

041318 Air Force Association, National Defense Industrial Association, and Reserve Officers Association Capitol Hill Forum with General Kevin Chilton, Former Commander, United States Strategic Command, on “Defending the Record of U.S. Nuclear Deterrence”

MR. PETER HUESSY: Welcome to this our second event in our 2018 series on nuclear deterrence and missile defense. On April 20th we will hear from Michaela Dodge and Tom Karako and then we will here April 24th from Mark Schneider and Steve Blank on Russia’s New War Against the West, then we will hear from Richard Fisher and Gordon Chang who will talk about China’s emerging danger, and that’s on April 25th.

We also have a conference in King’s Bay, Georgia on July 12th and 13th. It’s our next triad event. We do one outside D.C. and one inside. Our inside D.C. is October 9th. That is a new date. On July 12th we’ll have a tour of an Ohio-class submarine and then the conference on the 13th. For those who are interested, we’re going to have an industry panel as well and a reception on the night of the 12th. So if you’re interested in helping to support that, please do.

I want to thank you all for being here. With that, I’d like to introduce my boss, General Deptula, who will introduce our speaker.

GEN. DEPTULA: Let me just add my welcome to everybody. Former chief of staff General Schwartz,

currently the director of Executives for National Security, and General Chandler too. Thanks for being here.

Welcome to our special session this afternoon with General Chilton. I've had the very good fortune of having known General Chilton for now, I think I computed it at 38 years. He was the premier RF-4C driver on Okinawa, and I had the good fortune to fly with him, both in a simulator and in the airplane when he was transitioning to fly the F-15 Eagle.

He went on from there, as many of you know, to Test Pilot School. He flew three missions. He was the commander of SGS-76, his third Space Shuttle mission, and then was later the deputy program manager for operations for the International Space Station. You know he was the commander of Strategic Air Command. He commanded Air Force Space Command, the 8th Air Force, and a wing.

So he comes to us with an unmatched set of insights and expertise. Today the subject is going to be nuclear deterrence, and because of the knowledge level of the crowd -- we chatted a little bit -- he's not going to give you deterrence 101. He's going to go into perhaps how to deal with some of the challenges of those who oppose the fundamental values and virtues and the importance of nuclear deterrence.

So with that, please help me welcome General Kevin Chilton.

(Applause).

GEN. KEVIN CHILTON: Thank you. When Peter asked me if I'd do this, he said, when are you going to be in Washington, D.C. next? I looked at my calendar and I said, I've got about a three hour window at the end of a meeting this morning. He said, it's just a small gathering of folks if you wouldn't mind coming by and having a quick chat. So I thought this would be like six people.

I look out and I've got former bosses, former colleagues, mentors, teachers and friends here, and it's great to be with you all. This is really humbling, just to stand in front of you. So as Dave said, I'd like to just talk a little bit and then open it up for Q&A.

One of my challenges is I don't ever just talk a little bit. I get going on these topics, I get so passionate about them and I run at the mouth. So throttle me back, Peter, if you can, so we can get into the Q&A.

One quick Zatar(General Deptula) story. It's a really long backdrop to this story, but when I transitioned from the F-4 to the F-15 there was a policy in Tactical Air Command at the time that you could not do that if you were an RF-4 guy. It's against the rules.

So the Pacific commander said, we don't have rules in the Pacific, and there was always tension between TAC and the Pacific. So he said, I'm sending him to Luke anyway to

check out. They said, he can't fly our airplanes. He said, okay, he's going to be your (academic ?).

So I went to Luke, I never flew the airplane, and they wouldn't even allow me to get in the simulator. What I found out, though, is there are civilians that ran the simulator from Singer at night, starting at 5 p.m. The last student would leave, the last instructor, and they'd turn the simulator over to them for maintenance. If there's no maintenance going on, they just sat and drank coffee all night.

So I met these guys and I went over there and I told them my dilemma. They said, hop in the simulator. Since they looked over the shoulders of instructors all the time, they could give as good a SIM as any qualified F-15 instructor pilot. I went over every night for a month. You normally would get maybe a dozen SIMS, I had about 30.

(Laughter).

No (grade work ?), no documentation that any of this had ever happened. So when I get on the plane to fly back to Okinawa they're going to give me a local checkout. I'm going over for my first official rated simulator, and Captain Deptula is my instructor pilot and he gets in and is thinking okay, let's see if he can start the engines.

I start the engines. Well, can he handle a fire? Can he handle two fires? Can he talk off? Can he do an intercept and handle a fire?

I'm just smoking this simulator, and he keeps throwing malfunction after malfunction and I'm just handling it. I'm doing every possible thing you could do in a simulator. Afterwards, I could tell he was visibly frustrated, because Dave is a tough grader. He's filling out my grade sheet and he's going line by line and he's stopping and thinking, checking the boxes. You could tell he's just angry.

He finally gets to the bottom of this thing and he goes -- you can be graded zero to four with four being the best -- he says, I'm giving you a four. I've never given anybody a four before on any simulator ride. How did you do this?

(Laughter).

So I had to fess up. I was probably the high time simulator guy in the F-15, having never flown the airplane. Dave and I have been friends since that day, and it's been a great friendship. I really appreciate the invitation from both you and Peter to be here today.

Nuclear deterrence: we'll dispense with why we need a deterrent and deterrence 101, and what I want to do is turn you into apologists for the deterrent. I was raised Catholic and part of our training was Catholic apology, which meant how do you defend the faith? So we're going to learn how to defend the nuclear faith here.

