



## Board of Sponsors

(Partial List)

- \* Peter Agre
- \* Sidney Altman
- \* Philip W. Anderson
- \* Kenneth J. Arrow
- \* David Baltimore
- \* Paul Berg
- \* J. Michael Bishop
- \* Gunther Blobel
- \* Nicolaas Bloembergen
- \* Paul Boyer
- \* Michael S. Brown
- \* Linda B. Buck
- \* Ann Pitts Carter
- \* Martin Chalfie
- \* Stanley Cohen
- \* Leon N. Cooper
- \* E. J. Corey
- \* James Cronin
- \* Johann Deisenhofer
- \* Sidney Drell
- \* Ann Druyan
- \* Paul R. Ehrlich
- \* George Field
- \* Val L. Fitch
- \* Jerome I. Friedman
- \* Riccardo Giacconi
- \* Walter Gilbert
- \* Alfred G. Gilman
- \* Sheldon L. Glashow
- \* Roy J. Glauber
- \* Marvin L. Goldberger
- \* Joseph L. Goldstein
- \* David J. Gross
- \* Roger C. L. Guillemin
- \* Leland H. Hartwell
- \* Dudley R. Herschbach
- \* Roald Hoffmann
- \* John P. Holdren
- \* H. Robert Horvitz
- \* David H. Hubel
- \* Eric R. Kandel
- \* Jerome Karle
- \* Wolfgang Ketterle
- \* Brian Kobilka
- \* Leon Lederman
- \* Robert J. LeKowitz
- \* Roderick MacKinnon
- \* Eric S. Maskin
- \* Jessica T. Mathews
- \* Roy Menninger
- \* Matthew S. Meselson
- \* Richard A. Meserve
- \* Mario Molina
- \* Stephen S. Morse
- \* Ferid Murad
- \* Franklin A. Neva
- \* Ei-ichi Negishi
- \* Douglas D. Osheroff
- \* Arno A. Penzias
- \* Martin L. Perl
- \* David Politzer
- \* George Rathjens
- \* Burton Richter
- \* Richard J. Roberts
- \* Andrew Sessler
- \* Phillip A. Sharp
- \* K. Barry Sharpless
- \* Stanley K. Shinbaum
- \* Robert M. Solow
- \* Jack Steinberger
- \* Thomas A. Steitz
- \* Joseph Stiglitz
- \* Daniel Tsui
- \* Charles H. Townes
- \* Harold E. Varmus
- \* Frank von Hippel
- \* Robert A. Weinberg
- \* Steven Weinberg
- \* Torsten N. Wiesel
- \* Eric Wieschaus
- \* Frank Wilczek
- \* Ahmed Zewail

\* Nobel Laureate

## Deterrence and Assurance: Reassessing the Nuclear Posture

Speech by Hans M. Kristensen  
Director, Nuclear Information Project  
Federation of American Scientists  
To the Deterrence and Assurance Working Group  
USAF Global Strike Command  
Barksdale Air Force Base, Louisiana  
May 7, 2013

Let me begin by thanking General Kowalski for the invitation to come down here to Barksdale Air Force Base and address the Deterrence and Assurance Working Group.

I would be dishonest if I didn't admit that for someone working in the NGO nuclear arms control community standing here today is somewhat akin to being in the lion's den.

Be that as it may, few in my community discuss deterrence and assurance directly with the military community, which I believe is a significant problem for the public debate because it leaves an enormous gap in perceptions about the issues.

And I also understand that deterrence and assurance is not just – or even predominantly – about nuclear forces, but I have to limit my talk so the nuclear issue is what I will focus on today. And let me emphasize from the start: I do not have clearance. So this is an unclassified observer looking in from the outside.

In the public debate we assess nuclear force levels based on a very simple equation of how much terrible damage ought to be enough to deter anyone.

In the nuclear planning community the first issue is of course also deterrence, but it is as much about assessing what kinds of forces and scenarios are needed if and when deterrence fails.

This perception gap means that we – the arms control community on one side and the military on the other side – essentially talk about two different things.

