

**ICON Report**  
**Week of August 8, 2020**  
**Prepared by Peter Huessy, President of GeoStrategic Analysis**

**Interview with Hawk Carlisle, August 3, 2020, Remarks by USAF Chief  
David Goldfein**

**Q: Can you give us a little bit of a peak under the tent with the B-21 bomber program? How is it doing?**

A: I actually visited [the Northrop Grumman facility in Palmdale, California] twice. I actually got there and took a look and touched the B-21 as it was being assembled. Of all the programs right now that we manage in our acquisition portfolio, I will tell you that — based on company performance and culture and what I've seen in the program — I put the B-21 right now at the top of the heap in terms of confidence that I have in it as chief. ... I'm very, very happy with where the B-21 is headed.

**Q: How is the Ground-Based Strategic Deterrent program progressing? Do you have any concerns there as we go forward?**

A: I hope that as we build GBSD we will build in new ways of doing business in addition to what we build [for the platform]. Because what we do is provide a safe, secure and effective nuclear deterrent with that incredibly important leg of the triad. How we do it should evolve and mature because we don't recapitalize very often. If we're not careful we're gonna build a new weapon system to be managed in the exact same old way. ... Shame on us if we let that happen. ... Shame on us if we don't use robotics and technology and build that into GBSD.

What I want is the requirements to evolve with technology as industry solves challenges. I'd like it to get to a point where we're able to do a little bit of development ops, even in the nuclear business, so that as we achieve technological advances they can be brought into the GBSD without having us go through a two-year-long requirements review process. ... We've got to become more agile than that.

Breakfast Video Seminar Series on Nuclear Modernization and Sustainment,  
Missile Defense, Arms Control, Proliferation, Space, NNSA and Defense  
Policy, April-August 2020

**Schedule: 2020 Nuclear Deterrent, Missile Defense & Arms Control  
Seminars  
NNSA Seminars  
Space Power to the Warfighter Seminars**

**Seminars Completed**

- **March 10:** Secretary of the USAF, The Honorable Barbara Barrett
- **April 1:** General Daniel Goldfein, Chief of Staff of the United States Air Force
- **April 17:** Frank Miller: Franklin Miller, Principal, Scowcroft Group, “The Strategic Waterfront: Nuclear Modernization, Missile Defense and Arms Control”
- **April 29:** General Tim Ray, Commander, USAF Global Strike Command, “Nuclear Modernization in the Current Environment”
- **May 4,** General O’Shaughnessy, Northern Command C
- **May 16:** Drew Walters, Office of the Secretary of Defense, Nuclear Modernization & NNSA C
- **May 22:** Professor Stephen Blank and Mark Dr. Schneider, “Russian Nuclear Modernization and Implications of Escalate to Win” C
- **June 11:** Gordon Chang and Rick Fisher: “Chinese Nuclear Threats” C
- **July 14:** Uzi Rubin, “Iran’s New Missiles and US and Allied Missile Defenses: An Update” C
- **July 30<sup>th</sup>, 10am,** Admiral Charles Richard, Commander, US Strategic Command: “The Strategic Deterrent Challenges We Face”

▪ **Future Events Confirmed and Being Scheduled**

- **August 6, 11am:** Ilan Berman, Vice President of the AFPC, Iran Russia and China and Nuclear Proliferation <https://youtu.be/8qtaRh64IBw>

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| <ul style="list-style-type: none"><li>▪ <b>August 19<sup>th</sup>, 10am:</b> General Richard Clark, HAF/A10, Deputy Chief of Staff for Strategic Deterrence and Nuclear Integration</li></ul> |
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- **August 26<sup>th</sup>, 8am:** Jim Bridenstine, Administrator of NASA/General Raymond, Commander, US Space Command.

- **August 27: 3-430pm:** Dr. Brent Park, Deputy Administrator for Defense Nuclear Non-Proliferation.

- **August/September:** Dr. Brad Roberts, LLNL, Center for Global Research, Red/Blue Theories of Victory and Escalate to Win

- **September 2, 10am:** Robert Soofer, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy: “Nuclear and Missile Defense Policy Review”

- **September:** Israel Ministry of Defense, proliferation and the security environment.
- **September 14:** David Albright, Institute of Science and International Security, will discuss NK and Iran and nuclear proliferation threats and US Security
  - **Additional Seminar Events Currently in Discussion for Scheduling**
- Representative Cheney (R-WY) In process for September.
- General (Ret) Richard Formica and General (Ret) Ken Todorov: “Air and Missile Challenges in a Multi-Polar World”
- Chris Ford, Assistant Secretary of State for International Security: “A Review and Update of New Start and Next Steps in Arms Control”
- Henry Sokolski, CNEP: “Avoiding the Coming Nuclear Proliferation Cascade”
- Jim Miller and Rebecca Heinrichs: “Nuclear Modernization, Arms Control and Missile Defense”

## **Strategic Commander Admiral Charles Richard, July 30, 2020**

Here is the transcript and link for the Admiral Charles Richard seminar. This is a rough transcript including the Q&A Session.

[Nuclear Deterrence Forum: ADM Charles A. Richard, Commander of U.S. STRATCOM](#)

[The Mitchell Institute for Aerospace Studies](#)

Good morning ladies and gentlemen I'm Dave Deptula AAFA's Dean of the Mitchell institute for aerospace studies and welcome to the next event in our nuclear deterrence forum series we are extremely fortunate and pleased to have joining us today admiral Charles Chas Richard commander of US strategic command before taking the helm at STRATCOM in November 2019 admiral Richard held a number of key leadership roles he was commander of submarine forces in Norfolk Virginia deputy commander of US strategic command director of undersea warfare at the pentagon and deputy commander of the joint functional component command for global strike at US strategic command he's also worked in the offices of the undersecretary of the navy and undersecretary of defense for policy i think as most of you recognize that STRATCOM admiral Richard is responsible for overseeing the global command and control of all US strategic forces to meet our national security objectives by providing a broad range of capabilities and options for the president and the secretary of defense so welcome admiral it's really a pleasure to have you with us today.

I'd like to start our session by giving you the opportunity to make some opening remarks on the current priorities and issues that are confronting you at US strategic command so with that over to you admiral

Admiral Richard:

General, thank you and good morning to you and everyone else on the net and thanks to the Mitchell institute for providing me an opportunity to have what I think is a very important conversation here the I want to start off with an assertion and then we'll all keep a clock on me I may run a little bit long and I don't want to take all the time you want the timing on this.

But I assert that the United States and the department of defense have not had to consider the full implications of competition through possible crisis and possible

armed conflict with a nuclear-capable peer adversary in close to 30 years and when you think about that the implications to every single thing we do in the department are profound and we are we have a good strategy to go address that situation we have fabulous leadership from the secretary of defense secretary Esper and Chairman Miley they have made it quite clear to us in the department how they want us to go attack that and we're moving out at flank speed to go do that.

But it is important to recognize things have changed and part of that there's a couple of defining characteristics right you can write I am in great power competition six times on your war college paper and you're probably going to get a B but you have to do the work in terms of what does that mean one thing it means is it all starts with the threat right we used to know how to operate in a threat-based world that was the cold war and we did business very differently back then we're not in that again but we're coming out of a capabilities-based world right so we have to get back to the idea that all domains are going to be challenged that that strategic deterrence which has always been fundamental and foundational to the rest of the defense strategy.

What the department does is going to get tested in ways that it hasn't been tested before we need to be ready to answer that bill look I'll run through this pretty quickly i think we'll get into it some more in the q a uh but the threat is significant I'm only going to highlight the strategic forces a piece of this remember strategic deterrence is more than just nuclear deterrence particularly now today uh it is non-kinetic space cyber it is your conventional piece of this all of this has to be integrated together.

It is not just a STRATCOM job it is all combatant commands and we have to be able to rethink the way we do business real quick Russia uh bottom line is it's easier for me to tell you what they're not modernizing than to tell you what they are it's basically everything they've been at it now uh well over 15 years um they're all they're 70 something percent complete it's every element of their forces but it's more than that right it is their command and control it is their warning it is their doctrine it is their exercises it is their readiness it is an across-the-board step change in the ability of what they can their capabilities and what they can threaten us with.

I want to talk about China maybe a little bit more than i have in the past with china it is very important i think look at what they do not what they say i think

secretary Pompeo just said that recently i think he spot on target we have come to the same conclusion and again I'm going to talk strategic but it starts with actually their breathtaking expansion in all other uh military capabilities.

It has been stunning they always go faster than we do one of my favorite kind of recent examples is they didn't have a coast guard until like 2013 or something right now they're not exactly like us um but they decided in 2013 we need a coast guard today they have 255 coast guard ships right it is just stunning what they did.

By the way that is a perfect instrument when you're engaged in competition below the threshold of armed conflict sometimes known as the gray zone but now nuclear strategic is just the next thing on china's to-do list right so they are about to finish building out for the first time on actual triad by adding a strategic capability to their air leg they too have new road mobile new silo based much better capabilities i can't go into a lot of detail they have new command and control they have new warning they have better readiness and while they espouse a minimum deterrent strategy they have a number of capabilities that seem inconsistent with that and regardless of what they say they certainly have the capability to offer execute any number of uh strategic employment strategies not just a minimum deterrence thing.

So in the face of that we're going to have to change the way we think about deterrence right the basic equation in deterrence has not changed right go back read your khan read your suing the uh can i deny credibly deny benefit or impose a cost which is greater than what the competitor seeks to gain it's just how you apply that has changed.

I'll just very quickly um it's the dynamics associated with the use or potential use of force those are changing and we're working very hard to understand that a good example is um china is on a trajectory to be a strategic peer to us by the end of the decade **so for the first time ever the US is going to face two peer-capable nuclear competitors who are different who you have to deter differently we have never faced that situation before we are working very hard to strike along with a broader joint force uh to understand that this all couples i guess would be my biggest point right what you're doing strategically is influenced by what you're doing conventionally and it walks all the way down into the gray zone the level below the threshold of armed conflict it is not linear um the idea that there is a ladder here i think is flawed**

**it is non-linear there are discontinuities and there are points where a competitor's decision calculus may flip very rapidly on you based on events particularly inside a crisis we're working to understand that and be able to have a shared vision of it inside the joint force.**

Just a couple more points sir and the rest of the audience and now we can get into some of the questions um the uh so what do you do about that once you kind of have a try it uh that i have to have a triad a number of the modest supplemental capabilities that were requested to give me the capability and the flexibility to address the situation that i just described i think you'd be proud of us uh that that throughout uh covet 19 and all the impacts of worldwide pandemic STRATCOM did not miss a beat we remain fully mission capable throughout a real credit to the General Ray General Grady, General Karber, and others who saw the threat executed and updated plans that we had and able to operate straight through.

But I'll make one more point we move into some questions we have a triad and the capabilities that we have in part because of the flexibility it provides the ability to hedge inside of it right so that for an issue in one piece we're able to compensate with the others as part of the original brilliance in the design but what it also enables you to do is address the threat or the risks you didn't see coming we have to be very humble when we look over long term in terms of what we think we're going to need to defend ourselves that we can accurately predict every single situation or contingency that we're going to be faced with we always built margin into our strategic forces to make sure that we could account for the unknown risks that may be out there on alongside the risk that we could reasonably see coming i think covet 19 is a great example of where things can manifest that you don't see coming and with this mission set because of the consequences it is important to have margin ready to handle that my predecessors gave me that margin that enabled me to work through covet 19 i think we as a nation uh should learn from that wise lesson in terms of our decisions going forward.

General I got a lot more stuff to talk about but I'll just stop there in the interest of time and we can start getting into some questions.

Deptula: Well thanks very much admiral for that great uh overview of where STRATCOM is today and some of your concerns so let's jump right into these issues in a bit more detail excuse me um you laid out very nicely very succinctly

both Russia and china's efforts in uh not efforts but accomplishments in modernizing diversifying and expanding both their conventional and nuclear forces amongst those could you share with us a bit what aspects of their modernization programs that you find most concerning.

Admiral Richard: I would offer uh for both of them is not any one aspect of it it's the comprehensive nature of what they're doing it is the totality of what they're doing um so when you add it all up and then couple it with their actions right um we see aggressive action around the world by both of them um that that concerns me uh that that we are not converging on a path uh that i think is beneficial to the world so it is a combination and i would go back to i we have to broaden our thinking between a simple weapons count right it is much more complicated in that in terms of what someone can do and i think another key piece here is that this with strategic with the weapon systems that we're talking about it is merely the threat of their use that will accomplish a political aim it is a characteristic it is really not matched by conventional forces at least not to the same magnitude and i don't think we respect what could be done simply by merely threatening the use of these weapon systems and are we fluent in our ability to deter and respond to that very good one of the other points that you made that i think was probably got a lot of people's attention is the sort of the it's not the changing nature of deterrence because it continues to serve as a bedrock of our national security architecture however in many respects nuclear deterrence in the 21st century is a bit different than it was in the previous century i mean you highlighted one of the principal challenges that the Chinese are going to come up to speed here real quickly and by 2030 we're going to be facing two pure competitors in the nuclear regime are there some other key differences uh out there that concern you and what should the united states do to adapt to these changing circumstances well you hit on uh a big one which is uh and even in my own explanation sometimes it is uh tempting to simplify this to a two-party problem and it is not it is a three and actually broader than that piece another one that I'm under emphasizing here a little bit is I'm very proud of this nation's extended deterrence and assurance commitments that we have made right and how we will handle uh honoring those against this type of uh future that we're in i think is something that uh we need to continue to work the uh understanding uh in great detail these uh the relationships uh and how do you bring in space how do you bring in cyber right what would constitute a strategic attack in space or cyber uh thinking through all

of the dimensions of this how does this all couple back down into the gray zone I'm giving you a bunch of the theoretical pieces of this that's the foundation piece and then we move on from there thank you now getting down in a little bit of detail about some program specifics both the house and the senate armed services committee markups of the uh 21 NDAA fully funded the ground-based strategic deterrent program which is intended to replace the Minuteman 3 ICBMs why is this program critical and what are the potential implications of any further delays or even a cancellation as some have advocated for both in terms of cost and our overall nuclear deterrent posture well sir uh one i almost wish we didn't describe the triad by the weapon systems that it is made of it is it you we describe it in terms of the attributes right so if you take away the ICBM leg in fact if you take away any leg I'd give you a different version of this you just took away a stack of attributes that we have found useful in the past and see being useful in the future can i compensate in some respects by coming across and using other elements of the triad yes but not with those same attributes which means you just narrowed the range of uh situations that were able to uh effectively deter you just took away a future hedging capability um and on top of you were talking about the ICBM specifically um it one of the best things i think you could do if you want to accelerate china becoming a peer with us strategically is to take away the ICBM lift because you just made their problem a lot easier and so i can kind of go piece by piece down the triad and show you that that if you take a piece of it away that's a stack of capabilities and attributes that i have don't have that's going to make it that much harder for me to execute the policy of this nation is documented in the nuclear posture review and if you go far enough I'm going to have to ask for a new policy okay very good it is a complex subject on one hand on the other hand it's pretty simple uh and the triad has stood us in in good stead since it came into existence when i had the opportunity to speak to general ray on this series a couple weeks ago he mentioned that the long-range standoff weapon or LSRO for short is critical uh to maintain tailored deterrence to reach any target around the globe and that there's a point in time when legacy weapons simply won't be survivable against modern air defenses what's your perspective on the implications of any delays or truncations of the LSRO program and are there any benefits from accelerating the program so Gen Ray is spot-on target in terms of the implications of not having that weapon system and then fundamentally it'll start to call in uh it will limit the flexibility and the viability of your air link right which is a key component inside the triad i think if you go back and we have repeatedly shown in history that when you're in great power competition what