Everybody talks about the subject, and I'm going to

talk about some common arguments you might here when you sit down and talk to someone who maybe hasn't quite thought as much about deterrence as you have, or has been brought to the predilection that nuclear weapons are indeed bad and not useful for the defense of the United States of America.

One of the ones you will always hear -- and I believe in always emphasizing the destructive force of these weapons and just how terrifying they truly are. They are scary to me. Personally, I hate them, but it's a love/hate relationship. They're a necessary evil in today's world.

But the argument goes, they're so awful and so bad we know no American president will ever use them. So if we're not ever going to use them, why do we have them? That's the logic they try to present.

What they fail to understand, because they fail to understand deterrence, is that we use them every day. We deter every day. The fact that we have men and women in silos every day, on submarines every day, and our bomber force prepared to generate and our tanker force prepared to generate every day, our nuclear command and control that is exercised every day from the Pentagon down to the forces, and drills every day, the fact that we have those means we're using them and we're using them for their designed purpose. They're not designed for warfare, necessarily, although ultimately they have to be to be credible. They are designed to deter.

You need to always bring the argument back to that when you talk to people about why we have these nuclear weapons. In fact, I tell our young airmen, soldiers, sailors and marines, whenever I talk to them, that their highest calling is not to give their life for their country. It's not to fight and die, but to win our country's wars. Yes, you have to be prepared to do that, but the highest calling is to deter and give our nation the opportunity to secure its national interests and achieve its objectives without ever having to fire a shot, which is the essence of some of Sun Tzu's philosophies, and the nuclear deterrent is every bit much of that.

We use our deterrent to deter, as do the Russians. I would argue the Russians, of late, have used it for another purpose, and that is to coerce. I might suggest, they invade the Crimea -- and by the way, it was an invasion of sovereign territory -- they invade the Crimea and then they immediately conduct, on YouTube, making sure there's a videotape -- a nuclear exercise with Putin directing his forces to launch a nuclear strike, which then is followed by video of a missile coming out of the water and flying over Kamchatka. That type of rhetoric is a demonstration of will, shortly followed by an announcement that forces would be moved into the Crimea to make sure nobody counters their invasion.

Deterrence and coercion, a little bit of both mixed there. A real sign of coercion is when Sweden started musing about perhaps joining NATO recently, which would be a nice thing for the U.S. We always wondered how

neutral they'd be in the Cold War for folks flying out of England and maybe had to transit their airspace in the war plan.

Then the Russians said they conducted a nuclear training exercise and made it very politely clear that all of their targets were in Sweden. Sweden came forward and said, you know, we don't want to upset the Russians so we're not ready to consider joining NATO at this time. There's an example of how you can be coercive, I think, in adjusting another person's policies by using your nuclear deterrent.

We just use it to deter. The Russians, I think, distinctively use it both to deter and coerce. In any case, we use it every day.

A while back there was a move -- and there still is today -- a notion called prompt conventional global strike. When I was the commander of Space Command I was a big proponent of it. I was for a short period of time, as the commander of STRATCOM, and then I actually argued against it. The notion really started out with the rather crazy notion what if a terrorist got a nuclear weapon and we needed to reach out and touch him anywhere in the world real quickly and we wanted to do it with something other than a nuke? So we need to put a conventional warhead on an ICBM that we could quickly target to hit them before they move.

Well, it takes 30 minutes, so you don't have to move

very far to survive a conventional prompt global strike if you're a terrorist. So that argument I never brought. I like the idea, though, of maybe going after some fixed assets that are really important to me as the commander facing assets that might degrade or deny an adversary's capability to put my assets at-risk. Some of those targets are pretty deep in countries of interest and you don't want to give the president only one option of a nuclear attack on them. So that was why I kind of liked it for a while.

Then people started talking about we can actually decrease, as part of arms control negotiations with the Russians, or even unilaterally, the number of ICBMs we have with nuclear weapons on them and replace them with conventional and still make them a part of the deterrent. After all, maybe just target them against -- you pick a target -- a power plant. We've proven with the accuracy of our weapons systems now that we don't need to put a nuke on that to take it out, like we used to have to in the Cold War.

That's when I start saying, whoa, wait a minute, hold the horses. You can't deter at the same scale with a 2,000 pound bomb as you can with a 100 kiloton weapon. The fear factor isn't there. You throw the fear factor out. You throw away what people call the long dark shadow of the deterrent, which has a psychological impact on a decision maker that maybe hard to measure but is absolutely real.

The example I use here is, for those who would advocate just because with precision and accuracy there's some equivalency between a conventional strike and a

nuclear strike, I use this example. I say, let's imagine -- and thank God he did it -- but let's imagine that President Bush did not pull out of the missile defense treaty and start our missile defense capability 18 years ago. Pretend that doesn't exist.

Let's give the current dictator of North Korea, Kim Jong-un, the most accurate ICBM in the world. It's so accurate that he knows that if he pushes the red button -- and he does have one on his desk -- that warhead will impact within the carpet of the Oval Office. That's how accurate it is. It's going to be conventional, though, but still a pretty darn potent capability. Conventional prompt global strike, very accurate.

He gets a little aggressive on the Korean Peninsula and maybe starts invading the South or causing troubles that we want him to stop. Can you imagine that any president of the United States would be deterred from fulfilling our treaty commitments with South Korea in this scenario? I say the answer is no, of course we're going to stand up and support them even though he has this capability. I don't care if he has 50 of those things, we're not going to be deterred from going forward.

