

051618 Air Force Association, National Defense Industrial Association and Reserve Officers Association Capitol Hill Seminar with Brad Roberts, Director of the Lawrence Livermore Laboratory's Center for Global Security Research, on "Proliferation, Deterrence and Strategic Decisions" (For additional information on AFA/NDIA/ROA seminars contact Peter Huessy at phuessy@afa.org).

MR. PETER HUESSY: Good afternoon, everybody. I'm Peter Huessy and on behalf of the Mitchell Institute for Aerospace Studies, we are really delighted to have a friend of ours, Brad Roberts, who is the Director of the Center for Global Security Research at Lawrence Livermore. For four years, between 2009 and 2013, he was Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy. As you know, he served as the Policy Director for the Obama administration's Nuclear Posture Review and Ballistic Missile Defense Review.

From September of 2013 through December 2014, he was a consulting professor and fellow at the Center for International Security and Cooperation at Stanford University. Prior to joining the Obama administration he was a member of the research staff of IDA, the Institute for Defense Analysis, and an adjunct professor at George Washington University.

For those of you here, our schedule on the 22nd of May we have our Reagan Legacy Project seminar at the Heritage Foundation from 10 to 12 in the morning with Keith Payne and Frank Miller, Ty McCoy, the former assistant secretary of the Air Force, Sven Kraemer, who served seven presidents on the National Security Council, and Susan Koch, who is going to talk about the arms control aspects of Reagan's revolution, nuclear deterrence and arms control policy. And then I'm also going to be speaking at 10 to 12 at the Heritage Foundation as part of our Legacy Project. On the 22nd we are also having Rebecca Heinrich and Matthew Kroenig, who are going to be speaking about extended deterrence, missile defense and nuclear deterrence in Europe.

Brad, as you know, is the infamous author of the idea of "escalate to de-escalate." A number of people have said that's not really what the Russians believe, maybe they did but they don't any longer. But what's interesting is General Hyten has made a point that if we go back to April 2000, that's when Vladimir Putin announced the policy. He then says they exercise according to that policy, and then they build weapons that they exercise with to implement that policy.

So this was the centerpiece of most of the debates in the House Armed Services Committee about the low yield nuclear deterrent, which is being proposed in the NPR for both the D5 and an alternative cruise missile as well, aimed at deterring Russian use of nuclear weapons in a conventional conflict, particularly in the European or even in the Asian theater. So with that, Brad, on behalf of my boss, General Deptula, and Larry Farrell of the Air Force Association, and the Mitchell Institute respectively, I want to thank you for coming here today and speaking with us about this subject. Would you

give a warm welcome please to Dr. Brad Roberts?

(Applause).

MR. BRAD ROBERTS: Thank you, Peter. Thanks to all of you for finding time for this topic and discussion. Thank you for buying my book, I see it on the table there. It's kind of you.

I'm going to take the topic that Peter introduced and try and put it into a much larger context to try and make sense of it. When you got the notice for the meeting you saw "Proliferation, Deterrence and Strategic Decisions," and probably scratched your head, exactly the way I did last week when I got out my notes and said, what did I sign up for exactly? My first reaction was this is sort of like the moment in the oral Ph.D. exam 25 or so years ago when the first interrogator asked a question completely out of left field, that was either intended to really pin me down on something very precise, or see if I could find the middle of a very broad target. Well, I've tried to find the middle of a very broad target here.

I do want to be clear the views I'm expressing are my own and not those of Lawrence Livermore National Laboratory or any other organization. What I'd like to do in about 30 minutes is set out three main arguments, and then we can take the conversation in any direction you'd like to go.

The first is that we're entering what I think of as the third chapter in American strategic policy. The first chapter easily seemed to be the Cold War chapter, bipolar, all nuclear, the nuclear problem became the problem, Armageddon, because there was no escape from MAD. It was fairly messy at the time, but in retrospect a somewhat straightforward set of strategic decisions by the United States and our main adversary and our allies, in a chapter that came to a sudden and dramatic close.

It has been difficult to see the contours of the second chapter, not least because of the misnaming of it, in my view, as the second nuclear age. The second chapter in American strategic policy began with the lead but hedge strategy, the conviction that we had a lot of nuclear overhang from the Cold War, but also the risk of a sudden reversal. But strategic policy was driven, I think, more directly in novel new directions by the sudden experience of Iraqi WMD and missiles. Thus, the military planning paradigm that began to take shape in the 1990s was, quote, "major theater war with a WMD dimension." Some of you at the table will remember that.

Essentially, as a matter of national policy, we no longer accepted mutual assured destruction with the new actors. We explicitly rejected it with Iraq, Iran and North Korea, in what came to be called the Axis of Evil, and we never explicitly accepted it with China. We may have done so de facto, but have not done so formally in any way.

We began to adjust our strategic posture in a series of decisions to negate the deterrence of the emerging regional challengers, and essentially told ourselves, and to an

extent told the Russians and Chinese, that we understood that they would have to undertake adaptations in their strategic forces to ensure that their deterrent would remain credible in their eyes in the light of what we were doing with the American strategic posture. Our general decision about that was laissez faire. Developments in Russia's and China's strategic posture and strategic toolkit simply haven't much troubled us in this second chapter.