you want are bombers right that you want the range you want the payload they're incredibly flexible for you today's world is no different you have to honor the threat that's why you get into the need for the LRSO that specific piece of technology if don't have an LSRO then the B52s are just not very useful at that point and we're counting on them for a while now it's the acceleration on LSRO I'd take it all tomorrow uh if you uh if we could get it to me right and i say that not really being flippantly remember i am responsible to the people of this nation for their defense uh and i take that and my command takes that very seriously the better capability i have to do that the better job i can do that but i would uh phrase that question in terms of at what cost right if there was a trade-off that had to be made i would want to make sure i understood what i was giving up for that so let's just keep it on time all right if we just keep it on time that will work very good now moving on to the other leg uh our uh nuclear capable submarine leg SSBNs are often perceived as invulnerable um however both china and Russia have invested significant resources in improving their submarine hunting capabilities and some would say that the submarine force remains relatively brittle meaning that since there's such a large percentage of available weapons housed in the single platform that tends to provide a small number of nodes it can be affected to great effect um so how do these factors play into your thinking about the requirements for our SSBN force well I'll start with and this is true of any stealth platform although the submarines are probably the best example is that the when we say the submarine leg is survivable that's not based on just individual platform survivability right submarines are very difficult to find there's always a classic hider finder competition going on it's no different than in any other domain and they told me I'm trying to be very you know seriously informal they don't have cloaking devices on them right they are not impossible to find they have to be operated correctly just like any spell platform but you derive that from by force survivability right it is the combination of the number and location and the way you're operating the force is what gives you that very high confidence that that leg is going to uh survive so I'm very confident uh that the navy's taking the right steps to ensure that we're able to maintain for survivability uh general you are quite correct i think it's important that when we set the requirements particularly the numbers for the platforms that we were talking about that was based on a specific threat if you change the threat on me then we have to come back and then rethink what the right number is and that's going up i think it's also important to understand submarines are just the easiest example this is true in all the rest of the legs going down you start to it's not just what the

threat looks like but it's what it takes to maintain that attribute of the leg there's a minimum number of submarines you can get to that it doesn't matter what their number of weapons or missiles on them it's the number of platforms i have to have to make my statement remain true on for survivability um but that is why the navy and ins.com will say right at least 12 we need to see what the threat looks like well let's turn to the final leg of the triad although you've already mentioned it and that's the air breathing uh segment until the first b21 has become operationally available um the current airborne leg is dependent on fewer than 100 b-52s by the way the youngest being 58 years old and the b-2 aircraft of which we only have 20 that are capable of penetrating modern air defenses so i think i know the answer to this question but how important is it to keep this leg operationally viable well it is it is absolutely important and because of the signaling flexibility that you see in the air lag you get an almost daily demonstration right of what the air leg can do for you i would point back to uh the way we're executing and talk general ray about this because he's responsible for it the way we're executing the bomber task force missions is probably the iconic example of what dynamic force employment looks like and I really proud and thankful for the effort the air force is going through to sustain this sortie pace for B-52s B-2s and i just flew KC-10 to hit the first air refueling mission so the professionalism the commitment of the service they're doing the right things to make sure that those platforms make it to their recapitalization points but and I need that well very good and I was going to ask you if they gave you the opportunity when you're flying to B-52 to attempt to refuel it because I've had the good fortune of flying the B1 and the B2 and the B52 and refueling each of them and that's a bear trying to trying to refuel behind that tanker and a B52 later I'll tell you I just tried to do a heading change that's a it did turn me over in the B2 on the boom in the stem in six seconds that's all I lasted right that's tough much respect to the airmen that know how to do that admiral you've referred to STRATCOM as the parent of Spacecom which it is how's that process of transitioning responsibilities and personnel over to Spacecom gone what's worked well and what remains to be done and how do you envision the two unified commands working together in the future hey sir it just it probably just couldn't be going any better General Raymond was here just yesterday and in fact we were having the first STRATCOM Spacecom warfighter talks so I probably shouldn't characterize it anymore as the proud parent it's more you just you just went to visit the family business that you had turned over to uh one of your kids right so they are up fully operational you know we have a peer relationship now I

think that's a key piece um we're still supporting them in a couple of areas you know the bureaucracy has a long tail in some cases um but we see the world the same way i would really compliment General Raymond in space command for some very good work in terms of thinking about architectures strategies we had a good back and forth a number of things that they're doing in a in a space architecture i think have very direct applicability to the future nc3 architecture that I'm responsible for in uh my nuclear enterprise our nc3 enterprise center had uh and so it was a very good meeting and that idea that that we are so closely coupled is something that we share with all of the other combatant commands right i can go through and give you a similar story with every other one of them and that's a key thing that we have to do in the future in terms of global integration right the ability for us as 11 combatant commands under the leadership of the chairman and the secretary to have a shared understanding right of what the nation expects us to do and then globally integrating fires ops messaging integrated strategic deterrence planning so that we all function as one that's going to be a key advantage that we need to seize moving into the future outstanding um let's turn to the subject of arms race dynamics just as you summarize Russia and china currently modernizing their nuclear forces in the united states is in the initial stages of a long deferred nuclear modernization program beyond the price tag critics of the nuclear modernization effort claim that the u. S is spurring a renewed nuclear arms race how would you respond to those criticisms sir I'll tell you um we have been working to reignite a debate uh and better understanding this meeting is a great example of that about strategic deterrence and part of that is a social media campaign where we're addressing uh these kind of pervasive myths that are out there and no we love the conversation right uh we look very hard at every comment that we get back asking ourselves did we miss something is there something in here that we need to seize on and take advantage of but the i just confess i don't understand the criticism that we're starting an arms race i just went through that that 15 years ago Russia unilaterally starts to modernize her entire uh arsenal 70 complete china's not too far behind our response to that at the time is to do nothing right we don't do anything right the no one has uh lowered the role of nuclear weapons in their strategy more than the united states I'm having my staff check on this i think we are the only nation ever do unilateral um nuclear reductions i think you can go back to north history and see where we did that um ask yourself what we got in return for them um we have extended these systems the b-52 is your time about 100 years right we're going to take Ohio's design for 30 years we're going to get them to 42 a

whole class going longer than we've ever had any individual submarine go um  
minuteman was a 10-year lifetime missile we're going to take for 60 and then at  
the last possible moment to avoid the beginnings of unilateral disarmament in the  
face of the greatest threat we've faced in 30 years I'm accused of starting an arms  
race I just don't understand that well said admiral uh well said um now with  
respect to allies and non-proliferation I've heard you say that the united states  
policy of extended deterrence and assurance has played a pivotal role in  
promoting non-proliferation could you elaborate a bit on that point and how does  
our nuclear modernization factor into that equation well the bottom line is and I  
am very proud of this nation and the decision makers that established that policy  
i think that has done more for non-proliferation than any other single act in  
history i think it has been good for a free and open world but to do that you have  
to have capabilities such that you give your ally confidence that you're able to  
follow through on the commitment and again we're going to get tested in ways  
that we haven't been tested before and so absent these capabilities it is going to be  
harder to give the allies the confidence in us that we have the capability to follow  
through on the uh very valuable commitments that we've made um one of the uh  
options that uh is sometimes discussed is this issue of a no first use policy um i  
presume that you're not in favor of a no first use policy but could you explain to  
our audience what impact such a policy would have on our commitments to our  
allies so um i my best military advice remains strongly that a we should not have  
a no first use policy uh and there's many reasons for that uh the uh assurance to  
uh allies and others that we've extended that commitment to is at the top of the list  
right second is i just don't think it has much credibility um i the soviet union had  
no first use policy and i don't think that general may say okay we're up we're good  
um and uh if i could the problem with having me i am a you know a navy gun  
love telling c stories um the uh if you go back far enough in our history this  
nation used to have a policy that said we would not execute unrestricted  
submarine warfare uh if you go back up in the early part of the century  
unrestricted submarine warfare was held with uh it's not the same but at the time  
it was considered barbaric that a civilized nation would consider doing that and  
there were these very long debates between nations whether you should you  
should and our policy for decades was that we would not uh execute unrestricted  
submarine warfare until that policy changed in an afternoon on December 7th  
1941 and in fact there's some historical debate if a subordinate commander didn't  
do it on his own before the president told him to do it's a question of date time  
groups and so I think we have to be very humble uh in terms of the credibility of

policies like that particularly when um just be humble speaking of limited use in different varying applications Russia maintains uh a significant arsenal of small nuclear weapons I know some people refer to tactical nuclear weapons i just i just there's nothing tactical about a nuclear weapon but be that as it may it's been postulated that Russia might pursue early and limited first use of nuclear weapons in a conflict in Europe to end it on terms favorable to Russia this is an approach that's been described as escalate to de-escalator what your predecessor general heightened referred to as escalate the wind is that an accurate portrayal of how Russia envisions the role of small nuclear weapons in its nuclear strategy and doctrine and what kind of impact does this have on our requirements for deterrence well sir one uh they certainly are capable of doing precisely the strategy that you just described right and uh that is a type of discontinuity or non-linearity uh in terms of deterrence um uh theory I agree with you by the way there is no such thing as a non-strategic use of a nuclear weapon in fact i think this distinction that we have between these are strategic and these are not is actually very artificial uh is at best dated and may have always been wrong and so i caution this for trying to put them in in these two buckets i can't imagine that you would look up and go wow that's a non-strategic way it's okay um so we got to be very humble about that my job is to make sure that given what they can do in any postulated use of this the example we're talking about here being a very good one how do i ensure in crisis probably that the equation still holds that when they think about that i can either deny the benefit or impose a cost credibly such that i deter the use i think the nuclear posture review was wise in the supplemental capabilities that were added to the ones we already have i think it's important the ones we have are very capable but they certainly didn't deter Russia from developing the very capability that you're talking about hence the need for a more comprehensive approach i want to add on just one other point in terms of the uh the fact that they have several thousand non-treaty accountable weapons actually concerns me uh in terms of why do you have those um i I'm somewhat surprised sometimes that in our conversations there's not more about why do you have those things right uh that that wasn't free um and uh my deputy commander i I'm glad we're having the new start discussions this is a place where we can get into that type of conversation i applaud um both the united states and Russia for at least being able to sit down at the table and let's discuss what we have to do to improve confidence safety security and head to a mutually beneficial world i sure wish china would sit down a responsible power has those conversations but that's so important to me that i have dedicated my deputy commander as a part of

that team right so that i have John Boussier as a part of those conversations to go after and really bring that piece into um into the conversation of what is the purpose of those uh and uh how can we account for that oh it's very insightful thank you uh as a bit of a follow-up is the w-76-2 low-yield trident submarine warhead sufficient to counter the perception of an exploitable gap in u. S regional returns capabilities and are there other options out there that you're considering well uh sir it is a very welcome addition it is doing exactly what it was designed to do but it's important to remember it already it added into an already existing stack of capabilities right that is designed to also address that uh including low yield ALCM the dual capable aircraft capabilities that we have i need those to complement you know w762 is just a part of that um stack of capabilities and then the NPR also wisely talked about the need for a sea launched cruise missile right and again that has utility in that arms area that I'm responsible for as well as a very good beginning to offset the numbers of non-treaty accountable weapons and has great benefit in the assurance of our allies okay one more sort of broad question before we open it up to our audience um in your view what are the most serious misunderstandings among nuclear critics out there uh especially uh members of congress uh general I'm going to answer that question but i if i could get two more minutes i want to talk about nc3 for a second as well i have a bit of a touch of good news in that area you know my the biggest misconception i think and i won't call it a misconception it's almost an absence is we never seem to acknowledge that there's a threat out there that most of these conversations are almost on this frictionless plane and we're only talking about us um when in fact everything that this nation does is in in an effort to defend itself it's in an effort to address um threats that we have out there and the uh and I'll tell you i think a sign of that is look I'm you know an old cold war guy when i was younger i actually done a ducky cover drill right i suspect you have a piece of your audience that actually knows what I'm talking about and then there's a ton of them that that have no idea what i just said um i was in elementary school by the way not high school but the point being here is we palpably could feel the threat back then we knew it was something we had to defend ourselves against and this is what i think is the great accomplishment of the united states not only did it not happen right we have 70 years of nuclear non-use um we don't even worry about it anymore right the threat's still there right my kids have not spent one moment worried about the fact that there could be nuclear use that's victory that is victory in strategic deterrence to not only prevent it or deter it but take it out of the American psyche so i worry we forgot how we got here right that wasn't free that

required wise investments and the capabilities are needed that is hundreds of thousands of men and women who dedicated their professional lives in this mission you're never going to know their names right um but they took the fear out and realizing this was not free I'm going to the future that is going to require these capabilities we're going to have to have men and women who are also willing to go do that such that that we don't have to live inside that world that's my biggest fear um uh and the second thing i wanted to mention on nc3 um because i am proud to say of course that the great leadership by the department congress you know their recapitalization systems are fully funded including nc3 uh and this is the first time you may have heard us start talking about it yes there's some cats and dogs inside the normal pentagon budget process right that we have to get through but the nc3 enterprise center right i think great leadership um by then secretary Mattis his successors have followed it we now have a responsible commander me a an organization we understand this in a way well we haven't in a long time it's always been good right i would not want to imply that we've ever had any issue in the confidence of nc3 but i can put it all down on a piece of paper i can show you how it all interrelates i can show you how its funding status is i can show you the operational implications of that that's in the future i can do the same thing day to day I'll stop because it's a much longer conversation but we have come a long way in just one year in terms of uh understanding and strengthening our nuclear community control capabilities.

General Deptula: Well admiral thanks very much for those uh really insightful uh comments um on the subject of nc3 uh one of the concerns at Mitchell institute for a while has been the fact that as you mentioned early on people tend to focus on the weapon systems themselves uh and they don't think about the glue that puts that all together so about a year ago we put out a study on modernizing u. S nuclear command control and communications and I'll send your staff a copy afterwards but just to highlight the points that you made now obviously it's a difficult topic to follow because it's so highly classified but that's one of the reasons that we did it was to try to make people aware of the significance of it's not just the weapons themselves that need to be modernized but it's the command and control process too um you know there are a lot of people out there that don't even know that there's such a thing as an eight-inch floppy disk I think I don't know whether all those are gone yet or not but uh it's something that needs to be paid attention to so again on behalf of the Mitchell institute we

really wish you the very best in these ever increasing uh challenges and a reminder to our listeners our next event is going to be with members of the air force warfighting integration capability group next Wednesday August 5th as we take a deeper look at their recent global futures report.

Now we're going to uh open up the session to our audience those of you who have been on please use the raise hand feature and when I call on you please identify who you are and your organization so let's start with Teresa Hitchings

Hi sir this is Teresa Hitchings from Breaking Defense thank you for doing this my question is with regard to how STRATCOM is integrating with the efforts to create a joint all domain command and control system given that the networks that are used for NC3 for example but also for providing commanders with warning tend to be enclosed highly classified networks and that makes it difficult to integrate that information with networks that also provide tactical um for example information to soldiers on the ground and yet that's the goal of Jazy too so I was wondering if you could talk a little bit about how STRATCOM sees itself and those networks being integrated with Chad C2 thank you.

Admiral Richard: uh yes ma'am and so one uh and the bottom line is a high degree of integration between J2C2 and NC3 next not 100 right the consequence of failure in the NC3 mission is so high that it warrants its own dedicated stack of capabilities to guarding and the example I like using is most ships in the navy are multi-mission multi-role strategic deterrence is so important we dedicate 14 solely to that function right you're going to see a similar degree of overlap strategic platforms are still platforms they're part of the joint force and I need them integrated into the uh broader department's command and control system you will see us doing uh conventional nuclear integration in a way that we have never done before it's just what is required for us to do complementary effects inside the battle space there are new ways to get after the classification differences and handling differences as opposed to building out completely separate circuits so there's an operational imperative to go do this and the second thing it just makes sense from a wise use of resources standpoint to have a high degree of overlap between the two just not 100 over .

okay thank you how about Michael Gordon yes admiral Michael Gordon from the Wall Street Journal uh sir you um spoke um about the Russian nuclear forces and their extensive modernization efforts the question I have is right now we have verification uh means do on-site inspection and other provisions under New Start

to keep tabs on what the Russians are doing um but there is the prospect new start may expire in February and not be extended and that there may be no other agreement to take its place at that juncture anyway my question is not about the politics of new start but how important are these verification and monitoring provisions for your efforts to keep tabs on what the Russians are doing and also to maintain stability in the u. S Russian nuclear relationship.