Right now the public debate is very much dominated by the issue of costs. How much can we afford and for what purpose and how much and of what kind do we need to have sufficient deterrence and assurance?

Most people in my world feel that the nuclear posture is still far too dominated by Cold War thinking and out of sync with the world we live in today or can see on the horizon. I am not of the opinion that one can just do away with nuclear weapons in a heartbeat but I believe there are possibilities for significant

responsible reductions that still leave more than enough for deterrence and assurance to work.

How much depends on the role and tasks the president assigns to the nuclear force. That can change. It has changed. And it will continue to change. Anyone can see that nuclear weapons states and allies have very different perceptions about how many and what types of nuclear weapons it takes to deter and assure sufficiently.

If you ask Russia and the United States, the answer is that several thousand nuclear warheads are needed for immediate tasks, technical hedge, and reconstitution in case of geopolitical surprises. But if you ask China, Britain and France the answer is a few hundred. In India, Pakistan and Israel the number required for national security is even lower.

Similarly, Russia and the United States also insist that a Quadrad (that is a Triad of strategic launchers plus non-strategic nuclear forces) is needed, each leg with unique attributes to provide sufficient flexibility and options for deterrence and assurance to work and the national leadership to have enough different options in a crisis. China, India, Pakistan and possibly Israel are also trying to build Triads, but theirs are much smaller and less capable. France used to have a Triad, but gave up its land-based missiles in the 1990s and now says that a Dyad is sufficient for its national security needs. Britain has gone even further to a Monad with a single weapon system and is even debating whether it needs that anymore.

Russia and the United States also say that deterrence and national security require that more than 1,500 of their warheads are deployed on launchers, and that several hundred of those warheads must be on high alert 24/7/365 and ready to launch in a few minutes. Britain and France say they can do with much lower readiness levels, while China, India, Pakistan and Israel don't see a need to have warheads deployed on launchers or on alert at all.

In 2009, a newly elected President Barack Obama reenergized the international arms control community with a speech in Prague that committed the United States to "take concrete steps towards a world without nuclear weapons" and "reduce the role of nuclear weapons in our national security strategy" to "put an end to Cold War thinking."

The speech scared the heck out of the nuclear community and had it not been for the Minot incident just two years earlier and the subsequent effort to reinvigorate the Air Force nuclear mission, the air-delivered nuclear posture both here in the United States and in Europe might have looked very different today.

The ultimate goal of eliminating nuclear weapons is not new but has been U.S. policy since the 1960s, regardless of whether the administration at the time was Republican or Democratic or whether they were increasing or decreasing the nuclear arsenal. But the pledge to "put an end to Cold War thinking" seemed new. Unfortunately, the president did not explain what he meant by that other than to "reduce the role of nuclear weapons in our national security strategy."

That role or prominence has of course already decreased significantly since the Cold War as missions and tasks fell away with the collapse of the Warsaw Pact, the demise of the Soviet Union, and improvements in conventional capabilities. The Quadrennial Defense Review (NPR), Ballistic Missile Defense Review and Nuclear Posture Review all hinted of further reductions in

the role of nuclear weapons, but this appeared to depend on further improvements in non-nuclear capabilities.

Because of this change, the 2010 Nuclear Posture Review (NPR) determined that the United States “is now prepared to strengthen its long-standing ‘negative security assurance’ by declaring that the United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the Nuclear Non-Proliferation Treaty (NPT) and in compliance with their nuclear non-proliferation obligations.”

Previously, this long-standing policy depended on whether a non-nuclear adversary was in an alliance with a nuclear weapon state, but by issuing the new “strengthened assurance,” the NPR stated, “the United States affirms that any state eligible for the assurance that uses chemical or biological weapons against the United States or its allies and partners would face the prospect of a devastating *conventional* military response...” (Emphasis added).

This language has been widely used by officials and interpreted by analysts and journalists as the NPR reducing the role of nuclear weapons against non-nuclear attacks. President Obama has even stated publicly that he has reduced the role. “As President, I changed our nuclear posture to reduce the number and role of nuclear weapons in our national security strategy,” he said in a speech at Hankuk University in South Korea last year. “We’ve narrowed the range of contingencies under which we would ever use or threaten to use nuclear weapons.”

