

The Future of U.S. Nuclear Weapons Policy

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I'm supposed to talk about nuclear weapons, and about the future of U.S. nuclear-weapons policy. I have to admit that sometimes even I find this subject anachronistic. During the Cold War we worried a lot about nuclear weapons—and right so—but the Cold War has been over for nearly a decade.

There has been tremendous progress in nuclear arms control since the end of the Cold War: the INF Treaty, which was signed in 1987, eliminated an entire class of weapons; START I, which was signed in 1991 and which today is almost fully implemented, reduced strategic arsenals from well over 10,000 to 6,000 “accountable” warheads. The START II Treaty, which was signed in 1993, but has not yet been ratified by Russia, promises to reduce the number of deployed strategic warheads to 3500; in 1997 both sides agreed to negotiate a START III Treaty that would reduce the number to 2000 to 2500, or perhaps less. In addition, in 1991–92 both sides promised to unilaterally reduce tactical nuclear forces and to take bombers off alert, and for the first time in over 30 years the U.S. Looking Glass airborne command post stopped flying its continuous mission. No nuclear weapons are under development; no plutonium or high-enriched uranium is being produced for weapons; and the U.S. is assisting Russia in dismantling its nuclear forces.

In addition: Brazil-Argentina, South Africa (90); Iraq (91); Belarus, Kazakhstan, and Ukraine; North Korea (94); NPT (95); CTB (96); NWFZ in Latin America, South Pacific (86), Southeast Asia (95), Africa (96).

If ten years ago someone had told me that we would accomplish all this in the next decade, I wouldn't have believed it was possible. So there's an understandable temptation to conclude that we're moving rapidly in the right direction, that everything's under control.

Unfortunately, there is still much cause for concern. Nuclear weapons are a real and present danger to the security of the United States and its closest allies—the largest threat, and, in some sense, the only significant threat. Yes, we worry about ethnic conflicts around the world and about regional wars triggered by rogue states, such as Iraq or North Korea; we worry about chemical and biological weapons; we worry about terrorism; and we read that information warfare could destroy our economy. We should worry about these possibilities, but we should also realize

that a single nuclear weapon could destroy a large city and kill a million people; 100 could destroy the US and civilization as we know it.

Even after START II is fully implemented (in 2007!), the U.S. and Russia will each retain about 10,000 warheads, each of which is roughly 10 times more destructive than the bomb that destroyed Hiroshima. Today, each side can launch over 2,000 of these warheads within a few minutes; even after START II is fully implemented, the U.S. will be able to launch 1500. Both sides continue to watch the other, ready to “push the button” if it believes the other side has launched an attack. This high state of readiness is both dangerous and unnecessary—dangerous because it increases the chance of accidental, erroneous, or unauthorized use; unnecessary because the threat of massive, instant attack is not required to deter a deliberate attack, which has become unthinkable in any case.

Because U.S. forces remain at high states of alert, Russian planners must consider the possibility that they could be faced with a massive, rapid U.S. attack. This is particularly worrisome because today Russia has only a handful of missiles that are poised to survive such an attack—perhaps one regiment of mobile missiles out of garrison and one or two submarines at sea. Russia reportedly guards against the possibility of surprise attack by keeping its other nuclear forces—silo-based and in-garrison mobile ICBMs and some pier-side SLBMs—ready to launch on warning of attack. The CIA reportedly believes that the launch codes for submarines at sea have been distributed. Detargeting?

Maintaining nuclear forces on constant alert is difficult and dangerous enough in the best of conditions, with the best systems and the most reliable chain of command, but Russia is in the midst of an extended political and economic crisis that could worsen rapidly. Within the armed services, wages go unpaid for months, morale is low and corruption is widespread, and facility maintenance and personnel training are deferred. On several occasions electrical power has been cut off to strategic nuclear facilities because bills were not paid, and communications have been disrupted because thieves were “mining” cables for valuable metals.

Russia’s attack warning system is seriously fragmented and degraded: only three of its nine modern radars are working at all, seven of the ten older Hen House radars lie outside Russian territory, two of the nine slots in its constellation of early warning satellites are empty, and Russia appears to lack satellite coverage of the ocean areas from which U.S. (or British or French) submarine missiles could be launched. Lack of dual-phenomenology for certain missile corridors. Because Russia knows we know this, they might assume that we would take advantage of it; thus, they’d be especially nervous about any false-alarms in this area.

The dangers of this hair-trigger posture were illustrated when the launch of a harmless Norwegian scientific rocket triggered the first-ever activation of Yeltsin's "nuclear briefcase." Even these famous briefcases are said to be falling into disrepair.

