

CENTER FOR A NEW AMERICAN SECURITY DEFENSE PROGRAM

“HOW THE U.S. MILITARY FIGHTS WARS TODAY AND IN THE FUTURE”

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PANEL MEMBERS

SUSANNA BLUME, CNAS DEFENSE PROGRAM DEPUTY DIRECTOR

DAVID OCHMANEK, RAND CORPORATION SENIOR INTERNATIONAL DEFENSE RESEARCHER

CHRIS DOUGHERTY, CNAS DEFENSE PROGRAM SENIOR FELLOW

ROBERT O. WORK, CNAS DISTINGUISHED SENIOR COUNSELOR FOR DEFENSE

BLUME: Hi, everybody. Thank you so much for coming today. My name is Susanna Blume. I'm senior fellow and deputy director of the defense program here at CNAS. And we are gathered here today to talk about how the U.S. military fights wars today, but more importantly, in the future.

And I hope that you will indulge me in a slightly longer-than-usual preamble here, because I think it's important for us all to know what--what it is that we're talking about and, particularly, why these three gentlemen to my left are here to talk about it.

And so, we start, as I almost always do, at these events with the National Defense Strategy. It clearly defined the Pentagon's top priority as competition and potential conflict with China and Russia. And effectively, with the NDS, it was change the ends of--of U.S. defense strategy. And it also implied that the Department of Defense would also have to change the ways it approaches these new ends.

But, to date, much of the discussion about the NDS is actually focused on the means. It's focused on how much money is in the Defense budget. Are we buying X instead of Y? What do we need to shift? What do we need to move? And as--as you all know, this is actually what I spend most of my time talking about. It's a very important and worthy topic, but--but--we've--we've, to date, kind of missed this discussion about the ways, about that step two in the ends, ways, means paradigm.

And so, CNAS and, specifically, our new--newest Senior Fellow in the Defense program, Chris Dougherty, is launching a project to address this shortcoming, and it's called “A New American Way of War.” We like to call it ANAWOW for short, ‘cause you've gotta have a zippy acronym, right?

And his hypo--his hypothesis is basically that the shift in strategy is profound enough that we have to fundamentally rethink the--the way that we fight and that this thinking about the way that we fight should also inform what we buy and how much is enough. So, that's the thesis of the

project.

And joining me here today, to shed some light on this subject, and to launch this new project that we're undertaking here, are really the two dons of American force planning. And Bob Work and Dave Ochmanek--I knew you were gonna--

OCHMANEK: --(INAUDIBLE)--

BLUME: --Hate that, so I didn't tell you about it in advance--

OCHMANEK: --No. There's one don and one accolade. How about that?

BLUME: Okay. And--and Chris, himself, who is one of the foremost next-generation thinkers in this space.

So, Chris, as I mentioned, is a senior fellow here, and he's the mastermind of this new American Way of War project. Prior to coming to CNAS, he worked in the Office of Strategy and Force Development in the Pentagon and was a key drafter of the 2018 National Defense Strategy. What we like to say is that he wrote the pointy bits, which is rough on characterization of his role of that process.

During his time in the Pentagon, before and previously at the Center for Strategic and Budgetary Assessments, Chris also assessed the ability of the military to meet its strategic ambitions and worked on new operational concepts designed to meet the demands of deterring China and Russia.

Bob, who, as many of you know, is a senior counselor and distinguished senior fellow also here at CNAS. Prior to--to that role, he served as the Deputy Secretary of Defense, where his work leading the Third Offset was, in many ways, an important lead and precursor to what eventually become the NDS. It was a very influential bit of strategy and planning.

But, beyond the formal titles, you know, Bob was a preeminent visionary in--in the U.S. Defense Strategy and force-planning space, beginning in his time in the Office of Net Assessment and through tenures at CSBA, and then previously here, as the CEO of CNAS, you know, he's consistently been looking, you know, 20 years and beyond into the future, diagnosing critical military competitions and coming up with innovative concepts and strategies for meeting those.

Dave is a senior international and defense researcher at the RAND Corporation. He has interspersed his time at RAND with two stints as a deputy assistant secretary of defense. First, as the DASE for Strategy, 1993 to 1995, and then again as the DASE for Force Development from 2009 to 2014. And in those roles, he played a really critical role in shaping U.S.--post-Cold War U.S. defense strategy, particularly emphasizing the size, the shape, the readiness of the joint force.

But, again, you know, more important than those informal titles, is that Dave is a

preeminent analyst--I'm going to flatter you some more, just get ready--

--(LAUGHTER)--

--but, preeminent analyst of force planning in the U.S., and his ideas and methods have influenced, really, every major strategy review or shift in the--in the size and shape--the composition of the joint force since the end of the Cold War, up to and including the National Defense Strategy.

So, that's who these three guest--guests here with me today are. And--and that's why we selected these specific panelists to come and talk about this topic. And so, without further ado, I'm gonna dive right in. I'm gonna give the first question to Chris, and I'm gonna ask him to define some terms for us.

So, what is a way of war? You know, how is it different from official doctrine or operational concepts? Why does it matter?

DOUGHERTY: Absolutely. That's a great question. There's been a lot of writing on the American way of war in particular, and I think each--each scholar who's delved into that question has defined it slightly differently. You know, Russell Weigley kind of originated the term, had his own--had his own definition.

OCHMANEK: Um-hmm.

DOUGHERTY: I know Antulio Echeverria, who, I believe, (INAUDIBLE) here, defined it as an American way of battle. There've been different kinds of ways of thinking about it.

The way I see it and the way this project is going to approach it is as a common set of assumptions and expectations about how war unfolds and what war looks like. And--and Carl Builder, in his book--his kind of masteral book, *Masks of War*, called it the--the Image of Conflict. It's--if you close your mind--if you close your eyes, and in your mind's eye, you see how a war unfolds, that narrative structure about how it--what it looks like and how it unfolds informs the way you plan operationally.

And this manifests itself, I think, in the joint force and--and in our--our military thinkers in the template that we approach military problems with. And--and that template--you can see it, I think, most clearly if you do a lot of war gaming. You sit a joint planner down or a service planner down in front of--of a--a war gamer or any kind of operational problem and, generally speaking, the solution is within a--a 90 percent the--the same, every single time.

And that template that they're bringing with them, that is the way of war that we bring with us. And it is--informs doctrine, it informs our concepts, but it's a little bit more soaked into the marrow of our thinking than--than official writing.

BLUME: Yeah. Bob or Dave, do you have anything to add?

OCHMANEK: No, I think that's good.

BLUME: All right.

WORK: I was just say that I view--I don't think the American way of war, or a way of war, is a static thing. I address it primarily through strategic culture, which is an imprecise term, but it's based on the geography of the power, the ingrained experience.

So, the United States--the ingrained experience is transoceanic power projection or counterpower projection. That's it. That is our ingrained experience. So, everything we do--we fight an away game, we have to get across to broad oceans to do it.

The third thing is the overarching military regime, which changes. What is the way of war across all of the competitors? And who are the strategic competitors? And finally, strategic culture--you can see the value of human capital and technology. And the interplay of the two has a major, major impact on the way you think about how you would fight a war.

BLUME: Okay. Bob, I think I'll stick with you for this next question here. What is the current American way of war? And how did it come about?

WORK: Well, current American way of war is associated with a broad revolution in the overarching military regime, where we shifted broadly from unguided weapons warfare, which was at an inherent bias towards mass, to a shift to guided munitions and battle networks in which mass, and how we thought about mass on the battlefield, fundamentally changed.

Geom--geography is still a dominant factor, and over--the--the current American way of war really occurred in a period where we were worried about transoceanic counterpower projection, protecting our allies, and we were shifting from a garrison posture, in which we had large formations overseas in the theaters they were expected to fight, and we shifted to an expeditionary posture, where we had fewer forces forward.

So, you har--started to have concepts like rapid halt and things like that. You had to somehow stop the power projection of your potential adversaries quickly. And our strategic competitors were all regional powers. It didn't really matter what our American way of war was, we would've crushed them like cockroaches once we assembled the might of America and went against them.

And during this period, human capital and technology really was, how do we reduce casualties? We shifted to the all-volunteer force, the all--the people it--are the critical discriminator of the United States military, in my view. And generally, we thought of technology in terms of trying to reduce casualties and protect our most precious assets. But, it's across the ocean, rapid halt, assemble your bases. You know, what Frank Hoffman would call dominant maneuver.