Admiral Richard: So I'll one start that in the end any treaty between two nations is fundamentally a political agreement and so in the end this is a department of state-led effort um i certainly support any agreement that enhances the security of this nation and it looks like ample opportunity um to enhance the security of both uh the u. S Russia and china by this mechanism hey those verification mechanisms that you talk about yes they are very important are there a prized attribute i would say from my standpoint in terms of what's in new start I'd be cautious we're only actually verifying less than half of the total number of nuclear weapons that they have we do not have an equivalent verification mechanism on the non-treaty accountable weapons and i think it is uh we have to be cautious not to just dismiss that um and so it's not like we are operating in a world where we have a thorough for everything that they can threaten us with verification mechanism but i do prize that i would like to see us go have that more broadly uh and uh that is a part of my advice that I provide to my department's leadership.

Thank you sir Amy McCullough with air force magazine uh you mentioned china's growing uh capabilities and the air force just recently put out an arctic strategy other than icebreaker missions in that region I'm wondering if you've seen um any other type of flights like bomber flights or anything like that where they're trying to exert influence there.

Admiral Richard: You know from memory uh i can't I'm not sure in other words there wasn't anything that completely got my attention that question is uh better directed into PACOM and it's not like we don't talk to them um but you're right China has made it clear that they intend to be an arctic nation and whether i have seen it or not i am certainly watching for their developments in that direction to make sure that i properly factor them into our strategic deterrence efforts.

Pat Tucker are you in discussion with DOD leadership on delaying nuclear modernization efforts due to the potential budget constraints of responding to the covid 19 situation?

Admiral Richard: The answer is no uh and in fact i think it's an important point for us to consider is just because one threat manifested itself didn't mean that any of the others went away uh Russia did not give up a single nuclear weapon because of covid 19. china did not do any in fact their actions have been exactly the opposite so i have a responsibility to defend us uh regardless of whether or not we have a uh a worldwide pandemic or not and i would offer is i don't think that uh there's a choice that it's always a false choice to say i can't afford modernization because i have to do covid this nation has many resources we know our priorities we can afford survival um the department is focused on assisting the nation in this great challenge uh we do have to think our way through it there will be implications uh but we still have to defend ourselves because the threat is still there.

General Deptula: yeah admiral if i may um i like to remind people that i know folks argue about the balance between guns versus butter but if you go to the preamble the constitution and i dare say there aren't too many people that will argue with that although there are some out there but it states that the fundamental reason or one of the fundamental reasons we stood up with this this nation was to quote provide for the common defense comma uh promote the general welfare not the other way around anyway

uh let's go back and see more point on that if i go ahead is um so we have a debate sometimes over covid 19 versus um uh modernization there's a cousin to that inside the department right and i go back to the strategic deterrent is foundational and we can't take that for granted and so uh if the foundation doesn't have what it needs then the viability of every other capability of the department gets called into question something as simple as the other guy could just escalate right past you and so it's not only relative to covid but that we have really thought through hard as a nation to put the minimum amount of resources against our most important mission it's optimized any other thing that we do to that carries consequences in terms of assumptions that we make across the rest of the department and nation.

Paul Bernstein from national defense university could you please discuss the work the command is doing with regional combatant commands to help them prepare for the possibility of limited nuclear attacks in their areas of operation.

Admiral Richard: There's a number of things that we're doing but the one that I'll probably start with here is that we have initiated in the last six months a uh a new type of analysis called risk of strategic deterrence failure uh and so we are uh taking pieces of what's been inside STRATCOM and the joint force more broadly that's where these other combatant commands come in so then on a daily basis we are coming up with a formal estimate of the risk that deterrence is going to fail i so i acknowledge this is an analytic process getting after something that is fundamentally subjective but the assertion here is this risk carries so much consequence that i need to be able to describe to the secretary and the chairman at all times under all conditions what risk we're taking uh with regard to the deterrence failing and then inside that nuclear deterrence failing that's a key way that we're working with not only the regionals um a big chunk of that analysis requires you to understand what's happening in space what's happening in cyberspace in some other areas and we have some great formal mechanisms with all the combatant commands to pull in what they see and what they're doing put it into my best possible emulation of the other guys decision calculus and then be able to provide the department all right here's where we sit here's the risk here's the margin it's currently low i think you would expect that um but we're ready to go do that in crisis we're looking at it long term uh really focusing ourselves given the consequential nature of what we're talking about.

Bowen Ballard uh would you please give a current update on the status of hf availability in the event of satellite denial.

Admiral Richard: that has an early conclusion that we have come to as uh when we think about what nc3 next is going to look like in fact uh it's probably worth it a moment here is the difference between nc3 beyond what you just talked about sir in terms of it's very hard to visualize like it's 204 systems that all have to operate together to go accomplish this you know we talk about recapitalization the triad that's actually a pretty straightforward thing to divisionalize you have boomers bombers cruise missiles intercontinental ballistic missiles and when you're done you have boomers bombers intercontinentals and supplemental

capabilities and you will have them for a long time they get modernized nc3 is not like that right you will see it iterate going into the future as we improve it incrementally that's the way that technology works that's the way that threat evolves but we know now that um hf will be a component to that um my hf availability is good right now i have just placed renewed emphasis on basically everybody comes up on every circuit all the time if your tactical situation permits us to make sure that we're taking advantage of that and I see a great role for relatively small costs to buy us a relatively less dependent on infrastructure path that complements the other work we're doing in nc3 quite well.

Sarah Sirota hi thank you for doing this um i have a question about the LRSO program um if the urgency for this weapon is so um strong I'm curious if you think that NNSA is taking too risky of a schedule for the program uh for delivering the production units um and if you have concerns that that could lead to delays for other warhead modernization programs that they're overseeing and also um if you think that the air force's decision to end the competition early could lead to risks in terms of the design for the final LRSO weapon.

Admiral Richard: hey so a couple of points right uh yes there is urgency in LSRO just like there is urgency in every other piece of the triad i wouldn't want to single out LRSO as being special I need them all moving with urgency like with what we're going to have to have with LSRO to pace the threat um look we have a very good working relationship with NNSA via the nuclear weapons council that has been very productive for both departments in terms of staying synchronized the while the fundamental responsibility for assessing the risk that you just talked about really belongs on the service and acquisition side of the house we watch it very closely no I don't have any concerns and in fact to your broader question of the acquisition strategy I have full confidence that the air force um has a good acquisition strategy they understand the risks and that they're going to be able to deliver that program on time okay here's one from frank Gallegos uh keeping to the theme of the breathtaking expansion of the threat from our near peers what could we in industry do to help you the most where would you have us mass our intellectual resources to help improve our strategic deterrent go faster right whatever we have to do to sit down together to go faster it is and i think general heighten uh has said this very eloquently in a number of cases um this is when operational risk gets back on par with programmatic and technical risk right you change the way that you run your processes um you know i love the story about how we go from Thule Greenland

um being a shack with a dirt runway and we go in something like three months to a 10 000 foot reinforced concrete runway capable of handling strategically loaded b-52s two hangers and accommodations for four thousand airmen um when the nation had never built big runways on tundra before right because the operational risk of not having that base uh outweighed the risks that we were going to take sort of programmatically and technically so whatever the barrier is let's talk about that and figure out what we're going to have to go do I'll point to going back to nc3 um we're establishing a reach center right and that is a building but more so it is an idea that to move faster in nc3 i have to break down some of the barriers in terms of having communication with private industry with the government right the process is something as simple as I'm putting it outside the fence line just so that you don't even have to go through the here's how you get on the access list to get on the base type stuff so knocking down these barriers while respecting you know security and uh government obligations that's where we need to go if we're going to keep up with this threat well we've come to the end of our time and thank you again admiral for your insightful and candid remarks and thanks everyone uh for joining us today so i wish you all a wonderful and uh prosperous aerospace power kind of day

### **Low Yield D-5 Nuclear Warhead: Two State Department Papers**

<https://www.state.gov/wp-content/uploads/2020/04/T-Paper-Series-4-W76.pdf>

[https://www.state.gov/wp-content/uploads/2020/07/T-Paper\\_SCLM-N-CLEARED\\_T-Final.pdf](https://www.state.gov/wp-content/uploads/2020/07/T-Paper_SCLM-N-CLEARED_T-Final.pdf)

### **How Satellites Can Save Arms Control**

### **A Global Noninterference Treaty Would Reduce Nuclear Risks**

By [Michael Markey, Jonathan Pearl, and Benjamin Bahney](#)

During the Cold War, the United States and Soviet Union spent decades negotiating over how to control the competition in nuclear arms. The resulting agreements kept the peace by limiting the number and type of nuclear weapons each side deployed and by establishing norms and practices of transparency that increased confidence that the other side was adhering to its promises. Today,

however, the arms control regime is crumbling, and with it the remaining barriers to [unbridled nuclear competition](#).

One reason for this erosion—a reason frequently invoked by the Trump administration—is that current agreements apply only to the United States and Russia, leaving out China, which is [growing its own nuclear arsenal](#). Washington argues that future arms control negotiations should include Beijing along with Moscow. Chinese officials, however, have shown no interest in participating, and neither the United States nor Russia has leverage to force them into an agreement. This deadlock gives rise to both panic and fatalism—panic because traditional approaches are decreasingly effective, fatalism because new and better approaches seem out of reach.

Breaking this impasse will require a significant recalibration. Rather than focusing on the brass ring of nuclear arms limitations and reductions, policymakers should try for something broader yet more modest: a global treaty that includes China, Russia, and the United States and prohibits interference with both commercial and government satellite operations during peacetime. Such a satellite noninterference treaty would ensure that each power could maintain a basic awareness of the growth and movement of other powers' nuclear and conventional forces—allaying mutual fears of arms racing, deterring military adventurism, and stabilizing military competition. Until there is once again an opportunity to pursue more ambitious and comprehensive deals, it offers the best chance of strengthening global stability and stopping arms control from collapsing entirely.

## **THE UNRAVELING OF ARMS CONTROL**

The most enduring principle in modern arms control agreements is that of noninterference with “national technical means” of verification, including satellites. In practice, this means that each side agrees not to take actions that would destroy, degrade, or otherwise inhibit the other sides' satellites and other sensors from collecting information necessary to verify treaty compliance. These noninterference provisions have contributed to a once unimaginable level of transparency, helping to calm nerves and slow arms racing over many decades.

Early in the Cold War, the Soviet Union sought to thwart transparency, including by stalking or shooting down planes that carried out intelligence overflights (such as the U-2 piloted by Gary Powers in 1960). The principle of noninterference was first established in the early 1970s by the Strategic Arms Limitation Talks (SALT) and Anti-Ballistic Missile Treaty, as satellite photography and space-based

intelligence became more powerful. It has been included in every major arms control agreement since, including the 2010 New Strategic Arms Reduction Treaty (New START).

A world of routine interference with satellites would be extremely unstable.

Today, noninterference is at risk—particularly the principle of noninterference with satellites. One of the only remaining arms control agreements that upholds the principle, New START is on track to expire in February 2021, unless [Washington and Moscow overcome disagreements](#) on whether and how to extend it. And even if New START is extended, current prohibitions on interference are too limited and narrow. They apply only to the United States and Russia, at a time when China is expanding both nuclear and antisatellite capabilities. And they apply only to state-owned satellites, at a time when commercial satellites are becoming increasingly significant.

With U.S. companies such as Planet and SpaceX launching new constellations of hundreds to thousands of satellites, commercial satellites are likely to complement and in some ways exceed their state-owned equivalents, collecting vast amounts of data that could, for example, offer confidence that competitors are not building up their stockpiles of dangerous weapons or conducting threatening military activities. Although these new constellations are being designed primarily to support commercial activities, [governments could apply new artificial intelligence techniques to the data they collect](#) to monitor arms buildups and military movements with unprecedented persistence and insight.

Precisely because of their potential for monitoring nuclear and other military activities (and perhaps also because they could be used to offer people living under repressive regimes open access to the Internet), Russia and China may come to view large commercial satellite constellations as a threat. Russian and Chinese military planners already consider antisatellite (ASAT) weapons as a key means of reducing U.S. and allied military effectiveness; they are deploying [an array of ASAT weapons](#), including jammers that interfere with satellite communications, lasers that blind imagery satellites, and weapons that physically intercept and destroy satellites. In a conflict, Russia and China could use these weapons to disable satellites, undermining U.S. military advantage. But even in peacetime, they could use ASAT weapons to obscure arms buildups and troop movements—which would undermine transparency, increase the risk of misperception, stoke arms competition, and generally degrade strategic stability between the world's nuclear powers.

## THE CASE FOR NONINTERFERENCE

An effort to extend and modernize the principle of noninterference should be the starting point for a new era of multilateral security agreements—both because it would preserve a key component of nuclear stability and because it would lay the foundation for more comprehensive agreements in the future. A global treaty on noninterference with all satellites, both state-owned and commercial, would build on decades of U.S.-Russian consensus on noninterference; reflect the potential of commercial satellites [to augment traditional intelligence](#); dramatically enhance transparency; and correct a major limitation of existing noninterference provisions by including China, which is not covered by any arms control or limitation treaties.

The United States, Russia, and China would all benefit from such an agreement. Enhancing transparency by prohibiting interference with satellites in peacetime would increase the barriers to war by reducing uncertainties about arms buildups and troop movements, by equipping states with information to better prepare defenses, and by arming diplomats with tangible information about aggressive enemies to better rally international interventions, all in the service of deterring hostility. Unimpeded and increasing flows of satellite data could also help leaders on all sides push back against internal pressure to pursue unnecessary arms buildups or aggressive military actions driven by mistaken impressions of a competitor's activities or the belief that they can create a *fait accompli* for a competitor through sudden and aggressive military action.

The most enduring principle in modern arms control agreements is that of noninterference.

Russia or China might seek to challenge such an effort. Neither country has a commercial space sector as strong as that of the United States and its allies. And both might oppose a new treaty on satellite noninterference because it would take focus away from their deeply flawed space arms control proposal—the Treaty on the Prevention of the Placement of Weapons in Outer Space—which would impose an unverifiable ban on space-based weapons while ignoring the ground-based ASAT weapons that these nations already possess. But there is reason to hope that such opposition can be overcome. China's nascent [commercial satellite market](#), for instance, could provide Beijing with its own growing capabilities, overcoming concerns about relying on data from foreign companies for monitoring and verification.

Critically, efforts to advance the treaty would not have to wait on acquiescence from Moscow or Beijing. The United States and its allies and partners will launch vast commercial satellite constellations over the coming years, as will China, creating common economic incentives for keeping satellite interference from becoming routine. If Russia or China attempted to kill the proposal, the United States could move forward with a narrower group of like-minded partners to establish a global norm of noninterference supported by a legal framework for punishing violators. Eventually, this effort, with the majority of the world's economic and technological might behind it, could break down Russian and Chinese reluctance to join.

## **A NEW ERA OF TRANSPARENCY**

Even in the absence of a formal agreement, there are actions the United States could undertake to advance the cause. It should begin working closely with allied governments and the private sector to equip new satellites with low-cost warning sensors that can detect potential interference. The result would be a global monitoring network that would detect and record suspected interference events, cross-correlate sensor detections with actual instances of degraded or denied satellite operations to determine whether interference occurred, and transmit notification of confirmed interference events in real time either to an open website (operated by an independent international treaty organization) or to a professional organization of commercial and government satellite operators, ensuring that violators could be identified and shamed. In either case, this new organization could publicly address interference attempts while protecting the privacy of satellite operators and potentially consider and pursue responses ranging from warnings to sanctions, depending on the severity of the incident.

There almost certainly is no way to make the provisions of a noninterference treaty enforceable in wartime. The immense benefits that our nations' militaries reap from satellite information and communications may make these targets [too tempting to resist](#) during a conflict. But a prohibition on satellite interference during peacetime would at a minimum raise the bar for targeting satellites early in a crisis, because once broader noninterference norms are established, any such attack or interference would send a strong signal of the attacker's intent to escalate and offer an aggrieved party legal justification to retaliate. This could help to stabilize the emerging military competition in space and generally restrain escalation in future crises.