So my opening first argument here is that we're entering a new chapter, a third chapter, which I think is informed by a number of challenges and decisions. One is it's more and more difficult to have a laissez faire attitude about developments in Russian and Chinese strategic postures. Secondly, it's more and more difficult to escape a relationship of mutual deterrence with the regional challengers, unless diplomacy provides the breakthrough we all hope for at this moment, or another one. And we can no longer imagine the sweet spot.

The sweet spot was that point out there in the strategic future when we had a strategic posture large enough to effectively negate any rapidly advancing regional actor's strategic deterrent, but not so large as to generate significant instability in the relationships with Russia and China. If North Korea is headed to not 20 but 50 or 100 nuclear tipped ICBMs, what's the character of the strategic posture that we would then have that would not be troubling to China? We can't imagine that sweet spot anymore.

So I think we're entering this third chapter, that's the first argument. It's an interconnected set of, quote, "strategic decisions," from Peter's title, but decisions about deterrence relationships and a changing proliferation landscape.

The second main argument is one that many of you have heard me make before. In this new environment we face at least three adversaries who know exactly what the problem of conflict is that they confront, and who have an understanding of the strategic dimensions of that conflict. This goes back to the fact that beginning in the 1990s they were seized with the main strategic problem they faced in the new strategic period, us, our ability to project power against them, our apparent intention to engage in wars of regime removal, what they decry as an ideologically driven foreign policy that makes us look like the drunk bear in the woods going off willy-nilly trying to recreate countries in our image. But they can't come at us directly because, after all, as the world's only superpower, or as they put it, as the conventionally superior nuclear-armed major power and its allies, we have so many of the tools that coming at us directly would be an act of national suicide, or at least regime suicide.

So they have out-thought and out-innovated us in the pursuit of strategies that exploit our weaknesses and try and target our strengths. You all know all of those arguments. Because they were all three -- Russia, China and North Korea -- starved for money in the period when they became seized with this question, the 1990s, they invested where they could, which was with their people and their brains, and they put their intellectual houses in order.

So it is with a rueful smile that I read the National Defense Strategy enjoining Americans today to renew thinking about rivalry, and re-learn the art of out-thinking and out-innovating adversaries. We face three adversaries who have gone to school on us. I was glad to see the National Defense Strategy reiterate that language from Bob Work, because it should be an element of continuity.

They've gone to school on us and those of you who have heard my shtick on this before, apologies, but they have developed a coherent body of ideas about how to deter and defeat a conventionally superior nuclear-armed major power and its allies; a body of ideas and a body of theories that add up to maybe a little bit of wishful thinking, but a collection of ideas about how to emerge from a conflict with the United States and its allies with their interests intact in some way. I call this a theory of victory in two senses, the spirit of Clausewitz and the spirit of Sun Tzu.

Clausewitz has a particular view of war, of course, as you all know, a continuation of politics by other means. So if that's your view of war, you must have a particular view of victory. Victory isn't when you vanquish your enemy on the battlefield, it's when you bring your enemy to a, quote, "culminating point when the enemy chooses to no longer run the risks and costs of continued war," a political decision point.

I think these three countries have that set of ideas in mind, well set out in a doctrine and reflected in capabilities, as Peter observed. But none of the three is eager to put these theories directly to the test. They'd much rather have us and our allies be impressed by how much confidence and capability they have to implement these in time of war, and they would much rather that we are subdued, we are restrained, without going to war.

In the spirit of Sun Tzu, you subdue your enemy without fighting. I think this is what Kim Jong-un means about breaking America's hostile ways, and that's what Mr. Putin is arguing about when he wants to remake the rules of order in Europe. As an illustration of a theory of victory, and I think there's a great deal of commonality in the way these three countries have thought about this problem, but you have this illustration in front of you and on the board behind me.

Peter referred to this long-running debate in which we've all been a part about, does nuclear de-escalation exist as an element of Russian military doctrine, or at least Russian military thinking? If so, where does it fit in their overall body of ideas about war with the United States and NATO? And so what? What are the implications of this?

Well, watching this debate I commissioned a paper which is available online at the web site of CGSR, and from which this chart is extracted, a paper by Dave Johnson, who is the analyst on Russian nuclear capabilities at NATO on the international staff. He has deep knowledge, and this is a really compelling 90 page or so monograph. This is nearly the last page of the monograph.

This is Mr. Gerasimov's theory of victory. I will rotate a little bit away. "Russian military thinking sets out three levels of warfare: local, regional and strategic. For local war think Chechnya and Georgia. For regional war think against a major conventionally-armed major power with its allies. The planning paradigm is obviously the United States and NATO, but this is also, in Russian military thinking, supposed to encompass China, a country without allies representing a different problem. And then the high-end.