So, I think, right now, we've had 25 years of extraordinarily favorable strategic circumstances. And from a strategic point of view--I know many of the people who have fought

in wars will object to this--but, from a historical and strategic point of view, it's been pretty easy for the United States to gain its military objectives. And--oh, by the way, I wanted to say--

OCHMANEK: --Against state adversaries--

WORK: --Yes, against state adversaries.

Today, we're really talking about conventional warfare against state adversaries. We can talk about gray zone operations and counterinsurgency, but really, to get the Department to change right now, we're really saying, "How would we fight a conventional state adversary?"

BLUME: Yeah. Dave?

OCHMANEK: Just a couple things to add to that, or underscore. Yes, we're--we're--so, since the end of the Cold War, we are expeditionary. We don't have large forces deployed in theaters where we're likely to fight. We deploy the force on warning of potential threats, we expect that force to be able to deploy to theater and operate largely in sanctuary from enemy attack.

And we are built around the belief, which has been founded in experience, that once the order is given to commence hostilities, U.S. forces will quickly gain dominance in all five domains of warfare--air, space, land, sea and cyber--and exploit that dominance to achieve whatever objectives they're assigned. And, of course, that's exactly where our adversaries are, aiming their--their force development in order to deny us those key aspects of our--of our way of war.

BLUME: Thanks.

DOUGHERTY: I think--it's funny, I--I had three words written down to describe this, and they were time, sanctuary and dominance, and you kind of took two of them right--right out of my mouth.

But, I think the time aspect, as it pertains to the problems and the challenges we face against China, Russia really matter against non-nuclear armed opponents, right? A massive counter-attack. And--and--and you look at 2003, against Hussein's Iraq, right? There's no escalation capability for--for Hussein's Iraq. They're just--

OCHMANEK: --Um-hmm--

DOUGHERTY: --we're going to come in, we're going to obliterate you, we're gonna change your regime, and there's not a heck of a lot you can do about it.

OCHMANEK: Yeah.

DOUGHERTY: And so, time is really on the side of the United States. We have the flexibility to attack, as we've always said--and you hear this phrase all the time, it's become a cliché--the time and place of our choosing.

I--I don't think that situation obtains against new adversaries, and I think the other thing is that the ability to have escalation dominance against every rung on--on a ladder doesn't work when you're facing nuclear armed opponents, particularly an opponent like the Russians, who have a nuclear arsenal that is, in many ways, just as capable as ours.

So, I think that's another aspect of this, that you're--we've--we've kind of assumed that not only were our opponents regional adversaries, but they didn't have any meaningful means to--to escalate against us.

BLUME: Yeah.

OCHMANEK: Good point.

BLUME: Yeah, so, I think we're bleeding a little bit into my next question here. And I--I'll lead with Dave for this one. But--so, implied in this task that Chris has set for us, is that, you know, we do need a new way of war.

OCHMANEK: Yes.

BLUME: You know, why is that? So, Chris mentioned--also mentioned the criticality of war gaming. You know, what have recent games revealed to us about the weaknesses of our current--

OCHMANEK: --Yeah--

BLUME: --Approach?

OCHMANEK: Well, short answer, of course, is that, in our games, when we fight China or Russia--and we've written about this in unclassified forms at rant--blue gets its ass handed to it. Not to put too fine a point on it. We lose a lot of people, we lose a lot of equipment. We usually fail to achieve our objective of--of preventing aggression by the adversary, which is a headline.

So, you pull, you know, any--so, you go home on vacation, you talk to your parents, your friends. Everyone assumes, based on 25 years of experience, that we have a dominant military establishment, that when we go to war, we always win, we win big, and there isn't any question about this. And when--when you say to people, "Not so fast," they're shocked, because they haven't had this experience.

So--so--so, why does that happen? Number of reasons. All five domains of warfare are contested from the outset of hostilities. We do not have air superiority over the battle space at the outset of these wars. We do not have maritime superiority. Our space assets are under attack with kinetic and non-kinetic means. Our command and control is under attack by electromagnetic attacks and cyber.

You know, the--the--the--the brain and the nervous system that connects all of these pieces is suppressed, if not shattered.

And then, finally, of course, our foreign bases, whether at land or at--at sea, are under attack. So, this notion of sanctuary, that we deploy into and operate out from under, is now gone in these wars. And we have yet to come to grips with what all that means.

BLUME: Yeah. Chris, you want to--

DOUGHERTY: --Yeah, absolu--I think that, you know, I couldn't disagree with a single word that--that--Dave has said. I think, if you look at what he described, I think the reason why we need a new way of war is that what he describes are systemic problems.

So, it's not just a onesie, twosie, "I'm gonna to fix this widget," or "I'm gonna"--

OCHMANEK: --Yeah--

DOUGHERTY: --"change this concept for how I do airbase defense, and that's gonna make everything better." I think, when you add up the--the numbers of problems and you look at their breadth across domains, across services and across functions, what you see is an inability to fix those, piecemeal, at anything approaching a reasonable defense budget.

And so, if you--if you say that, "Okay, now I have to change almost everything." And I always--I, you know, I use that line from Johnny Lampedusa--Giuseppe Lampedusa has got this novel called The--The Leopard, and it's a--a story about the Italian Resorgimento and how the--the nobles needed to align themselves with the liberal revolution against the kingdom of the--of the two Cicilys. And there's a great line there where he says, "In order for things to say the same, everything's got to change."

(LAUGHTER)

And I think, as a status quo power that kind of likes the situation that we're in, as a country, we have to think, as a military, if our level of advantage and dominance is going to remain over the next 30 years the way it has over the last 30 years, since the end of the Cold War, we're going to have to really, fundamentally change the way we fight wars.

BLUME: Bob?

WORK: Yeah, I mean, what's so frustrating about this is the United States--in the 1990s, the Office of Net Assessment did a large series of war games called 20SX. And it--it essentially said, "Okay, right now, we are dominant in the new operating regime. There's been a revolution in war, guided munitions and battle networks at the operational level of war are going to, in large part, determine the pace, the scope and outcome of a campaign. Let's imagine, 20 years hence, when a large state adversary has achieved parity--which is what any marshal would call a mature regime--where all the competitors now have the same capabilities and scale, even if they pursue a--a couple of them asymmetrically."

So, if you take a look at the six operational challenges outlined in 2001 QDR, those six

operational challenges were informed by a decade of war games which said, "We are on the top of the hill right now. It really looks great--Desert Storm, Operation Allied Force--gosh, we're just going up against these regional pygmies. Everything looks good. What happens if it changes?"

And if you look at the six operational concepts outlined in the 2001 QDR, and had we pursued those, we'd be in a much, much different position right now against our strategic adversaries, like Russia and China, than we are.

But, of course, things happen. You know, 9-11 happened just as the QDR was being published, and we went into a different direction. And so, the biggest thing right now is, we have a mature regime in which we have large state competitors that can match our scale. That's what's different. And so, we have never gone up against an adversary with the same capabilities and scale in the guided munitions battle network regime.

And look, people can say, "Oh, you're just talking about transformation work," and I say, "No, look at what our competitors talk about." The Russians called them Reconnaissance Tri-complex, and the Chinese call them Operational Systems. Everyone sees this exactly the same way. How do you win in this environment? And you will not win doing what Dave has--has described. You simply won't be able to do it.

In every case that I know of, the F-35 rules the sky when it's in the sky.

OCHMANEK: Hmm.

WORK: But, it gets killed on the ground in large numbers. So, in the first five days of the campaign, we're looking really good, but after the second five days, it's not looking so hot. Those are the things that the war games show over and over and over. And so, we need a new American way of war, without question.

BLUME: So, next, I want to talk a little bit about, you know, what should the elements of this new American way of war be, right? You know, as Bob points out, you know, people have been thinking about this on and off for some time now, and we should have some kind of inkling at--you know, at first blush, of what direction we should be headed.

And I'm gonna start with Dave and ask you to talk perhaps a little bit about the near-term--

OCHMANEK: --Yeah--

BLUME: --Five to seven-year outlook and then go to Bob and--and ask you, maybe, to look a little bit further out than that.

OCHMANEK: Yeah. So, of course, we do war games not only as a way of giving a grade to the program of record, but also as a way of getting insights about the dynamics of these future campaigns and then testing hypothesis about how to fix the problems that the baseline games identify.

We typically send our players home after two days quite depressed--again, because they get--they got creamed. If we bring them back on day three, we reset the clock to zero, and we say, "Let's try something else. Let me give you some new stuff, and let me encourage you to try some different ways of fighting," what--what--what seems to be working is--is things built around the following sort of ideas.

