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Disarmament and arms control is not new. In 1139 at the Second Lateran Council Pope Innocent II outlawed the crossbow, declared it to be “hateful to God and unfit for Christians.” The crossbow was later overtaken in effectiveness by the English longbow. The crossbow and the longbow were then eclipsed by the destructive firepower of the cannon. The Catholic Church also banned the rifle when it appeared, but military technology continued to develop over the centuries, and diplomacy and arms-control efforts could not keep pace.

This changed with the advent of the atomic bomb in 1945. For the first time, a weapon existed with which humanity could destroy itself. Disarmament efforts gradually gained momentum, and over time a web of international treaties and agreements were constructed that have inhibited the spread of nuclear, chemical, and biological weapons and limited their deployment. There is no question but that these efforts have changed the course of history and made the world safer.

And soon after the end of World War II, as a central symptom of the Cold War, a vast nuclear arms race between the United States and the Soviet Union came into being. The United States conducted its first atomic weapon test in July, 1945 and a few weeks later used nuclear weapons against the Japanese cities of Hiroshima and Nagasaki. The Soviet Union carried out its first nuclear test in 1949. The bomb used against Hiroshima had an explosive yield of 12.5 kilotons, the equivalent of 12,500 tons of TNT. This weapon completely devastated the city of Hiroshima, killing some 200,000 people out of a total population of approximately 330,000. But with the first thermonuclear weapon tests by the United States and the Soviet Union just a few years later in the early 1950's, nuclear test explosions were in the megaton range- one million tons or more TNT equivalent- roughly 1000 times more powerful than the bomb that destroyed Hiroshima.

During the Cold War and thereafter, the United States built some 70,000 nuclear weapons, the Soviet Union around 55,000, and at the peak the United States had approximately 32,500 weapons in its stockpile, the Soviet Union some 45,000. And there was a perceived risk that these weapons might simply spread all over the world. During the Kennedy Administration there were predictions that there could be in the range of two dozen nuclear weapon states, with nuclear weapons integrated into their national arsenals by the end of the 1970's. President Kennedy in response to a reporter's question in March of 1963 said "...personally I am haunted by the feeling that by 1970...there may be 10 nuclear powers instead of 4, and by 1975, 15 or 20... I regard that as the greatest possible danger and hazard."

If such anticipated proliferation had in fact happened, there could indeed be significantly more than two dozen nuclear weapon states in the world today. Mohamed El Baradei, the Director General of the International Atomic Energy Agency, expressed this concern in 2004 when in a speech in Washington DC, he said, "The danger is so imminent...not only with regard to countries acquiring nuclear weapons but also terrorists getting their hands on some of these nuclear materials- uranium or plutonium." Director General El Baradei said in another speech around the same time that more than 40 countries now had the capability to build nuclear weapons. Thus, under such circumstances with this many nuclear weapon states, potentially every significant conflict could have brought with it the risk of going nuclear, and it might have become extremely difficult to keep nuclear weapons out of the hands of terrorist organizations, they would have been so widespread. Illustrating this danger of nuclear weapon proliferation and the threat of terrorist acquisition, former U.S. Defense Secretary William Perry, a scientist not given to exaggeration, has often said that in his judgment nuclear terrorism which could involve a nuclear detonation on U.S. soil is the gravest security threat that we face.

When President Kennedy became so concerned about nuclear weapon proliferation, the United States had in the range of 22,000 nuclear weapons in its arsenal, the Soviet Union nearly 2,500 and the United Kingdom 50. This total is a smaller number of nuclear weapons than exist in the world today. While from the earliest of days in the nuclear era it had been clear that it was necessary to prevent the spread of nuclear weapons, early attempts to prevent proliferation of nuclear weapons did not succeed. A watershed was in 1961 when the United Nations General Assembly unanimously passed a resolution, introduced by Ireland, which called on all states to

conclude an international agreement prohibiting the transfer or acquisition of nuclear weapons.