The economic crisis in Russia has also raised the specter that nuclear warheads or nuclear materials might be stolen and sold to rogue nations or terrorists. At some nuclear facilities, guards have left their posts to forage for food. Guards who have not been paid in months are understandably reluctant to man unheated posts in sub-freezing conditions and patrol facility perimeters without winter uniforms. At some facilities, entire security systems have been shut down because the electricity was cut off for non-payment, or because guards were annoyed by frequent false alarms. I have a long list of incidents in which personnel with responsibilities for nuclear weapons have gone on strike, have stolen equipment or nuclear materials. In several cases, desperate or deranged soldiers have shot their comrades or have taken hostages. For example, in one 16-day period in September:

- on 9/5/98, five soldiers from the 12th Main Directorate of the Ministry of Defense (the unit in charge of security for nuclear weapons) killed a guard at Novaya Zemlya (the nuclear test site) and tried to hijack an aircraft;
- on 9/11/98, a 19-year-old sailor went on a rampage in Murmansk, killing 7 sailors with an AK-47 and a chisel aboard a nuclear attack submarine, before barricading himself in the torpedo bay and committing suicide. (Russia says no nuclear weapons on board, but...)
- on 9/20/98, a Ministry of Internal Affairs sergeant at Mayak, where 30 tons of weapons-usable plutonium are stored, shot two comrades and wounded another before escaping.

And this is what we know about! When you set these events in the larger political and economic context, I don't think its an exaggeration to say that the current crisis in Russia could lead to a collapse of the civilian government, leading to a military takeover or anarchy.

In short, ten years after the end of the cold war, there are too many nuclear weapons, too ready for use, and the threat of deliberate attack has been largely superseded by the threat of theft, coup d'état, and accidental, erroneous, or unauthorized use.

This is why I'm concerned about nuclear weapons. But what can we do about these risks?

All we can do is lead by example, and give Russia incentives to do the sorts of things that would improve our safety and security. We can do this through a combination of formal agreements, such as START III, new reciprocal unilateral initiatives, such as the reductions in tactical forces and detargeting, and assistance programs (such as Nunn/Lugar), in which we pay Russia to dismantle its weapons and improve safeguards on nuclear weapons and materials.

Sadly, our ability to lead has been hampered by cold-war thinking about how nuclear weapons serve our interest. I'm afraid that something bad will happen in the next few years, and that we'll look back and lament that we squandered many opportunities over the last decade to reduce nuclear risks. At this point I am tempted to launch into a long discussion of strategy, and how nuclear weapons relate to broad goals of national policy.

In briefest summary, let me just say that it would be much easier to reduce the risks I just mentioned if role of U.S. nuclear weapons should be strictly limited to that of deterring the use of nuclear weapons against the United States and its allies. The United States should promise never to use nuclear weapons first.

As you know, the U.S. continues to reserve the right to use nuclear weapons first. Historically, this was because we believed we needed nuclear weapons to deter conventional attacks against our allies, but this argument has evaporated with breakup of the Warsaw Pact and the Soviet Union. Several of our NATO allies have moved toward NFU, but we continue to oppose it. The latest argument is that we need to use nuclear weapons to deter or respond to the use of chemical or biological weapons. I think this argument is deeply flawed for a variety of military, legal, and political reasons. It also hinders our nonproliferation efforts. After all, if the United States—the greatest military power in the world—has to rely on nuclear weapons to deter or respond to chemical or biological weapons, then wouldn't many other states have even more need of nuclear protection? Moreover, we've pledged, in connection with the renewal of the NPT, never to use or threaten to use nuclear weapons against states that don't have them, and I'm afraid we've already done grave damage to this pledge by suggesting, as Secretary of Defense Perry and others have, that we might launch nuclear strikes in response to a CBW attack.

I'd be happy to elaborate on this more during questions. In any case, it appears that we have squandered an opportunity to reach an understanding on this with Russia, since Russia now believes it needs nuclear weapons to counter the conventional forces of NATO and China.

In addition, it would be easier to reduce nuclear risks if the U.S. abandoned counterforce—the practice of targeting opposing nuclear forces and command and control posts. Counterforce drives up force requirements; it is the main reason why our military believes that it needs to deploy thousands of strategic warheads. Counterforce also drives readiness: a counterforce attack can succeed only if opposing forces can be destroyed before they are used. This, in turn, generates pressures on both sides to launch quickly if they believe they are under attack or might soon be attacked. This pressure is particularly acute in Russia, whose forces are now far more vulnerable than the U.S. As I mentioned earlier, Russia reportedly compensates by keeping its forces in a launch-on-warning mode. This increases the chance that Russian nuclear forces might be launched in response to a false warning, particularly given the degradation in Russian early warning systems and in the training and morale of personnel.