However, if you gave Kim Jong-un a much less accurate intercontinental ballistic missile with say a one mile CEP rather than three foot, and gave him a 20 kiloton warhead, the equivalent of the Nagasaki weapon on top of that, and took away -- remember we have no missile defense -- and now he threatens the United States with that

warhead if we come to the aid of the South Koreans, might that give a future president pause? I think that when people start trying to talk about equivalency between conventional strike and nuclear strike, they're heading down the wrong path, and we need to remind them just how powerful these things are. I did a little math here, just so I don't have to do it in public. A single 200 kiloton nuclear warhead -- kind of in the class that we might imagine on top of an intercontinental ballistic missile -- equates to 200,000 Mark 84s, our largest conventional bomb carried by our fighters, 200,000 of them detonating simultaneously.

That's 200,000 times more powerful than a single one ton conventional warhead. These are just astonishing numbers when you start looking at them. This is one warhead. It's going to take 12,000 B-1 bombers to deliver them. Of course, they'd all have to be in formation.'

Or, you could do it with a B-52 with 800,000 Mark 82s. That would take 8,000 sorties. Or you could use the MOAB. That has been in the press lately. It would take 11,000 MOABs simultaneously detonating. Of course, you'd have to have 11,000 C-130s in formation to roll them out the back end and it wouldn't be quite as accurate.

That's a single warhead. There's just no equivalency, and the terror and fear that generates in an adversary's decision calculus, particularly when you throw on top of that the possibility of fallout and the other destructive powers that goes along with it.

Another argument you'll hear is our conventional overmatch -- and boy we heard this -- our conventional overmatch makes the need for a nuclear deterrent not as important, if required at all, because we're just so strong and powerful. Because we're so strong and powerful we don't need as many F-22s as we'd like to have. But let me keep on the nuclear side.

You see how different these are. They come and go, and I think we understand they're always going to come and go. They're fair arguments to start.

The story I like to tell for young officers when you hear these things, and unfortunately the young officers don't remember these days, but I know some in this room were alive in '85 and remember the Reagan buildup. What was it going to be about? A 600 ship combat Navy, right? We have less than 300 today.

There was going to be 47 combat aircraft wings for the United States Air Force. The Army, 18 armored divisions. We don't have armored divisions anymore, we have brigade combat teams.

If you could imagine that buildup today, not only will I give you all that conventional power, I'll give you all the L&M (ph) you need to go to the range every day. Every fighter pilot will be getting 40 hours a month. It's going to be nirvana. The training factor here can be so sharp, so capable, who would dare take on the United States of America in any form or fashion with this powerful

conventional force?

But I'm going to take away all of your nuclear capability. To President Maduro of Venezuela I'm going to give 30 intercontinental missiles and 30 nuclear warheads. Who has the power in the Western Hemisphere in this case? Who has the leg up at the negotiating table on economics, trade, policy? It's not the most powerful conventional force on the map, it's the most destructive and feared force that President Maduro would have in his hands. So when people start telling me that we're so strong conventionally we don't need nukes, I don't think they really appreciate the magnitude and power that these weapons have.

Here's one we've had recently, we don't need a triad. This has been debated many times since we invented it. I'm totally okay with debating the triad, but what I don't like is when people simply say we don't need that leg and don't go any further to explain why we don't need that leg. What's the strengths and weaknesses and why do we have that leg in the first place?

Of course the submarine leg is our survivable leg. It used to be the air breathing leg was our survivable leg too, and by the way it's nice to have redundancy. It can be a survivable leg today. If you put them back on alert and posture them like we did in the Cold War, it was the survivable leg for a long, long, long time. You can scramble them and disperse, them. It meant they were hard to kill.

But the submarine leg is our survivable leg today, and not many people ever argue against that. Of course, there's the risk of a transparent ocean someday. It has always been talked about and always been feared, and we continually hear that's not going to happen in the next 10, 20 years, but you have to worry about the next 30, 40, 50 years as well, so it's nice to have a hedge there. Plus, half that force is always in port and incredibly vulnerable when it is in port.

Then you have the bomber leg, which we talked about, which is not only survivable on alert but even when we're not using them on alert has tremendous strength in signaling, an essential element of deterrence. You've not only got to have the capability, but if the adversary doesn't believe you're going to use it you can't deter them. If you're the pansy walking around the school yard with a sledge hammer that you can't even pick up, if you don't go to the gym often enough to be strong enough to pick it up, no one is going to believe you're going to hit them over the head with it. You can't deter anybody.

Will, demonstrated will, is very important to the calculus. Sortie-ing B-52 and sortie-ing B-2s is an important way to signal your will and to escalate your signals of displeasure to other countries. Further, probably the most important part of the bomber leg of the triad is it supports our nonproliferation policy.

How is that? Well, if you read the purpose of deterrence it is to deter attack on the United States, and our partners and allies. The second part of that, which is often

forgotten by many, is the assurance part of the deterrent calculus. The funny thing about assurance is we don't get to decide if Japan is assured. They decide, they decide.

We can't impose assurance upon anybody. And when the TLAM-N was taken out of the inventory in the last Nuclear Posture Review time period, it turns out the Japanese weren't as assured as before. Why?

Well, they saw that the bombers were off alert. And with the TLAM-Ns off that meant the only thing left for an umbrella for them is the ICBM and the submarine-launched ballistic missiles. Not only did they not believe that the United States would launch an intercontinental ballistic missile in their defense, whether it be from a submarine or North Dakota, they also didn't think the Russians would find that a credible deterrent. They didn't think the Russians would believe that either.