One, U.S. forces need to be able to reach into the contested zone created by the enemy's A2/AD capabilities from the outset of the campaign, and engage and kill the operational center of gravity, whether it's amphibious ships coming across the Strait of Taiwan or battalion tactical groups coming across the borders of the Baltic States.

You--you--even with great improvements in our capabilities to suppress integrated air defenses, to--to--defend bases, you are not gonna have time to gain that dominance that you'd like to have, that we've become accustomed to, such that you can use direct attack weapons and non-stealthy platforms to go engage the enemy. The--it will not work. So, figure out how to reach in and kill.

Two, reduce the exposure of your force to the enemy's long-range fires. It will not work to put hundreds of airplanes within MRBM range of an adversary and expect those aircraft to generate combat power, whether they're at sea or whether they're on land. And--and--and unless and until we get a very significant breakthrough in the effectiveness and cost effectiveness of active defenses against ballistic missiles, we're gonna have to live in that world.

Three, maintain functioning kill chains. You gotta have situation awareness on the battlefield, you gotta know where the enemy is, and you have to apply the limited combat power you can bring to bear, to the places where it matters most.

And finally, having done that--and--and--the strategy calls the--talks about the blunt phase of the--or the blunt force to do this, you buy yourself some time to, then, start taking apart, dismantling the adversary's A2/AD complex. So, they've got air defenses, command and control of the zone (INAUDIBLE).

So, in--in broad-brush strokes, those are the four main elements that I think we're gonna have to pursue if we've gonna solve this problem. And I think it is--it is not an intractable problem. There are--there are--there is stuff out there that would give us the wherewithal to do this.

BLUME: Not an intractable problem even in the relatively near term?

OCHMANEK: Yes. Even in the relatively near term.

BLUME: Okay. Bob?

OCHMANEK: And we can amplify on that as we go along.

BLUME: Yeah, let's do.

OCHMANEK: Yeah.

WORK: Yeah, once you have a mature regime, you're either going to try to gain an advantage in the regime against your competitor, you gonna to try to look to change the name of the game and create a new regime. The hypothesis of the Third Offset was, we're at that point that the United States should try to change the game.

And in broad strokes, it was--I'll say it was calling for a move toward algorithmic warfare in which we truly exploit the advances in artificial intelligence and use them to have new ways of war with human machine collaboration and human machine combat teaming and assisted human operations, being able to call upon these new devices to help them gain a tactical advantage and to go after new types of autonomous weapons.

In this transition from what Dave is talking about, to this longer range, which is gonna to require a lot of experimentation--this is just a hypothesis, no one has an answer for this--but, the Chinese theory of victory is you will have what they call a systems confrontation, collision between an American battle network and a Chinese Anti-Access Area Denial Network.

That collision will start early, and it will probably determine the outcome of the campaign. And the Chinese theory of victory is system destruction warfare. They--nothing that I can find says, "Hey, you need to sink a certain number of American ships or shoot down a certain number of American airplanes," or, you know, "kill a number of tanks." It is, "Attack the American battle network at all levels, relentlessly." And they practice it all the time.

Meanwhile, on our side, whenever we have an exercise, and when the Red Force really kind of destroys our command and control, we stop the exercise and say, "Okay, let's restart. And, Red, don't be so bad, and allow us to practice the American way of war because, you know, after all, we're pretty good at it."

So, the first thing we have to do is become--we have to win the system destruction warfare fight, both against a Chinese adversary or a Russian adversary. We--we know we're going to have to fight from longer range, in many cases, and we know that we're going to have forces inside their guided munitions regime--guided munitions envelope.

And just as we tried to work it out in the 1950s, it will require distributed operations. You're gonna to have to disaggregate your force so that your forces are not masked and will be able to survive under persistent guided munitions bombardment.

When I first heard in the--it just is, kind of, a throwaway in the unclassified version of the NDS, and it talks about the new global--

DOUGHERTY: --Operating--

BLUME: --Operating model--

WORK: --operating model, and so they say there'll be a contact layer, a blunt layer, a surge layer and a homeland defense layer.

And when Chris first told me about it, I didn't like it at all.

(LAUGHTER)

I said, "Hey, this sounds to me a lot like rapid halt in 1983. What's the difference?" But, the more I thought about it, I said, "This could be a way to really force change on the services and get new operational concepts." And I'll give an example.

The Marines really see themselves as a--as a blunt surge force.

OCHMANEK: Hmm.

WORK: In other words, they--you know, you have the muse out there, they're in the contact layer, but they're really to kind of do the part of the blunt. And then, you assemble two big marine expeditionary brigades, M38 amphibious ships, and you get them across the beach.

But, if the Marines started thinking of themselves more as the contact blunt force, which I think a lot of what Noel Williams talks about, it--you wind up with an entirely different Marine Corps. You don't need a huge amphibious fleet.

OCHMANEK: Hmm.

WORK: You might have more human machine combat teams that you can insert inside the guided munitions envelope and really do some things that would screw up an adversary.

So, I think this contact blunt surge would be an interesting thing to try to force change on the four services and have OSD say, "Come up and tell me how you--how you envision yourself in these layers? And how would you contribute to a campaign?" And you might get some very interesting stuff.

BLUME: Chris?

DOUGHERTY: I think what's interesting is--is the--the commonality between some, you know, much of what--what Bob is talking about is--it's (INAUDIBLE) today in--in theories and concept, and--and it's being developed, but the ideas and the solutions are out in the, you know, the 10 years and beyond, oftentimes 20 years, for--for some of the stuff.

And I think Dave is much more focused on things that can be done within a FYDP--

OCHMANEK: --Um-hmm--

DOUGHERTY: --or--or possible--or--or--two, at--at the most, but the common themes are--the--the difficulties of gaining and maintaining sufficient information.

We--we used to call it dominance. I think that's probably unrealistic against a pure adversary--I think it's--but a sufficient advantage in the information domain, because as--as--when Bob described that shift that we had, from mass to precision, where precision relies on information, relies on knowing where things are, being able to transmit that information quickly and--and accurately to a weapon system or platform, and then have that platform attack it and then know that that target was actually successfully attacked.

And if you look at what China and Russia are doing, they're attempting at every--as--as Bob described and as Dave described, doing everything they can to deny us that ability and to destroy our systems.

And I think that's one reason why the NDS focused so much on resilience of our C4ISR. They are--we have--we have designed our C4ISR systems around efficiency--efficiency of cost and efficiency of--of information transfer. And I think we've realized that that focus on efficiency in that area has--has made us vulnerable to attack.

But, when you're not under attack from--from, you know, an Iran or North Korean or an Iraq, it doesn't really matter that your space architecture is vulnerable, 'cause it's not. Nobody's gonna to attack it.

I think the second thing I would go to is that--and Bob alludes to this with the disaggregation--and that's logistics, right? So, if we are going to fight as a--as a transoceanic power projection force, there is no getting around the need to move people, material, munitions, fuel and other critical end items to wherever you're going to fight. And the more disaggregated you fight, the more difficult that becomes.

OCHMANEK: Um-hmm.

DOUGHERTY: We build main--big, main operating bases not because we like to have big, main operating bases--because that's an efficient way to operate, particularly for air operations, right? It's--it's just much, more efficient to concentrate.

But, what you've done is created a large, concentrated target. And how do we figure out the logistical pathway to getting toward--from where we're talking about today, where, you know, it's possibly tractable to the future, where it--it may not be tractable. It's really some of the--where the rubber meets the road in these concepts, I think, in those two particular areas.

And the last, I would say, is it's in the aerospace realm, a lot of it. I--I think, you know, every domain faces its own challenges, but I think that the Chinese and Russian almost laser-like focus on denying us an ability to establish some form of aerospace dominance in--in the theater of--of operations is particularly problematic, because that, I think, is the sine qua non of every--

OCHMANEK: --Um-hmm--

DOUGHERTY: --U.S. operation since the tail end of World War II. I mean, there--there's

always that quote that's been since 1953, since U.S. ground forces came under a concerted air attack--although I know that there's been recent drone attacks in the Middle East and then you--you quibble with, oh--whether that--that qualifies or not.

But, I think that--that notion that, really, since the end of World War II, U.S. ground forces haven't been under adversary air attack of any particular consequence, really strikes home in the fact that that's not going to be the case anymore. And so, how do you think about operating in a completely different way, now that that--we can't guarantee that to a joint force commander any longer?