Much more could be said about issues of strategy and targeting doctrine, but I realize, from my experience in the Department of Defense and in connection with the Nuclear Posture Review that it is difficult to change ingrained attitudes, particularly within military organizations. So let me turn to a set of concrete initiatives that would allow us to make progress in reducing nuclear risks in the short term. Most or all of these initiatives are described in the CISAC book (online at <http://www.nap.edu/readingroom/books/fun>) and the Brookings book.

First, we should reduce the size of nuclear arsenals dramatically. During the START II negotiations, Russia argued for a limit of 2000 to 2500 deployed strategic warheads, but the U.S. insisted on 3500—mostly because it believed that it needed that many to implement a counterforce doctrine. (NPR options to eliminate ICBMs.) Today, Russians say that they will be hard-pressed to deploy more than 500 to 1000 strategic warheads, but the U.S. wants the right to deploy 2500 under a START III agreement.

I think we should go as low as Russia is prepared to go. I do not see the need for more than a few hundred nuclear weapons. A single U.S. Trident submarine, armed with 50 or 100 warheads, could destroy any country. At sea, these submarines are invulnerable to attack. A force of, say, ten subs, with two to four at sea at any time, is more than sufficient to deter nuclear attack.

But the START agreements only limit strategic delivery vehicles and deployed strategic weapons. They do nothing to limit nondeployed and nonstrategic warheads. These warheads, which are mostly in storage, create fears of rapid breakout, theft, or unauthorized use. Russia, for example, worries that the U.S. could rapidly replace the warheads that would be removed from Trident and

Minuteman missiles under START II, doubling the size of force in a matter of months. The United States worries about the security of Russian tactical warheads, which apparently are not equipped with sophisticated use-control devices. We also worry about the possibility that tactical warheads might be used by the Russian army.

As a first step, the US and Russia should exchange detailed information about their inventories of nuclear warheads, and the dismantling of warheads and the disposition of the nuclear materials. Today, our estimates of Russian stockpiles are highly uncertain—the CIA has testified publicly that the uncertainty is plus or minus 5,000 warheads. Our estimates of fissile material stockpiles are even more uncertain. Russia tells us that excess warheads are being dismantled and that warheads and materials are safe and secure, but we have very little hard information. A data exchange, followed by inspections to verify its accuracy, would give us the information we need to help Russia improve its security, and confidence that its nuclear arsenal is being reduced irreversibly.

Ultimately, I think we must move to formal a limitation on all nuclear warheads. This will pose verification challenges, but this only emphasizes the importance of beginning the process today. In parallel, we must redouble our efforts to protect fissile materials.

Second, we should move immediately to reduce the readiness of nuclear forces. The current situation, in which both countries stand ready to launch thousands of nuclear weapons in a few minutes, is both unnecessary and dangerous, particularly given the state of Russian nuclear forces and command and control. Deterrence requires only the ability to retaliate, not the ability to retaliate immediately.

Both countries should take their vulnerable forces—their silo-based and in-garrison mobile missiles and pier-side SLBMs—off alert, preferably in ways that can be observed by the other side. Bombers have already been taken off alert. Alert forces—submarines at sea and mobile missiles out of garrison—should be reduced to a minimum. Russia has already done this out of economic necessity; the US should follow suit. As an immediate step, the US should deploy no more than four Trident submarines at sea, on modified alert. Over the longer term, both countries should undertake cooperative measures to assure the other that its forces are not capable of rapid attack. The agreement to exchange launch warning data is a good first step, but more could be done. We could, for example, consider using technical devices to assure each other that ICBMs and SLBMs are not being readied for rapid attack, and we could exchange officers that could observe peacetime nuclear operations and verify that rapid-attack options were not being exercised.

Third, don't deploy limited national ballistic-missile defenses, or advanced theater missile defenses. A more modest version of this might be, don't deploy missile defenses unless Russia and China will go along it, at least implicitly.