So there are three levels of war and this is, of course, a simple graphs of intensity of conflict, phases of conflict, start of conflict operations, crisis, and quote, "resolution." They don't use the term war termination. Let me attract your eyes here to a number of points.

All of the down arrows are de-escalation. This is a mix of options going up the level of intensity aimed at inducing our restraint, or our allies restraint, separating our allies from us. The next chart in the book goes on to simplify part of this and it talks about the language they use to describe prescribed dosage. We talk about imposing costs. They talk about the proper dosage of pain and risk that comes with an attack.

If you're on any medication you know you want enough of the medication to address your problem, but not so much as to make you sicker. You want to be capable of using the right amount of force, enough force to scare America's allies away, but not so much force as to create a new stake for the allies to escalate. This is calibrated fairly carefully in their thinking, the dosage that is required to induce restraint, either among allies or by the United States.

Let me attract your attention to the words strategic weapons set at the very top -- strategic weapons set. This is Dave's extraction of this chart, so what he did was extract everything that had to do with nuclear strike and conventional strategic strike. He didn't put on the chart the things that would be there, that are there, in the Russian version, about space and cyber.

The strategic weapons set is that full toolkit, and the mode of attack varies from signaling, low-grade, reversible, hints at further pain to come, to at the other end, irreversible massive and destructive, and gradients in between. So the strategic weapons set is diverse. And note that the strategic weapons set applies to the entire spectrum of conflict, not just to the high end nuclear war.

You'll note that -- it's easier to read in the small print in front of you -- the different ways in which nuclear threats and strikes are intended to be employed; terms we're not accustomed to hearing, grouped but limited strikes. And, of course, you should be struck by the way in which they've populated the spectrum of options with conventional, that is non-nuclear, but strategic strike. There are the strikes that inflict deterrent damage. Deterrent damage is often translated with the word prescribed dosage.

This is Gerasimov's picture of how to prepare for the possibility that Russia would have to escalate if NATO chooses not to accept a fait accompli at the conventional

level of war. This doesn't include -- the monograph goes on to talk about all of the other strategic operations (as they're called?). The strategic operation (SAT-SIT?), the strategic operations to destroy critically important targets. It was a big, new, secret fact a few years that is now out unclassified. There's a strategic operation for what used to be called aerospace defense. Now it's just for the aerospace force, but it's defense and offense linked together.

So there is a lot of operational innovation and integration that occurs in their way of thinking about this. One other point. I've made the point about the strategic weapons set applies across here. We tend to associate the strategic weapons set, of course, with the high end, and primarily nuclear. To think that when we think those things we should be thinking about unrestrained warfare, to borrow the Chinese word, unrestrained warfare. They have all sorts of restrained warfare with their strategic toolkit.

So, my first argument is that we're entering a third new phase where, among other things, we can't simply be -- we won't find it comfortable to accept a laissez faire attitude towards the development of these theories of victory. The second main argument is that we have three, at least, potential adversaries who have out-thunk and out-innovated us on this problem, and here is an illustration. The third argument is that our national theory of victory is still taking shape.

If the adversary's theory is the red theory of victory, ours is blue but it's better thought of as blue/green. If it doesn't encompass the ideas and requirements of our allies, it's a failure straight out of the gate. Our allies have particular thoughts and interests and requirements that have to be a part of this discussion.

My argument here is that our development has taken shape and is developing in steps. The first big step I already hinted at, in the 1990s, when we rejected the principle of mutual vulnerability with rogue states and set about in the defense Counter Proliferation Initiative, and in the context of major theater wars with a WMD dimension, to think through what a big regional war against an adversary armed with WMD might be like. The concept that dominated the thinking of the 1990s was that whatever the problem might mature to be, it would be like the problem that Saddam was presenting us at the time, because that was what was familiar to us.

It was roughly, we might see chem-bio used against power projection forces in the course of a major ground war, and we might then see nuclear weapons employed against those forces or outside the region if regime removal came to the question. So in essence, as one person put it, one senior person, the nuclear thing would be the exclamation point at the end of a conflict that went very badly for Saddam.

As was common to hear in the Pentagon in those days, if we really face this problem we'll just turn them into a glass parking lot. Already by the end of the 1990s that view of the problem was seen to be not very helpful to us, not least because if the military's job is to win the war in a manner that secures the peace that follows, having turned the country into a glass parking lot would be unhelpful to the peace that followed.

Then, of course, we put the focus of our innovation and attention elsewhere after 9/11. As a nation, we flirted with the proposition that this is a military problem that's just too hard. We can't live in a world in which we escape mutual vulnerability with rogue states. Missile defense is impractical towards that end. Nuclear deterrence is unreliable, and we will not live in a world with those kinds of states, so we must engage in pre-emptive or preventive wars to prevent the emergence of this threat.

That was, in my view, a complete vote of no confidence in the ability of the U.S. military to compose a solution to this problem that would support the national interest. In 2009 I think we returned more directly to this question, with a National Security Strategy, a national Quadrennial Defense Review and a Nuclear Posture Review which all talked about the need to strengthen and adapt regional deterrence architectures to meet 21st century challenges, and to strengthen and adapt through a comprehensive approach encompassing political measures to ensure that our alliances were strong and nobody thought we were easily divided from each other.