BLUME: Yeah. So, Chris, as you point out, there's a lot of agreement happening up here right now, which is, you know, lovely and delightful, but doesn't make for a particularly spicy panel.

(LAUGHTER)

And so, what I'm gonna to try now is try to get you to disagree a little bit. And I'm gonna to do that in the traditional way that reasonable people are caused to disagree, and that is by trying to apply a resource constraint--

OCHMANEK: --Hmm--

BLUME: --to the conversation here, right?

OCHMANEK: Yes.

BLUME: And so, all three of you mentioned lots of very expensive things. Bob, on the end, is talking about pretty substantial investments in artificial intelligence, in autonomy, human machine teaming, things of that nature. Dave, kind of implied in your comments are certain advanced munitions--

OCHMANEK: --Um-hmm--

BLUME: --what--you know, what would you like to add to that--

OCHMANEK: --Yeah--

BLUME: --to your Christmas list?

OCHMANEK: So--so, I'll answer that question and also foil your attempt to get us to disagree. So--so--so, if--RAND--

Unknown Speaker: --(OFF-MIC)--

OCHMANEK: --Yeah, yeah--

--(LAUGHTER)--

--yeah. (INAUDIBLE). So, two years ago, I was asked to lead a project that looked back at 15 years of war gaming, and the headline of that was, "We're over 18." And General Hicks, who was the Air Force strategy lead on the air staff--I--I want to say he loved to quote that. He didn't love it, he--he hated the fact that we were over 18 in these war games against our--our most competitive adversaries, but--but, that was the reality

Following that, he said, "Okay, I'm tired of playing these war games, where we learn the same lesson over and over again, that the program of record fails. Build me a force that will not fail, that will--that will underwrite a--a better operational concept, better way of war." We did that.

To our surprise, we found it impossible to spend more than \$8 billion a year to make the Air Force ready to deal with these problems. So, multiply that by three. For \$24 billion a year, I will assert that if we focus that on the right stuff, we can move the needle against China and Russia. And the right stuff would be standoff weapons and munitions, like (INAUDIBLE). And so, we shouldn't get into--

BLUME: --Yeah, yeah--

DOUGHERTY: --Yeah--

OCHMANEK: --brand names, but anti-armor munitions, posture changes, right?

We don't have enough stuff in Europe. Let's--I mean, let's just admit it. I need armor brigades, I need fires brigades, I need weapons munitions, I need short-range air defenses for my army, my air bases, anti-satellite weapons, jam-resistant data links, SAM suppression missiles. I--I can buy the whole kit, and it's all mature technologies, and it would scare the crap out of our adversaries--

BLUME: --Yeah--

OCHMANEK: --in a good way.

BLUME: So, it would scare the crap out of our adversaries in this--again, this, like, five to 10-year time horizon that we've been--

OCHMANEK: --Yeah--

BLUME: --talking about. But, where do you wedge in Bob's investments--

OCHMANEK: --Yeah--

BLUME: --in the future to deal with challenges 20, 25 years out? I hazard that's gonna be more than \$24 billion a year.

OCHMANEK: Well, so, the--so, I--so, I think I read yesterday that our R&D budget for FY20 is gonna be a hundred and ten billion dollars a year. I repeat, \$110 billion a year. I think, with some smart management, you could get plenty of umph against the things you most want for the Third Offset, the 2030-ish kinds of capabilities that we need to keep ahead of the--of a dynamic adversary.

WORK: Well, maybe you have, you know, because I would like to take issue here.

BLUME: Yes.

OCHMANEK: Oh, boy.

WORK: It just--you have to make a judgment on your strategic competitors. Are they looking for a fight? If they're looking for a fight, and looking for a way to incur a defeat on the United States, then I would say, sure, \$24 billion a year for the next five years would be a good expenditure.

But, I believe both China and Russia are conventionally deterred. You know, that is why--in the--in the Cold War, with the forces in Europe right up against each other, the competition went out of area in proxy wars. Now, it's going more in the terms of gray zone competition below the--below the level of overt military competition.

I think we needed to improve readiness. That was a righteous, near-term focus, but I would actually take risk right now and put more money into pursuing advance capabilities and asking the services to do more to pursue what we would call new operational and organizational constructs, new operational concepts and new organizations.

And I'm heartened that we're spending a hundred and ten billion dollars on R&D. That is awesome.

BLUME: We're asking for.

WORK: Asking for. You know, so--that's totally awesome. And I think we're spending on the order of 200 and--200 billion in modernization. That's awesome. And there's all sorts of things that are going on.

You just probably read yesterday, Kratos is coming out with this attributable low-cost drone. Boeing is going after a loyal unmanned wingman. The Navy just announced that they're gonna have an unmanned surface ship on contract by the end of the year. The Navy has just bought four extra-large diameter--or huge diameter, whatever they're--call them now--

--(LAUGHTER)--

--huge diameter UUVs. So, there's a lot of stuff going on.

But, the thing that's missing are, really, experiments on new operational concepts and organizational constructs. And so, that's where I'd put--I'd put my money in that right away.

And the place where Dave and I agree is, spend a lot more money on munitions than you're spending right now. Get your munition stocks up and take a real, hard look at some of the things in the program and get rid of them and go after these large things. We're not that much of a disagreement. I just take a little bit more risk, probably, in the near term.

DOUGHERTY: I--I think--I would play to--and obviously, it's--the--the--the theme of the--the--project, but I would place a greater emphasis, I think, on ensuring that we have a--we have a workable concept first.

I--I think, within the five-year timeframe, you're--you're somewhat limited in--in the stuff you can buy, simply by what exists and what is on the shelf and what is out there, and--and--and budgetary constraints. So, I--I don't want to, at all, say that the sorts of things that--that Dave is talking about aren't absolutely critical, because they were things that we recommended as part of the National Defense Strategy. So, those things are all excellent.

But, I do think that there comes a breaking point, and I think--you know, I'll use an example of air base defense as kind of a--a--a good example, right? Ultimately, we're in a long-term competition between the adversaries, long-range missiles and our ability to shoot down or defend ourselves passably against those missiles. And whether they're ballistic or cruise or now-increasingly, hypersonic, the competition there just doesn't look good for the defender.

OCHMANEK: Um-hmm.

DOUGHERTY: And so, while there are things we can do in the five to 10-year timeframe to make those issues better, and in particular, investing in better cruise missile defense being kind of one of them--long term, that competition in that kind of first island chain, second island chain area or in--in--in what--Central and Western Europe, just doesn't look good for the--the side that relies on air bases to create aerospace power.

And the same thing applies in space. If you are the power that relies on space for your long-range C4ISR, you are disadvantaged, because objects in space are incredibly vulnerable and sensitive to interference.

And so, how do we get around the fact that, in the near term, our investments are going to be in marginal improvements or differentiations of those systems against the world of--that--that Bob, I think, is postulating, which--in which those things may not be--may not be useful, whatsoever?

And the question is, would we be investing in things, over the next five to 10 years, that in 20 years we're saying, "Gee, I wish I'd--I'd bought something else, because now I'm not even gonna have something that looks like a main forward operating air base. I'm gonna have something radically different?" We don't know quite what that is yet, but perhaps we need to figure it out.

BLUME: Yeah. Excellent way to resolve the conflict.

OCHMANEK: So, can I just have a quick--

BLUME: --Of course--

OCHMANEK: --(INAUDIBLE). So, I am guilty of going to the hardware first. And the--all the stuff that I mentioned, and more than was on our list, is only useful to the extent that it underwrites a new concept of operations that allows you to, in fact, reach into that contested zone and kill stuff from the outset of the campaign.

So, I--I don't disagree at all that the concept has to be guiding what you buy, but you can't actually enable what I believe is the future concept without buying the stuff to make it feasible. And you need to do it judiciously so that--so that the--you know, if you got a 20-year shelf life on this stuff, you believe it will still have relevance in the world of 2040, when--when, admittedly, both the adversary and us will have a whole new generation of stuff coming online.

DOUGHERTY: And this is why the upgradable--upgradability of systems really matters, right?

OCHMANEK: Yeah.

DOUGHERTY: There's got to be a--there's got to be a path to getting that system to the next generation so that we can--we can take it, improve it, and--and make it ready for the--the year of algorithmic warfare as--as we move into the future. I--I couldn't agree more.

OCHMANEK: Yeah.