A world of routine interference with satellites would be [extremely unstable](#). By limiting insight into the actions of competitors, such interference would open the door to dangerous arms races, increase the risk of misperception, and provide strong incentives to strike an enemy first. Establishing a comprehensive norm of transparency, by contrast, would inject new hope into a struggling arms control agenda—one that reflects the realities and addresses the dangers of nuclear competition today. Only those who seek to derive and hold on to their power through secretive arms buildups, military adventure, and repression would need fear this new era of transparency.

- **This week we have a plethora of essays on nuclear issues as we are coming up to the 75<sup>th</sup> anniversary of the nuclear bombings of Hiroshima and Nagasaki.**

### **New Start Extension**

[Keeping Peace in the Nuclear Age](#)

[Why Washington and Moscow Must Extend the New START Treaty](#)

[Anatoly Antonov and Rose Gottemoeller](#)

[The Age of Strategic Instability](#)

[How Novel Technologies Disrupt the Nuclear Balance](#)

[Elizabeth Sherwood-Randall](#)

04 August 2020

### **Nuclear weapons: arms-control efforts need China**

As tensions mount and treaties totter, fresh thinking is needed — on deterrence, emerging technologies and key players in east Asia.

[Nobumasa Akiyama](#)

[PDF version](#)

It is 75 years since the United States dropped atomic bombs on the Japanese cities of Hiroshima and Nagasaki on 6 and 9 August 1945, killing around 200,000 people. Since then, humanity has had to coexist with the massive destructive power of nuclear weapons.

Although such weapons have not been used in wars since, they define the international order. Nuclear deterrence and pacts to restrict arms between the United States and Russia have assured decades of precarious peace. Meanwhile, the United Nations' adoption of the first-ever Treaty on the Prohibition of Nuclear Weapons (TPNW) in 2017 buoyed hopes of a world free of these catastrophic arms.

Now the skies are darkening. In 2019, the Intermediate-range Nuclear Forces (INF) Treaty between the United States and Russia collapsed, ushering in a new arms race for weapons with a range of 500–5,500 kilometres. China's rise as a superpower is bolstered by a rapidly modernizing arsenal. India and Pakistan are engaging in the worst border scuffles for decades. Iran is re-stoking its nuclear programme, after the United States unravelled the Joint Comprehensive Plan of Action restricting it. North Korea continues to expand its arsenal.

This environment had made the old rules of strategic stability obsolete even before the COVID-19 pandemic fuelled nationalism and tensions. New ways of thinking about nuclear security and arms control are needed urgently, and for more than two players.

First, researchers and security experts need to find deterrence strategies that are acceptable to three nations. China should join arms-control talks with the United States and Russia, even if these are open-ended. Second, international security discussions need to encompass emerging technologies and conventional weapons, as well as nuclear ones. Third, non-nuclear states, including Japan — my nation — need to be at the table.

**[How a small nuclear war would transform the entire planet](#)**

In the 75 years since the nuclear cataclysm at the end of the Second World War, scientists have been central to deterrence, detection and verification, capitalizing on global collaborations to build trust, technology and treaties. Researchers' skills and commitment are needed now more than ever.

Nuclear-arms control is at a crucial juncture. On a positive note, world leaders are increasingly vocal about abolishing these abhorrent weapons. Sadly, current geopolitics means that situation is a long way off.

Former US president Barack Obama called for a world without nuclear weapons on a visit to Prague in 2009, and became the first sitting US president to visit Hiroshima, in 2016. UN secretary-general António Guterres argued that their abolition is crucial "to save humanity" in his 2018 disarmament agenda<sup>1</sup>. When Pope Francis visited Nagasaki and Hiroshima in November 2019, he criticized the concept of nuclear deterrence as offering a "false sense of security" sustained by "fear and mistrust". [Peace should be assured](#) instead, he said, through "the arduous yet constant effort to build mutual trust".

Similar sentiments among non-nuclear states delivered the TPNW. It was adopted by 122 of the 193 members of the UN, and will enter into force once 50 states ratify it. But, as of this month, only 40 have done so. Signatories agree not to develop, test, produce, acquire, possess, stockpile, use or threaten to use nuclear weapons.

Eradication is unlikely, however. Notable absentees from the treaty include all nuclear-armed countries. They did not vote for the TPNW; they jointly expressed their unwillingness to join. Nor did 'nuclear umbrella states' in Europe and Asia, such as the members of the North Atlantic Treaty Organization, Japan and South Korea, whose security from nuclear attack relies on the United States.

A global regime of arms control is still crucial to manage nuclear risks.

### **Fracturing framework**

The United States and Russia together possess 90% of the world's 14,000 nuclear weapons. Their holdings have been shaped through four bilateral treaties at three levels: strategic nuclear arms, missile defence and sub-strategic nuclear and conventional arms. Negotiations began in 1969 under the Strategic Arms Limitation Talks (SALT).

The SALT I agreement, signed in 1972, restricted systems that were capable of directly delivering nuclear weapons to either country. That agreement was replaced by the 1991 Strategic Arms Reduction Treaty (START 1), which capped the numbers of nuclear warheads as well as delivery systems that each nation could hold. President Obama and then Russian president Dmitry Medvedev signed a replacement 'New START' treaty in April 2010.

### [Atomic bombs through wars hot and cold](#)

The Anti-Ballistic Missile (ABM) Treaty, signed in 1972, limited competition concerning these offensive weapons that had shaped confrontation between the two countries in a framework of mutual assured destruction.

In 1987, the United States and the Soviet Union agreed to eliminate ground-launched, medium-range missiles under the INF treaty, and signed the Treaty on Conventional Armed Forces in Europe, which set ceilings on key conventional forces in Europe. Russia announced its withdrawal from the treaty in 2015.

Each nation agreed to abide by these rules because they recognized the existential risks: either could wipe out the other. The rules were formalized and verified. Predictability and transparency increase trust. Scientific teams from both countries conducted on-site inspections of warheads and exchanged data. The number of nuclear weapons held in each country has now fallen to around 6,000, or one-fifth of their peak during the cold war.

But tensions are rising again between the United States and Russia. The United States backed out of the ABM treaty in 2002. And in February 2019, it announced it would withdraw from the INF treaty, citing Russia's testing of prohibited missiles. After Russia made counter accusations, both sides abandoned the treaty in August 2019.

### **Enter China**

Negotiations have also stalled over a replacement for New START, which expires in February 2021. If the treaty is not renewed or extended, the nuclear arms race will go unchecked. The United States wants to bring in China and expand the scope of weapons covered. Russia wants to stick to the original remit.

China's rise has transformed the geopolitical landscape. The United States cited that country's unrestricted build-up of nuclear forces as one reason for its

withdrawal from the INF treaty. China has around 320 nuclear warheads, and more than 250 missile launchers capable of carrying them<sup>2</sup>. The majority of its nuclear arsenal is in land-based, medium-range missiles.

For example, the Chinese ballistic missile Dongfeng 26 can travel 4,000 km, roughly the distance from eastern China to Guam, a US territory in Micronesia in the western Pacific Ocean. Dongfeng 21 can reach a target 2,000 km away, enough to hit US aircraft carriers deployed around the South China Sea if launched from central western China. Dongfeng 17 is a manoeuvrable missile that can deliver both nuclear and conventional warheads at a similar range. It could function as boosters for a hypersonic glide vehicle flying at low altitude, which radars would have little time to detect<sup>3</sup>.



A view of Hiroshima in Japan, about two years after it was hit by a US nuclear bomb. Credit: AFP/Getty

These types of missile are the very assets that the United States and Russia could not possess under the INF treaty. For China, they are key to being able to compete with the United States in the western Pacific Ocean. It is because of these that the United States, keen to protect its superiority in the region, wishes to bring China into the arms-control fold.

So, in June this year, the United States invited China to attend its discussions with Russia in Vienna about what will replace New START. China declined. Not keen for the United States to dampen its nuclear ambitions, it would rather wait and see what happens in November's US presidential election.

But there are good reasons for China to engage. Not least, it could influence the agenda — to raise issues that concern it, such as the missile defence systems of the United States and its allies, which include Japan.

### **Three challenges**

Finding a trilateral arms-control strategy will be difficult for three reasons<sup>4</sup>.

First is a problem of game theory. It makes more sense for three players in a non-cooperative dilemma game to defect rather than cooperate<sup>5</sup>. Conventionally, rational players would rather engage in an arms race than agree not to. That view changes when they look ahead. Players place more emphasis on the value they will gain in future — they would rather be guaranteed a smaller payback than risk gaining nothing or losing. Cooperation then becomes possible. That's why the United States and Russia agreed to act in the past. The game repeats endlessly, and the devastating power of nuclear weapons makes the cost of defection high — a nuclear-first strike from the other.

In a three-way game, the outcome might be different. It is harder to find a stable equilibrium in the first place. And it's better for two to form a coalition against the other, even in the long run. Thus, every player fears others teaming up against them. When trust is missing, players prefer to stay in competition rather than reach agreement.

### **[We ignore the past at our peril](#)**

The key to trilateral arms control is to ensure that the isolated party benefits from signing up. It's unclear whether the confidence-building and verification measures associated with existing arms-control treaties are sufficient to do that, and whether the level of transparency that could be required is acceptable for all three.

Second, power balances, strategic goals and arsenals that were evolving fast are now profoundly in flux. The economic power shifts brought about by technology alliances and globalization have been accelerated and amplified by the COVID-19 pandemic. At potentially one of the most profound inflection points for centuries, it is hard to define a stable state of relations among countries that have different (and unpredictable) goals and assets.

From a global perspective (even as the pandemic continues), the United States is still a political and economic heavyweight, as well as a military one. It has been pursuing cooperation with allies in the Indo-Pacific, Europe and the Middle East. Russia's power is declining: its core interests are in Europe and central Asia, and it is seeking to keep its superpower status, even if only nominally. China's global status is rising: it has been extending its influence worldwide by economic and diplomatic means, such as the Belt and Road Initiative, and its military focus has enabled it to gain dominance in the western Pacific.

These three rival powers, with their varying future trajectories, face a major challenge in finding a sustainable way to accommodate all of their strategic interests.

Third, boundaries are blurring between different types of weapon. Emerging technologies such as hypersonic gliders, precision-guided strike systems, robots and artificial intelligence (AI) make conventional weapons as effective strategically as nuclear ones ([go.nature.com/2x46wda](https://go.nature.com/2x46wda)). Cyberattacks could cheat nuclear command-and-control systems and confuse decision-making, leading to risky situations. Satellite-imaging technologies enhanced using AI make it easier to identify and target strategic assets such as missile-launch sites and commands.

All of these factors complicate deterrence calculations. Discussion on regulating them has not produced any tangible results, and it will remain difficult.

### **Steps forward**

The United States, China and Russia should immediately begin talks that explore how stable strategic relationships can be built. That would reassure other countries

and pave the way for more substantive security agreements. Meanwhile, the United States and Russia need to extend New START to avoid a gap in arms control.

### From blackboards to bombs

The three powers should discuss ways to identify and reduce the risks associated with nuclear weapons, as well as how to implement transparency measures. Then they should take the following steps. First, agree the definition and scope of the weapons systems covered by an arms-control treaty. Second, reach a mutual understanding regarding the definition of a strategic equilibrium that serves the security of each country. This will involve balancing qualitative values with a quantitative formula. Third, formulate mechanisms for verification and confidence-building that prevent defection without compromising sensitive security information.

Researchers and specialists in security need to explore new models of deterrence and arms control. Win-win-wins need to be found for a three-player game. And a formula is needed to convert the balance of strategic interests into measurable levels of force, given different goals and military assets. Deterrence strategies that cover nuclear, conventional and cyber capabilities also need to be designed.

Non-nuclear states must participate in arms-control discussions. East Asia could be one focal point for testing new strategies, for three reasons. First, it is caught in the middle of a competition between the United States and China. Second, four nuclear powers, including North Korea and Russia, are involved in the region's instability. And third, non-nuclear allies of the United States — Japan and South Korea — are major strategic and scientific players in the high-tech environment that today shapes the power of states.

This places my country in a difficult but important position. Japan should take the lead in envisaging new forms of arms control, because it would be a way for the nation to commit to its promise: that what happened to the people of Hiroshima and Nagasaki must never happen again.

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## **Our Annual August Debate over the Bombs**

By [Victor Davis Hanson](#)



Mushroom cloud after the detonation of an atomic bomb over Hiroshima, Japan, August 6, 1945. (*US Army Air Forces/Library of Congress/Handout via Reuters*) It was a terrible choice among even worse alternatives.

This month marks the 75th anniversary of the dropping of two atomic bombs on Japan, at Hiroshima on August 6, and Nagasaki on August 9.

Each year, Americans argue about our supposed moral shortcomings for being the only nation to have used an atomic weapon in war.

Given the current cultural revolution that topples statues, renames institutions, cancels out the supposedly politically incorrect, and wages war on America's past, we will hear numerous attacks on the decision of Democratic president Harry Truman to use the two terrible weapons.

But what were the alternatives that Truman faced had he not dropped the bombs that precipitated Japan's agreement to surrender less than a week after the bombing of Nagasaki and formally on September 2?

One, Truman could have allowed Japan's wounded military government to stop the killing and stay in power. But the Japanese had already killed more than 10 million Chinese civilians since 1931, and perhaps another 4 million to 5 million Pacific Islanders, Southeast Asians, and members of the Allied Forces since 1940.

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Trump Warns Coronavirus Will Likely ‘Get Worse Before It Gets Better’

A mere armistice rather than unconditional surrender would have meant the Pacific War had been fought in vain. Japan’s Fascist government likely would have regrouped in a few years to try it again on more favorable terms.

Two, Truman could have postponed the use of the new bombs and invaded Japan over the ensuing year. The planned assault was scheduled to begin on the island of Kyushu in November 1945, and in early 1946 would have expanded to the main island of Honshu. Yet Japan had millions of soldiers at home with fortifications, planes, and artillery, waiting for the assault.

The fighting in Japan would have made the prior three-month bloodbath at Okinawa, which formally ended just six weeks before Hiroshima, seem like child’s play. The disaster at Okinawa cost the U.S. 50,000 casualties and 32 ships — the worst battle losses the American Navy suffered in the war. More than 250,000 Okinawans and Japanese soldiers were killed as well.

Just the street fighting to recapture Manilla in the Philippines in early 1945 cost a quarter-million Filipino, Allied, and Japanese lives.

Three, the U.S. could have held off on using the bomb, postponed the invasion, and simply kept firebombing Japan with its huge fleet of B-29 bombers. The planes soon would have been reinforced with thousands more American and British bombers freed from the end of World War II in Europe.

The napalming of Tokyo had already taken some 100,000 lives. With huge new Allied bomber fleets of 5,000 or more planes based on nearby Okinawa, the Japanese death toll would have soared to near a million.

Four, the U.S. might have played rope-a-dope, stood down, and let the Soviet Red Army overrun China, Korea, and Japan itself — in the same fashion that the Russians months earlier had absorbed eastern Germany, the Balkans, and Eastern Europe.

But the Soviet occupation of North Korea alone led only to more war in 1950. Had the Soviets grabbed more Japanese-occupied territory, more Communist totalitarianism and conflict probably would have ensued, with no chance of a free and democratic post-war Japan.

Five, Truman could have dropped a demonstration bomb or two in Tokyo Bay to warn the Japanese government of their country's certain destruction if it continued the war.

But there was no guarantee that the novel weapons, especially the untested plutonium bomb, would work. A dud bomb or an unimpressive detonation at sea might have only emboldened the Japanese to continue the war.

There were likely only three bombs ready in August. It was not clear when more would be available. So real worries arose that the Japanese might be unimpressed, ignore the warning, and ride out the future attacks in hopes that there were few additional bombs left.

In the cruel logic of existential war, demonstrating rather than using a new weapon can convey to autocratic belligerents hesitancy seen as weakness to be manipulated, rather than as magnanimity to be reciprocated.

By August 1945, six years after the start of World War II in Europe, some 70 million had died, including some 10 million killed by the Japanese military. Millions more starved throughout Asia and China owing to the destruction and famine unleashed by Japan — a brutal military empowered by millions of skilled civilian industrial workers.