The year before that, National Security Advisor Thomas Donilon declared that the NPR had created a “new doctrine” that “reduces the role of nuclear weapons in our overall defense posture by declaring that the *fundamental role* of U.S. nuclear forces is to deter nuclear attacks” (emphasis added) as opposed to deterring conventional, chemical and biological attacks.

But it is not clear to me how and to what extent a reduction in the role has happened because of the NPR. When has the “fundamental role” of U.S. nuclear weapons not been to deter nuclear attack? Moreover, the reduction in the role that has taken place appears to have occurred well before the NPR following the elimination of the Soviet and Warsaw Pact conventional threat to Europe and subsequent improvements in U.S. and allied conventional capabilities and counter-weapons of mass destruction capabilities. Even the “strengthened assurance” comes with a huge exemption. According to the NPR:

“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...” (Emphasis added).

Neither the public, allies, friends nor adversaries know much about U.S. nuclear war planning, except that the current strategic nuclear war plan is called OPLAN 8010-12 Strategic Deterrence and Force Employment, and that it is a “family” of plans with a myriad of options directed against half a dozen potential adversaries. But since all of these adversaries are exempt from the “strengthened assurance,” it is hard to see how the NPR has reduced the role of nuclear weapons.

In fact, according to one former White House official, the strengthened negative security assurances were “deliberately crafted to exclude countries like North Korea and Iran which threaten our allies – or countries that depend on us – with a range of potential nuclear, biological, chemical and conventional threats.”

Of course, President Obama also said in Prague that as long as nuclear weapons exist the United States will retain a safe, secure and effective nuclear arsenal. He also acknowledged that nuclear disarmament might not happen in his lifetime.

Not surprisingly, everyone has been cherry picking his or her favorite bit of the speech. The arms control community and State Department focus on the bit about reducing the numbers and role of nuclear weapons, the military focuses on the bit about maintaining and modernizing the nuclear arsenal, while conservative lawmakers have been focusing on preventing further reductions.

And in return for a yes vote on the New START Treaty, the administration agreed to significant nuclear modernizations – by some accounts \$214 billion – over the next decade. In fact, it has been amazing to see the Obama administration securing more funding for nuclear modernization than the Bush administration was able to do. As a former administrator of the National Nuclear Security Administration commented a couple of years ago: “I would have killed for such a budget.”

The twin-commitments to reductions and elimination on the one hand and sustainment and modernization on the other hand have created a somewhat schizophrenic nuclear policy where it can be hard to see what the focus is.

Whether one likes it or not, however, the pledge to reduce the role of nuclear weapons is now a central element of U.S. nuclear policy and to the international community’s perception of what it is.

So it is very important for deterrence, assurance, as well as non-proliferation goals that the role – reduced or not – is not blurred or spun too much. It has to be real and genuine. There are two regions where this is particularly important.

One is the Korean Peninsula where the interaction between deterrence and assurance is particularly striking. The United States has for many decades sought to deter North Korea and assure South Korea, but with North Korea’s nuclear tests the mission has recently taken on new importance.

But with nearly 30,000 U.S. troops deployed in South Korea, large-scale joint exercises, bombers rotating through Guam, eight ballistic missile submarines patrolling in the Pacific with hundreds of nuclear warheads, annual joint U.S.-South Korean statements reaffirming the nuclear umbrella, and significant U.S. and South Korean conventional force modernization over the past two decades, how does one deter the North more or better? And if all of that does not assure the South, what will?

Yet when North Korea earlier this year set off a third nuclear test, launched a missile in defiance of the international community, and issued direct nuclear threats against the United States, all of

the above capabilities, operations and statements didn't seem to matter very much. So B-2 and B-52 bombers were deployed as well to demonstrate extra deterrence and assurance. But how do we know that they made any difference in Pyongyang or in Seoul? What we could see, however, was that they played directly into the North Korean brinkmanship by being used to justify the next outrageous threat. I think what worried me the most was how willing each side was to walk up the escalation ladder until someone finally said: "hold on a minute."