BLUME: Yeah. So, I do want to save some time for the audience to ask questions. But, first--sorry, Sydney--but, first, I do have one--one final question for the panel here, and that's how are--how are we gonna get to the future that we've just spent the last, you know, 45 minutes describing, right? Is--is change going to be evolutionary? Is it more revolutionary?

Do--can--does it need to be driven from the top down? Are we--do we expect more of a bottom-up generated kind of answer to this set of problems that we've presented here today? What is--what is--how do we get there? And I'll start with Bob.

WORK: Well, you know, there's always a combination of top-down bottom-up. At this point of time, I think a more impetus from top-down is necessary, because there are choices being made that may not support the long-range kind of operational concepts.

As we're spending money on experiments and prototyping and doing wargames and trying to do this, I actually--Dave has convinced me that to really jumpstart this, you give a specific goal that the joint force must accomplish.

And so, based on all the wargames--and the numbers are not exact, because the exact numbers are classified, but this--I'll just give you the thing. "Joint force, I'm going to withhold \$24 billion over the FYP. You have to show me how we kill 350 PLAN ships and PLA--PLA Coast Guard ships in 72 hours, whether they're in harbor, in a tunnel, on or under the sea."

OCHMANEK: In the first 72 hours?

WORK: In the first 72 hours.

OCHMANEK: Right.

WORK: "That's your goal. And any of the services that come in with an operational concept that get us closer to that will be given the money at the end of the build to go after the concepts and the--and the programs you have." In Europe, it would be, "We must kill 2,400 armored vehicles in the first 72 hours. Tell me how you're gonna do that."

I agree with Dave. Those two sound hard, and they are hard, but they're possible. They're possible with stuff that's on the drawing boards right now. And my argument would be it would override conventional deterrents, both in the Western Pacific and in Europe, and it would force operational concepts. In other words, don't wait for the operational concepts. Give goals to the joint force that they have to solve, and I guarantee you, that will generate operational concepts.

I would withhold money at the beginning of the program build, whatever it might be, at least 10 percent of R&D and procurement, and the services that come in with the most--with the best operational concepts after you do the review and you agree to the--what they have done with the money that was allocated at the beginning of the program build, you say, "Army, that is a cool way to kill 2,400 tanks. You're going to get \$17 billion over the FYP to go after only the stuff that you said you would need to use this."

And I would go to Congress and say, "You must get rid of unprior--unfunded priority list." That is the killer for any top-down guidance, because any of the services can go to the Congress and say, "Look, if we only had another \$10 billion, we would've bought all these really cool," you know, "armored Humvees--"

OCHMANEK: --That are built in your district--

WORK: --that are built in your district.

Unfunded priority list really hurts you in a period of transformational change like this. You have to enforce discipline on the program.

BLUME: Dave?

WORK: I see Mark in the background. I'm--I'll wait to see whether he agrees with me or not.

OCHMANEK: I think--I think Bob's exactly right. You're not going to have some bearded civilian in OSD--

--(LAUGHTER)--

--come up with new ways to kill tanks. I mean, we have ideas about it, but at the end of the day, innovation at the operational level is the birthright of the services. They're the professionals, and they know how to do this. But, they have to be given the right incentives and strong leadership.

So, the leadership has a vision, it states goals, it has the discipline to hold people to--to the achievement of those goals. The incentive comes from--from providing money to the winners, not saying, "Congratulations, you just came up with a brilliant new concept for killing tanks in the Baltics. Take the money out of your own hide." That's guaranteed to fail.

That, and a--and a partnership with Congress so that you can get support for these politically painful changes in the way we do business, I think--I think is the way we're going to get there.

BLUME: And I'll give Chris the last word.

DOUGHERTY: Yeah, I think--(INAUDIBLE) one of the coolest moments of the NDS process was actually after the NDS had--had been released, and I was--I went to War on the Rocks, and I read this piece in War on the Rocks about warbots.

And it would--had been written by a series--a handful of--of--of mid-career junior officers in the Marine Corps about how the Marine Corps could use unmanned systems and man/unmanned teaming in the littorals to form kind of a--a hybrid of a contact and blunt layer like Bob talked about.

And it was this really cool moment, because you're coming up with these ideas in the National Defense Strategy, and you're banding about--you're hoping, like, "Does this land with someone? And does somebody out there hear this and get it and go take it and run with it?" And it was clear to me, in seeing that, like, "Holy Moses, somebody did. They took it and ran with it. They made some cool ideas," and I think that's great.

So, I think that gets to the--you know, how do you start fomenting the bottom-up concept development? Because Dave--Dave is completely right. It's not gonna to come from--from folks like me. It's gonna come from folks inside the services, like those Marine officers.

I think the--so, the--the phrase I--I've been using in my mind is kind of a guided adhocracy, right? You create a target, you create this idea of what it is you want to go do, and then you let the smart folks who are capable of doing it without--without reaching into them bureaucratically, but simply saying, "Look, this is the thing you want to go do. And if you go do this, there's going to be some good things that happen," and reward the people who do--who do good work inside it.

The one place that I think it gets a little problematic is that--Dave is totally right. The concepts--the good ones are gonna to come from the services. The problem is, warfare is increasingly and inherently joint.

OCHMANEK: Um-hmm

DOUGHERTY: And so, finding a way to stitch together these diverse concepts from each service, to something that is more than the sum of its constituent parts, is going to be incredibly difficult. And I think it's going to be hard for people, whether it's in OSD, the joint staff, or--or in Congress, to judge the merits of service investments or service concepts, until they understand how all of these fit together into a larger war-winning idea.

And I think that's the--the key part for me is, how do we get from that step, where you're gonna have service-driven ideas--because I--I do think that is probably, in all likelihood, the interim step, right? It's not gonna become some sort of grand theory of everything. You're gonna have to do the--the--the hard work at the end, and it's gonna be somewhat evolutionary, probably, at first, at the service level, but to something that creates a revolutionary impact, when you put it all together.

OCHMANEK: I notice you didn't say JFCOM.

DOUGHERTY: Yeah.

OCHMANEK: Yeah.

DOUGHERTY: Yeah.

BLUME: Okay.

OCHMANEK: Yeah, JFCOM is the answer. It was--

DOUGHERTY: --Yeah--

OCHMANEK: --the wrong question.

DOUGHERTY: Yeah, yeah.

(LAUGHTER)

OCHMANEK: It has to come out of the services.

BLUME: Okay. Well, in the spirit of guided adhocacy, I'm gonna turn over to the audience. I'm just gonna stand so I can see everybody. And, Sydney, here, first question.

QUESTION: Sydney Freedberg, Breaking Defense. So, we--we--we have gone through a great discussion of what we want to do and that we have to make hard choices, but not what the

hard choices necessarily are, except for maybe readiness cuts. You know, this budget looks like it has--it's cutting a carrier, overhaul, so that's 25 carriers out of the force, maybe 20 if you tweak the reactor a little bit.

We're buying F-15 super-whatevers, as well as stealth fighters. Army is moving 30 billion out of legacy programs. Sounds like primarily upgrades to things like CH47, M1, M2, in favor of all new stuff. You know, are those the right hard choices? Or a down-payment on the right hard choices? You know, what stuff would you guys kill to fund the stuff you need? If you were king/murders, assassin for the day, what would you cut?

WORK: You want to go first--

OCHMANEK: --Well--so, we're not programmers. It's--it's easy to sit up here and play that game. Reality is that the--the program of each of the services is so complex. There are thousands of invisible lines in there that can be used find money when you need to find money. If--if--if a service chief says to his programmer, "I need \$8 billion at the no-kidding level of life, to buy this stuff," they know how to do that. So--so, just--let me just offer that.

I think, in the long term, things that sail on the surface of the ocean, in general, are going to have a hard time in this environment. Things that rely on sophisticated base infrastructures, like runways and fuel tanks, are going to have a hard time in this environment.

Not everything our force does is going to be in the A2/AD environment, so we've gotta be able to walk and chew gum at the same time. There is still a role for legacy platforms, but--but--but, if you--if you can't get the delta to the top line that you need to buy the stuff to--to--to address A2/AD, then you gotta look at some of those kinds of tradeoffs.

WORK: Yeah, your--your question comes just a little bit soon. I think the budget drops on Monday, and--

QUESTION: --All the things I said are true.

WORK: Well, that's true. But, the budget--we've been promised that the masterpiece will be revealed in the 2020 budget.

OCHMANEK: Yeah.

WORK: And I have heard things that may be in the budget, but I just don't know. Some of the things say, "Hey, that's really cool," and some of the things say, "Oh, that's really a bummer."

