before the Cold War ended. As Sam Nunn has said, the Administration's Nuclear Posture Review "expands options for nuclear attacks, widens the number of targets, and develops new nuclear variants...Each of these may have a plausible military rationale, but their collective effect is to suggest that the nation with the world's most powerful conventional forces is actually increasing its reliance on nuclear weapons. "

Shortening the lead-time to testing is one of a handful of initiatives which have a "plausible military rationale, " but which result in a net negative for the United States in the world. They suggest that United States is trying to move the world in one direction, away from nuclear weapons, while we move in another.

We do not realize a net gain, for example, by repealing Spratt-Furse, the ban on development of low-yield nuclear weapons. The world's greatest conventional power does not need to use nuclear weapons in a conflict for tactical purposes, and should not give credence to the notion that small nuclear weapons have tactical utility.

We do not realize a net gain by developing a new earth-penetrating nuclear warhead, designed to destroy deep-underground bunkers, even though these may be enclaves for weapons of mass destruction.

We do not realize a net gain by leaving the impression that we regard nuclear weapons as differing in degree but not in kind from conventional weapons.

We do not realize a net gain by investing in "advanced concepts, " suggesting that the U.S. is about to develop a new generation of nuclear weapons.

Having opposed all of these measures, I would say, nonetheless, that they are not as substantive as one might infer. In repealing Spratt-Furse, Congress reminded the Pentagon that funding for any low-yield nuclear weapon must be authorized before it is developed; and in 2004, Congress did just that, by refusing appropriations for the robust earth penetrator and advanced nuclear concepts. There are other pluses, such as SORT, that combine to make our current posture a net positive.

Take, for example, Nunn-Lugar and Cooperative Threat Reduction and the programs that fall under this umbrella. The United States and Russia, as stewards of the world's largest stockpiles, must face up to the risks in our own backyards. We should master the means of making our stockpiles safe, secure, and accountable. Morally, this will enhance our authority as we try to block the spread of nuclear weapons and materials. Practically, this will help strengthen safeguards and accountability. The non-nuclear parties to the NPT should credit the progress made in this realm, even though our achievements lag far behind what could have been done.

Five years have passed since the Baker-Cutler Task Force warned us: "The most urgent unmet national security threat to the United States today is the danger that weapons of mass destruction or weapons-usable materials in

Russia could be stolen and sold to terrorists or hostile nations and used against Americans troops abroad or citizens at home. "

Baker and Cutler said further: "Current non-proliferation programs in the Department of Energy, the Department of Defense, and related agencies have achieved impressive results thus far, but their limited mandate and funding fall short of what is required to address adequately the threat. " Budget levels are too low, they said, and management is too diffuse.

Baker and Cutler found that the Former Soviet Union had built 40,000 nuclear weapons and produced nuclear materials that could make 40,000 more.

They noted that the United States was buying 500 metric tonnes of HEU, removed from Soviet weapons, and converting it to low enriched uranium fuel to burn in reactors, but found that this still left 500 tonnes of HEU and 150 metric tonnes of plutonium. One grapefruit-sized lump of enriched uranium or one orange-sized lump of plutonium could make a bomb that would level lower Manhattan.

Baker and Cutler recommended that we speed up the purchase of HEU; that we down-blend not just 34 tonnes of plutonium, as agreed, but 100 tonnes, and that we pump money into the Nuclear Cities program and into IPP (Initiatives for Proliferation Prevention), to engage Russian scientists and stop the brain-drain of nuclear know-how to rogue countries and terrorists eager to learn and willing to pay.

Baker and Cutler estimated that between 1940 and 1996, the US spent \$5.8 trillion (in constant 1996 dollars) on nuclear weapons. [Schwartz, Atomic Audit, The Costs and Consequences of US Nuclear Weapons Since 1940, 1998] Thus, a tripling of the budget for nonproliferation, from \$1 billion to \$3 billion a year, seemed by no means inordinate.

They found that Russia's fissile materials were located in 300 buildings at 50 sites, that there were 10 nuclear cities, and that in any one of these cities, there was more fissile material than in all the arsenals of France, Britain, and China put together. With the aid of Graham Allison, they formulated a strategic plan to neutralize or secure all weapons-grade materials, and prevent outflow of scientific expertise, which would be implemented over 6 -7 years. The estimated cost: \$30 billion over 8-10 years.

Baker and Cutler recognized that all of the above required a sea change in the level of attention given such tasks by senior officials, so they urged a non-proliferation czar in the White House.

Four years later, the same amount of money is being spent on CTR and related programs; the same limited quantity of enriched uranium is being purchased each year; the Nuclear Cities program is still inadequately funded, and our mutual plan to down-blend plutonium into MOX fuel has been side-tracked by legal problems over liability for Russia's facility once it is up and in operation.

