

Keynote

**Nuclear Weapons
and International Order**

The Role of Nuclear Weapons in the 21st Century¹

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Since the catastrophes of Hiroshima and Nagasaki the world has experienced an extraordinary moratorium on the use of nuclear weapons. It is in the interest of every person on the earth that this moratorium be continued until the world is free of nuclear weapons and their use becomes impossible. As the Perry-Schlesinger Commission, on which I had the honor to serve, pointed out, “any future use of nuclear weapons is likely to be the beginning of catastrophic change in the world order. Those nations able to strengthen their nuclear forces, or to start to acquire nuclear weapons on their own, would like do so. Thus, nuclear proliferation would be accelerated, and the 63-year-old dividing line between conventional and nuclear could be erased... Clearly, preserving this tradition of non-use is essential.”

As the Commission also pointed out, states that have nuclear weapons have not found ways to effectively use those weapons for any purpose other than preventing their use by others. Even when it found itself in a war with a non-nuclear state, no nuclear power has been able to use that capability to secure a victory. In fact, to quote the Commission final report again. “In at least four wars a nuclear-armed power accepted defeat or stalemate fighting an enemy that did not have a single nuclear bomb: the Korean war, the U.S. War in Vietnam, the Soviet Union’s war in Afghanistan, and China’s cross-border attack on Vietnam.”

The nuclear weapons states accepted defeat or stalemate rather than use or even threaten to use nuclear weapons not only because they recognized that the world would fundamentally change for the worse if they used nuclear weapons, but also because they could not find an effective way to use nuclear weapons on the battlefield

¹ I draw for this paper on several un-published paper written jointly with Arnold Kanter and Jeffrey Lewis. I am grateful to both of them for many insights and for permission to rely on our joint efforts. Dr. Kanter died in April 2010. I wish to dedicate this paper to his memory and in honor of the many contributions he made to developing a sound nuclear policy for the United States.

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to influence the course of the military conflict. Nuclear weapons, every state which possesses them has come to see, are not really “weapons” and have no value on the battlefield, nor can they be used effectively to deter others.

Moreover, nuclear weapons do not confer the status and prestige that many states think they can gain by developing a nuclear capability. Israel, India, Pakistan and now the DPRK have each learned in turn that nuclear weapons are of little value in dealing with the real security threats that they face and do not give them any real advantage in their dealing with other states.

The actual role of nuclear weapons in the 21st century will likely be no different than it has been for the first 60 years of the nuclear age unless nuclear weapons come into the hands of a terrorist group or an irresponsible government which exploded such a weapon despite the irrationality of the act. Thus, as the American 2010 Nuclear Posture Review (NPR) concluded, our shared objective must be to prevent the further proliferation of nuclear weapons —most immediately to prevent Iran from acquiring nuclear weapons and to persuade the DPRK to give up its small nuclear capacity— and to structure the relationship between the nuclear powers so as to reduce the risk of unintentional or accident nuclear use.

One critical step in this process is for the nuclear powers to adopt a declaratory policy which does not put them in a position where they are likely to create expectations on the part of their potential adversaries or their own military that they are likely to use or threaten to use a nuclear weapon. At the same time the United States, at least, needs to adopt a declaratory policy which reassures those states that depend on the American deterrent without threatening its potential adversaries.

To accomplish these objectives, nuclear weapons states must make it clear that they understand that the sole legitimate and effective role of their nuclear weapons is to prevent their use by others and to be sure that they never need to use them. This requires the nuclear weapons states to refrain from threatening other states with the use of nuclear weapons. To this end, all states that have nuclear weapons, should state definitively that they maintain nuclear weapons solely for the purpose of deterring the use of nuclear weapons by other states. The five permanent members of the UN Security Council —the “nuclear weapons states” under the NPT— should reaffirm the negative and positive security assurances made in connection with the NPT. Specifically they should commit themselves (as the United States did in the NPR) to neither threaten nor use nuclear weapons against any state that is a party in good standing of the NPT. They should also reaffirm their commitment to come to

the assistance of any such state that faces a threat or use of nuclear weapons.

The revised NSA released by the United States in the report on the NPR reads as follows:

“The United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are parties to the Nuclear Nonproliferation Treaty (NPT) and in compliance with their nuclear non-proliferation obligations.”