But, to a point, you gotta look at the strategy. If you looked at the strategy right now and said, "Hey, we have 58 brigade combat teams in the Army, and we have 54 tactical fighter squadrons in the Air Force, and there is no way that I can square that with the strategy. There's just no way I can square it."

So, I would say, "Look, we seem to be, in this strategy, below the level of aerospace power we need to execute the strategy, and it appears to me we might be--have too much capacity on ground forces." It appears. Now, again, I've been out of this now for almost two years, so I haven't seen anything. But, for example, in the Army, we're gonna buy 504 light tanks. Huh? Tell me how the 504 light tanks fit within this construct.

There is an insurgency in the Marine Corps right now. And they say, "Look, we gotta quit spending all this money on these high-end exquisite amphibious ships. We have to go to a whole new way of thinking about maneuvering Marine forces in this very contested environment, and there's all sorts of ideas to do it." I would love to hear them, and I would say, "Okay, how do we do the transition?"

Now, I've heard that two LPDs got cut, so maybe that transition is occurring, I don't know.

QUESTION: They--they're cut.

WORK: So, that would be interesting. Right now, the technological threat against aircraft carriers is growing, without question. I think everybody agrees with it. The only thing they don't agree is whether or not the defenses and the tactical techniques and procedures would allow you to operate safely in this very contested environment.

So, from what I understand, you know, you buy two carriers, you chop a RCOH, you keep the carrier forces around 10, which was the number that Bob Gates said, "Let's go for a carrier force and see how the competition unfolds over decades." That seems right to me.

So--and then, I heard the Air Force is gonna get rid of B2 and B1--B1--

OCHMANEK: --B1s--

WORK: --B1 bombers, and I'm sitting here going, "This is where jointness kills you." If you went to the Navy and said, "Kill 350 ships in 72 hours," they would most likely do it through a combination of undersea systems and aerospace--air systems.

I mean, if the Air Force is getting rid of the B1 bomber, I said, "You are out of maritime strike. We're gonna to give the B1 to the U.S. Navy, we're gonna to load up with 3,000 LRASMs, and we're gonna base them in Guam and,"--you know, "and all over the place." And in the first 72 hours, they are gonna go out and hunt down and kill every ship in sight. And--in other words, give the whole Chinese Anti-Access Area Denial Network no targets to shoot at.

That's why I say, what Dave has said, after watching 18 years of wargames and saying, "These two operational goals are doable," Yes, they are, but it would require the Navy to go back to what they called in World War II: VPB, Patrol Bomber Squadrons, rather than just BP, Patrol Squadrons.

But, jointness--he would say, "Oh, no, the Air Force has to be able to do all the long-range air." No, they don't. In this transformational change, we can't use jointness as a monolithic

cojole.

DOUGHERTY: It's not a goal.

WORK: It's not a goal. It's how do you solve the operational problems? So, if the Navy came in and said, "Hell, I can do it. Give me some long-range bombers, and I'll go out and clean the seas." Well, that sounds pretty good to me. You get \$24 billion.

(LAUGHTER)

So, we can't--until I see the--the actual choices--go for longer range, go for distributed operations, distributed logistics, really look at electric weapons--the one thing that could change this balance right now is if you could--right now, it's offensive dominant, so electric weapons like high-powered microwaves, laser--lasers, electromag railguns--they have the potential--the potential, I'm not ready to push the "I believe" button--but, they could allow you to get surface forces into the Western Pacific and potentially operate off of bases in Europe if they work, because they have deep magazines, high rates of fire, et cetera.

So, as I said, I'm kind of a glass half-full guy, and right now, there's a lot of things going on. What I'm most frustrated on is the lack of new organizational constructs that would say, "Okay, we are changing the force."

BLUME: Yeah. Chris, do you want to take (INAUDIBLE) at this one, or--

DOUGHERTY: --I--I'll go really quick, because those were great answers. I would just say--the big thing that I would--that I would whack at are the--the arbitrary numerical targets, 355 ships, 386 operational squadrons.

OCHMANEK: Yeah.

DOUGHERTY: I think those are just--they do so much harm. I think the--the--the world in while we lived in the past was, "Let's buy a system, regardless of whether we actually put all the--the full capabilities on--all the countermeasures, all the weapons systems--and we can actually load it out with munitions"--

OCHMANEK: --Yeah--

DOUGHERTY: --right? And we'll just have a ship hold that--that--that, you know, looks--it--it counts toward our ship count, but isn't actually, really an operational capability or an aircraft that isn't really an operational squadron. I think that thinking has to go away. I think we have to think in terms of, "What is the actual war-fighting outcome that I am buying by purchasing this system? And have I bought all of the--the--the requisite"--

OCHMANEK: --Hmm--

DOUGHERTY: --"end items that go along with it, when it comes to sensors, when it comes

to countermeasures, when it comes to weapons, when it comes to basic infrastructure that it needs to live on,” and think holistically like that and--and kind of get away from the--the numerical targets?

BLUME: So, halfway up the aisle here, on the right side.

QUESTION: Hi, my name is Price Floyd. I’m a CNAS OG Version 1 and former head of Public Affairs at the Pentagon. I was struck by your opening statements and where someone said if you went home, you talked to your parents or your--your siblings and you explained to them, you know, where we are, they wouldn’t understand what you’re talking about, because we’ve been dominant for 25 years.

And so, my question is, as you put together this new construct, are you thinking about how to get buy-in? Because I think, in the past, you could have this discussion here, you could then go have it with people in the building and on the Hill. If they agreed, you could implement it. But, I think those days are gone, and the American people have a say in a way they just didn’t before. They kind of let Washington do its thing, and they were okay with it.

But, I’m not sure they’re so okay anymore. So, what do you do, even if you get buy-in from the building and the Hill, but the American people send new folks here, who don’t want to do this?

DOUGHERTY: You know, I think one thing that’s really striking to me is the consistency from the past two political administrations. I know that sounds odd to say, but both President Obama and President Trump have, more or less, said something along the lines of, “We need to move away from nation-building abroad and--and toward nation-building at home.” And I think that reflects a larger pulse among the American people. I don’t think that’s an outlier.

I know, when I’ve talked to my family who--you know, that does not live in the Beltway, they ask me about the strategy, they ask me about the build that comes along with it, and they usually say something along the lines of, “You’re kidding me. You’re asking for \$750 billion. You’re telling me that we might lose a war.” And I kind of shrink back and say, “Yeah, that”--

OCHMANEK: --Yeah, yeah--

DOUGHERTY: --"that’s true.”

And I feel a little bit sheepish. With that being said, I--I think there are ways of making the point to the American public in ways that perhaps we haven’t before. You know, if I had a perfect solution to give you, I would--I would give it right now. I do think that just writing papers that we circulate amongst ourselves is probably not the way to do it.

OCHMANEK: Yeah.

(LAUGHTER)

DOUGHERTY: I think, you know, I love talking to all of you, and this is all fantastic, but I do know that there's nobody in--very likely very few people in Des Moines, Iowa, or--or--or Tacoma, Washington, who are listening to what I'm saying right now. And--and that, I think, has to change. The question is, what do we use to change that?

And I--I--I, you know, I think--I think there are multiple ways--I mean, I remember--and I'm--I'm sure many of you here do as well, the impact that Tom Clancy's novels had on the--the broader American public's understanding of the potentials of warfare with--with--with the Soviet Union in the 1980s.

I think something like that, where it--it popularizes this--that kind of, like, military techno-thriller that was, kind of, very common in that period of time. I think something like that reprise for--for this era, and I know goes (INAUDIBLE), you know, started that ilk but more could certainly be necessarily to--to get it into the American public's head that, like, "No, this is--the image of conflict you have in your mind's eye, which is," you know, "the--the Iraqi triple A blinding spraying the sky, looking for"--

OCHMANEK: --Yeah--

DOUGHERTY: --"the stealth fighters isn't what warfare is gonna look like, and you need to"--the American people know to--need to come to grips with what that may be. And I'm sure there are probably--I mean I--books are terribly outdated. I--I mean, I know, there's probably some--much more relevant, you know, Twitter campaign we could launch, but I think getting outside of--of--of what we do traditionally, because it's clearly not working.

WORK: I--you know, to me, the center of gravity is Congress. The Office of Net Assessment, working with RAND, made what was called the Overmatch Brief. And what it did is, it took a look at what was happening in the Western Pacific and what was happening in the--along the Balts, et cetera, and it just, in a very pictorial way, said, "Our overmatch is gone, and look at this."