To Americans and most of the world 75 years ago, each day in early August 1945 that the Japanese war machine continued its work meant that thousands of Asian civilians and Allied soldiers would die.

In the terrible arithmetic of World War II, the idea that such a nightmare might end in a day or two was seen as saving millions of lives rather than gratuitously incinerating tens of thousands.

It was in that bleak context that Harry Truman dropped the two bombs — opting for a terrible choice among even worse alternatives.

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## **Is There A (New) Strategic Arms Race?**

David J. Trachtenberg

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In a series of excellent analyses in the 1970s, strategist Albert Wohlstetter challenged the conventional wisdom that the United States was the leading cause of an arms race with the Soviet Union.<sup>[1]</sup> Through a detailed empirical analysis of arms racing dynamics, Wohlstetter demonstrated that the United States was not the instigator of an arms race with the USSR. Likewise, Colin Gray, in several seminal publications, described how arms competitions are fueled by a plethora of unique national considerations.<sup>[2]</sup> They are not simply automatic reactions to the actions of others. It appears these lessons need to be relearned today.

In recent weeks, critics of the Trump Administration have been hyperventilating over assertions that the United States is instigating a new arms race with Russia. These critics assert that U.S. actions will invariably result in similar and dangerous Russian reactions that will jeopardize the security of the nation and, in fact, the world. The U.S. actions that will be responsible for triggering this impending disaster vary depending on the critic, but they generally include efforts to modernize the nation's aging nuclear deterrent, the perceived dismemberment of Cold War arms control regimes, and the possibility of a resumption of U.S. nuclear testing.

The battle cry of today's critics mimics the assertions of those in previous decades who predicted that U.S. actions to fortify its strategic deterrent against adversary threats would be counterproductive and spark an arms race. Moreover, the corollary argument that U.S. strategic restraint would engender similar restraint on the part of opponents was also proffered as a rationalization for U.S. inaction.<sup>[3]</sup> In reality, neither the action-reaction nor inaction-inaction models accurately reflect

the historical record. Wohlstetter and Gray demonstrated this in the 1970s and their analyses have stood the test of time.

The notion of an uncontrollable action-reaction arms race predates the birth of the nuclear age. For example, by the end of the 19<sup>th</sup> century, Great Britain was the world's dominant sea power, but that dominance was under siege as continental powers challenged Britain for naval supremacy. Germany, most notably, began to build battleships to assert its own naval dominance. By the early 1900s, Britain's seafaring stature—patriotically embodied in the song, “Rule, Britannia! Britannia, rule the waves!”—was on the wane, with some in Britain conceding that “we have lost our [naval] superiority and are distinctly dropping to the rear.”<sup>[4]</sup>

While British leaders debated how best to respond, some warned of the consequences of starting a naval arms race with Germany, calling concern over Germany's arming “naval scare-mongering.”<sup>[5]</sup> Consequently, Britain scaled back its naval armaments program. Yet Britain's restraint was not matched by Germany—quite the opposite, as Germany increased its warship production—demonstrating that inaction by one party does not necessarily lead to similar inaction on the part of others. In this case, Germany's actions helped fuel a quest for supremacy that led to the first truly global conflict of the 20<sup>th</sup> century— “the war to end all wars”—in 1914.

More than half a century later, a similar dynamic was in evidence as the United States sought (and indeed, welcomed) strategic “parity” with the Soviet Union while the Soviets forged ahead rapidly with an extensive nuclear buildup, intended—as former Harvard professor Ricard Pipes noted in the late 1970s—to provide them with the ability to fight and win a nuclear war if deterrence failed.<sup>[6]</sup> The sophistry of the inaction-inaction paradigm was demonstrated by the unrealized expectation that U.S. restraint would engender similar Soviet restraint and was best captured by former Secretary of Defense Harold Brown when he stated: “When we build, they build; when we cut, they build.”<sup>[7]</sup>

Of course, neither the United States nor other great powers make decisions on their respective nuclear postures in a vacuum. But the arms interactions that have occurred generally do not track with the simplistic supposition of a U.S.-led arms race. In some cases, adversaries have reacted to U.S. decisions in ways that were completely contrary to the expectations of those who believed the United States was initiating a new spiral in the arms race.

For example, the Soviet response to the Reagan Administration's Strategic Defense Initiative (SDI)—which was considered by critics to be the harbinger of an arms race in space and the death knell for arms control—was neither. In fact, it was the Reagan Administration that concluded the Intermediate-range Nuclear Forces (INF) Treaty, which led (at the time) to the complete elimination of U.S. and Soviet ground-based, intermediate-range nuclear delivery systems. SDI was also credited as a major impetus toward Soviet reforms that contributed to the USSR's ultimate demise. Nearly two decades later, Russia agreed to an arms control treaty that mandated the deepest reductions to date in strategic offensive nuclear arsenals—the Strategic Offensive Reductions Treaty (“SORT,” or “Treaty of Moscow”)—only one month before the U.S. withdrawal from the 1972 U.S.-Soviet Anti-Ballistic Missile (ABM) Treaty took effect, freeing the United States to deploy an initial, missile defense capability against limited threats.

There are also examples where U.S. inaction—expected to set an example for others to follow—resulted in unexpected adversary reactions. For example, the U.S. decision to cap its ICBM deployments and forego strategic missile defenses after the ABM Treaty opened the door to an expansion of Soviet ICBM capabilities that could hold U.S. missile silos at risk. This Soviet action was contrary to what many predicted. One former senior U.S. official asserted at the time, “there would be little excuse for the Russians to continue building additional ICBM sites. In such a situation of frozen stable deterrence, they would not be needed.”<sup>[8]</sup> Unclassified estimates indicate, however, that the growth in the Soviet nuclear weapons stockpile increased dramatically after the ABM Treaty was signed.<sup>[9]</sup>

Clearly, many of the traditional indicators of arms racing are not present when looking at U.S. nuclear programs. The United States has not built a new nuclear weapon or deployed a new nuclear delivery system in decades and has not conducted a nuclear explosive test since 1992. In fact, the U.S. nuclear stockpile today is at an historic low, having been reduced by more than 85 percent from its peak.<sup>[10]</sup> The percentage of defense spending devoted to sustaining the U.S. nuclear arsenal is less than three percent—significantly smaller than during the modernization cycles of the 1960s and 1980s.<sup>[11]</sup> Even at the peak of the current modernization program, U.S. spending on nuclear weapons will remain a single digit percentage of the overall U.S. defense budget. Moreover, the increased focus on advanced conventional technologies like hypersonics reflects a continuing desire to reduce the role of nuclear weapons in U.S. national security strategy. By contrast, Russia, China, and North Korea have forged ahead with their own nuclear

weapons programs over the last two decades, building and deploying a variety of new nuclear weapons and delivery systems.

This stark contrast in approaches suggests that the answer to the question “Is there a new strategic arms race?” is emphatically “no”—or that if there is an arms race, the United States is not a participant.

In short, it is time to cast a skeptical eye on assertions that the United States is leading another round of the arms race and that U.S. actions will—like Newton’s third law of motion—inevitably spur reactions on the part of others. Such predictions have been wrong in the past and are equally specious today. They are based on a theory of international relations that ignores the various unique national considerations that factor into a leadership’s armaments decisions—considerations expertly analyzed years ago by both Wohlstetter and Gray and that refute the simplistic action-reaction paradigm.

Today’s critics would be well advised to go back and study their history lessons again. <sup>[1]</sup> See Albert Wohlstetter, “Is There a Strategic Arms Race?,” *Foreign Policy*, No. 15, Summer 1974, pp. 3–20. Also see Albert Wohlstetter et al., “Is There a Strategic Arms Race? (II): Rivals but No ‘Race,’” *Foreign Policy*, no. 16 (1974), pp. 48–92.

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## **A statement on the bombings of Hiroshima and Nagasaki**

By [Bulletin Science and Security Board](#), August 6, 2020

Seventy-five years ago this month, the United States used the most powerful weapons developed until that time to attack the cities of Hiroshima and Nagasaki. Because the atomic bombings caused such extraordinary damage amid an already-disrupted wartime Japan, the number of people who died as a direct result of the attack [can't be pinpointed](#). Initial US military estimates placed the immediate death toll at 70,000 in Hiroshima and 40,000 in Nagasaki. Later independent estimates suggest that 140,000 people died in Hiroshima and 70,000 were killed in Nagasaki.

The weapons dropped on Hiroshima and Nagasaki had the power of [15,000 and 21,000 tons of TNT](#), respectively. As heart-wrenchingly evidenced in the displays of the [Nagasaki Atomic Bomb Museum](#) and the [Hiroshima Peace Memorial Museum](#), the magnitude of the calamity caused by those indiscriminate weapons—weapons that instantly vaporized those close to ground zero, sometimes leaving nothing but shadows on pavement—is all but [impossible to comprehend](#).

Since World War II, no country has again used nuclear weapons in war. But the nuclear genie is out of the bottle, and the risk of nuclear catastrophe remains. Genies have only mythical powers born of fantasy; nuclear weapons are very real instruments of destruction. The fantasy about nuclear weaponry—the fiction that has kept the nuclear disarmament movement from making significant progress—springs from the deluded notion that more and “better” nuclear weapons provide more safety and security.

A week after the atomic bombing of Hiroshima and Nagasaki, J. Robert Oppenheimer—director of the Los Alamos Laboratory, which developed the bomb—wrote to Secretary of War Henry L. Stimson on behalf of a committee tasked with examining the future of nuclear energy and nuclear weapons. Oppenheimer outlined four concise points for Stimson: more powerful weapons could be developed; there were no effective military countermeasures that could prevent the delivery of atomic weapons; US atomic hegemony was not assured, and even if it could be, such hegemony could not protect the United States from terrible destruction; and the safety of the United States lay in the prevention of

future wars, rather than in its ability to inflict damage. This last point is key and deserves to be quoted in full:

We believe that the safety of this nation—as opposed to its ability to inflict damage on an enemy power—cannot lie wholly or even primarily in its scientific or technical prowess. It can be based only on making future wars impossible. It is our unanimous and urgent recommendation to you that, despite the present incomplete exploitation of technical possibilities in this field, all steps be taken, all necessary international arrangements be made, to this one end.

Oppenheimer, a physicist who had just successfully created a weapon of mass destruction, was advocating diplomatic solutions to make such weapons irrelevant. Seventy-five years later, we know the following: Science did produce more powerful weapons but, as Oppenheimer predicted, no effective military countermeasures. Eight other countries also acquired nuclear weapons, erasing US hegemony.

And now, thousands of nuclear weapons—almost all of which are many times more powerful than the bombs that destroyed Hiroshima and Nagasaki—remain on high alert around the world. The United States and Russia possess more than 90 percent of those weapons, and a nuclear war between those superpowers would kill millions and perhaps billions of people, essentially ending civilization.

And so, on this awful 75<sup>th</sup> anniversary, the Doomsday Clock stands at 100 seconds to midnight. The Science and Security Board calls on all countries to reject the fantasy that nuclear weapons can provide a permanent basis for global security and to refrain from pursuing new nuclear weapons capabilities that fuel nuclear arms races. Rather than new weapons for new nuclear missions, new delivery systems such as hypersonic glide vehicles, or a resumption of nuclear testing, the United States, Russia, and the world's seven other nuclear powers should set their technical sights on achievable milestones along the path toward arms control and eventual nuclear disarmament.

There are those who claim that putting the nuclear genie back in its bottle is impossible, because the information and technology needed to produce a nuclear bomb is too widely available. But the key to producing nuclear weapons has been and remains the acquisition of the fissile material—highly enriched uranium and plutonium—used in nuclear weapons. The means to track, locate, and secure these materials is within human capability, with the right application of financial and political will and resources.

The final hurdles on the path toward reducing nuclear arsenals and eventually eliminating nuclear weapons entirely will be political rather than technical. As the COVID-19 pandemic has made clear, solving major global problems requires international cooperation—and national leaders willing to seek it through verifiable global agreements and strengthened international institutions.

Seventy-five years after the first use of nuclear weapons and the founding of the *Bulletin of the Atomic Scientists*, we—all the [members of the Science and Security Board](#)—pledge to redouble our efforts to bring about a world in which the use of nuclear weapons is both unthinkable and impossible. On this tragic anniversary, we ask political and military leaders around the world to join us—to demonstrate that nuclear weapons do not create safety or security, but diminish them and threaten humanity’s future. With the fantasy that they are useful dispelled, nuclear weapons may come to be viewed for what they are—a costly and dangerous detour from the path toward real global security.

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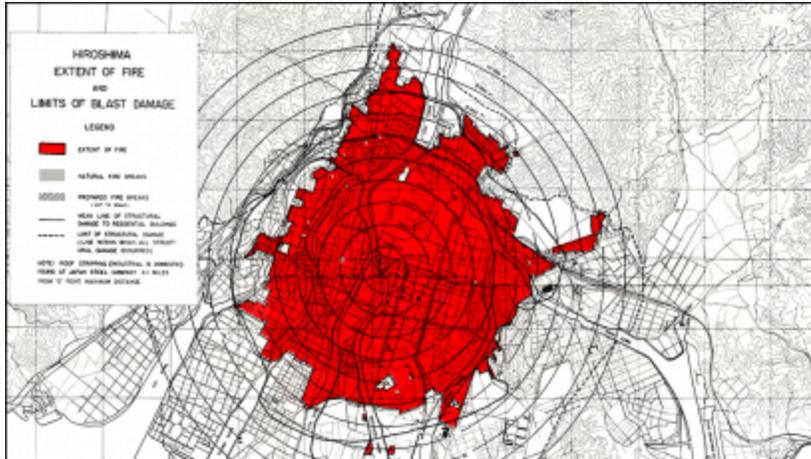
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For those of you interested in the libertarian right and the progressive left joining together to get the USA out of supporting Taiwan, South Korea or Japan, here is an essay by Bandow laying out the arguments why the US umbrella should be withdrawn and we should sell Taiwan weaponry but not pledge to protect the country./Bandow recognizes China wants to forcefully take over the country but then argues the USA has been a bully to China and therefore that is why China has reacted with more military deployments. .

### **Ready to Go to War? Republicans Beat the War Drums Over Taiwan**

by [Doug Bandow](#) Posted on [July 27, 2020](#)

The sun never sets on the American Empire, which is no less extensive than the British Empire. What makes Washington's imperial domain unique is that it regularly expands without conquest.

Now members of the ever-hawkish Republican Party want make Taiwan an official defense client, with Washington promising to defend the island from the People's Republic of China. And the threat is real. Earlier this month Taiwan's Foreign minister Joseph Wu warned that "for China, Taiwan would be an extremely convenient sacrificial lamb." He worried that "The threat is on the rise."

If the U.S. guarantees Taipei's security the danger of war will be great. Barry Posen of MIT observed that "The US commitment to Taiwan is simultaneously the most perilous and least strategically necessary commitment that the United States has today." How many American lives might be sacrificed in another people's fight that could go nuclear?

China is an ancient civilization. Once the world's greatest economic power which dominated Asia, the empire turned inward. The vast land stagnated as Europe flourished. By the mid-1800s European countries were forcibly "opening" China for trade and seizing territory, ranging from Hong Kong to Western "concessions," including in Shanghai, where many original buildings from that time remain on the Bund, or waterfront.

The "century of humiliation" extended into the 20th century. The decrepit Qing dynasty was overthrown in 1911. The Republic of China was established on January 1, 1912, but much of the country fell under the control of warlords. Over time the Kuomintang, led by Chiang Kai-shek, revived the ROC's authority, but still fell short of real control. The Chinese Communist Party emerged, in which Mao Zedong soon gained preeminence. In 1937 Japan began an extended war of conquest against China. Tokyo promiscuously murdered and destroyed but could not control the territory it seized. With Japan's defeat in 1945 came full-scale civil war in China. Chiang lost, allowing Mao to dramatically declare creation of the new revolutionary government in Tiananmen Square on October 1, 1949. Two months later Chiang moved what remained of his government to Taiwan.