The Japanese were kind of going, now this really means you've got to trade Tokyo for New York. Surely if you launch from the U.S. you'll likely be retaliated against on sovereign U.S. soil. They looked at the TLAM-N as a theater weapon that could be launched from within theater against tactical targets outside of those countries, perhaps, that they would be at war with, against fielded forces, say ships or formations, whatever was threatening them. They believed that that was a credible deterrent for their defense, one that the Russians and the Chinese would believe, and ergo they were assured.

It took a lot of work after that decision and consultations with them to convince them that no, indeed, we still had cruise missiles we could launch off airplanes, that we could put on alert. We still had gravity bombs and we could commit those from deployed locations forward, like Guam and other locations. The Japanese became assured again, but it was a great lesson for us to understand that we don't dictate assurance. And it's a great strength of the bomber leg, one that we often forget.

Everyone's favorite target seems to be the ICBM, which seriously is the least expensive to operate. It's not cheap to deploy. We dug those holes a long time ago and plan to re-use them. We've got to recapitalize the missiles and life extend the warheads, and recapitalize the command and control systems. But in a world where you eliminate the ICBM leg of the triad what you leave exposed to both Russia and China is the capability for them to eliminate our entire deterrent capability with five weapons, with the exception of the submarines that are deployed at-sea that day. Day-to-day, that's less than half the nuclear submarine boats we have in our inventory.

So you kind of do the math on this, and I won't throw out the classified numbers, but START is 1,550 deployed strategic weapons, and with five weapons they can take out King's Bay, they can take out Bangor, they can take out Minot, they can take out Whiteman, and they can take out Barksdale. The air breathing leg is totally destroyed, the home ported submarines are totally destroyed, and they have 1,545 weapons left. We have what few weapons we

have left deployed at-sea that day, which is a much smaller number.

Does this lead to World War III? Maybe not, maybe it leads to them looking across the table and going, are you sure you want to do anything? Maybe it's game over. Why would we want to put ourselves in that position?

This is called strategic instability. Not many people understand -- you've seen the articles written about LRSO, that it's unstable. Not true. Maybe from an arms race perspective, but even then there is no evidence that that has led to that because both sides have LRSO equivalence, based on ALCMS.

Strategic stability means no adversary of the United States ever wakes up in the morning and says, today is a good day to attack the United States of America, ever. Why do they calculate different if they've got to take out 400 ICBM silos? For one thing, it takes about two warheads per silo. So if you really want to neuter our capability to retaliate, that's 800 of your 1,550 weapons. That's a substantial investment.

Here's the best part as they think about maybe doing this. There's no assurance when those weapons arrive that there's going to be missiles in the ground because we can launch on warning. See how this makes it so that every day Vladimir Putin wakes up he goes no, not a good day to do this, by any calculation. It's because the ICBM leg is the most stabilizing leg of the triad for strategic stability, and

we've got to always remind people of that when they start talking about reducing numbers.

How about if we just had 100? Well, there's consequences to that for what they have to target. We want to make this a hard problem for them, and the triad does that. Not only do the legs of the triad back each other up, but they make it a more difficult problem to solve for an adversary.

Finally, on the bomber and the LRSO and the need for it, we don't have a lot of strategic depth here anymore like we used to have. We used to be able, at some point in the Cold War we were making up to close to 3,000 new weapons a year. Today Pakistan can make more nuclear weapons than the United States of America. I would venture to say probably North Korea can too.

I don't have any intel to support that, but I know Pakistan can make more and is making more new nuclear weapons every year than the United States. China is as well and Russia is as well. The French and the British are. In fact the only declared nuclear power in the world that is not making new weapons is us. We unilaterally self-constrained.

As a result, the infrastructure in place to do that is Manhattan Project stuff, and much of it has been dismantled and needs to be recapitalized, frankly. But because of that, we have to protect against the possibility that maybe you've got a problem in your Ohio-class boats.

Maybe it's generic to the reactor and the Navy calls up the SecDef one day and says, they're grounded. We're down to two legs. That's a significant portion of our on-alert deterrent that just goes away overnight.

You say, that could never happen. Really? Something that has happened in the historical past is you have a problem with a warhead that takes out an entire class availability. You don't advertise that, for sure, but it has happened. We've had to go back and fix it and re-posture and reconfigure the deterrent. So you want to protect against that.

The biggest protection we have today is not in our ability to produce our way out of this problem, which we used to be able to do in the Cold War. The way we can do this today is in short order we can have 20 B-52s in alert with 20 ALCMs on each B-52. That's 400 independently targeted warheads that will have a high probability of penetrating enemy defenses and reaching their targets.

That's the hedge we have for technical failure in both the ICBM warhead leg, ICBM leg for the delivery system, and for the submarine leg. It's a critical part of why we need to have the cruise missile continue to be developed and made available for the third leg. The bomber is not only important to assurance and signaling, it is our hedge for any failure in any other leg of the triad. So, we need the triad.

If I ever hear anybody in this room say this I'm going

to hunt you down. Our nuclear ICBMs are on hair trigger alert. That's crazy.

I got in trouble giving a speech about this once before the White House removed it from their web site. I grew up in the days of good cowboys and bad cowboys on TV. The good cowboys wore white hats and the bad cowboys wore black hats, and you always worried about Black Bart who warned the sheriff that my six shooter has got a hair trigger on it.

What did that mean. It's the picture that people are trying to paint in your mind and they're trying to scare you. It meant that if Bart pulled this thing out it might go off even if I don't want it to. I might have it pointed at you and if I sneeze it goes off, so you'd better mind your p's and q's sheriff.