It was hoped that this resolution would pave the way for rapid agreement on a treaty constraining further nuclear proliferation. However, this was not to be the case. Nothing was done for four years. However, in 1965 the UN General Assembly took up the subject again. A new resolution was passed which over the next few years proved to be the blue print of the Nuclear Nonproliferation Treaty, The NPT. The NPT was signed in 1968 and entered into force in 1970, and came to be recognized as the principal reason- along with the parallel extended deterrence policies of the United States and the Soviet Union- that President Kennedy's darkest fears were not realized during the Cold War.

Thus, the nuclear weapon proliferation so rightly feared by President Kennedy did not happen. Indeed since 1970 and the entry into force of the NPT, at least until now, there has been very little nuclear weapon proliferation. In addition to the five nuclear weapon states recognized by the NPT- the United States, Britain, France, Russia and China, three states, India, Pakistan and Israel and perhaps North Korea have built nuclear weapon arsenals- but India and Israel were already well along in 1970. This is far from what had been feared in the early 1960's.

But the success of the NPT was no accident. It was rooted in a carefully crafted central bargain. In exchange for a commitment from the non nuclear weapon states (today more than 180 nations, most of the world) not to acquire nuclear weapons and to submit to international safeguards to verify compliance with this commitment, the NPT nuclear weapon states pledged unfettered access to peaceful nuclear technologies and undertook to engage in nuclear disarmament negotiations aimed at the ultimate elimination of their nuclear arsenals. It is this basic bargain for the last three decades has formed the central underpinnings of the international non proliferation regime.

However, one of the principal problems with all this has been that the NPT nuclear weapon states have never truly delivered on the disarmament part of this bargain and in recent years it appears to have been largely abandoned. The essence of the disarmament commitment in 1968 and thereafter was that pending the eventual elimination of nuclear weapon arsenals the nuclear weapon states would: agree to a treaty prohibiting all nuclear weapon tests, that is a

comprehensive nuclear test ban, a CTBT; negotiate an agreement prohibiting the further production of nuclear bomb explosive material; undertake obligations to drastically reduce their nuclear arsenals; and give legally binding commitments that they would never use nuclear weapons against NPT non-nuclear weapon states. The CTBT is of special importance. There was one specific measure that many non nuclear weapon delegations negotiating the NPT wanted included in the treaty as an objective above all others, a comprehensive nuclear test ban;- the idea was that if nuclear weapon states could not significantly reduce their nuclear weapon stockpiles in the near future, at least they could stop conducting explosive tests of nuclear weapons. Sweden proposed for the January 1968 draft treaty a reference to seeking the discontinuance of all test explosions of nuclear weapons and it was included in the final treaty text as preambular paragraph 10. Ever since, progress toward the Test Ban has been the litmus test of NPT nuclear weapon state willingness to meet their NPT nuclear disarmament obligations in the eyes of the non-nuclear weapon states. However, none of the disarmament elements of the basic bargain have been actually accomplished over 35 years later. The CTBT was negotiated and signed in 1996 but a U.S. Senate in part concerned about security but in part motivated by anti-Clinton sentiments rejected it in 1999, thereby greatly damaging the NPT. This act weakened and over time has undermined the NPT, the Treaty essential to our security. But also it has prevented the CTBT from entering into force, a Treaty overwhelmingly in the national security interests of the United States. The United States has carried out more nuclear weapon tests than the rest of the world combined. The U.S. nuclear stockpile is safe and reliable, allowing further testing by other countries will only damage us.

In addition, while there were nuclear weapon reductions in the treaties negotiated in the past, there have been no negotiated real reductions of nuclear weapons since 1994; there has never been any progress toward an agreement prohibiting the further production of nuclear explosive material for weapons and even though political commitments were made by the NPT nuclear weapon states in 1995 in effect not to use nuclear weapons against their NPT non-nuclear weapon treaty partners, the national policies of the United States, Britain, France and Russia are the opposite--holding open this option.