Secondly, a balance of conventional forces favorable to the interest of the alliances. Thirdly, missile defense both in the region and of the homeland to address the decoupling problem. Fourthly, improved conventional strike, preferable CPGS at the time. Fifth, resilience in cyber space and outer space. And lastly, sixth, quote, "a tailored nuclear component tailored to the requirements of the different regions where the United States extends nuclear deterrence.

We were sent off on the project of comprehensively strengthening these regional deterrence architectures while, of course, trying to work with our allies to reduce the role of nuclear weapons and extended deterrence, and strengthen extended nuclear deterrence against our enemies, a complicated project. I think in this period the Obama administration also set out some ideas about the Sun Tzu theory of victory, which is to say to extend an open hand and we might find ourselves on a different path, at least to run the experiment. Lastly in this period -- two more points -- I think there was a recognition and growing exploration of the deterrence values of the different tools in our strategic weapons set. So you saw the emergence of the discussion about the role of cyber deterrence and space deterrence and the beginning of the cross-domain deterrence discussion which I think has move on to the terrain of integrated strategic deterrence, a term that Russia and China both use.

What does integrated strategic deterrence mean to us, is the big question that I think was on the table in the last year of the Obama administration. So steps, 1990s, Obama, the Trump approach to this problem. Clearly the administration has embedded the problem of strategic war in a broader view of the new security environment and the new military challenges in front of us.

The National Defense Strategy's main themes should all be well known to you, at least as they relate to this topic. With the objective of sharpening the American military competitive edge, to cite the subtitle of the NDS, the administration seeks to build a more

lethal joint force and to strengthen alliances and attract new partners. It has made three main innovations, I think, on the problem in front of us here.

The first is the hint at an interest in a theory of victory, which the NDS refers to as a theory of success. Victory sounds a little -- particularly when you get close to the nuclear topic -- there are many people who don't want to talk about victory in nuclear war, but victory in nuclear deterrence or success in nuclear deterrence, may be a more palatable term. But the document briefly mentions the value of a theory of success in guiding the development of doctrine and capability.

It refers to the need to contest a revisionist power's actions to remake the regional order. It refers to effective responses to the efforts of regional aggressors to blunt our power projection. It talks about surging forces while under concentrated A2AD attack. And then it talks about preserving the sanctuary of the homeland, recognizing that sanctuary is really no longer within our reach. The document goes on to describe the value of joint lethality in contested environments, and the value of maneuver resilience in the face of these revisionist powers and their own theories of success.

So this is a body of ideas in an unclassified report, but it points to some thinking about theories of success. The second innovation is the big emphasis on competition. Quote, "long-term strategic" is an alternative, quote, "to the traditional American view of the binary switch between peace and war."

On this point, they made the argument about the need to foster a competitive mindset to out-think and out-innovate. The third innovation is the one Peter referred to, the assessment of the gap in the nuclear deterrence architecture in Europe. A gap that did not exist, or at least was not perceived, in the conduct of the last Nuclear Posture Review.

Thus, with these innovations in mind, what the administration has set out is a requirement for, quote, "a joint force that can be postured and deployed to achieve its competition and wartime missions." Compare that to this. We're making innovations, useful ones. I don't want to in any way suggest otherwise. But I think this work so far, these three steps, leave some important questions on the table for us.

How does this theory of success account for the out-thinking, out-innovating that our adversaries have done of us for the last 25 years? Frankly, a lot of this language is the same language we Americans have used about our response to the emerging strategic problem for a couple of decades. And I'm not sure we're much closer.

The National Defense Strategy mentions only once the topic of managing conflict escalation. Here you paint a picture of a world in which you say the renewal of major power rivalry, major powers armed with nuclear weapons, this is the big emerge problem, and once in your National Defense Strategy do you refer to managing conflict escalation as a problem. So, okay, maybe it's elsewhere in the report.

Well, there are 11 defense objectives set out and one refers to dissuading,

inhibiting and deterring the acquisition and use of WMD, a worthy and important objective, but not suggesting a very central place of this problem set in the landscape. The new joint 5.0, which I last looked at when it was probably 60 pages long, now requires a little more perseverance to get through, it's 380 pages or so, which is of course the joint planning guidance for, quote, "the full spectrum of conflict." And I understand it's an unclassified document, it's not going to say a lot about nuclear and other forms of planning options. But the words deterrence and escalation appear very sparingly, and the words extended deterrence and de-escalation and war termination after a nuclear exchange, not at all. So I think the question is still on the table about how the theory of success, put on the table, accounts for this solution set they put in place.

Second, the competition, I couldn't agree more with the assessment of the security environment or the injunction to renew our thinking in this area, but it begs the question, competition for what? What's the objective that's envisioned? And to what extent is this informed by the thinking of the 1970s and '80s about competitive strategies? Again, a generational topic, I suspect, (for the room ?).