That's the imagine people want to paint in the minds of the less informed about the alert status of our ICBMs. They're not in any way on hair trigger alert. Here's the analogy I like to use.

In fact, there is a gun and it's got a really big bullet in it. But that gun is in a holster and the guy who is wearing the holster, there's two locks on that holster with different combinations. The guy wearing the holster, he doesn't have the combination to either one. By the way, even if he did, it would take somebody else to help him out.

This is the alert posture, not hair trigger of our ICBM

status. Yes, if the president of the United States says launch these things, within very short order, shorter than the time of flight of a Russian missile -- and that's important for strategic stability -- those orders can be carried out. But they are not on hair trigger alert, they're on deliberate alert, for a deliberate and very important reason, strategic stability. So don't let anybody ever get away with calling these things on hair trigger alert. That is purely a scare tactic used by people of my age to try to win the argument.

I've already talked a little bit about the LRSO. The argument that it is destabilizing, I don't believe that for a minute. We've had cruise missiles for how long? The Russians have had cruise missiles for how long? The Pakistanis are developing cruise missiles. They're not destabilizing.

You could argue they might be arms race destabilizing. In other words, back in the day when parity was important to us -- it's no longer part of our policy, I'd point out -- if they built one we had to have one. If they build 10 we had to have 10.

That turned into a back-and-forth, tit-for-tat when you've got a parity policy on both sides of the ocean. But we don't see that today. In no way does the existence of an LRSO invite a pre-emptive strike, which would be the definition of an unstable strategic circumstance. I don't see any logic that supports that. So I would push back strong on folks who would suggest that we shouldn't have the LRSO because it's a destabilizing weapons system.

It's like, you never say you were the Air Force programmer. What you say is I was the hated-Air Force programmer. That's a hyphenated word, hated-Air Force programmer.

I got to work budgets for three POMs and it was a great learning experience. You learn everything that the Air Force does. You know where every nickel goes as you go through that process.

When I hear people say we can't afford the triad recapitalization, I know these are people who have never been the hated-Air Force programmer. I found it very curious when the first articles came out and said it's going to cost \$380 billion to recapitalize the triad. Guess what, nobody blinked.

About three months later, it's going to cost \$460 billion -- we re-sharpened our pencils -- to recapitalize our triad. Nobody blinked. The next article I read, it's going to cost \$1.5 trillion to re-capitalize the triad and operate it for its 30 year lifetime.

First of all, if you admit that you need a triad, and we have for all the other arguments, then you can't count O&M in the bill. If you need a car, what do you worry about? The cost of a new car, because you need a car. You're going to put gas in it. You don't use that in the calculation of whether or not you should buy a car. It's really about the price, right?

So it's not fair just to throw out \$1.5 trillion. Yeah, that's an accurate number, maybe an accurate number for the lifetime of the program, but again you're just trying to scare us out of making the right investment for the country. In fact, you should just look at the recapitalization costs in the debate, and yes we should drive to get them down.

But the notion that it's unaffordable is crazy. Even at sequester levels of \$600 billion dollars, if you just kept that flat, across 10 years of development and 30 years of operation, that's less than five percent of the DOD budget. We're not going to stay in sequester. We have evidence of that now, right?

So the total percentage cost is going to actually go down, I think, when you look at how budgets will grow as a percentage of the top-line. If you believe my earlier argument that you need these things, and no conventional might is equivalent, I'd say any dollar on conventional capability is a waste of taxpayer money if you don't first get this right. The deterrent, that's the foundation. The conventional capability we build on top of that, is what we do with the other 90-some percent of the budget, and try and operate and pay or soldiers, sailors, airmen and marines to live a decent life.

Part of the mantra goes we need to continue to show some leadership to meet our responsibilities for the Non-Proliferation Treaty, which is misquoted quite often, that others will follow suit. We have to maintain the moral high

ground here. Well, I just mentioned we've done that.

We've reduced our forces, usually in treaties with the Russians. But we've unilaterally stopped producing weapons. We have unilateral constraints by Congress and by administrations, both Republican and Democrat, to not allow us to develop new weapons, which by the way really bothers me because we're about to run out of the human capital that knows how to do this.

If we don't start tasking people to design new weapons and engineer them and get the technicians to run the lathes and put them together and test and see whether it works -- and by that I don't mean short of detonation -- we can do that. Whether you field it or not, you exercise this thing called human beings that in 20 years we won't have anybody left that knows how to do that. The last test was in '93. The last weapon we designed and fielded and put in the inventory was 1988, the W-88.

That's the biggest thing that's atrophying out there. It's not our weapons, we're life extending those. It's the human capital that will be available to some future president in 2030, 2030 or 2050 when the plutonium in our current weapons ages out. And yes, it will someday. It'd be great to be around then, but they will, it's physics.

If some change in the geopolitical environment requires more weapons or different kinds of weapons or just new weapons to be built, is there going to be anybody left in the United States that knows how to do this? I

guarantee you, this isn't like you pick up the recipe book and you just follow the instructions. This is a bit of art and science and engineering, and what we rely on today is modeling and SIM, which as an old test pilot I've seen bombs come off airplanes that they promised me would go down that went up. So this is a very, very scary thing.

Our unilateral actions -- I see no evidence of our unilateral actions encouraging restraint amongst anybody. In fact, since we've adopted this unilateral policy Pakistan has gone nuclear, India has gone nuclear, and Syria tried to go nuclear. The Israelis interdicted that.

Iraq had a nuclear program. We interdicted that. And Libya had a nuclear program. So our restraint has not deterred anybody from trying to field their own capability.