And now the other side of the bargain has begun to fall apart. India and Pakistan eroded the NPT from the outside by each conducting a series of nuclear weapon tests in 1998 and

declaring themselves to be nuclear weapon states. India, Pakistan and Israel maintain sizable unregulated nuclear weapon arsenals outside the NPT. North Korea withdrew from the Treaty in 2003, may have produced enough fissile material for eight to ten nuclear weapons and has conducted a nuclear weapon test, which was not, however, successful. North Korea has agreed in principle to return to the NPT and to negotiate an end to its nuclear weapon program and progress has been made toward this objective, but probably the elimination of their weapons is years away. And now North Korea has at least temporarily terminated their participation in disarmament discussions. The A. Q. Khan secret illegal nuclear weapon technology transferring ring based in Pakistan has been exposed but who can be sure that we have seen more than the tip of the iceberg? Iran is suspected of having a nuclear weapon program and admitted in late 2003 that contrary to its IAEA safeguards agreement it failed to report its acquisition of uranium enrichment technology.

And why might Iran want the nuclear fuel cycle and the attendant option to construct nuclear weapons? The nuclear program is very popular in Iran. It appears that some countries believe that ultimately the only way that they can gain respect in this world, as President Lula of Brazil declared during his first election campaign, is to acquire nuclear weapons. During the Cold War, nuclear weapons distinguished Great Powers from other countries. The permanent members of the Security Council are the five NPT recognized nuclear weapon states. Forty years ago Prime Minister McMillan and President De Gaulle both asserted that great power status was the real reason that Great Britain and France were building nuclear weapons. India declared in 1998 that it was now a big country; it had nuclear weapons. This high political value of nuclear weapons which it was a primary purpose of the NPT to change has in fact not changed since the days of the Cold War.

The NPT is a strategic international political bargain, it is not a gift from the non-nuclear weapon states. Few deny that the Treaty is in crisis. The question is how long can it remain viable as an unbalanced treaty with one-half of its basic strategic bargain unrealized and the other half unraveling. It is true that the norm of nonproliferation runs deep after forty years. It may be that the NPT can limp along for some years with only limited further proliferation or maybe not. But it could be the case that the world community is on the verge of a new wave of proliferation there are a number of experts who think so, and it will take a strong NPT regime to

prevent such a development. Also it will take close U.S.-Russian cooperation to prevent further nuclear weapon proliferation. Our relationship with Russia is the most important international state to state relationship that we have. The Congress should keep this in mind when it debates further NATO expansion to include states that once were a constituent part of the Soviet Union. We must take care to try to understand the way Russia sees the world and not drive the one state essential to the U.S. objective of a peaceful and stable 21<sup>st</sup> Century into a corner.

But beyond the essential task of improving the U.S.-Russia relationship what measures should be pursued to restore the NPT to real viability? The United States now has a new Administration committed to negotiated international security arrangements in the nuclear weapon field. For example, the President, the Secretary of State and the Secretary of Defense are all on record as favoring U.S. ratification of the CTBT. In addition, for the first time senior national security statesmen are advocating the complete world-wide elimination of nuclear weapons. The idea of serious movement toward the elimination of nuclear weapons was eloquently advanced by former Secretaries of State George Schultz and Henry Kissinger, former Secretary of Defense Bill Perry and former Chairman of the Senate Armed Services Committee Sam Nunn in their two op-ed articles in the Wall Street Journal in 2007 and 2008, as well as other supporters of the so-called Hoover Institution Process. The two articles evoke President Reagan's view that nuclear weapons are possibly destructive of life on earth and must be abandoned, and note that this objective is even more important in a world where nuclear deterrence no longer works and in which international terrorism and rogue states pursuing nuclear weapons are real threats.