But now we're committed. So next time North Korea does something stupid and we *do not* send the bombers, then what are we signaling? And if sending bombers only makes North Korea ramp up its threats even more, will we then have to re-deploy non-strategic nuclear weapons to South Korea to be taken seriously?

In Europe the situation is very different. There is little need for nuclear deterrence but plenty of people who say they need assurance. After two decades of unilateral reductions of U.S. non-strategic nuclear weapons in Europe and NATO saying Russia is not an adversary and the remaining weapons are not aimed at anyone, the 2010 Strategic Concept and 2012 Deterrence and Defense Posture Review concluded that the weapons in Europe should not be reduced more unless Russia was willing to reduce its inventory of non-strategic nuclear weapons.

Yet Russia is not a military threat to NATO and does not have the conventional capability to conduct a large-scale attack. So it is using non-strategic nuclear weapons to compensate for the much more advanced conventional forces of the United States and NATO.

Nor are the national security concerns of Eastern European countries and their need for assurance about Russian non-strategic nuclear weapons. They are about border security, organized crime, minority issues, and a general and understandable uneasiness about Russia after years of being occupied by the Soviet Union. Indeed, if Russia eliminated all of its non-strategic nuclear weapons tomorrow, the Eastern European NATO countries would probably have exactly the same security concerns that they say they have today.

So in Europe the challenge is how to transition the alliance out of the remnants of the Cold War posture of forward-deployed non-strategic nuclear weapons to something that better captures the essence of Europe's security situation today and better expresses the direction NATO wants to take in the future. Right now the Alliance seems stuck in the mud. Indeed, non-strategic nuclear weapons deployed in Europe are probably the least credible form of assurance because they are the least likely to ever be used or needed for the security concerns that face Europe today or in the foreseeable future.

So in conclusion I want to say that there are obvious deterrence and assurance challenges but I believe that they are predominantly about non-nuclear capabilities. The nuclear mission is in the background and it can be reduced further. And I am pleased to see that despite a recent tendency to take advantage of Congressional opposition to further nuclear reductions and instead modernize the entire legacy Cold War posture, the military community is spending more time thinking and planning about non-nuclear missions in support of deterrence and assurance.

Although there are nuclear challenges and any nuclear use would be horrific, I think the current scaled-down Cold War nuclear posture is above and beyond what it needed for sufficient deterrence and assurance. In a report to Congress in May last year, the Office of the Secretary of

Defense – in a coordinated assessment with the Intelligence Community – expressed an extraordinary confidence in the nuclear posture even against the most severe of all potential nuclear threats.

It concluded that even if Russia conducted a disarming first strike, *even significantly above the New START Treaty limits*, it “would have *little to no effects* on the U.S. assured second-strike capabilities that underwrite our strategic deterrence posture” (emphasis added). Moreover, the DOD report stated, the “Russian Federation...would not be able to achieve a militarily significant advantage *by any plausible expansion of its strategic nuclear forces, even in a cheating or breakout scenario under the New START Treaty*, primarily because of the inherent survivability of the planned U.S. Strategic force structure, particularly the OHIO-class ballistic missile submarines, a number of which are at sea at any given time.”

I want to end with this statement because when we in the public debate read such an official assessment, we find it hard to understand why it is necessary to retain the large nuclear force structure and alert posture that we have today – not least in the current fiscal environment. Despite the challenges with Russia, it would be helpful to reduce the asymmetry in strategic nuclear forces to help remove some of the drivers for worst-case planning and improve the incentives to reduce overall force levels.

The Pentagon and the White House already have decided that it is possible to meet deterrence and assurance requirements with fewer nuclear weapons than we have today. And the administration’s long-overdue NPR Implementation Review might reduce the targeting and alert requirements. So the nuclear force level is not going to go up or stay the same but it will decline further in the future. The challenge for Air Force Global Strike Command therefore is not how to fight reductions but how to sustain sufficient deterrence and assurance at lower levels.

Let me end here and open up for any questions you might have. Thank you.