The island had been part of the spoils gained by the Japanese after their 1895 victory in an earlier war. The territory was returned to China in 1945 but remained an unimportant backwater. However, the land, first called Formosa by the Portuguese, who used it for a trading post, offered the Nationalists a refuge. The Taiwan Strait was only a modest barrier – 81 miles at the narrowest point – but the revolutionaries lacked amphibious capabilities. When the Korean War exploded Washington used its fleet to shield what continued to call itself the ROC and claim to be the legitimate government of the mainland.

America's support kept other nations behind the ROC. America's UN veto also allowed Taipei to continue representing China in the international body, including as a permanent member of the Security Council. To maintain the pretense of representing all China, the Taipei government retained representatives from the mainland in its own legislature.

However, in 1972 Richard Nixon made his dramatic move to engage the PRC, traveling to Beijing and meeting Mao Zedong. As part of their deal, Taiwan was out of the UN, though still recognized by Washington. On January 1, 1979, the US shifted diplomatic relations to Beijing, though Congress approved the Taiwan Relations Act, which ensured continuing semi-official ties.

Then the PRC promoted an unhurried vision of "one country, two systems." Taiwan could return to the mother country while preserving its separate government. Even then such an offer was not attractive. The mainland remained poor despite the rapid economic growth sparked by reforms under "paramount leader" Deng Xiaoping.

More important, Mao's death in 1976 did not mean the development of democracy: in 1989 the Chinese Communist Party, led by Deng, crushed nationwide protests, highlighted by the massacre in Tiananmen Square, and ousted liberal Zhao Ziyang as CCP general secretary. At that time the ROC was democratizing under Chiang Ching-kuo, who succeeded his father after the latter's death in 1975, and Lee Teng-hui, the native Taiwanese who served as Chiang's vice president and took over on the latter's death in 1988. Lee eliminated martial law, orchestrated the election of a purely Taiwanese assembly, and became the country's first directly elected president in 1996.

Lee also moved the ROC away from its claim to represent all China toward a separate identity for Taiwan. Beijing was outraged at what it denounced as actions to "split the motherland." This triggered a spate of PRC missile tests from mid-1995 into 1996, disrupting commerce at Taiwan's two largest ports, in an effort to intimidate Taiwanese voters.

Washington responded by sending a carrier group, led by the USS Nimitz, through the Taiwan Strait, while another, headed by the USS Independence, tarried nearby. The PRC's humiliation was nearly complete: it had nothing to match America's military might. Even worse for Beijing, however, Taiwanese voters gave Lee a majority rather than the plurality predicted by polls in the multi-candidate field. They were intent on choosing their future, and in doing so selected someone who after leaving office unashamedly promoted Taiwanese independence from the mainland.

Since then Taiwanese support for reunification with the PRC has vanished. Younger generations have no direct experience with the mainland and decisively reject its politics. Indeed, there has been no better advocate for an independent Taiwan than Chinese President Xi Jinping, whose policies remind Taiwanese today what the Nationalist remnants were fleeing in 1949: brutal totalitarianism. No rational Taiwan resident could want to ruled by Beijing.

Chinese leaders blame everyone but themselves for the lack of support for a PRC takeover. However, no one living in a free, democratic society is going to support Xi's "China Dream." In fact, the mainland's increasingly brutal embrace of Hong Kong, highlighted by the recent imposition of national security legislation, further radicalized Taiwan's politics.

President Tsai Ing-wen, attacked by PRC officials for failing to affirm the joint "One China consensus" – that there is only one China, though the two governments

interpret that separately – was running behind in her reelection campaign due to a moribund economy. However, last year's Hong Kong crackdown, [which effectively extinguished the former British colony's "two systems, one country" legacy](#), destroyed the presidential candidacy of the opposition Kuomintang's Han Kuo-yu, the China-friendly mayor of Kaohsiung and original favorite. Not only did he lose the January presidential vote by 20 percentage points, but in June Kaohsiung voters removed him from office.

Taiwan's relations with the mainland are likely to worsen. Throughout Tsai's first term the XI regime refused to engage with her government, in contrast to Beijing's treatment of previous KMT administration. The PRC worked to strip away countries recognizing the ROC. Especially ominous was China's increased military pressure. The PRC built up forces capable of supporting an invasion; Chinese planes routinely violated Taiwan's airspace and Chinese war games relating to Taiwan multiplied. Moreover, the PLA increased efforts to infiltrate Taiwan. Even if primarily intended to push Taipei into surrender negotiations, these steps created a greater chance of inadvertent conflict.

Beijing failed to intimidate Taiwan. Tsai is unlikely to tempt fate by promoting formal independence, but she made her sentiments known, after her reelection observing that "we don't have a need to declare ourselves an independent state. We are an independent country already and we call ourselves the Republic of China (Taiwan)."

Moreover, her government, recognized by only 14 countries plus the Vatican, is expected to continue pressing for increased international space. Earlier this month Taiwan's legislature voted for resolutions to rename the state-owned China Airlines and rework passports to emphasize their connection with Taiwan. These efforts will be aided by widespread international criticism of the PRC, inflamed by the COVID-19 crisis, for blocking Taiwan's participation in the World Health Organization.

In return, Beijing almost certainly will increase its pressure on Taiwan after Tsai's decisive victory. XI's rhetoric suggests that he views Taiwan as a major issue to be resolved while he is in power. Deng Yuwen at the University of Nottingham warned that rising tensions with Washington might cause XI "to speed up the process of reunification."

No doubt, the PRC prefers peaceful submission by Taipei, perhaps procured through the threat of military action. An invasion would be problematic even

without US intervention. Lesser military steps, such as closing the strait, imposing an economic blockade, seizing smaller islands, destroying airports and ports, and targeting military sites also would ensure foreign economic if not military retaliation. Ruling over a hostile population of 24 million would be a nightmare.

Nevertheless, throughout history governments have gone to war to preserve their territory and control. In May Chinese Premier Li Keqiang spoke of reunification without the usual qualification of "peaceful." Although Taiwanese officials dismissed the omission, Li's comments to the opening of the National People's Congress were carefully prepared. He also insisted that the XI regime would "resolutely oppose and deter any separatist activities seeking Taiwan independence." Standing before the body which approved the new Hong Kong national security legislation, he urged the Taiwanese people "to join us in opposing Taiwan independence and promoting China's reunification."

In June the PLA publicly insisted that it had "sufficient capability to safeguard national sovereignty and territorial integrity, protect the common interests of compatriots on both sides of the strait, maintain regional peace and stability in the Taiwan Strait, and resolutely thwart any attempt to create so-called 'one China, one Taiwan'." Around the same time, the CCP's China Daily warned Taipei against provoking the PRC by pursuing independence: "Beijing will have to intensify crackdowns on the Taiwan secessionists and use non-peaceful means to safeguard national sovereignty and security."

Even more threatening were the remarks of Li Zuocheng, Joint Staff Department chief and Central Military Commission member on the anniversary of the Anti-Secession Law: "If the possibility for peaceful reunification is lost, the people's armed forces will, with the whole nation, including the people of Taiwan, take all necessary steps to resolutely smash any separatist plots or actions." However, at this stage the only potential for genuinely peaceful reunification is the radical transformation and democratization of the mainland, and even then, why would a nation of 24 million want to submerge itself in a colossus of 1.4 billion? Otherwise "peaceful" reunification requires Taiwan's de facto surrender to avoid war. Li's warning looks like a tragic prediction for the future.

Enter proposals for Americans to guard the island from the PRC.

Throughout the Cold War before the U.S.-PRC rapprochement, it was widely assumed that Washington would defend Taiwan against Chinese attack, despite the lack of a formal treaty. As America's relations with China improved, the guarantee

for Taipei became less certain, leading to chatter about "strategic ambiguity." When asked in 1995 by Chinese military officers how the US would respond to an attack on Taiwan, Joseph Nye, an assistant secretary of defense, said: "We don't know and you don't know; it would depend on the circumstances." US policymakers claimed this approach was an advantage, since Beijing, uncertain of America's policy, would act with restraint. The opposite possibility, that the PRC would not take Washington's implicit threats seriously, didn't seem to bother Taiwan's advocates at the time.

Shortly after taking office President George W. Bush promised to do "whatever it takes" to defend Taiwan, but his aides immediately denied that was policy and he eventually walked back the statement. Indeed, the crisis caused by 9/11 appeared to pull the administration away from confrontation with the PRC, after the crisis involving the collision of America's EP-3 spy plane with a Chinese fighter. Later administrations avoided making any firm military commitment to Taiwan.

However, urged on by Republican super-hawks, Congress recently approved laws requiring greater support for Taiwan – such as encouraging official contacts and promoting its diplomatic status. Now legislators are pressing the administration to formalize defense ties with Taipei. For instance, Rep. Mike Gallagher and Sen. Josh Hawley introduced the Taiwan Defense Act, which requires the government to report on its ability to fulfill its defense obligations to the island under the Taiwan Relations Act – selling defensive weapons to Taipei and preparing to defend the island, if necessary. Most extraordinary, mad, really, the bill mandates that DOD include "an assessment of the role of the nuclear forces of the United States," suggesting the territory's inclusion under America's nuclear umbrella, that is, to treat Taiwan as a de facto US state.

Gallagher also suggested executive action. He argued that "Taiwan's liberty is a vital national security interest of the United States," without explaining why that is so. Moreover, he asserted, "the Chinese military threat to Taiwan ... is a dangerous course of action that gets more likely the less we stand up to CCP aggression." So he declared: "Now is the time for a declaratory statement of policy committing the United States to the defense of Taiwan."

Former UN Ambassador Nikki Haley endorsed this approach, declaring that it is "time for US leaders to publicly recommit to our promise to defend Taiwan." In her view, "China's leaders will continue to test the limits of American resolve unless the United States makes it clear that Chinese aggression would come at too high a price." Slightly less provocative was Michael Mazza of the American

Enterprise Institute, who observed: "Even absent a clear commitment to defend Taiwan, the United States can telegraph that commitment by making the choices required to ensure it can defend Taiwan successfully."

However, Rep. Ted Yoho would go further, having introduced the Taiwan Invasion Prevention Act, which, he explained: is "going to lay very clear what our intent is. In fact, it'll go to the point where it authorizes an AUMF (Authorization for Use of Military Force) if China invades Taiwan." More surprising was the response of Sen. Bernie Sanders who, when running for president in 2020, was asked what to do if Beijing used military force against Taiwan: "I think we have got to make it clear to countries around the world that we will not sit by and allow invasions to take place, absolutely."

These ideas sound a lot like the "mutual" defense treaties with Japan and South Korea, in which the US commits itself to the defense of other nations. In fact, Washington's "mutual" defense treaty with Taipei was abandoned in 1979 after diplomatic relations were established with Beijing. The main difference is that a simple declaratory statement would not impose any reciprocal responsibilities on the other country. The Taiwanese have made clear they would like to be a treaty ally. Taiwan's Foreign Minister Joseph Wu recently argued that an alliance with America is critical for its survival.

While Taipei understandably would like to be protected by Washington, doing so would be bad for Americans. It is not their responsibility to risk war for the island state.

War is not a video game: it is something to be feared, not played. Despite the assumption that America always wins, the consequences of combat are ever uncertain. And even victory can be too dearly bought. War should always be a last resort, reserved to protect vital interests, most importantly America's survival – protection of its territory, population, and liberties. Washington should sacrifice lives and wealth only to protect the American political community itself. Making Americans die on behalf of others reflects arrogance, not compassion.

Many Taiwan hawks discount the possibility of war. They assume that all the president need do is tell Beijing no to force its retreat. However, China's claim to Taiwan is no passing fancy. The latter is widely seen as the last territory awaiting return after the century of humiliation. Similar raw nationalism has motivated nations around the globe, including 19th century America, to violently oppose secession. Chinese exhibit similar sentiments, with little sympathy for permitting

Taiwanese to choose their future. Chinese students with whom I've dealt, no less than their elders, believe that the island (or, more properly, islands) is properly part of the PRC.

Moreover, in contrast to the US Beijing would be motivated by defense – the possibility of American military deployments on an island just a few score miles off its coast is a nightmare. Indeed, in June China's semiofficial *Global Times* reported on footage of joint U.S.-Taiwanese military training and commented: "This could even be a crucial reason for the mainland to increase military deployments or even launch military operations against the island of Taiwan."

As a result, explained Charles Glaser of George Washington University: "China considers Taiwan a core interest – an essential part of its homeland that it is determined to bring under full sovereign control." This means the Chinese people care far more about controlling Taiwan than the American people care about preserving the island's independence. A Chinese president could far more easily explain to his people why the PRC was going to war over Taiwan with America than could a US president explain the reverse to Americans. It doesn't matter if American analysts don't believe the PRC should be willing to go to war. Revanchist sentiments are great and growing.

The obvious difference in the seriousness and intensity of interest means China would more likely see the threat of US intervention as a bluff. In 1996 a Chinese general, thought to be Xiong Guangkai, asked the Pentagon's Charles Freeman whether America was prepared to risk Los Angeles to save Taipei. This sentiment was reinforced in 2005 by Gen. Zhu Chenghu, who observed: "If the Americans draw their missiles and precision-guided ammunition on to the target zone on China's territory, I think we will have to respond with nuclear weapons."

Of course, the PRC, with a smaller and less capable armed services, does not want war with the US. However, the military balance is shifting as Beijing improves its anti-access/area denial capabilities. Moreover, while Washington remains determined to run the entire world, China would concentrate its more limited resources on Taiwan. Reliance on mainland bases also would multiply Chinese power. And deterrence remains far less expensive than power projection. Beijing need not be able to defeat America; the PRC need only create the likelihood that the price for US intervention would be too high.

Ultimately, the US no longer can count on a quick or easy victory. Noted the Rand Corporation in 2015: "a Taiwan [conflict] scenario will be extremely competitive

by 2017, with China able to challenge US capabilities in a wide range of areas." Irrespective of the result, human casualties and equipment losses would be well above anything suffered in its recent wars against such military nonentities as Iraq and Afghanistan.

Moreover, the escalatory spiral would be unpredictable and could reach nuclear weapons. For instance, US strikes on mainland military sites almost certainly would expand the conflict, since the Chinese government could not allow attacks on the homeland without responding. With less sophisticated and extensive conventional capabilities, Beijing would be tempted to turn to missiles and nuclear weapons.

What could justify war under such circumstances?

The fact that Taiwan is a worthy friend is no cause for America to go to war, even though the Taiwanese have made what deserves to be an independent nation. For but four of the last 125 years, Taiwan has been separated from the mainland. For the last 71 years the island has been ruled by its own government. Since the emergence of democracy Taipei officials have been accountable to their people, in sharp contrast to the PRC.

Last year Rep. Michael McCaul advocated support for Taiwan since "they stand for freedom and democracy in the region." The Hudson Institute's John Lee argued: "Taiwan terrifies China because the small island represents a magnificent vision of what the mainland could be and what the [Chinese] Communist Party is not. This should be a reason to reaffirm that defending democracy in Taiwan is important to America and the region."

Making a similar point in a slightly unhinged screed was Azeem Ibrahim of the Center for Global Policy, who wrote that China should be told that attacking Taiwan would be "waging war against democracy, and if you do so, you will find yourself at war with all democracies, from all over the world." Of course, only one democracy would be likely to go to war for Taiwan, and that is America. No other would put its citizens at risks for "democracy" in the abstract.

Nor should the United States. Democracy is the best political system, despite its endless imperfections, because it represents the people rather than the rulers. This a good reason to affirm the right of the Taiwanese to determine their own political destiny. However, abstract appreciation for democracy is no reason to go to war with a nuclear power absent serious threats against America. The casualties in any war, especially a large one, like a conflict with China, would not be abstract.

Rather, they would be real people with real families, friends, and communities. Their lives should not be needlessly forfeited in ideological crusades.

Taiwan advocates also wax eloquent about the island's importance. Argued Sen. Josh Hawley: "Taiwan is the lynchpin of a free and open Indo-Pacific." With growing hysteria, he added: "If the Chinese Communist party is allowed to seize control of Taiwan, it will stand ready to dominate the region. This would pose an unacceptable threat to the lives and livelihoods not just of our Asian allies and partners, but of working Americans here at home."

That is beyond hyperbole. The island is not a lynchpin for anything. Taiwan has little to do with the security of the US, which is 7600 miles away. It is not vital terrain worth war.