Why? Even though the Cold War is over, the logic that underlies the Anti-Ballistic Missile Treaty remains intact. If defenses threaten a country's deterrent capability, that country is likely to take steps to restore the potency of its arsenal. These could include deploying countermeasures, such as decoys, to fool the defense; more missiles or warheads to overwhelm the defense; or to launch its missiles on warning of attack to overwhelm and preempt. In the end, the country who deployed the defensive system could be no more secure than before. In fact, I would argue that it's likely he would be less secure, because an opponent is likely to overestimate the effectiveness of the defensive system while underestimating the effectiveness of his countermeasures to it.

The administration understands this logic. It says that any BMD system would be capable of defending the U.S. against limited attacks from rogue nation, such as North Korea or Iran, but not Russia or China. I doubt that this is possible. First, even the most limited missile defense would, if it worked, render the small Chinese force impotent. China could respond by greatly increasing its force. There is evidence that Chinese strategists are attracted to counterforce doctrines, partly because they would provide more credible options to resist U.S. coercion. With the world's fastest growing economy (in 15 years the world's largest?!), China could afford it. China will be making major decisions about the modernization of its nuclear forces in the next few years. U.S.-Russian arms control developments and U.S. BMD deployments will undoubtedly figure prominently in China's plans.

Russia's missile force is larger, but it would worry about the possibility of a U.S. strike against these forces. The number of missiles that could survive such an attack is much smaller—perhaps two or three dozen. BMD deployments could put even more pressure on Russia to launch its forces on warning of an attack.

Thus, unless they go along with it, Russia and China are likely to respond to BMD by taking compensating actions that would result in a net decrease in our security.

Even so, it might be worth deploying such a system if it could protect us from more worrisome threats. This is highly unlikely. No other country has an ICBM today. Even if a U.S. adversary should acquire ICBMs, they would threaten U.S. security only if they were armed with nuclear or biological warheads. But a country that had such warheads could find cheaper, more reliable, and more effective ways to deliver them than an ICBM—a small airplane, for example, or a

merchant ship or mini sub, or special operations forces. After all, less than 10 percent of drug shipments into this country are intercepted; why should we do better against nuclear weapons. Even the launch of short-range missiles off the deck of a ship would be simpler and more reliable than an ICBM. A NMD system would do nothing to protect us against these possibilities. Even if an ICBM was the delivery system of choice for a biological weapon, the most efficient way to deliver BW would be in hundreds of bomblets.

Finally, we should stop NATO expansion, or announce our honest intention to include Russia in the alliance. If we offer NATO membership to former republics of the Soviet Union, there is every indication that Russia will break off security cooperation with the United States. This not only would end efforts to cooperatively reduce nuclear threats, it would likely respond by increasing its nuclear forces—particularly tactical nuclear forces deployed against NATO. Russia could use its veto in the UN Security Council to block all sorts of actions. The only way to avoid this outcome is to include Russia, but there is no way that other members would go along with this.

So far I've focused on the U.S. and Russia, but I should remind us that the rest of world is watching. Next year there will be a major NPT Review Conference. The main focus of the Conference will be on the extent to which the nuclear weapon states have met their obligations under Article VI of the NPT, which calls for nuclear disarmament. The implementation of START II and the ratification of the CTBT are seen as tests of the commitments we made during the indefinite extension of the NPT. I'm not saying that the NPT will fall apart, or that some country will "go nuclear" if the START II isn't ratified. But I am convinced that the long-term health of the nonproliferation regime, and our ability to build coalitions and marshal world opinion against proliferation, depends on continued progress in reducing the size, readiness, and salience of our nuclear forces.

In conclusion, this is an urgent agenda which has received too little attention. START II remains unratified. For the last four years we have insisted that Russia must ratify START II before we can move ahead. In December it looked as though Russia would finally ratify; then we attacked Iraq and the Duma shelved the Treaty. I haven't given up on START II, and I think there still is some change that it will be ratified. But we need to make progress.

- Begin START III negotiations immediately. Break the agenda into two parts: a quick agreement to lower levels, early deactivation, indefinite duration. On a parallel track, negotiation an exchange of data and transparency measures for nuclear warheads and fissile materials.

- Remove the congressional restriction in the DAA prohibiting reductions before ratification of START II.
- Renounce the “upload hedge” and pledge to dismantle warheads removed under START if Russia promises to do the same.
- Place excess warheads in central storage pending dismantling and invite Russia to reciprocate and monitor the facility.
- Take ICBMs off alert, reduce the alert status of Trident submarines.

I realize that none of this is likely to happen during the next two years. This agenda requires presidential attention and initiative, and Clinton and Yeltsin are politically paralyzed. We probably will have to wait for Presidents Lebed and Bush to sort things out. Let's just hope nothing bad happens in the meantime.