This preserves the right of belligerent reprisal in the event that a non-nuclear state, such as Iran, was to acquire and use a nuclear weapon. It also highlights the importance the US attaches to the NPT and, as such, will enhance diplomatic leverage in advance of 2010 Review Conference. Finally, it strengthens the incentive, for states to remain or resume their NPT membership in good-standing.

Having made this statement on its own, the United States should seek an agreement among the P5 which combines such assurances from each of them to all states in good standing as members of the NPT with positive security assurances from each state that they will cooperate in the UN Security Council to protect the security of any such state facing a nuclear threat from any source.

US declaratory policy traditionally has focused on the conditions under which a President would use nuclear weapons. This policy has been one of “calculated ambiguity” about the conditions under which they would be employed, i.e. only in response to a nuclear attack or also possibly to retaliate against other WMD attacks or, in the past, massive conventional attacks.

The advantage of “calculated ambiguity,” as the Perry-Schlesinger Strategic Posture Commission noted, is that it “creates uncertainty in the mind of a potential aggressor about just how the United States might respond to an act of aggression, and this ought to reinforce restraint and caution on the part of that potential aggressor.” Although the extent to which calculated ambiguity enhances deterrence is impossible to quantify, it seems likely that it strengthens deterrence of certain non-nuclear threats.

The downside is that appears to expand the utility, and hence the desirability, of nuclear weapons. As such, it could be seen to be directly at odds with President Obama’s commitment to reduce reliance on nuclear weapons, and undermine the credibility of the US non-proliferation efforts as the member states prepare for the NPT Review Conference in May of 2010.

It would be difficult (because of “existential deterrence”), and probably unwise, to try to eliminate the “ambiguity” completely. However, there would be considerable merit to shifting from a declaratory policy that focuses on when the United States would use nuclear weapons, to one that focuses on the purposes for which it has and maintains them. Accordingly, US declaratory policy should be revised to state:

“The United States maintains nuclear weapons only to deter and, if necessary, respond to nuclear attacks against ourselves, our forces, or our friends and allies.”

The President and his advisors should decline to elaborate on the statement's meaning, characterizing it as a statement of fact about why the United States maintains nuclear weapons and refusing to engage in discussions about hypothetical scenarios involving possible use of nuclear weapons.

Such an approach would have three broad advantages:

- Such a declaration is a logical and indeed necessary corollary of the commitment made by President Obama to seek a world without nuclear weapons. Implicit in the statement that the United States seeks such a world is that the United States is prepared to deal with any plausible non-nuclear threats without resort to nuclear weapons.
- The declaration would underscore that any plans for modernizing American nuclear weapons, infrastructure and delivery systems are solely for reasons of safety, security, and reliability, and thus would make clear that the United States is not seeking to develop new weapons for new military purposes such as destroying deep underground facilities.
- By not explicitly forswearing the use of nuclear weapons against unexpected threats, such a declaration preserves “existential deterrence” that is the inescapable consequence of having any nuclear weapons, as well as protecting the right of belligerent reprisal.

The United States needs to be more careful than other nuclear weapons states in making statements about the possible use of nuclear weapons since many non-nuclear states, including Japan, rely on the American nuclear deterrent to persuade other states not to threaten them with nuclear weapons or to use nuclear weapons against them.

In the NPR the Obama Administration stated its position on this matter as follows:

“In the case of countries not covered by this assurance — states that possess nuclear weapons and states not in compliance with their nuclear non-proliferation obligations— there remains a narrow range of contingencies in which U.S. nuclear weapons may still play a role in deterring a conventional or CBW attack against the United States or its allies and partners. The United States is therefore not prepared at the present time to adopt a universal policy that the ‘sole purpose’ of U.S. nuclear weapons is to deter nuclear attack on the United States and our allies and partners, but will work to establish conditions under which such a policy could be safely adopted.”

The NPR went on to say that the United States would consider using nuclear weapons only in extreme circumstances to defend the vital interests of the United States or its allies and partners. This is an important step forward.

In addition to stating clearly that it is ready to use nuclear weapons in response to nuclear threats against states that rely on its nuclear protection, the United States needs to maintain a safe, secure and reliable nuclear deterrent until nuclear weapons can be eliminated.