This is not to say that Cooperative Threat Reduction has not been a success. For an investment of \$6 billion as of November 2004, CTR funds have helped de-activate 6,472 warheads; destroy 559 ICBMs, and eliminate 541 SLBMs plus 137 strategic bombers. These numbers dwarf the warheads that even a robust missile defense system could hope to counter, and these are just Department of Defense programs. Department of Energy programs include a permanent repository for nuclear materials, a storage facility at Mayak, now in operation. These numbers illustrate how much has been achieved, but also suggest how much more could have been achieved if funding had been raised to the levels that Baker and Cutler recommended.

It is not too late to make amends. As one step toward making the climate more conducive for changes in the NPT, we should heed the advice that Howard Baker and Lloyd Cutler gave us five years ago, and ramp up funding for Cooperative Threat Reduction in the Former Soviet Union, and elsewhere, such as at some 20 or 30 research reactors scattered about the world, fueled with materials that we provided them, and in many cases secured with no more than a chain-link fence. I say that, knowing that it won't be easy to accomplish. The defense budget has grown to \$420 billion, by \$100 billion over four years, and even so, it is strained to fund everything programmed. From the start, those jealous of the defense budget have looked upon Cooperative Threat Reduction as an interloper, a way of siphoning money off real defense programs into foreign policy and the State Department. This attitude among a few key leaders in the Congress, and a lack of zeal in the Administration, have kept these programs flat-funded.

Some options could be undertaken without much money, if this were treated as the grave and urgent problem that it is. Consider, for example, this idea: Russia could transfer its excess HEU to the IMF and in return have its debt reduced or have special drawing rights credited to its account. The IMF, in turn, could lend the HEU to an international organization like the IAEA, which would blend it to reactor fuel, and act as a guaranteed nuclear fuel source to NPT states that agree to forgo nuclear fuel development.

There are other steps we can take that should cost relatively little in the short run, perhaps save money in the long run, and build up capital with the non-nuclear states:

\* The United States should move to SORT levels sooner rather than later. We can do it without hampering the effectiveness of our strategic deterrent one bit.

\* We should shift our focus from solely strategic weapons, and address a longstanding omission: tactical nuclear weapons. We need to engage the Russians, inventory accurately and then safely and verifiably dispose of tactical nuclear weapons. They are prolific, and their small size and portability make them attractive to terrorists.

\* We should plug another loophole, and reclaim the fissionable materials used in research reactors in countries around the world, materials that the U.S. and the U.S.S.R. provided in the form of loans. The State Department has a list of the most dangerous reactors, and we should not let another year go by without eradicating this risk.

\* We should stand ready to increase the funding of the IAEA to a level commensurate to the broader responsibilities we are asking the agency to assume.

These carrots alone may not be enough to close the deal and plug the fuel cycle loophole, but they should make the climate more conducive, and that's an advantage the Bush Administration should bear in mind, because the proposal they are pushing is a high stakes proposition, on which the future effectiveness of the NPT may rest.

In conclusion, let me offer a few observations.

For the non-nuclear states who think that the nuclear states are not in earnest about Article VI, but look upon it as an unattainable ideal, to which they agree but are not truly committed, I would say, take stock of what has happened in recent years:

–The United States has not ratified the CTBT, but it has kept the moratorium on testing; it has invested heavily in stockpile stewardship as an alternative

to testing; and it has not indicated, openly or otherwise, that it will resume testing.

-The two nuclear super-powers, the U.S. and Russia, have entered into SORT, which makes substantial reductions in deployed nuclear systems, down to levels in the range of 1,700 to 2,200. Granted, a long time is allowed for implementation, and SORT allows the parties to hold retired warheads in what the Bush Administration calls a "responsive reserve, " but this is still measurable progress.

-The U.S. and the Former Soviet Union, through programs like Nunn-Lugar and Cooperative Threat Reduction, have eliminated an impressive array of missiles and secured significant quantities of nuclear materials. Granted, the task is not half completed, and we would more secure if the recommendations of Howard Baker and Lloyd Cutler had been heeded, but at its own plodding pace, there is measurable progress in reducing risks that are the legacy of the 50-year nuclear arms race.

As for the nuclear states, those in particular who think that NPT is obsolete and ineffectual, and does not even take account of the most serious threat, terrorists, they should take note of NPT's accomplishments:

--All but a half dozen states are signatories, and instead of 20 or 30 nuclear states, as once predicted, there are eight. It is hard to believe that the world would be in this relatively secure state if nuclearization had been left to each country, laissez-faire.

-The NPT has some demonstrable weaknesses, but over time, most have been identified and many have been corrected. It will take some deft diplomacy to plug the nuclear fuel cycle loophole, but what this means is that the nuclear states seeking such a stringent remedy should be thinking of quid pro quos; and there are plenty on the table, such as a continuation of the



nuclear test moratorium and a cut-off in fissile material production. Rather than abandoning or unraveling what Madeleine Albright has called the most successful multilateral treaty in history, all sides should use the current discontent as a constructive tension to make the treaty better.