And it's not the American people. I--I mean, when Senator McCain saw this, he said, "I want every single person on the SASC and the HASC to see this brief." We actually went over and gave it. And the members--the members of Congress who were on the House Armed Service Committee and the SASC, they were shocked. They were going, "Holy, moly. I didn't have any idea it was this bad."

So, before we go and try to convince the American people, we have to convince Congress that the administration and Congress need to work together to affect this broad transformation to allow us to regain some measure of overmatch.

And so, I'd be interested in the guys who were on the SASC and the HASC, but I would--I was there when we were briefing the overmatch, and I was surprised at the reaction we were getting, where people who were actually supposed to know--I remember one member--you know, the briefer used the term C4ISR. And this is a member on the HASC said, "What is C4ISR?" And that's when I went, "Whoa. We've got a lot further"--

UNKNOWN: --Right (OFF-MIC)--

WORK: --"to go convincing Congress we need to change ourselves."

QUESTION: Although, admittedly, (INAUDIBLE) military love for--

BLUME: --Sydney, hang on. Hang on. Wait to be called on, please. Dave, do you have anything to chip in on this one?

OCHMANEK: No.

BLUME: Okay. Let's go second from the front, on the aisle, here.

QUESTION: Hi, Chip Ericson, lazy retiree.

(LAUGHTER)

And this has been a great discussion, and you quite properly put the onus on the services to explain their strategic concept and how they're gonna to organize to fulfill that strategic concept.

Let me take a contemporary problem and--and ask about a--an agency. Something that could kill North Korean missiles over North Korea would be a terrific deterrent, at the moment.

OCHMANEK: Hmm.

QUESTION: Do you include MDA in your possible candidate for your mythical \$24 billion?

OCHMANEK: Yes is the short answer. Yeah, boost phase intercept looks like it could be a real winner in Korea.

QUESTION: But, no surface (OFF-MIC)?

OCHMANEK: Correct. Correct. Well, so--

WORK: --Well, this is the way I would answer that. Under the Roles and Missions, THE U.S. Army has the responsibility for airbase defense. And if we went to war in Europe, there would be one patriot battery moving, and it would go to Ramstein. And that's it.

So, this goes back to my--my comment that we have 58 brigade combat teams, but we--we don't have anything to protect our bases. So, what difference does it make--

OCHMANEK: --Or our brigade combat teams.

DOUGHERTY: Yep, yep.

OCHMANEK: --From Russian helicopters, from Russian UAVs, from Russian--

UNKNOWN: --Yeah--

OCHMANEK: --(INAUDIBLE) aviation.

QUESTION: Yeah. (OFF-MIC) protecting an ally.

WORK: Yeah.

DOUGHERTY: Yeah.

QUESTION: Yeah.

BLUME: Yeah.

QUESTION: And (OFF-MIC) the--the burst radius of a nuke is a little bigger than--

OCHMANEK: --Yeah. Could be protecting ourselves as well.

WORK: Yeah, about three years ago--

QUESTION: --Which is why I'm saying we're--we're close to being able to achieve boost phase intercept and--unless you believe in Santa Clause coming out of Hanoi, it's gonna be (INAUDIBLE) real quickly.

WORK: Yeah, three years ago, Jim Searing came to the Department of Defense and said, "Look," you know, "we were born as an R&D agency, we've become a procurement agency. We have--we see what is happening with the threat. We want to now shift focus to the threats coming down the line and come up with both operational concepts and capabilities to address that threat."

So, that was three years ago. I would assume that that is continuing to pace.

BLUME: Yeah.

WORK: I don't know.

BLUME: So, just on the aisle here, in the yellow tie.

QUESTION: Thank you. Great discussion and thanks to CNAS for--for hosting this. I'm Bruce MacDonald, Johns Hopkins SAIS and former senior director for science and technology on the Clinton NSC staff.

Quick comment and a question. Quick comment is, in this additional funding--and I'm glad to hear about a hundred and 10 billion, but my experience is that, one thing that's gotten short shrift

a lot over the last 20 years is 6162 R&D funding.

OCHMANEK: Hmm.

QUESTION: Not a lot of money, but as a percentage of the budget, it just keeps going down and down and down.

OCHMANEK: Hmm.

QUESTION: So, that gave us, you know, the internet and a whole lot of other things, so don't forget that.

My question is, in all this discussion, maybe just once did I hear anything about allies. And so, my question is, excellent points made. You know, we can get, you know, very joint perhaps, but how does the jointness and these great ideas you're kicking around--how do we interact with our allies on that?

And also, just as a point of comparison, we do have the inherent strength that we have a lot of allies. Sometimes--

OCHMANEK: --Um-hmm--

QUESTION: --more than we--maybe we need, but China and Russia are notably deficient in that, and I hope that gives us some strengths or advantage here. I mean, I feel like you're wargames, I want to go--

DOUGHERTY: --Yeah--

QUESTION: --go home and--and have a few drinks after taking you guys too seriously.

But, anyway, so I toss that out to you, and I'd--I'd love to hear your comments.

OCHMANEK: Yeah. Absolutely right, Bruce.

DOUGHERTY: Yeah. So, I was gonna say--so, two things. One--

BLUME: --(INAUDIBLE)--

DOUGHERTY: --I mean, there is no more clearer statement of the U.S. defense strategy since the end of World War II, which is that it relies on a constellation of allies and partners and an ability to project power globally, right? The two go hand in glove. They--they exist together.

Our allies and partners extend our influence across the globe, and they provide basing access and forces when we go to fight. And our power projection capability deters threats and helps defend them in the case of aggression against them. And--and those two things work synergistically, and they've worked synergistically very well for the last 70 years. And

hopefully, they'll work very well synergistically for the next 70 years.

And I think part of this project is getting us to a place where the--the latter half of that--because obviously, our focus is on warfare, at least in my part of the project--still functions, right, our ability to project power or to--to use military force to help protect our allies and partners overseas.

With that being said, that in itself, just inside the Department of Defense, is an incredibly complex task. And as we were talking about earlier, right, we may have to aim for joint concepts but end up at service concepts that are eventually, then, congregated.

Adding in allies and partners to that, I think, at least my decision was, very early on, it's going to be a little bit complicated, but, over time, as our concepts begin to grow, building out the American way of war so that it now becomes a coalition way of war that we do together.

But, I mean, if you look back at the--the development of airline battle, for example, airline battle comes in, then you get NATO follow-on forces attack, right? But, you've gotta--you've gotta have something that you, then, build out and--and--and share with the allies and partners. And I think that's the--the first focus. I think Phase 2, obviously, would--would move on to that coalition effort.

OCHMANEK: Just at the operational level, there's a lot of unexploited potential that the allies could--could exploit by doing more. A couple of simple examples--shallow water mines and short-range anti-ship cruise missiles in Taiwan can make it much harder for China to achieve its objectives and much easier for us to sink that 350.

Unattended ground sensors that we're using in Afghanistan--they cost almost nothing. And Latvia, Lithuania and Estonia can give us a marvelous sensing network to help defend against a--and they're not high tech. They're not expensive. We just need to identify these things and--and encourage our allies to start fielding them.

BLUME: So, second from the back in the purple shirt.

WILSON: Yes, my question--

BLUME: --Just--the microphone, please?

WILSON: Oh.

BLUME: And please identify yourself.

WILSON: Oh, Peter Wilson, the RAND Corporation. Bob, the question I have to you about the Third Offset--what I find troubling about the concept, unlike nuclear weapons or our 25, 30-year monopoly in reconnaissance strike capabilities, which we have used effectively, is that many of the elements of the Third Offset--artificial intelligence, robotics, et cetera, are globalized, that--and that the Chinese and others and also, for example, in the area of robotics,

this arms race between IT and the automotive industry to produce autonomous vehicles--it's unclear to me how the U.S. maintains a comparative military advantage in these domains when, in fact, we may not actually have really significant technological superiority.

WORK: That's a great question. When Secretary Mattis came in, and he said, "Come and talk to me about Third Offset." And he goes, "That's not a strategy." And I go, "Sir, I disagree. It is a strategy." And he'd go--but, he was--I said, "It is a competitive strategy. It's a temporal, competitive strategy. We have to have objectives in the FYP, we have to have objectives in the second and third FYP, and we have to have objectives in the fourth FYP and beyond."