However, the credibility of this so-called nuclear umbrella depends less on the configuration of the American nuclear arsenal than on the political relation between the United States and the countries relying on its nuclear protection. There should be full and frank discussions between each country relying on American nuclear protection and the United States about the scope of the protection and what needs to be done to keep the nuclear deterrent credible. The United States has conducted such a dialogue with its NATO allies for many years. However, its discussions with other states including Japan were in the past more limited. The Perry-Schlesinger Commission recommended, that the United States should be willing to discuss these issues in the same depth with Japan as it does with NATO countries subject only to the desires of the Japanese government. This was done during the period leading up to the adoption of the NPR.

The American nuclear arsenal needs to be seen as sufficient to credibly deter nuclear threats. In order to effectively assure its allies the United States needs to maintain a nuclear arsenal which is perceived as being equivalent to that of Russia

and to maintain a significant numerical advantage over China. However, credible deterrence does not require specific weapons systems devoted to extended deterrence missions nor the stationing of nuclear weapons outside the territory of the United States. During the cold war period the United States maintained large numbers of nuclear weapons —some of very short range— on the front lines of its defensive positions both in Europe and in Asia. With the collapse of the Soviet Union all of the nuclear weapons were withdrawn from ships at sea (except for the ballistic missile submarines) and from bases in Asia. There were also very substantial reductions in the number of nuclear weapons based in Europe. These moves helped to underscore the American commitment to move toward reduced reliance on nuclear weapons and to meet its commitments under the NPT. There is nothing to suggest that they in any way reduced the credibility of the extended deterrent.

There had been some recent suggestions that the United States needs to redeploy a “tactical” nuclear delivery system such as the TLAM/N (Tomahawk Land Attack Missile/Nuclear) to assure the credibility of the American nuclear umbrella in Asia. There is no evidence to suggest that the nuclear deterrent in Asia has declined since the TLAM/N was removed from operational status and no reason to believe that the American missile and bomber force does not provide a sufficient and effective deterrent. Indeed in early 2010 the new Japanese government made it clear that it is not seeking any such deployment and in the NPR the United States announced that the weapon system was being retired as planned.

In Europe the time has come to begin discussions about removing the last remaining American nuclear weapons from the continent. As a step in that direction and to insure the safety of the weapons in Europe they should be consolidated on one or two American basis. Complete withdrawal should await the forthcoming NATO nuclear review. The NPR left this issue open for discussion and decision during the forthcoming NATO review.

If some critics have worried that the United States was dangerously reducing its reliance on nuclear weapons by phasing out tactical systems others are concerned that the United States needs to demonstrate reduced reliance on nuclear weapons by moving off what they see as an unnecessary hair trigger alert.

During the Cold War, both the United States and the Soviet Union postured a significant number of their strategic nuclear forces so that they could be launched within minutes of a decision to do so. Today, both the US and Russia still maintain significant numbers of weapons on day-to-day alert —and the nuclear “football”

remains the American President's constant companion — even though the risks of a large scale “bolt out of the blue” attack have diminished significantly.

The policy to keep significant nuclear forces on alert is rooted in the decision to maximize deterrence at the expense of some increased risk to nuclear stability — in particular, crisis stability. In the Cold War context, such a choice was entirely defensible. In present circumstances, however, a new balance should be struck between the requirements for deterrence and for stability in determining how American nuclear forces are postured and exercised.

The US instituted elaborate procedures during the Cold War to minimize the risks of an accident, unauthorized use, or miscalculation. Although there were some “close calls,” these measures (obviously) would have to be judged to be highly effective. Today, such risks remain very low, at least for US forces. Given the consequences of any unintended nuclear detonation, however, the United States should reduce these risks to the lowest possible level — consistent with maintaining a credible deterrent in the current geopolitical environment — by revising current guidance and practices.

One has to be less sanguine about the Russian situation. Moscow not only has a much larger fraction of its strategic forces on alert, but has also experienced well-documented problems with both its early warning system and its command and control system. It is clearly in the American interest to address these problems directly, as the Obama Administration seeks to do with the Joint Data Exchange Center.

The way in which the United States postures its forces can also influence Russian decisions. First, the existence of large, alert US forces capable of prompt operations exacerbates Russian fears of a US attack. These fears make Russian leaders reluctant to take steps to enhance nuclear stability if those steps could somehow also increase their vulnerability. Second, even if it is impractical to reach a formal agreement with the Russians on stabilizing measures, it is possible that the Russians would make desirable changes in their posture in response to US actions. In any case, in a crisis the US President will be better positioned to manage instability arising from Russian time pressures if he himself is not under similar duress.

