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## The U.S. Without Nuclear Weapons

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Nuclear Weapons-- The Greatest Peril to Civilization

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The United States was of course the first to acquire nuclear weapons and the only state thus far to use nuclear weapons in warfare. I have worked with nuclear weapons since 1950 and contributed substantially to the development of the hydrogen bomb and to nuclear weapons technology in general. I have also contributed to arms control and the Comprehensive Test Ban Treaty, as well as to means of verifying arms control agreements.

I believe that the spread of nuclear weapons in the world, particularly to non-state actors), is exceedingly dangerous for our civilization and that even a single nuclear weapon in a major city such as New York, Washington, or London could cause the demise of an entire country.

Whether or not we are able to get rid of all nuclear weapons in the future 10 or 20 years hence, we will need to take measures to protect societies from collapse from the use of a single or a few terrorist nuclear weapons.

Since 1988, I have advocated essentially instant bilateral and even largely unilateral reductions to a total of about 1000 nuclear warheads, from the 30,000 or more in the U.S. and Soviet armories of that time. We have had substantial reductions, although there is confusion as to the December 31, 2012 level of "operationally deployed strategic warheads" that are to be permitted in the U.S. and Russian armories, before the Moscow Treaty expires. But there are likely to be a total of some 6000 nuclear warheads on each side, and no constraint after that.

My observation is that states with nuclear weapons care more about preserving their nuclear weapons than they do about keeping other states from acquiring them, as if their own nuclear weapons would protect them against others. In fact, nuclear weapons do offer some protection by means of deterrence, but it takes technically very few to do that. More common in the United States is the feeling that so long as the United States has far more nuclear weapons than does China or perhaps India or Pakistan or Iran or North Korea, its security is assured. Nothing could be farther from the truth.

The nuclear weapons establishment in the United States naturally wants to keep itself in first-class shape, and wants to make sure that it has excellent staff and proper infrastructure. Over the last few years there have been several attempts to develop new nuclear weapons, primarily, in my opinion, in order to maintain the quality of the staff

and the spirit of the nuclear weapon establishment. The candidate weapons were the robust nuclear earth penetrator-- RNEP-- and more recently there is the reliable replacement warhead-- RRW. The RRW initially emerged around the year 2000 as a simple 5 kt warhead that would replace a 500 kt warhead simply because with the improved delivery accuracy of ICBMs, five-fold smaller miss distance, corresponded to a five-cubed or 125-fold smaller required yield to achieve a given overpressure. But it was not necessary to develop a new warhead, since the thermonuclear weapons obtain most of their yield from their "secondary", and if one fires only the boosted "primary" one has from the existing weapons a yield on the order of 5 kt.

The single RRW has gone by the wayside because the National Nuclear Security Agency-- NNSA-- wants to make at least two-- one to replace the W76 and the other to replace the W88 warhead. Furthermore, the reason for the RRW has essentially vanished, since it has been established that the lifetime of the plutonium primary pits is at least 85 and probably more than 100 years, so one doesn't need to do anything about replacing the pits during the next half-century.

It is clear that the Nonproliferation Regime-- NPR-- is imperiled by the fact that the United States has not ratified the Comprehensive Test Ban Treaty and that it recurrently desires to build new nuclear warheads. If the United States were on a steeply declining glide path to fewer than 100 nuclear weapons, it would make a substantial difference in the urgency and legitimacy of the U.S. demand that other states abandon their own nuclear warheads. And I believe that would improve U.S. security.

Last week on February 13 I helped introduce a new report, "Toward True Security" that prescribes a ten-step plan to begin the process of massive reductions and possibly nuclear disarmament:

1. Declare that the sole purpose of U.S. nuclear weapons is to deter and, if necessary, respond to the use of nuclear weapons by another country.
2. Reject rapid-launch options by changing its deployment practices to allow the launch of nuclear forces in days rather than minutes.
3. Eliminate preset targeting plans, and replace them with the capability to promptly develop a response tailored to the situation if nuclear weapons are used against the United States, its armed forces, or its allies.
4. Promptly and unilaterally reduce the U.S. nuclear arsenal to no more than 1,000 warheads, including deployed and reserve warheads. The United States would declare all warheads above this level to be in excess of its military needs, move them into storage, begin dismantling them in a manner transparent to the international community, and begin disposing-- under international safeguards-- of all plutonium and highly enriched uranium beyond that required to maintain these 1,000 warheads. By making the endpoint of this dismantlement process dependent on Russia's response, the United States would encourage Russia to reciprocate.
5. Halt all programs for developing and deploying new nuclear weapons, including the proposed Reliable Replacement Warhead.

6. Promptly and unilaterally retire all U.S. nonstrategic nuclear weapons, dismantling them in a transparent manner, and take steps to induce Russia to do the same.
7. Announce a U.S. commitment to reducing its number of nuclear weapons further, on a negotiated and verified bilateral or multilateral basis.
8. Commit to not resume nuclear testing, and work with the Senate to ratify the Comprehensive Test Ban Treaty.
9. Halt further deployment of the Ground-Based Missile Defense, and drop any plans for space-based missile defense. The deployment of a U.S. missile defense system that Russia or China believed could intercept a significant portion of its survivable long-range missile forces would be an obstacle to deep nuclear cuts. A U.S. missile defense system could also trigger reactions by these nations that would result in a net decrease in U.S. security.
10. Reaffirm the U.S. commitment to pursue nuclear disarmament, and present a specific plan for moving toward that goal, in recognition of the fact that a universal and verifiable prohibition on nuclear weapons would enhance both national and international security.

Toward True Security,  
[http://www.ucsusa.org/global\\_security/nuclear\\_weapons/trueseconomy.html](http://www.ucsusa.org/global_security/nuclear_weapons/trueseconomy.html), does not describe the conditions that would permit the United States to eliminate its nuclear weapons but it would bring that day closer.

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