But look into the National Strategy with the question, my competition for what? "To regain a competitive edge, to maintain favorable regional balances, to continuously deliver performance with affordability and speed, to expand the competitive space in order to seize the initiative, to generate decisive and sustained U.S. military advantage, to impress upon rivals U.S. strength and the vitality of our alliances," so that they, quote, "abandon aggression."

And what about competition in the strategic toolkit? There's not much to find. The National Security Strategy says more than the National Defense Strategy.

To just cite a little bit of the text here, "Our adversaries have studied the American way of war. They target our strengths. They aim to exploit our weaknesses.

This has made deterrence much more complex. Deterrence must be extended across all domains to address all possible strategic attacks. Our thinking, planning and capabilities have not kept pace with changes in the character of competition.

America's military must be prepared to operate across a full spectrum of conflict across multiple domains at once." What we seek is a, quote, "over-match, a combination of capabilities and sufficient scale to ensure that America's sons and daughters will never be in a fair fight." Over-match.

The word match is used one other time in this document, and it's in the discussion of nuclear modernization. It says, the United States will need incredible deterrence and assurance capabilities," and quote, "The U.S. does not need to match the nuclear arsenals of other powers." That's an interesting statement.

Over-match raises, I think, two big questions. If we conceive it to be like dissuasion, a term from the George W. Bush administration's nuclear catalog, dissuasion

was the counterpart to deterrence. Deterrence assumed the existence of an intention, dissuasion was about the formation of the intention. If we could effectively dissuade countries from forming intentions to do certain things, we would never have to deter them from doing those things.

The idea kind of got set aside because it was, among other things, a little too fancy for the time. But there wasn't a good counter argument to the idea that it was actually motivating some of the behaviors we were trying to mitigate against. That's the big question with over-match. Are Russia and China -- and they've done all this homework -- are Russia and China and North Korea prepared to say, yeah, America doesn't want a fair fight, we give up? It seems unlikely.

So there is a question of what is a strategy of competition to outmatch or over-match your opponents. What is it other than a recipe for a long-term arms race? I think there are some good answers to be had, but I don't find them as yet crafted. And I don't mean in any way to be unkind to this administration, which I think has taken useful, constructive, innovative steps forward in the development of a problem that has long attracted so little attention.

So my third argument and sum, and I'll close here, is that our blue theory of victory is evolving in a series of steps. There is a lot of continuity. If you look back over 25 to 30 years of thinking about this, it hasn't been the case that each new administration has come in and thrown out all the bad ideas of the last guy. There has been a kind of cumulative and self-correcting process.

This new problem in front of us, the theory of victory, isn't first and foremost a theory of victory about nuclear war. It's about the new strategic problem of the 21st century, but of course nuclear weapons play an essential, unique, and so far irreplaceable role in our theory of victory. There have been some useful Trump innovations, but also some hard questions left on the table.

So with that, let me thank you for your patience in sitting through opening remarks and staring at the graphics. Let me return the mic to you all.

(Applause).

MR. HUESSY: If anybody has questions just let me know and I'll bring you the microphone.

Hunter.

MR. HUNTER HEUSTUS: Thanks so much for your informative analysis. I want to ask a related question. The grid diagram, other versions of that diagram show the non-military (forms ?) which I believe the literature says are 60/40 non-military. One of the interesting components running the complete spectrum was the information competition -- (inaudible). So our failure to properly -- (inaudible) -- we don't have any

national inter-agency groups that talk about Russia strategy and China strategy.

So there's two parts to this. The one is the military-nonmilitary -- (inaudible) -- part of this. The other is a micro-section of the U.S. review of this. We do have a concept called conventional support maneuver operations, which actually cover (these events?). Possibly the right way to think about it is, what's the effect of nuclear capabilities on the conventional fight, in all phases of that conventional fight?

I guess my question is, could you talk about our (desirability?) to bring the military-nonmilitary, especially when it comes to messaging and trying to shape perceptions? And my perceived inability to ground -- on of the final comments you made was at the end of the day it is a nuclear theory -- our inability, in my perception, to acknowledge that and (integrate it?).

MR. ROBERTS: Well, it is a nuclear theory of victory but not a theory of nuclear victory, a little catechism I want people to have lodged in their heads. We want to cast that nuclear shadow, too.

To your first point, I really accurate picture of Russian grand strategy would be to compress this piece into a little timeline. It's a blip on a timeline. Most of the rest of the time they're in phase one, as we would call it. They're engaged in active campaigns to remake -- to support the president's objectives, which include the remaking of the European security order through multiple means, and maybe direct military means are neither necessary or the most promising for them. But this is clearly a part of their solution set.

I don't think we have the societal characteristics to engage in the same style of information strategization that they have. Thus, we should have a strategy that plays to our strengths and unique characteristics as a society. I haven't thought deeply about this, but I do reflect back on the experience of the Cold War where you could argue that Russian information strategy today is simply a modern application with modern tools of Soviet propaganda.