Arbitrary measures to reduce the readiness of the US strategic forces are not the best way to rebalance US strategic forces more in the direction of stability. Indeed, in some cases, such measures could exacerbate tensions if the US began to raise the alert status during a crisis. Instead, the American President should provide guidance

to the military about the sort of options he wants and, to the extent possible, convey to the Russian leadership his interest in providing both sides with more decision-making time in a crisis.

During the Cold War, the United States sought to increase the President's flexibility for nuclear use by expanding the number of pre-planned options that could be executed under crushing time pressures. All of these options, however, utilized forces that were on day-to-day alert for prompt launch, and therefore as a practical matter, created enormous time pressures on the President to launch a retaliatory attack. The President faces pretty much the same situation today.

In today's geopolitical environment, however, giving the President the flexibility to respond in the time and manner of his choosing means designing and exercising attack plans that minimize the need to make such life-and-death decisions under extreme time pressure, and that can be tailored to the specifics of a situation. Specifically, the President should issue guidance that:

- To maximize strategic and crisis stability, he intends to take whatever time is required to confirm the fact, size, and origins of any attack before authorizing the launch of nuclear weapons.
- In addition to a broad range of effective options premised on US nuclear forces being withheld for days or more before they are launched, he will want the ability to task the military to generate tailored options in response to the specific situation.
- US nuclear forces be deployed and exercised on the assumption that he will order the use of nuclear weapons only hours or even days after confirmation of a nuclear attack by an adversary.

The President should take a further step and explicitly withdraw the current requirement to provide one or more pre-planned options for "prompt retaliation." Such a directive could be politically controversial on grounds ranging from tying the hands of the President in the event of a nuclear crisis to increasing the effectiveness of a nuclear attack on the United States. On the other hand, it would send a powerful signal of the President's determination to drive down the risks that nuclear weapons would ever be used, and help him convince the Russians that they can and should follow the American example in order to serve the strong shared interest in avoiding miscalculations or accidents that lead to a nuclear exchange.

The proposed changes in guidance also could produce other important benefits.

For example, directing that US nuclear forces be deployed and exercised on the assumption that the President would order the use of nuclear weapons only hours or even days after a nuclear attack could reduce or even eliminate the need for the President to have to choose from among pre-planned options by giving STRATCOM the time to tailor his response to the precise objectives the President specifies. It also would relax some of the operational constraints under which American nuclear forces now operate, such as increasing the period during which US ballistic missile submarines can operate on “modified alert,” allowing them to train for other missions, but still permitting to launch within a few hours. With no requirement for prompt retaliation, the Navy might also consider further changes to how it communicates with its submarines, consistent with relaxed requirements about the promptness of retaliation.

The Obama Administration has already taken steps to reassure Russia, including renewing the commitment to a Joint Data Exchange Center that would share early warning information. Building on these steps, the Administration should convey to the Russian leadership the overall impact of the President’s revised guidance and propose Russia make similar or complementary changes in the Russian strategic posture. The United States and Russia could also consider supplementary confidence building-measures relating to US and Russian SSBN —and for Russia, mobile ICBM— operations. The NPR directed further studies of these issues during which the issues raised above should be considered.

To honor the commitment not to seek to make any gain from the possession of nuclear weapons other than to deter their use by others, Russia and the United States, which between them possess a very large percentage of the world’s nuclear weapons, must also re-establish a structure of binding and verifiable agreements limiting their deployed strategic weapons and delivery systems. They have now negotiated such a treaty and the hope is that it will be ratified by both governments and enter into force before the end of 2010. Following the advise of the Perry-Schlesinger Commission, the Treaty makes only relatively modest reductions in both deployed weapons and delivery systems while re-establishing the structure of binding limitations and verification. In light of the Obama Administrations commitment to modernizing the American nuclear weapons complex, the Senate of the United States can be expected to consent to ratification of the new treaty with an overwhelming vote.

Further reductions will be much more difficult to negotiate since the United States will want to include tactical nuclear weapons as well as non-deployed weapons

and the Russians will seek assurances about ballistic missile defenses.

At the same time as it continues bilateral negotiations with Russia, the United States should begin discussions with all the other states with nuclear weapons. As a first step they should agree to reveal the size of their arsenal and pledge not to increase the overall size of their stockpile or the number, if any, of deployed weapons.