Something that Dr. Cast (ph) taught me, always remember Chili, nations will always behave in their own best interest, not yours. Sometimes they overlap. There isn't a nation on this planet that sits around and goes, what can I do for the United States? They may want to do something good for us, if it's in their best interest. So we've always got to remember that.

I guess the last one I'll touch on is that when they finally run out of reasons and new ideas for the debate, they'll say that's just Cold War think. That's when you know you've got them in the argument. I suppose machine guns and World War I tanks, we don't need those anymore. Tanks are World War II things were kind of developed for

that. We don't need those anymore, I guess. It's just a non-sequitur for this argument.

They are not Cold War think, they're current day think. As long as there's a country or countries as there are today that hold an existential threat over this country with their nuclear weapons, we need a deterrent. Conventional forces won't do it. Conventional forces won't do it. We need a nuclear deterrent, so don't buy this Cold War think argument. It's not, its current day think. It's current day think, and we're not thinking enough about it, is the problem.

I'll do one more. This is probably the most controversial one. It gets back to my love-hate relationship with nuclear warheads and weapons. I mentioned I was Catholic, and I am. I'm a very devout Catholic.

When we had our first nuclear deterrence forum at STRATCOM that General Helms (ph) organized, it was a great forum. It lasted several days and we invited all the heads of the labs to come and speak. We invited the policymakers to come out. People that hadn't had a voice in 15 years came out to this, and we also invited all the nuclear powers in the world, so France, England, Russia, China, Pakistan and India came and participated in the conference.

By the end of the first day, everybody's fangs were out in the audience. I mean, it had been 15 years since they heard anybody say anything good about the nuclear

deterrent, and there was panel after panel talking about how essential and important it was not only for the United States, but other foreign countries were saying how important it was, how it was important to them that the United States have a deterrent as well. That night, I intentionally invited the archbishop of the United States of America for all Catholics to give the dinner speech and give the policy of the Catholic Church of America on nuclear weapons, which is of course opposed to them.

It was like someone threw a bucket of ice water over (the audience ?). It was just the reaction I wanted. I want people to be thoughtful about these awful, awful weapons, and the Catholic Church position is essentially they are too nondiscriminatory to be a valid weapon of war. The irony is that that nondiscriminatory nature of them often helps you do what you have them for, which is to deter, not to fight but to deter.

So you'll hear this talk about a world without nuclear weapons and how nice that would be. It's a goal. It's not a goal of one administration, it's been a goal since Ronald Reagan talked about it. Every consecutive president has talked about reducing and eliminating nuclear weapons.

First, I don't think you can collect the knowledge back in the ignorance bottle. I don't think you can ever un-invent them. The folks that advocate for this will say in the same breath, they just never get quoted very precisely on this, that it will take a significant change in the world order for this ever to be possible, and they don't think it will

happen in their lifetimes. Which I say, it won't ever happen.

The day it will happen is called -- we know the day it will happen. In my faith it's called the second coming. Before that, you are supposing that all the countries of the world would yield to some omniscient power and authority that would enforce global zero. Remember, we all know how to make these things, and more and more people are learning how to make them, and the material doesn't all go away.

How has that worked internationally? The UN? That's a great example of why this will never work, because we can't even make it work for the UN, today. They're not talking about being the omniscient authority that can ensure nobody cheats on nuclear weapons. So one, I don't think it's possible.

But two, I would argue that they talk about climbing this mountain to nuclear zero. Every time they go up to a new base camp, everybody reduces a little bit. We pause and we look around and say, anything bad happen? Nope.

The top of the mountain is kind of clouded in fog but we're going to keep pressing. We'll go up a little higher, which means we can reduce a little more, and take another pause and think about it. Did anything bad happen? This is their story.

So finally you reach the summit. I'd argue that we've

been at the summit. We have stood on top of that mountain. Mankind stood on top of that mountain until August of 1945. We know exactly what a world without nuclear weapons looked like, exactly. It's well documented.

Throughout the millennia I can think of no time when mankind ever did not seek to be more lethal and deadly in the way they waged warfare. Nor did they ever step back from waging warfare. We made it illegal once. How long did that last?

There's nothing that suggests to me that humanity is better today than it was in July of 1945, no way. The last Adolph Hitler has not been born. The last Stalin has not been born. The last Osama bin Laden has not been born.

You can't un-invent these things. But standing on top of that mountain, this is what you would have seen. In World War II alone the estimated casualty rate, the death rate for the world, was somewhere between 60 and 80 million human beings killed in the six year period, from September of '39 until August of '45. When you do math in public you keep it easy. I think the middle number was 72 million dead, not casualties, dead. Casualties, the number is usually about three times that and includes wounded.

Seventy-two million dead people in six years. Six into 72 is 12 million a month, every month, on average for six years. Divide it by 30 days, it's about 32,000 a day, every

day, for six consecutive years.

Yes, there has been war since then. We lost about a day and a half worth of those deaths in Vietnam, total. A day's worth in Korea, U.S. loses.

Nothing scales like the horror of World War II and what it did to humanity on this globe. That was a world without nuclear weapons, and what did it take to end it? And what has been our history since then?

No major power wars, certainly not between countries that have the deterrent, since then. Can you prove it's always going to be that way? No. Can you increase the probability it won't happen? Yes, by having a strong deterrent.

Thanks, ladies and gentlemen.

(Applause).

Did I leave any time for questions? Fire away.

MR. HUESSY: Can you please wait until we get a microphone to you?