The new Administration is moving forward with vigor to seek a better relationship with the Russian Federation. Also, the Administration is committed to attempting to achieve a new strategic arms treaty to replace the START I Treaty which expires by its terms- unless renewed- by December of this year. The recent conversation between Secretary Clinton and Foreign Minister Lavrov is very encouraging. There likely will be an objective of lowering the level of strategic nuclear weapons to 1000 and perhaps also a restructuring of the START Treaty; for example by changing the counting rules. This is a highly important goal, but the number 1000 will still be sizable. Such a numerical level certainly would not imply that nuclear weapons will no longer have a significant role in the security policies of the United States and Russia-which is

what is necessary to really help the NPT. Once this new Treaty is concluded, hopefully this year, there should be a prompt effort to engage the other three NPT nuclear weapon states; the United Kingdom, France and China and over time to bring the nuclear weapon levels of the five to a number in the range of 300 each for the United States and Russia and something less than 100 each for the United Kingdom, France and China. Such a result would make it clear that nuclear weapons have been devalued as contemplated by the NPT, thereby significantly strengthening the Treaty regime and beginning to move the world community toward ultimate nuclear weapon elimination. It is of course recognized that this would take a long time and also would require that the three longtime non NPT states, India, Pakistan and Israel, be brought into the negotiations and their agreement to very low numbers of nuclear weapons achieved.

However, the United States has it within its power to take a long step toward returning the NPT to viability in the nearer future. If the United States could ratify the CTBT, the most important disarmament obligation of the nuclear weapon states by far, which has languished in the hands of the Senate for over a decade, this would open the door to its subsequent entry into force and reinvigorate the NPT community. This should be the highest priority of U.S. nuclear policy this year, on this may hang the future viability of the most important international security treaty on the books. A first stage 1000 nuclear weapon level replacement treaty for START will help the NPT, but the second stage is likely years away. Senate consent to CTBT ratification can be achieved this year and ratification by the remaining necessary states permitting CTBT entry into force, in the wake of the U.S. ratification, with some vigorous diplomacy added, perhaps would not take too long. A possible exception would be North Korea but surely creative diplomacy could resolve this issue. Unfortunately, the new Administration may be reluctant to even proceed to hearings on the CTBT until “we know we can win,” in view of the defeat in 1999. But that is something that is usually not knowable, the case will be made in the hearings and the vote taken when the Senate is ready.

Overwhelming the best course is to seek ratification of the CTBT, and to seek it this year before the 2010 elections are too close to have a chance to gain the requisite Republican votes. And while the U.S. National Laboratories likely will have objections as in the past, after 10 years the answers to those objections are available. CTBT ratification is very broadly supported by the international community. Over the past six years in the annual votes at the United Nations in

favor of world-wide CTBT entry into force, member states have cast 1045 votes in favor of the CTBT and eight against. Of the eight against, six were cast by the United States, one by the tiny Pacific island state of Palau and one by North Korea. That is not a place we should want to remain.

But what are the chances of it or any major nuclear initiative succeeding during this time of economic crisis? In being honest one has to admit not good. Economic policy, because the stakes are so high, and because it will be so difficult to return our country to prosperity after all the damage that has been done, is likely to take all the oxygen out of everything else. However, it is possible for this Administration to do more than one thing at once; it is capable of doing economic policy, strengthening the environment, seeking a national health care system, and addressing the security challenges in Afghanistan/Pakistan and elsewhere as well as pursuing a START Treaty and pressing for CTBT ratification all in the same time frame. We have a big government. Indeed it must do these things. History will not stand still for us in certain areas while we address others. And in any case many of these issues are fundamentally related.

To remain credible as strongly supporting the NPT in its entirety, not just one side of the basic bargain, it is most important that the United States at a minimum take the first steps toward CTBT ratification before the NPT Review Conference next spring. This Administration should not want to take a chance on “losing” the NPT, and there is a lot of water under the bridge already. The CTBT is the “litmus test” for the NPT non nuclear weapon states. Hearings should be scheduled this summer so that the powerful case for the CTBT can be made.

No international security treaty exists or is ever likely to exist that is as important to our security as the NPT. The CTBT is essential to its long term viability. Both a new START Treaty and CTBT ratification must be promptly and urgently pursued in the interest of peace and security in the 21<sup>st</sup> century.