We quickly decided we couldn't prove every lie with a lie and we, the government, couldn't prove anything. We had to let the people decide and come to their own conclusion that here was a liar, and thus anything that came (was suspect?). Now, that's a lot more complicated today. There are many more actors doing that and the lies are much more complex that they're telling in communication.

But I liked the fact that we met Soviet propaganda in Europe with the America houses, which were, for those of you are too young, there are still America houses in Europe. I spoke in one a couple of months ago. But they are mostly gone and these were essentially libraries and then social clubs.

There's currently in the State Department a lobby, a display, on the role of jazz club support through the U.S. Information Agency program in the 1950s, which was a

way of dis-empowering the propaganda campaign of the Soviets because European and recovering societies were able to understand what kind of country America was through the encounter with the American people and culture. There's a there, there still. I'm not sure what it is and we don't get there by (saving a dime ?).

That's a rambling answer to the first question, let me --

MR. : There's a European values think tank in Prague that works on this.

MR. ROBERTS: Let me answer the second question, or are you alright on this? The second question I just want to be clear that there's a whole realm. If we were to accept this roughly as our starting point of our sketch of our answer to the question, which it's not a bad one, one thing I'd immediately say is in one sense this fits our standard picture in a way that's not helpful.

The decision point we face isn't either escalate or de-escalate. There's a third option, which is just steady as she goes lads, because they haven't done anything really to fundamentally change the conflict for us. Or, we're winning without it. Or, we're going to lose at an acceptable cost, even though we don't want to lose.

There is still a whole realm of nuclear war, major combat operations, which I don't take as a very serious problem. It's a very serious problem. We want to keep our powder dry. But it's not the problem where we have a weakness in concepts or capability.

Where we have weakness in concepts and capability is in the employment of nuclear weapons in a manner that's strategic but not relevant to the conventional battle, or it's relevant at the operational level but not the tactical level of war. I hear so often people reach back and say, so this is the strategic level of war and that's the tactical level, and what we need to do is bring more tactical nuclear weapons back to Europe or to Northeast Asia. Tactical nuclear weapons were brought home and destroyed, by and large. They existed for the problem of defeating 186, as you know, Soviet-Warsaw Pact armored combat divisions, which we weren't going to be able to do by standing in the front and shooting at each one.

We don't face that problem today. It's very difficult to imagine a circumstance where a geographic combatant commander would call up STRATCOM and say, I need a nuclear weapon here because I'm losing the conventional battle. These are about signaling resolve and decisively shifting the overall campaign level of war that an adversary is fighting. That's a different way of beginning to think about conventional and nuclear integration. It's analogous to the old ways, but I think it's different.

MR. : Should the U.S. nuclear enterprise be recapitalized?

MR. ROBERTS: Yes. Should it be recapitalized? The alternative to recapitalization is unilateral action to fundamentally alter the strategic balance and the

deterrence toolkit. We have kicked this can -- all of these many cans: warheads, delivery systems, delivery vehicles, command and control systems -- we have kicked all of these cans down the road to the point where the timelines are all scrunched up against each other painfully so.

If we don't proceed on the modernization program of record left by the Obama administration, and now slightly modified by the Trump administration, we will have to unilaterally withdraw our remaining U.S. nuclear weapons from Europe. We will not be able to support the commitment to make dual-capable aircraft globally available, if the B-61 and VCA (ph) modernizations are not completed. If we have to take down one of the legs of the triad, if it's the sea-based leg that's a huge slice of the force.

Are we as a nation prepared to accept -- every president since the end of the Cold War, until this president, has said we will in the nuclear business be second to none. Well, we no longer need to match the arsenals. I mean, maybe they are prepared to be second.

My point is there are significant political consequences of the investment choices in front of us. We usually debate the investment choices in terms of the military capabilities they create for us, instead of their role in our political strategies. So yes, I see this as -- I also react badly to the argument that what we're doing is simply replicating the Cold War force.

Eight-five percent of that force is gone. The number of types of nuclear weapons at the end of the Cold War was what, under 30 roughly, 30 types? We were headed to five and now it's more like six or seven.

MR. : Almost the same number as we had in 1957.

MR. ROBERTS: So it's still an expensive proposition, definitely. It invites the possibility of competitive responses from Russia and China. But on the other hand, Russia is already in its modernization cycle and very well along, and evidently has its successful program in place.

China is not building its nuclear forces because of our nuclear force. It's building up its nuclear forces because of our missile defenses and conventional strike capabilities. So I don't really account for much of an arms race reaction from U.S. nuclear modernization.

Who's next?

MR. : (Inaudible) -- was the government doing enough to really get the best performance out of the enterprise. Look at what happened at Los Alamos and the capability -- (inaudible) -- also perhaps in oversight. Can you describe how the enterprise emerged from this successfully, and what led to (the stagnation ?)?

MR. ROBERTS: Well, I'm happy to do that with you off-line afterwards, but I think that's sort of beyond the scope of the subject that you've invited me for here. I'm happy to chat about that, but it's a little beyond my scope of theories of victory. It is a strategic decision.