Occupied by American forces the island would inhibit Chinese military operations but also would be a vulnerable target. Gallagher contended that "By taking Taiwan, the People's Liberation Army Navy would have a foothold to turn Japan's flank and break out of the first island chain." Occupied by the PRC Taiwan would ensure Chinese control of the Taiwan Strait and ease Chinese operations against the other island nations – Japan, Philippines, Australia, Indonesia. However, Beijing has demonstrated its ability to deploy naval forces without access to Taiwan. The added advantage of Taiwan is no *casus belli*.

Some Taiwan hawks apparently imagine that a little nyah-nyah rhetoric is enough to make Beijing turn tail. Last week former UN Ambassador Nikki Haley claimed that "Protecting Taiwan from Chinese aggression is essential to preventing an outright conflict with Communist China." In her mind threatening war will prevent war.

However, threatening war requires that one be prepared for war, since deterrence often fails. And Haley proposed nothing to better prepare for a war with China, instead suggesting that Washington proceed with arms sales to Taipei, ink a free trade agreement, welcome Taiwanese "students, researchers, and scientists," and "greater collaboration between our lawmakers, diplomats, and military." None of these steps, however worthy, would help fight the war that might result from taking her advice to promise to defend Taiwan.

Unfortunately, swaggering exhibitions of Washington's military might are more likely to inflame than deter. For instance, sending an American carrier through the Taiwan Strait in 1996 highlighted Beijing's impotence, accelerating the PRC's naval armament program. The George W. Bush administration similarly sent a

carrier through the waterway in 2007. Joseph Bosco, a former Defense Department official, recently suggested another visit on what he called "a deterrent mission," perhaps by the USS Ronald Reagan. However, Beijing already knows the US possesses a gaggle of carriers. Highlighting Washington's naval superiority would goad the XI regime to do more, not frighten it into doing less.

Moreover, Washington's promise to intervene on an issue that the Chinese people as well as government consider to be an internal matter would similarly inflame nationalist sentiments. Which the regime would harness for its political and military advantage. One consequence almost certainly would be to accelerate the PRC's ongoing military transformation and buildup. As noted earlier, Beijing would not need the ability to defeat America in a global conflict. Rather, China's objective would be to credibly threaten imposing sufficient costs to forestall US intervention. The countervailing threat of US action against the mainland offers a powerful incentive for China to continue expanding its military.

To maintain the ability to impose their will so far from home American policymakers would have to initiate and maintain a counter buildup. Yet finding the money to construct larger armed forces will be increasingly difficult. The US entered 2020 with a \$1 trillion deficit, and predictions from the Congressional Budget Office that the red ink would worsen in coming years as the Baby-Boom generation continued to retire.

Then came COVID-19, which resulted in a deficit of \$864 billion in June alone. The deficit this year will exceed \$4 trillion and could go much higher once Congress approves another bailout/stimulus package. The inflated borrowing and interest payments will be incorporated in the structural deficit. Uncle Sam will find it impossible to both police the globe and care for an older population. Popular sentiment is likely to force reductions, not increases, in the military.

At the same time, the Taiwanese have not taken their own security needs seriously. This is a long-standing problem. In 2007 Cato Institute scholars Justin Logan and Ted Galen Carpenter warned: "Taiwan spends far too little on its own defense, in large part because the Taiwanese believe the United States is their ultimate protector. The Taiwan legislature's six-year delay and severe downsizing of a budget to pay for weapons systems that Washington has offered the island since 2001 is only one piece of evidence of Taiwan's free riding. ... Taiwan's overall investment in defense – approximately 2.6 percent of GDP – is woefully inadequate, given the ongoing tensions with mainland China. America is now in

the unenviable position of having an implicit commitment to defend a fellow democracy that seems largely uninterested in defending itself."

Little has changed, despite the PRC's increasing political demands and military expenditures. Cato's Eric Gomez noted in 2016 that "Taiwan's investment in its own defense has languished." Military outlays ran about \$11 billion in both 2018 and 2019, less than two percent of GDP. That is shockingly little to spend if Taipei genuinely fears Chinese military action as the PRC continues to increase its military outlays.

In mid-July Grant Newsham of the Japan Forum for Strategic Studies observed: "consider successive Democratic Progressive Party and Kuomintang administrations' mystifying but steadfast refusal to properly fund defense – even though Taiwan is a wealthy nation and facing a serious threat from mainland China. Exact figures are elusive, but one estimate has it that during the 12 years from 2008 to 2020 defense spending increased only about 8% overall. Another assessment claims that between 1995 and now the increase is only 4% when adjusted for inflation."

Money is not the only issue. Taiwan needs to focus on the simple but critical objective of deterring China, not larger political objectives. Explained Gomez: "The most immediate roadblocks to change are the equipment and mindset of Taiwan's military. The upper echelons of the military have resisted implementing changes that could improve their ability to fight a war against the modern PLA." Most importantly, Taipei needs to think in terms of deterring the much larger and increasingly sophisticated military deployed by China.

Taiwan does not need a military that can defeat the PRC, which no longer is a realistic objective. Taipei needs to create a stubborn defense that would raise the price of military action. This is well within Taiwan's abilities. For instance, it has developed the Yun Feng, a long-range, supersonic cruise missile, which could hit both Shanghai and Beijing. Observed columnist David Axe: "In fielding Yun Feng missiles, Taiwan conveys to Beijing that a war would not be confined to the island and surrounding waters."

In short, Taipei has the wherewithal to deter China. There is no reason for America to act, especially if the Taiwanese aren't willing to do what is necessary to defend themselves.

Promising to defend Taiwan would be a serious, even potentially deadly, decision for America. And the risks of doing so will only grow. The PRC is steadily

increasing its pressure on Taiwan. The U.S.-China Economic and Security Review Commission warned: "With the world distracted by COVID-19, China also intensified its multi-faceted pressure campaign against Taiwan. Chinese military aircraft crossed the median line of the Taiwan Strait three times in the early months of 2020, after only one such incursion in 2019. Peoples Liberation Army (PLA) forces participated in a joint air and maritime drill over two days in February involving back-to-back circumnavigating flights around the island, while a Chinese aircraft carrier and attached group of warships sailed near Taiwan in April."

When Gallagher urged the administration to commit to Taiwan's defense, he admitted that "this approach is not without risk," though he went on to argue that "we have learned painfully from decades of failed policy toward the CCP, the greatest risk of all comes from complacency." Actually, no one is complacent about the threat posed by China to Taiwan. But the greatest risk to America comes from fantasy that a mere declaration can forestall a great and rising power from attempting to reclaim territory which it believes was wrongly taken from it.

Wu worried: "If international society does not give China a sufficiently clear signal, I believe China will take it that international society will not impede it in doing other thing." However, to not defend Taiwan does not mean disinterest. Washington should allow Taipei to purchase weapons for its defense. Of course, the PRC reflexively complains about such sales, but that highlights their effectiveness.

[A free trade agreement between the US and Taipei is long overdue.](#) Such a pact would benefit both sides economically as well as strengthen Taiwan's international stature. A shared approach by the US, Europe, and Asian democratic states threatening economic isolation if China employed military means, would help constrain Beijing. For instance, Chinese military strategist Qiao Liang acknowledged the danger posed by sanctions: "the Taiwan issue cannot be completely resolved unless the rivalry between Beijing and Washington is resolved."

Moreover, there are diplomatic options to forestall conflict. Washington should suggest a mutual stand-down: the US could drop efforts to expand Taiwan's international stature, end military cooperation, and assure the PRC that no US forces will ever be stationed in Taiwan, backed by Taipei's pledge of the same. China could end aggressive military challenges to Taiwan's airspace, reiterate a commitment for peaceful resolution of the dispute, and remove missiles placed to

intimidate the island. What matters most is maintaining peace today and pushing demands for resolution into the future.

US foreign policy should focus on protecting the American people. Which is the most important reason to reject proposals to lend the US armed services to Taiwan. Maybe everything would work out peacefully. Alas, history is filled with examples of fate cruelly dashing the hysterically optimistic predictions of those threatening or employing military force.

Any war with China certainly would be serious and likely would be horrendous. And even victory over the PRC likely would be temporary, just an armistice for a generation or two, like in Europe after World War I. Beijing would not supinely yield to greater American firepower. Washington should not go to war over Taiwan.

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### [U.S. Foreign Policy](#)

How to do trilateral arms control and keep China out of talks to extend New START

August 2, 2020

Written by

[Jessica Budlong](#)

The Trump administration appears to be holding the renewal of the bilateral New Strategic Arms Reduction Treaty, or New START, hostage with the fallacy that China should, and would immediately, join trilateral negotiations with the United States and Russia. The United States has continually [pressed](#) China to join discussions on a trilateral nuclear arms control agreement, but it has not yet outlined what such an agreement would actually look like.

Ambassador Robert Wood, the U.S. Permanent Representative to the Conference on Disarmament, also [stated](#) on June 19 that the United States “[is] not going to allow Russia and China to continue to move forward on their modernizations and increasing the stockpiles of nuclear weapons.”

He did not in any way explain how the United States would prevent those countries from doing so. If the U.S.'s true goal is to create a substantive arms control agreement that would replace New START and include China, then the Trump administration needs to outline a clear roadmap of how it will achieve that goal. Such an outline would require fulsome details on possible asymmetric numerical limits and mutually acceptable verification measures.

On June 22, the U.S. and Russia met in Vienna to discuss strategic stability. Special Presidential Envoy for Arms Control Marshall S. Billingslea [implied](#) that Chinese officials were a no-show. China repeatedly made it clear that they were not coming to the meeting, with Foreign Ministry Spokesperson Zhao Lijian [saying](#) “it is our clear and consistent position that China has no intention to take part in a trilateral arms control negotiation with the U.S. and Russia.”

Beyond the obvious problem of changing China's mind, the real challenge to any trilateral arms control agreement will be the numerical disparities between the U.S., Russian and Chinese arsenals. Since New START's restrictions went into effect in 2018, the United States and Russia have [kept](#) their number of deployed strategic warheads under the 1,550 cap. Deployed and non-deployed intercontinental ballistic missile launchers, submarine-launched ballistic missile launchers, and bombers are limited to 800. The two countries both have thousands more nuclear weapons in their active stockpiles. These limits are important when examining how China fits into the treaty with a [presumed](#) total of 320 weapons, only 160 of which are deployed.

As a first step, it should be made clear that China joining New START is not the goal, nor does it make sense from a technical perspective. According to [reports](#), China also does not mate their warheads to their launchers, which means none of their warheads would be counted under the rules of New START, which focuses on deployed weapons. It is clear that New START and its verification mechanisms were designed specifically for Washington and Moscow's arsenals. Looking at the sheer numbers, the cap of 1,550 deployed strategic warheads under New START is five times greater than the size of China's whole arsenal. Any trilateral agreement would have to account for stockpile size in a way that does not encourage China to race to numerical parity.

Next, the United States would have to think about what would incentivize China to reduce its forces. Simple numerical cuts could disadvantage China, and percentage cuts might not produce a substantive change. For example, a 10 percent decrease in

total active stockpiles means the United States and Russia drop to 3,420 and 3,879 [nuclear weapons](#) respectively, while China would only reduce to 288 weapons. Given the sheer number of open questions, a public presentation on U.S. thinking about how to handle asymmetric reductions might make China more likely to consider joining a trilateral dialogue.

An alternative option to numerical or percentage reductions could be an asymmetric cap on the number and types of weapons allowed, similar to the current restrictions outlined in New START. A cap that effectively freezes all three arsenals can help create more space for a broader dialogue on strategic stability. It can help to calm Washington's [concerns](#) over [aims](#) of a possible "crash build up" by China.

Any functional trilateral agreement would also require new thinking on verification and compliance mechanisms. New START's comprehensive verification regime provides for on-site inspections and data exchanges, backed up by National Technical Means. The United States and Russia have been implementing verifiable arms control agreements with these kinds of mechanisms for almost 50 years.

China has never submitted to anything so intrusive. In fact, China has major concerns about such tools. [According](#) to the Defense Intelligence Agency, the People's Liberation Army writings "suggest that reconnaissance, communications, navigation, and early warning satellites could be among the targets of attacks designed to 'blind and deafen the enemy.'" Getting Beijing accustomed to the kind of verification mechanisms that will be a part of any worthwhile trilateral agreement will take time and commitment.

Ambassador Marshall Billingslea has [said](#) that "new arms control should definitely involve Russia AND China, and cover entire nuclear arsenals of both those countries." That may be the Trump administration's goal, but it is unachievable at this moment. Whether it is the lack of interest, the mass disparity between arsenal sizes or the discomfort with verification, it is clear that China is far from ready to make a nuclear deal with the United States. That does not mean it is not a worthy goal. It just means that New START extension should not be held hostage to what is undoubtedly a decades-long undertaking.

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## **A DISCUSSION ABOUT DEFENSE BUDGET CUTS**

Why we will win the fight to cut the Pentagon budget  
July 30, 2020

Written by  
[Erica Fein](#)

This week, Senate Republicans unveiled their long-awaited COVID-19 “relief” legislation, and it falls cruelly, laughably short on almost every metric. The bill provides inadequate funding for testing and contact tracing, includes no money for states and localities, cuts federal unemployment benefits (while providing immunity for corporations who put their workers at risk), provides no rental or mortgage assistance, nor does it extend the eviction moratorium. But it does ensure that one group is well taken care of: the defense industry. The legislation provides nearly \$30 billion for the Pentagon, [\\$24 billion](#) of which would go directly to the arms industry.

This comes on the heels of two major votes in the House and the Senate to cut the Pentagon budget by 10 percent. Both amendments were soundly defeated.

Yet while the picture may look bleak, there is cause for optimism about reducing the Pentagon budget. In fact, conditions look more favorable today than they have at any time for at least a decade. That’s owed to organizing inside of Congress, an energized progressive foreign policy movement, and a new national reckoning over budget priorities propelled into the nation’s consciousness by the national uprisings over systemic white supremacy and the coronavirus crisis.

Comparing the recent votes to cut the Pentagon budget with a similar vote in 2017 illustrates the point. Three years ago, the House voted on an amendment to the Defense Appropriations bill to cut the Pentagon budget by one percent, or just \$7 billion. That year, 35 percent of House Democrats supported the cut. Contrast that with today’s House effort, led by Representatives Barbara Lee and Mark Pocan, which sought to chop 10 percent, or \$74 billion, off the Pentagon’s topline. Today, 40 percent of House Democrats supported the amendment, despite the fact that members of their own party wrote the bill. And in a parallel Senate effort, led by Senators Bernie Sanders, Ed Markey, and Elizabeth Warren, nearly half of the Democratic Caucus voted for the amendment, including Senate Minority Leader Chuck [Schumer](#), who has not been known to be supportive of such measures.

These votes didn’t just happen. Since May, the Congressional Progressive Caucus has been [pushing](#) a strategy to call attention to the ostensible blank check for war that Congress is handing the Trump administration by passing massive Pentagon spending and policy legislation without any real constraints. Days before the vote, the CPC [urged](#) its members to oppose the National Defense Authorization Act

without adoption of the Pocan-Lee amendment — something it has [never](#) done before. In the end, 43 Democrats voted [against](#) this year’s NDAA. The previous year, just [eight](#) did.

The inside efforts have been matched with enthusiastic organizing on the outside. The [People over Pentagon](#) coalition, which brings together a diverse set of organizations to dramatically reduce the size of the Pentagon budget in order to fund human needs, sent a [letter](#) to Congress signed by over 60 groups supporting the amendment; Win Without War activists alone have taken nearly 120,000 actions — signing petitions, sending emails, and making calls to Congress — and activists have [placed dozens](#) of op-eds and LTEs [around the country](#) in support of this amendment.

The energy coming from the progressive foreign policy movement is also buoyed by broad public support. A recent poll [shows](#) a majority want to transfer Pentagon spending to other priorities, such as combatting the coronavirus. And the issue is becoming a part of the national public discourse — from Seth Myers [arguing](#) that “decades of conservative governance that has raided the Treasury to dole out billions in defense spending,” to the Movement for Black Lives [rolling out](#) a legislative proposal that includes a (yet-to-be-written provision) to dramatically reduce the DOD budget.