As the reductions negotiated between Russia and the United States begin to move towards the levels of other nuclear weapons states, these states must also agree to reduce their arsenals in a transparent manner.

The United States also needs to move towards ratification of the CTBT as quickly as possible. President Obama has taken the critical first step by announcing his support for the treaty and his determination to secure Senate approval for ratification. Given the need to secure 67 votes in the Senate in the face of continuing opposition by many to the treaty, the Obama Administration will need to engage in an all out effort to explain the advantages of the treaty in light of the American decision, reaffirmed in the NPR, not to resume testing in any foreseeable future. To assist in that effort, the Obama Administration should seek a pair of supplementary understandings or agreements, one with the P-5 and one just with Russia, to address certain objections to the treaty. Given the time that likely will be required to secure agreement, the other P5 parties should be engaged now, even if the CTBT is unlikely to be submitted to the Senate for some time. That the USG is taking visible steps towards ratification of the CTBT will help ensure a successful NPT review conference even if ratification prior to the conference is not possible.

Skeptics and opponents of the treaty, including some members of the Perry-Schlesinger Commission, have expressed several reservations about the CTBT, including the following:

- The treaty is unverifiable. Some opponents claim that Russia can conduct militarily significant tests with yields of up to a few tens of tons, and perhaps an order of magnitude larger, if they employ sophisticated techniques to “decouple” the explosions.
- The United States and Russia (and perhaps other nuclear powers) have different interpretations of the treaty's central obligation to prohibit all nuclear explosions. In particular, Russia believes that hydro-nuclear tests are permitted.
- Because Egypt, India, Israel, Pakistan and North Korea —among others— must ratify the treaty to bring it into force, it will be a very long time before

there is a truly comprehensive ban on nuclear testing. Meanwhile, the US would be all but prohibited from resuming testing, even if becomes necessary to do so.

Although these objections are not compelling reasons to reject the treaty, others see them as such. In particular, there are some Senators who have expressed similar objections in the past, but who now may be persuaded to vote for the treaty if their stated concerns are addressed. The Obama Administration may want to look for ways to do so in hopes of garnering their support for ratification.

The United States should seek two agreements —one among the P-5 and the other with Russia— that would help persuade American opponents of the treaty that the Obama Administration had overcome the shortcomings that prevented the treaty from being ratified in 1999. These agreements could be in the form of Joint Understandings which would not require Congressional approval, or they might be more formal agreements which would need to be submitted to the Congress.

In particular, this exercise that would serve three functions:

- To definitively establish, at least among the P-5, that the treaty permits sub-critical tests (which produce no nuclear yield), but prohibits hydro-nuclear tests (which do produce a nuclear yield);
- To provide additional measures to improve verification of sub-critical nuclear experiments (which are difficult to distinguish from prohibited hydro-nuclear experiments); and
- To provide for the treaty's provisional entry into force among the P5 and other willing states, pending ratification by the "hard cases" —Egypt, India, Iran, Israel, North Korea and Pakistan. There would also be a commitment among the P5 to work together to secure ratification by these other states.

The first and third functions can and should be included in the P-5 agreement. Addressing the verification concerns is more complicated. There are obvious virtues to including supplementary verification measures in the P-5 agreement, including the fact that a single agreement would be easier to explain and perhaps easier to get the Senate to approve if such approval were sought. Moreover, CTBT opponents might seize on the principal reason not to include additional verification measures in the P-5 agreement — that China is unlikely to accept additional test site transparency outside of the treaty— to raise new questions about whether the treaty can be

adequately verified.

On balance, however, a better tactic would be to negotiate supplementary verification measures in a separate bilateral agreement between the US and Russia. First, it is Russia, and the prospect of Russian cheating, that is at the heart of expressed concerns about verification. Addressing these Russia-centered concerns is necessary and may be sufficient to win over skeptics concerned with what they regard as shortcomings in the Treaty's verification provisions. Second, it is likely to be easier to negotiate a bilateral agreement than a P-5 agreement that included the same measures. Russian officials have indicated that they would be open to an agreement on additional test site transparency measures.

As it moves towards bringing the CTBT into force the United States should work with other states to begin serious negotiations of a fissionable material production cutoff. Taken together the measures outlined in this paper would meet the obligations of the United States and the other nuclear weapons states to reduce their reliance on nuclear weapons, while permitting the United States to meet its obligations to provide nuclear protection for other nations as we seek to find ways to move toward a world without nuclear weapons.