MR. : General Chilton, I'd like to talk about another aspect of deterrence, or have you speak about it, and that's extended nuclear deterrence, something you didn't exactly mention, although we have these great relationships. I'm just wondering, is it just unique to the American experience

to drape in the way that we do? Perhaps that's one of the failures in the Korean thing, that none of our adversaries like Russia or China are able to assure North Korea that they don't need their own. To what degree does extended nuclear deterrence be valuable for other nuclear powers to do that for their adjacent political spheres?

GEN. CHILTON: A good question. I kind of thought I covered assurance, which is extended deterrence. I just used a different word.

You're right. I think we're pretty unique in this regard. We are unique. But you've got to start with, how many close allies does Russia have? They've got Belarus, and that's about it, and that's not necessarily an alliance.

And then you look at China. Who are their close allies and partners? You posit maybe North Korea. Maybe they could offer an umbrella to North Korea and dissuade Kim Jong-un from developing -- or get him to dismantle what he's done so far.

I've not talked about that. I think that would be an interesting discussion. Always my antenna go up whenever I hear anything associated with North Korea and China, particularly North Korea, because they're liars.

My view on North Korea is Kim Il-sung wrote the playbook in the '50s and '60s. He gave the playbook to his son, who gave it to his grandson. The playbook hasn't changed.

The change over on our side of the pond is the administration every four or eight years and everyone comes in and thinks we can outsmart these guys and negotiate with them. They just open up the playbook and go, new president, here's what we do. There's nothing new that I'm seeing going on here.

What's new -- and people ask me this all the time. My daughter is stationed over in Korea. I was just over there visiting her. I've been asked a bunch, are they really tense around the peninsula? No.

They've been living under this threat, whether it was chemical, biological; in artillery range in Seoul; 25 million people in the greater Seoul area, which is the entire population of Australia for crying out loud, and a river to the south of them they've got to cross to escape an invasion force or artillery. They've been living under this since 1953, and they don't believe for a minute, in general, that it's going to happen. What's changed is now the guy up north can touch us, and suddenly we're paying attention, for good reason, for good reason. And not just touch us, but our allies in Japan and in the theater outside of South Korea.

I don't know the answer to that. I'd have to think about it. But I'm sure that the notion of encouraging that with China is probably something policymakers have thought about and rejected, because (I don't hear ?) everybody talking about it out loud.

MR. : First, that was an amazing talk, sir. Thank you very much for that. I learned a lot. It was very informative.

One of the big concerns you hear these days, and you hear it in the press a lot and throughout the public is, one person can give the command, the president of the United States. What are your thoughts on that and do you have any concerns?

GEN. CHILTON: It has always been that way and I think it's the right thing. Only the president can direct the release of nuclear weapons in this country. I think it's exactly the way we should be postured to do that. He's got to pass that order down through officers that are sworn to support and defend the Constitution of the United States, not the president. Remember that. It's unique to us as well, unlike in other societies. But I think you have to hold at the very highest -- and I think as Americans when we vote we ought to consider that. But remember, again, the principal reason we have this is to deter, to deter.

MS. : Thank you, Chili. Thank you for a fantastic presentation. The point you just made (coincides with why ?) we vote. That actually should be more in the public domain.

My question is about the so-called new notion of escalating to de-escalate, which leads in the Nuclear Posture Review to the recommendation to develop lower

yield nuclear weapons. I would like you (to comment ?).

GEN. CHILTON: There is a change in the Russian declaratory policy in the last several years under Vladimir Putin. Although the Chinese have a publicly stated no first use policy, if you read their documents you could drive a truck through that statement. They, in fact, have a very similar policy underlying that, which is if they're going to be losing a conventional fight they don't rule out pulling out low yield -- what is often referred to as tactical, although it's hard to imagine that there is such a thing -- but a theater nuclear weapon that doesn't impact the United States of America but would impact U.S. or allied forces in a fight that may be on their territory. It's a dangerous change in policy.

One might argue that was our policy in the 1970s when we had a conventional overmatch in Europe. Rather than redeploy our entire army and all those tanks that we had just brought home in the '50s as the threat increased and the '60s -- some of the people in this room probably sat nuclear alerts over in Germany and England. We had nuclear artillery rounds in the U.S. Army inventory, Honest John recoilless rockets, nuclear land mines that were going to be deployed along the Fulda Gap. And we said if you cross we're going to use these things. That was our way to deter.

What is different is Putin's -- he tries to characterize it as if we're losing this fight on Russian soil we'll pull these things out. But now what he's really saying is if we invade

Lithuania and Estonia and the Baltic states, and we start to lose or you come to their defense, we just might use these things. That's what he's saying. That's certainly what we're hearing.

Then it gets into a discussion of, if that's what he's saying, which is an escalate to de-escalate policy, do we offer the president of the United States -- the Department of Defense and the Department of Energy -- do we offer the current or future president the right tools to one, deter, that is credible and lethal; and two, if deterrence fails, to win? Again, I use a -- it's not a real good example, but if all you have is a sledgehammer in your backpack, all you have, people might (run up ?) and kick you in the shins. You're not going to hit me over the head with a sledgehammer because I kick you in the shins. Now if they kick your mom in the shins you might hit me over the head with a sledgehammer, but come on. I might just give you a little shove, but you're not going to kill me for that.

I just might. So here's the real danger, miscalculation on the part of the adversary. Putin thinks he can shoot a half a kiloton artillery round at U.S. fielded forces that are threatening to retake that land. Half a kiloton was about the size of our 155 in the Cold War. That doesn't sound like very much.