I'll say a bit about it. We've had four Nuclear Posture Reviews since the end of the Cold War, all of which basically said the same thing on this topic. They said that we want to improve the resilience and flexibility of the infrastructure so that we don't have to keep a lot aging nuclear weapons around as a hedge. We would like the hedge to be extant in the infrastructure, and by hedge leaders have meant the ability to respond in a timely fashion to a surprise, either in the geopolitical environment or a technical surprise. In the 1990s there was, of course, no new money for flexibility. There was just a lot of downsizing under way. But science-based stockpile stewardship was conceived as an activity by which you could decide what actually you needed to have a flexible, responsive and agile infrastructure.

In the George W. Bush administration the same general commitment was made in its Nuclear Posture Review. The administration was generally unresponsive to the requests of the infrastructure community for enhanced investment. Money was going into the post-9/11 problem set, not this problem set. Moreover, nuclear politics turned even more sour in the Congress. There was a bigger falling out, and so a series of proposals to do this, that or the other thing from the administration went down to defeat.

So in 2007 the Congress passed a law saying that the next administration, of whichever stripe it should be, should definitely do a Nuclear Posture Review, because sometimes these reviews are mandated by Congress and sometimes not. The Congress in 2007 said, that 2009 review has got to be different. We need it to go soup to nuts, meaning the Congressional perception was all of the different pieces of nuclear policy no longer fit together.

We had an arms control strategy, a deterrence strategy, an extended deterrence strategy, some interest in strategic stability, nuclear counter-terrorism, nuclear counter-proliferation. Please tell me how all this fits together so that if I've got a spare dollar I know where to put it? That became the first DOD-led inter-agency Nuclear Posture Review that I led in 2009 and '10.

But on the same page of the law, the Congress created for itself a Posture Commission, bipartisan in character, chaired by former Secretary of Defense Bill Perry and Vice Chairman former Secretary of Defense Jim Schlesinger, six Democrats, six Republicans. It had two questions. Is there anything you all can agree about, because it sure doesn't look like it? And their answer was almost, no. If so, what? And their answer was, so long as the United States pursues a balanced nuclear strategy that gives us political, diplomatic and economic tools to reduce nuclear dangers, but maintains the military capability to protect itself and its allies, so long as nuclear weapons remain, this balanced approach makes sense and would enjoy bipartisan support.

In that report, there's a chapter on governance and infrastructure investment. The ongoing position of the Obama administration was, this sounds like good bipartisan advice, we should take it. Let's go do it. The administration ended up not taking the advice on governance reform because it concluded that the problems weren't really in the governance structure, they were in political leadership attention and a willingness to pay the bills to get the job done.

Then the bills started to go up and attention wandered, and it was time for our democratic system to do what it does, which is bring in a new group of people to think about the problem and look at it afresh. So my point in telling that long story is that your question points to an enduring concern, a problem that no administration has so far been successful in delivering on, and which this administration now says, appropriately so, it's got leadership focused on this and it's putting a lot of new money against it, and it's time to get on with renewing, and this will now be caught up in our national politics. We hope that this administration -- I personally hope that this administration will make more progress than the one did of which I was a part in addressing the problems of funding and governance for the laboratory complex.

MR. : Japanese embassy -- (inaudible).

MR. ROBERTS: That's an excellent question. Let me take you back to this chart, the argument that it's all about deterrence. This is basically Russia's theory of a war in Europe against a NATO that, if Russia gives us time, we're going to prevail, because we have much more strength. So it has to break our will quickly.

As the possibility to engage in nuclear attacks at any point on this spectrum, with any delivery system, with weapons of any range -- I mean, it has built a nuclear war fighting force, if it chose to do that, of maybe 2,000 or more weapons capable of reaching targets in Western Europe. It has tried to raise the level of performance of its conventional forces and lower the yields of its nuclear forces, to talk about having a nuclear scalpel for every military problem in Europe. So they will impress upon us that for them it's this incredibly easy step across the nuclear threshold.

Our signal is very clear, as a culture, we don't want to go there. The strategy question for the West is, do we want to join them in doing this? Our belief -- and it is a belief -- is that if you cross that nuclear threshold that's a really big step.

It's going to change -- in a local war, the war over Georgia, we had important interests at play, but if Russia had employed a nuclear weapon, our interests would have changed and gone up (significantly?). So we think crossing the nuclear threshold is a really big deal. We don't mind that gap, although we'd like it to be maybe a little narrower.

But where that leaves you then is arguing that if they cross the threshold down here, and we threaten that up there, they're not going to think that is credible. You mean, you Americans are willing to launch a strategic war from your homeland for which we

will certainly retaliate on your homeland, in order to respond to some limited use down here? We don't think so.

So the next point in the discussion has been, then does NATO need a symmetric response to Russia, which is sort of what it had in the Cold War? It was called flexible response, and essentially it was Russia, you choose where you want to fight and we can meet you there and go one or two more steps, so you won't go there -- flexible response. Well, in my view, when you're in the realm of war fighting with a lot of nuclear weapons, maybe you need a flexible response doctrine. What we need, practically from a deterrence perspective, is the ability to present them with an unacceptable consequence at each of the many points where they might employ nuclear weapons.