Despite these signs of progress, some might argue that the stranglehold of the arms industry over Congress will block any real chance of change. After all, the GOP’s latest proposal is really just business as usual on steroids. Indeed, every time a Pentagon spending bill passes, hundreds of press releases are sent out cheering on the federal dollars coming home for ships, planes, and bombs one day intended for war.

But this is where time and circumstances are changing things. The progressive movement is much more intersectional, and bolder, than it used to be. It’s no accident that the Sunrise Movement, a group whose mission is to combat the climate crisis, is in the anti-militarism fight while organizations like Win Without War are crying out for action on climate: our struggles are not just intertwined, our strategies are linked too. If we are going to be able to cut the Pentagon, we will need to replace the real investments and jobs Pentagon spending generates with something else. And that’s a perfect entree for the Green New Deal, which will not only lead to a better planet but also more employment and prosperity.

Perhaps the most important indicator that change is possible is the draft Democratic Party 2020 [platform](#), which argues that national security can be provided for less defense spending, and that after two decades, it's time to end our forever wars. Even as an aspirational document, the platform leaves much to be desired, and the devil is in the details; but that's where the real work comes in.

Should Joe Biden be elected president, the progressive movement inside and outside of Congress is in its best position in years to cut the Pentagon budget. Not only are Pocan and Lee not giving up, they're forming a new [caucus](#) on the issue. Senators Sanders and Warren [continue](#) to be [forceful](#) voices in the Senate and with the public. And the movement's not slowing down: in response to the new GOP bill, 75 organizations [just sent](#) a letter to congressional leadership, amplifying a demand from April that no more COVID-relief money be spent on the Pentagon.

Finally, in 2021 for the first time in 10 years, lawmakers will have a major chance to reprioritize federal spending. That's because the [Budget Control Act of 2011](#), which locked in so-called "defense" and "non-defense" spending levels for a decade and prevented the transfer of money between those two categories, will expire.

So let's dream big and end the era of massive defense spending. Coupled with a possible shift to Democratic governance, major public support, and a fired up progressive movement, our moment to win is upon us.

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## **Defense budget reflects today's security challenges**

**[Mackenzie Eaglen](#)**

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Cutting the defense budget to restrain American foreign policy is a way to avoid truly hard choices and set clear priorities. In 2018, the National Defense Strategy cautioned "failure to meet our defense objectives will result in decreasing U.S. global influence, eroding cohesion among allies and partners, and reduced access to markets that will contribute to a decline in our prosperity and standard of living." Just because the U.S. can cut the defense budget by \$500 billion over 10 years does not mean that it should.

Facing the coronavirus pandemic, climbing national debt, frustrating acquisition failures, and unresolved domestic spending debates, it is understandable for policymakers to search for savings. Unfortunately, it is typical Washington

behavior to [target first](#) the defense budget. But the peace doesn't keep itself. Safety at home and security protection abroad are not zero sum outcomes.

China will likely remain the pacing threat for the United States throughout the decade. Even after shedding a half trillion dollars in defense spending, the U.S. could still compete with China—but it would be a Sisyphean task. Army and Marine Corps active duty end strength could be reduced, favoring the naval and air power demands of operations in the Pacific. Ambitiously, nearly 150,000 billet reductions could be identified in infantry, Stryker, and aviation brigades—along with corps and above headquarters, for example. This would scale back brigades deployed or stationed in the Middle East and Europe and reduce training units.

Submarines, bombers, and fighters will be prioritized. Heavy ground forces should be cut steeply. The F-35 program should end in 2024 in exchange for longer range bombers. The Navy could deemphasize aircraft carriers, using cheaper platforms, like barges and small surface ships—such as the FFG(X) frigate and Littoral Combat Ship—as basic launch platforms for advanced missiles, holding China's more expensive platforms at risk in its near seas. Ruthless retirement and divestment schedules could also be implemented for legacy programs to save maintenance dollars, [while ordering more platforms like the F-15EX](#) that incorporate new capabilities into old assets.

The U.S. could give up nuclear modernization and cut the ICBM missile force, as China currently does not have the capabilities or capacity to pose a serious threat to the other legs of the nuclear triad. This could feasibly save around \$20 billion, though the continued deterioration of the triad will ultimately cost more later.

Here is what such haphazard and un-strategic choices will achieve: a hobbled and hollow force; a new era of nuclear proliferation; an emboldened Russia, China, and Iran; frustrated U.S. allies in Europe, the Middle East, and the Indo-Pacific; the destruction of domestic manufacturing industries; supply chain failures; and an isolated, less prosperous United States. In 2013, [scholars from Dartmouth and Princeton wrote](#) that “a world with a disengaged United States is the devil we don't know,” but that is only partly true. We know its features.

Iran is making progress toward a nuclear program, and the U.S. will likely be driven out of Iraq. Africa is gripped by instability. Russia is pressuring Romania, retaining a position in Syria, and interfering in democratic elections in Europe and America. China has clear ambitions on Taiwan that will be achievable absent an effective American deterrent. Without forward-based forces in Europe, the U.S.

undercuts its ability to quickly respond to crises in the Middle East and Africa. Without a modernized nuclear arsenal at the bargaining table, the next administration will be unable to negotiate a new arms control regime.

Defense budget cuts at this scale are not fiscally responsible. They are political theater that makes politicians feel good for “saving” money but actually reduce security and ultimately prosperity.

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## Spending too much and buying the wrong things

[William D. Hartung](#)

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This year’s proposed budget of \$740 billion for the Pentagon and related programs is one of the [highest levels](#) of defense spending since World War II, higher than spending during the Korean or Vietnam Wars or the peak of the Reagan buildup. Spending this much money on traditional military capabilities is out of sync with the world we now live in, where pandemics, climate change, and extreme inequality pose the greatest challenges to our safety and security. Our military should be smaller, have fewer missions, and be structured around different priorities.

This analysis is adapted from the report of the Center for International Policy’s [Sustainable Defense Task Force](#), a group of ex-White House, Pentagon, and congressional budget officials; former military officers; and think tank experts from across the political spectrum. Key elements of the task force’s approach include an end to endless wars and the global military reach they require; a more realistic view of the challenges posed by Russia and China; greater reliance on allies to defend against risks in their home regions; a diplomacy-first approach to regional challenges, like Iran and North Korea; a deterrence-only nuclear strategy; and the elimination of waste and unnecessary bureaucracy at the Pentagon. The cuts outlined below represent a down payment on the savings that could be yielded by taking this approach.

### Where to cut

**Reducing force structure.** Any substantial savings in Pentagon spending will require a reduction in the size of the force, which can set the stage for reduced costs on personnel, health care, equipment, and facilities. The current force should be reduced by at least 10 percent—approximately 140,000 personnel—with half of

that number coming from reductions in overseas deployments. In keeping with a less interventionist strategy that relies less on nation building and wars of occupation, the biggest cuts should come from the Army and Marines. Total savings from this approach would be on the order of [\\$530 billion](#) over 10 years.

**Rolling back nuclear modernization.** A [deterrence-only](#) nuclear strategy, like the one developed by Global Zero, would allow for substantial cuts in the Pentagon's 30-year, [\\$2 trillion](#) nuclear modernization program, including the elimination of ICBMs and reductions in the bomber and submarine forces. Savings from this approach would be an estimated [\\$100 billion](#) over ten years.

**Eliminating excess bureaucracy.** The Pentagon currently employs [more than 600,000](#) private contractors, many of whom do jobs that are either redundant or could be done more cheaply by government employees. As the Project on Government Oversight has noted, a 15 percent cut in spending on private contractors could save [\\$262.5 billion](#) over the next decade.

**Ending the Space Force.** The Space Force creates a new, unneeded bureaucracy while increasing the prospects for the militarization of space, which would put U.S. economic and military space assets at greater risk than a policy that seeks cooperation and clearer rules of the road for space operations. Eliminating the Space Force would save roughly [\\$15 billion](#) over the next decade.

**Eliminate outmoded or ineffective weapons systems.** Aircraft carriers are [expensive](#), vulnerable to missile attack, and unnecessary in current numbers in the absence of a strategy that relies on the ability to intervene anywhere in the world on short notice. The U.S. should stop buying new aircraft carriers and reduce the force from 11 to 7 over time. The F-35 Joint Strike Fighter may never be ready for high-end combat—the program should be scaled back in keeping with the reduction in force structure outlined above, and the total buy should be [reduced](#), with projected F-35s replaced with upgraded versions of current generation aircraft. These two changes would save a minimum of \$40 billion over the next decade.

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**Special for the ICON: ICBM Ear Commentary on William Perry's op-ed this week in the New York Times and new book "The Button", where he calls for the unilateral elimination of the GBSD and the lands based leg of the nuclear Triad.**

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William Perry's new book, "The Button" declares the US is spending too much on nuclear modernization, an estimated \$1 trillion over the next thirty years. To remedy the situation, the former Secretary of Defense recommends the US unilaterally kill all our 400 ICBMs, cut out two of the planned twelve submarines we are building, and cut our conventional/nuclear capable bombers by twenty-five percent.

These big cuts save only \$5 billion a year, what in a normal year the United States federal government now spends every 10 hours. Far worse, however, is that Perry's recommendation unilaterally cuts 800 warheads out of the 1550 force levels the United States is allowed by the New Start treaty

Apart from the budget savings, Dr. Perry's primary motive is to avoid an accidental nuclear war. Dr. Perry thinks a US national leader might launch our missiles or bombers by mistake. How would that happen? A US president, if warned of an impending attack by our early warning radars, might automatically retaliate against the country from where the missiles originated. Without confirming an attack actually occurred.

Now it is true during the height of the Cold War, the Soviet Union had some 12,000 nuclear warheads. Thus, the United States during that period did worry about what was termed a "bolt out of the blue. This scenario had the Soviets launch a surprise attack on the US from a normal, day-to-day peacetime posture. With over ten thousand warheads available to use, the Soviet could easily attack all our 1050 land-based missile silos. And the Soviets would still have left thousands of warheads in reserve to hold hostage the rest of the US.

One would normally ask, well that doesn't make any sense, wouldn't the US retaliate with our remaining nuclear weapons and thus annihilate the Soviets as well? Well, that is exactly the deterrence strategy upon which the US relied throughout the nuclear age.

But during the period after the 1972 SALT treaty between the US and Soviet Union was signed, the danger of just such a Soviet first strike increased. And the deterrent strategy the US relied upon was thought to be inadequate.

From 1972-1982, the Soviet strategic nuclear deployed warheads grew from 2500 to 12,000. It was thought by US military experts the Soviets could execute a strike eliminating our most lethal weapons—our land-based missiles—and still have in

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reserve nearly ten thousand more warheads with which to hold hostage American cities and other military targets such as bomber and submarine bases.

This “window of vulnerability” as it was called was solved, however, by successive American administrations through a three-part process. Starting with President Reagan, we reduced Soviet and then Russian nuclear weapons by 90% through arms control while simultaneously building for ourselves a better and more survivable nuclear force of submarines and bombers.

We made all our ICBMs only single warhead missiles, thus making the missiles unattractive targets. Given Russia would have to use two attacking warheads to eliminate each US missile silos, the Russians would expend nearly one thousand warheads to eliminate only four hundred of our warheads. Another difference is the US now has other highly accurate missiles available which we did not have at the height of the Cold War. We can now effectively hold at risk key Russian targets, with our submarine launched missiles. In short, the deterrence America thought was lost because of the window of vulnerability has been restored.

Now those nuclear forces we built under President Reagan are all well beyond their service life and need to be replaced. The Trump administration, using roughly similar plans put forward by the Obama administration, is rebuilding our nuclear Triad. But the first ICBM and bomber won't be put into the force until 2029. Completion of the entire Triad is not scheduled until 2042. Unfortunately, this rebuilding Dr. Perry wants to tear down unilaterally. And do this despite Russia already finishing its own nuclear modernization of its 700 new missiles, submarines and bombers allowed by the New Start treaty.

Where did Dr. Perry go wrong?

At the end of the Cold War, the US went on what retired USAF General Garrett Harencak described as a “procurement holiday.” We have put a new nuclear bomber, submarine or ICBM in the field since 1996. The US is hardly starting an arms race. We are trying to catch up.

Now why are we building a Triad of forces? We have a multiplicity of forces for a number of reasons. One we do not want a technical failure to take down our deterrent. That requires us to have a redundant capability. While bombers can be recalled, and thus can signal resolve, the time to get to the target is very long. Here land-based ICBMs are really valuable because they can reach Russian targets in 30minutes. And given the land-based missiles are in known, fixed silos, we need

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submarines at sea which the Russians can't find to make sure a certain portion of our nuclear deterrent can survive a possible Russian first strike.

We thus spend a lot of money on a Triad of forces rather than rely upon only one technology. This Triad assures the President does not have to launch our nuclear forces early in a crisis or on warning of an attack. The US is thus guaranteed the ability to retaliate while sustaining crisis stability.

And though the cost to modernize the force over 30 years is high, Dr. Perry's budget books are cooked. The cost of the three legs of the Triad in today's budget is \$8.5 billion. Two-thirds of the nuclear budgets simply sustains and operates the old, legacy systems we are replacing. For all intents and purposes nuclear modernization is cheap.

Even cheaper if one takes into account that the \$8.5 billion annually includes 100% of the cost of the new B-21 bomber which while it will be nuclear capable, primarily serves a conventional mission. As Obama era defense official Jim Miller acknowledged, the "nuclear" cost of the B-21 bomber is actually only 3% of the total bomber cost so even the \$8.5 billion annual modernization price tag is too high.

Even if the cuts Perry proposes saved a lot of money, the unilateral cuts would still not be smart. If the US followed Perry's lead, the US would not have sufficient capability to deter our adversaries. Who says so? The past 11 American administrations, all of whom supported a robust ICBM force.

But Perry's ideas are also quite reckless. They would make the US highly vulnerable to a disarming first strike, the very threat Perry says he is struggling to prevent. For example, unilaterally eliminating the nearly 500 missile silos and launch control facilities making up the ICBM leg of the triad would leave the United States with 10 or fewer nuclear assets. Three bomber bases, two sub-bases, and 3 submarines at sea would be the entirety of the US nuclear force.

What's the point of making it easy to disarm the United States given that today we have over 500 nuclear targets that the Russians and Chinese cannot eliminate, assuring the survivability of the US nuclear deterrent. Why reduce that number to less than 10?

Nearly 40 years ago Bill Perry was a member of the 1983 Scowcroft Commission that recommended building a new ICBM, the Ohio class submarines, the D5

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missile for the submarines, and the B1 and B2 nuclear capable bombers. All these nuclear systems comprised the entirety of the Reagan proposed nuclear modernization program. And the Scowcroft Commission recommendations were accepted by Congress and thus together the Reagan administration and Congress roundly rejected the Soviet proposed alternative of a nuclear freeze.

Dr. Perry unfortunately thinks the men and women of the industrial base which builds our nuclear deterrent do so just for the money. He says the industry is only interested in profits and thus effectively lobbies Congress to support such systems. Nothing could be further from the truth. Industry and Congress support this modernization effort because we need to do so to protect the country.

That is why Perry's efforts to eliminate America's ICBMs received a paltry 12 votes out of 56 in the House Armed Services Committee this summer. While last year getting stomped on the House floor by a vote of 166-266.

Now the past two administrations placed the new GBSD ICBM in the budget. And the last ten administrations before that —during and after the Cold War— supported a robust ICBM force and nuclear Triad.

As for arms control, Perry apparently believes the country should be punished because the INF Treaty has been discarded. But the Russians walked out of the INF treaty, not the United States. And the Chinese refuse to even talk about nuclear weapons, despite having the third highest number of nuclear weapons of any country in the world.

The plans Dr Perry has for a world of zero nuclear weapons are all well and good. But until the nine nuclear armed nations all agree to go to zero, the USA will in the meantime keep a strong, credible deterrent, seek reasonable and verifiable arms control where possible and build stabilizing missile defenses to better protect our people. And a new GBSD land-based ICBM force is integral to that effort.

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