Half of 1,000 tons, that's 500 Mark 84s going off right next to your command post or over your formation. There's videos of these 155s shooting out in the desert. It's not a small nuclear explosion that goes off from half a

kiloton. It's very significant. You can calculate that surely with a half kiloton shot at fielded forces in Poland, for crying out loud, what do you care? We won't do anything.

Well surely we might. And if all we have -- and he may calculate that because he realizes our smallest weapon is 100 kilotons, to pick a number. The U.S. wouldn't do that.

Oh yes we might. You don't want the president of the United States in a position to have to make that decision, nor do you want Russia, in this case, to miscalculate. So you have to demonstrate the will that not only are you not going to get away with it, but if you do it we have tools at hand to do what deterrence promises it will do, either inflict unacceptable pain or deny the benefits you seek. That's the argument for these lower yield weapons.

I like the argument of rather than just modifying things it's a great opportunity to get our design agencies at work to build something new. It doesn't have to have capability -- we fielded many major kinds of weapons with all different yields. I would make it a new design only to exercise the infrastructure and the people. But at the end of the day, it's not going to be some wiz-bang out of the box device. It will be something that works and has the appropriate yield and flexibility, which is also key, to deter.

And at the end of the day it's not just a weapon. I think we need a strategy. The NPR gave us a couple of tools to develop, but that's not what you need. We need to

use all elements of national power. Diplomacy, we've got to get our allies involved in this.

We've got to get the world paying attention to this declaratory policy, which is bad, bad for the West and ultimately bad for the Russians if they ever stepped into it, if they ever use it. And we need to get them to change the policy, and that's not going to get changed by just fielding a couple of weapons. We need a strategy.

MR. : Chili, thanks again for being the articulate spokesman for deterrence that you are. You mentioned earlier theater weapons. Would you comment on how DCA contributes to deterrence?

GEN. CHILTON: I sure will. Thanks, chief. That's a great question. Once upon a time when I was, as John Handy (ph) would say, I was an early programmer, I remember when I was young and stupid. General Handy had been a programmer. That's when I tried to retire at the end. He said, I tried that once, get out of here.

I tried to -- at one point I argued for the closing down of our nuclear storage sites in Europe. It was the early 2000s and what do we need these things for anyway? I'm having a senior moment. A great American was on the NSC staff at the time doing policy, and no kidding, we were in Dr. Cambone's office and he was the PA and was ready to sign up for the offset. I was major close to making \$400 million bucks for my Air Force to go buy more of whatever else we needed.

He walks in and he makes a last ditch plea to Cambone. He says, we haven't had time to consult with our allies, just give us another year and we'll do it. So he said, okay.

Well, another year came and there was no way that offset was going in ever again. I didn't understand how not only from a deterrence perspective, but how politically important -- and that's another part of the calculus -- the NATO deterrent is. It's deployed on dual-capable aircraft in NATO, both conventional and nuclear capabilities. We control the weapons, but they have the mission and they're required to plan the mission. So it wasn't a STRATCOM job.

My view today is it's as important as ever to keep the NATO alliance involved in this mission set. But I would even go further than that, from a U.S. Air Force perspective. Because NATO controls the planning and execution of these weapons, you always wonder when the Russians look across the border and although they say NATO is not a bother and they're so powerful, they know what NATO's capability is and they also know how long it takes to get a decision made in NATO.

By the time NATO makes a decision they won't just be in the Baltics. If they wanted to go further west they would go a lot further west, waiting for a NATO decision to employ. And then the notion that NATO would employ first in that scenario, is highly unlikely.

So one thing the NPR does talk about is the U.S. unilateral DCA capability, which I think can serve as a broader deterrent than the NATO capability. I'm in support of the NATO capability for the political alliance, but I'm also in support of, for example, accelerating the block force software development for the F-35 so it can carry a B-61. When you look at the IADS that Russia is deploying in Europe and that China is deploying, they both have a strategy of pushing us out with air defense systems that would keep us from penetrating.

I would like them to know if they execute their policy of escalate to de-escalate that we can do the same damn thing with an F-35 that you can't shoot down, and that we can penetrate with an Air Force package of whatever it takes. So I've called for a worldwide DCA capability for our forces, not just NATO forces. I think that can help put pressure on North Korea, for example.

We don't have to put weapons back on the peninsula. They violated the agreement. We said we'll take ours off and you won't develop them. We took our off and they developed them.

If it's too politically hard to put them back on the peninsula, it's not too politically hard to put them in Guam. It's a very powerful statement, one that our allies would really appreciate. I think it's a very powerful counter-signal to both the Chinese in the South China Sea and the Dayu Islands (ph), Senkaku Islands (ph) in the East China

Sea, and to the Russians in Eastern Europe, of our will. Don't miscalculate. That's kind of where I land.

Thank you.

(Applause).

GEN. DEPTULA: I think all of you will agree with me that was a magnificent tour d'force, Chili. By the way, it wasn't 28 years ago, it was 38.

This is the anniversary of the centennial end of World War I, which you kind of alluded to in your comments about what happened when we didn't have nukes. That was supposed to be the war that ended all wars, and it didn't. While we don't know for sure, what you talked about may at least be able to put a cap on it.

As a thanks, we've got a book for you here, "Lafayette Esquadrielle: A Photo History of the First American Fighter Squadron." It's got a lot of pictures in it.

GEN. CHILTON: Good, I can read it.

GEN. DEPTULA: Thanks very much for being here. I know General Chilton has got a plane to catch, but he may be able to stick around for a little bit to answer some of your questions.

GEN. CHILTON: Yeah, I can.

GEN. DEPTULA: Thank you all for coming.