So they're signaling down here, they're increasing activity and mobilizing and deploying, they're putting forces on alert, but then they begin with a single nuclear demonstration strike. So we need to be capable of signaling, mobilizing, deploying, alerting, responding to a single demonstration strike. So let's say they've conducted a nuclear strike that's limited but grouped, meaning some small number, and what they expect is we'll say oh my God we didn't understand your Russian stake. Ours isn't nearly as big, we back down. That's what they're expecting.

If we want to do that, we can just do that. But if we want to communicate to them that you miscalculated, we're not willing to back down, but we're not going to war over the American homeland either, we need something to credibly threaten retaliation at that level, and if they go beyond a single demonstration strike, beyond a group of limited selective nuclear (strikes ?).

By public accounts, NATO has a standing nuclear force of approximately 200 U.S. B-61 bombs and the associated dual-capable aircraft. I think that's not badly sized to this problem because we can't imagine -- I mean, more than 200 nuclear weapons going off. That's major nuclear war and that's a problem for which the strategic deterrent is relevant.

So there's something between flexible response, that is a symmetric response, and a peer deterrence strategy. This is a limited graduated deterrence strategy that provides credible response options at the main thresholds where Russia might contemplate nuclear attack. It sounds like nuclear war fighting, it's not nuclear war fighting. The whole point of having credible capability here, short of the highest end of the conflict, is to reinforce deterrence, to prevent their miscalculation that they can take that little step without some significant consequence. That should be good for deterrence.

MR. : Are you saying we are entering into a third chapter, but this seems like it's kind of a refined version of the first chapter? (Inaudible).

MR. ROBERTS: Well, I think it's fair that -- first of all, short answer, chapters are just organizing concepts. I'm sure there are many elements of continuity. But my problem in talking with people about this is, if I answer yes to your question then people

generally reassure themselves and think this is a familiar problem. I know something about this. It's deceptively familiar. It looks so similar to the problem we had before, but it's not the problem we had before.

I mean, in part it's the balance of capabilities. The United States has brought home 97 percent of the weapons it had in Europe in 1990. We're not going to meet this problem with numbers, and we don't choose to, we don't need to. It's not that we're prevented, and more nuclear weapons in our arsenal wouldn't solve this problem. But I do think some supplemental low yield capability does. A long answer to your question.

MR. : This isn't directly related to the topic, but it's close enough, I think. There's kind of a debate about whether or not the U.S. declaratory policy has changed. My view is that the language has changed, but policy hasn't changed. One explanation of the current declaratory policy is that examples were added to deal with the intentional ambiguity that has been consistent with our declaratory policy. I'm wondering what your view is.

MR. ROBERTS: Well, it took a little bit of sweet irony that I enjoy this topic, because when we rolled out the declaratory policy we did in 2010 a number of people in the other party attacked us as weak and calculated ambiguity. So here with the elaboration of cases, one could argue that by specifying something about where your red lines are, you're removing some of the ambiguity in the situation.

I think your basic points are right. Fundamentally, American presidents all pretty much think about nuclear weapons the same way, which is I really don't want to have to use them. I'm not sure when I'm going to use them, but I'm pretty sure I'm going to use them when my vital interests are at risk. And we're Americans and we're not always sure when those are. We tend to discover them four days after the president or the secretary of Defense says Korea is not in our vital interest. We discovered that it is.

I think we are culturally reticent. We listen to the catalogues of vital interest that other leaders provide for their countries, and we're skeptical. We don't know what our vital interests are, but we know that we would defend them. And I think we're confident in saying we would defend the vital interests of an ally when they are at risk and we'd be willing to run these risks to do that.

And I think every American president -- again, I'm not sure this one has -- but every other American president has said the fundamental role of nuclear weapons is to deter nuclear attack. And we're not willing to say that's the sole purpose. So I see a great deal of continuity in the way presidents have expressed their intent.

By the way, one of the recommendations of the Posture Commission was on declaratory policy. It was, figure out a way to clean up the discrepancy. America has been talking out of two sides of its mouth on nuclear employment for the modern period, saying on the one hand if you're a party to the NPT and in good standing, you will not be subject to nuclear attack. But if you have WMD and you threaten our vital interests or

those of an ally, we will. We came up with the so-called clean negative security assurance.

I think the addition of the cases, the red lines so to speak, could have been more helpful if the case set had been larger. These are illustrations of the ways in which you might bring us to the point of thinking our vital interests (are at risk ?). But by narrowing it to such a small group it has come to be seen as conditions, which I don't think was the intent. Insofar as the particular elaborations are aimed at particular concerns where we think deterrence may be weak, and trying to clarify to an actor that, let's be clear, if you go there you're going to be in trouble, I understand the value of that. But I think in retrospect they hit the wrong sweet spot on this one.

Anything else to talk about?

MR. HUESSY: Thank you, Brad.

MR. ROBERTS: Thank you.