And how you phase, that is--I would argue is a strategy. He doesn't agree. He said, "I don't agree. I will refer to this as the Third Offset program, but I won't refer to it as strategy." And I said, "Oh, that"--you know, "you are the boss."

(LAUGHTER)

And so, this is a very--it's much different than the Cold War, where we had--we knew we had a technological superiority, and the entire basis of the Second Offset assumed--

UNKNOWN: --Yeah--

WORK: --we would maintain that authority over time--superiority over time, and the Soviet Union simply would not be able to compete with us. And they were correct. We can't make that assumption anymore. So, this is a really hot competition, and that's why, you know, Sydney's written several articles in the last couple days.

I'm sure the Russians and Chinese are heartened that we're going after AI for predictive maintenance and firefighting.

OCHMANEK: Hmm.

WORK: I'm sure they are entirely heartened, because we are trying to explain to the American people--this is where we will have to go to the American people and say, "No," you know, "AI-enabled autonomous weapons will be more discriminating on the battlefield. They're totally congruent with laws of war. They're more ethical. Tell me why you are worried about them." And, of course, they're worried about terminators.

And I can give the long story on how this came about, but the Department of Defense has no intention, that I know of--certainly no intention when I was talking about Third Offset--to go after what is now called a Lethal Autonomous Weapon System, where the weapon system itself decides what target to attack.

What commander would want that weapon? Because the Law of War says that distinction and proportionality are on the commander's head, not the weapon. So, the commander who uses a lethal autonomous weapon system that chooses its own target, the commander is delegating his free will--I mean, he's delegating his culpability for a Law of War violation to a free-willed

machine.

I've never talked to any commander in the West who said, "Hey, that's a real good idea. We will use artificial narrow intelligence to make weapons more discriminating." And I think where our advantage is, Pete, is a system of systems of human machine collaboration and combat teaming where we may be able to prevail. But, man, this is--this is like game on. This is totally game on.

BLUME: This is going to be the last question. You've already had one, Sydney. Right--right--second row, right here in the aisle.

Question: Zach Bates. I'm a reporter at the Center for Public Integrity. So, I wanted to ask, given that that technological advantage is not as clear or absolute as it might've historically been, the past 25 years we had this level of dominance, which is a bit of an anomaly. It's not a historical--historically consistent level of capability.

When we're talking about a new concept what are we striving for? Are we striving to somehow recreate that level of dominance, despite the difficulties--

OCHMANEK: --No--

QUESTION: --with the techno--the technology competition? Are we just looking for a minor edge so that we can win a conflict? What's the level of capability that we hope this future concept can achieve?

OCHMANEK: Yeah.

DOUGHERTY: You want to--you want to go first?

BLUME: I'm gonna give you the last word, Chris. Dave, go ahead--

DOUGHERTY: --Okay.

OCHMANEK: So, yeah, it's unrealistic to expect that we will ever enjoy, against Russia and China, the degree of dominance we had against the junior varsity--the Iraqs, the Serbias, the Afghanistans of the world. Forget about it.

What is--what is realistic is that we can create operational problems that Russia and China cannot solve in their aggression. So--so, I may not have air superiority over the battle space in the opening week of the war. Some of my satellites are gonna get broken. I'm gonna be under jamming attack, et cetera. But, that will not prevent me from reaching into the contestant zone and going after its operational center of gravity. That's doable.

WORK: And this goes back to Pete's question. I think the one advantage that the U.S. has shown is the ability to--to rather quickly, and from a historical perspective, go from operational concept to all of the things you have to do to actually make it real--the training, the exercising--

OCHMANEK: --Um-hmm--

WORK: --all of that. The example I use is the Army says, I think, in 1975, "We want to own the night." And if all it was, was go out and buy a bunch of NVGs, night vision goggles, well we could own the night, you know, in two years.

But, that's not what allowed the Army to own the night. They had to train all their squad leaders on how to take care--you know, how to be quiet at night. They had to train all their forts how do you operate where your peripheral vision isn't very good? You know, what type of control measures do you have? What type of command and control do you--that was a 10-year process. By 1985, the army owned the night But, it wasn't like it's the competitor who can put all these technological things together.

And the other example, of course, it's Blitzkrieg. Everybody know there was mechanization. Everyone knew that aviation was exploding. Everyone knew about the radio. But, only the Germans put it together into an operational concept that gave them an advantage on the battlefield.

That's where I think the United States has its competitive advantage. And that's why all of us, I think, are so frustrated. Where it--where are these operational concepts? We want to see them. And perhaps they're being made in the back room. I don't know. But, hopefully, we'll get on towards them quickly.

BLUME: Chris, last word.

DOUGHERTY: Yeah. So, I--I mean, it's kind of a hybrid answer to--to two questions, 'cause I think they're interrelated.

I think, first, United States, you know, with--with kind of marginal exceptions, we're largely a status quo power. You know, we've--we've got an international order that we--we setup, you know, 70-odd years ago, and we'd like to, more or less, keep things as it is--as they are, because it's been working out pretty well for us for the last 70-odd years.

And I think China, in particular, wants to change the--the--certainly, the character of that order. And if not, you know, build a new one, at least replace us as the--as the center of the order and--and make it more to their interests.

And I think the good thing about that situation is, it--it does afford us the strategic defensive, and it affords us, in many cases, the operational defense as well, which is advantageous in some ways. And I think what that allows you to do is adopt a strategy or a posture that--that, really, what you're focused on doing is every day--every morning of every day, your opposite side in the enemy country wakes up and says, "I'm not gonna do this today. This isn't gonna work." And--and--and it just goes on in perpetuity like that.

And the--I think the question, and I think a lot of people are grappling with this is, "Okay,

that's great. You've done that in the military sphere," right? Every day--every morning of every day, they say, "No, I can't do this," there's a whole other host of--of--of--of government and--and other spaces, whether it's diplomatic, economic.

I got all that right? I mean, I understood, but we're here to solve the--the M problem of the dime issue. So--but, I think that is a doable thing, as I think both Dave and--and--and--and Bob have laid out.

When it comes to how do we get there and--and what is the--this proliferation of technology mean, you know, I would come to two things--two examples from history. One is the--the dreadnought question, right? And this gets to the AI point.

You know, after the--the--the Battle of Tsushima Strait, right, everybody realized that an all-big-gun battleship was just going to be so qualitatively superior to the mixed-gun battleships that had preceded it, that everybody was going out and--going to design something like the dreadnought. But, it was up to the British to make the very, very dangerous--what seemed a very dangerous, very risky decision, to build a battleship that, in its own existence, obsolesced the entire rest of their previous-dominant battle fleet.

But, you had to do it, because if you didn't, somebody else--the Germans were sure as heck gonna to do it, and you--you needed to do it first, because you needed to gain that advantage. And so, I think you can't just--we can't just wish away artificial intelligence or autonomy because we don't want to do it, and we like the way we do things nowadays. It's coming whether we like it or not, because our adversaries sure as heck aren't going to--to--to wish it away.

And then, I think Bob made the perfect point about World War II and the Blitzkrieg, right? What matters is the ability to--to look very--with a very clear eye at the problem, understand what it is, break it down into its constituent parts and work very hard at solving that problem analytically, wargaming it, and then going out and exercising it with actual systems and saying, "Did--what I--did--did what my analysis told me and my wargame told me actual work in the field?" And then, come back, do your analysis again and do your wargaming again, and keep on going with that cycle of research until you get to an answer that seems--that seemed reasonable.

BLUME: Bob has something to add--

DOUGHERTY: --(INAUDIBLE)--

WORK: --Yeah, I just have--I feel like I have to say this before we go. Because we all work in the wargaming space, sometimes we use the word adversary when we're talking about Russia and China, but if you look at the U.S. national--I mean security strategy as well as the National Defense Strategy, nowhere will you say that we designate China and Russia as strategic adversaries. We say they are geopolitical rivals or strategic competitors.

And we are not the Department of Defen--Department of War. We're the Department of Defense. All of this thinking is to make sure we never cross swords with another great power.

So, I--I think we all used the word adversary at different times today. I just want to make sure that you don't think that CNAS has declared China and Russia--

--(LAUGHTER)--

--as--as adversaries. They're strategic competitors that we have to keep our eyes on. And I just wanted to say that before we broke.

BLUME: And that's a great place. And the goal here is actually to keep the peace. It's to never have to fight another power war. That's what we're all trying to do.

(APPLAUSE)

BLUME: Thanks to our panelists. Thank you very much, everyone, for joining us today. Appreciate it.

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