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SPACE FORCE

Remarks by CSO Gen. Chance Saltzman at the 2024 Global Air and Space Chiefs' Conference

LONDON (AFNS) As delivered by U.S. Space Force Chief of Space Operations Gen. Chance Saltzman on July 17, 2024 --

Wow, what a distinguished group again! I enjoyed last year so much I thought I'd come back, and the weather was better. So, thanks for all of that.

Thanks, Susannah, for that kind introduction, and thanks to everyone here at GASCC that helped make this important conversation possible.

It's going to be my honor later to share the stage with Generals Novak and Tedman. So, thanks for indulging me with your patience while I try to set the stage for this important conversation.

And to my fellow air and space chiefs as well as the academic and industry leaders gathered today, thank you for being here, and I look forward to sharing ideas on deterrence with you.

Now, when I was a young officer, I could not understand deterrence. But now, after many years of education, experience, and intense mentoring, I can assure you — I am no longer a young officer.

Let me apologize in advance to the non-history buffs in the room because I'm going to dive into the history of deterrence in an attempt to contextualize the challenges we are currently facing applying the concept to space. So, hang in there; I think it's going to help us chart our way forward.

Let's start with some of the earliest discussions of 'deterrence' as a concept. And by early, I mean some 2,500 years ago, to that famous Athenian general and historian Thucydides. I know; I said, "bear with me," right? I can say anything I want now.

Alright. In the history of the Peloponnesian War, Thucydides describes no less than 10 uses of what he calls a deterrence strategy, and that was in the conflict between Athens and Sparta.

Aside from one partial exception, they all fail spectacularly. In fact, in most cases, they primarily serve to provoke the exact behavior they were meant to prevent.

Yet, here we are, today, at a panel called "Space Deterrence and Integrated Deterrence." What I intend to do is attempt to address two fundamental questions. First, is deterrence a suitable military construct to help us deliver forces needed to meet security objectives, particularly in

space? And second, are there limits to what can be deterred?

Historically speaking, deterrence has rarely been a major element of military strategy until the modern era. But now, our strategies are riddled with terms like ‘nuclear deterrence,’ ‘strategic deterrence,’ ‘conventional deterrence,’ ‘minimum deterrence,’ ‘extended deterrence,’ and as we see here today, ‘space’ and ‘integrated deterrence.’

Presumably, each of these serves different strategic objectives. So, what’s changed? Well, in short, I contend what has changed is nuclear weapons.

The root of what we understand today as ‘deterrence’ grew from the decisive application of nuclear weapons in World War II. In 1959, Bernard Brodie — one of the foremost civilian military strategists of his era — published “Strategy in the Missile Age.” This seminal book, now 65 years old, became the foundational text for deterrence as a modern strategy. In its pages, Brodie encouraged military leaders to think about the unthinkable: to confront the threat of nuclear war and to carefully consider the realities of deterrence in the dawning of the nuclear age.

“Deterrence,” he wrote, “now means something as a strategic policy only when we are fairly confident that the retaliatory instrument upon which it relies will not be called upon to function at all ... In short, we expect the system to be always ready to spring while going permanently unused.”

Brodie’s work drove the reemergence of the term and popularized ‘deterrence’ in its modern context. The word itself is an appropriate one, deriving from the Latin for ‘terrible’ or ‘terrifying’ and signifying that ‘to deter’ is ‘to frighten away.’

But the deterrence of Brodie had little in common with the deterrence of Thucydides. As Brodie wrote, “what was distinctively new” about deterrence in the atomic age “was the degree to which it was intolerable that it should fail ...” Deterrence in his mind was a threshold condition — on one-side, a state of stability, on the other side, a state of intolerable devastation. So, to the first question: “Is this a suitable construct for us to use?”

Over the course of my career, I have come to the conclusion that deterrence is really a term of policy best used to capture an ideal outcome of grand strategy. This is why I believe Integrated Deterrence IS a valuable and worthy approach in the U.S.’s National Defense Strategy. Our NDS describes it as a weaving together of capabilities and concepts with those of our international and interagency partners to dissuade aggression. In other words, a whole-of-government and an international approach as a grand strategy, in pursuit of ideal security outcomes. But, with that said, we should recognize that militaries only play a supporting role in this strategy, and we must provide the proper support if we are to achieve the desired outcome. As air and space chiefs, we owe it to our national decision-makers to focus on creating operational realities that can help to drive the desired outcome.

For those of us in uniform, our goal must be to assist in deterrence by taking actions that are far more tangible. We must remember that deterrence lives in the mind of an adversary, and figuring

out which forces are needed to affect a mental calculus can be and is subjective and problematic. Therefore, I contend that we shouldn't think about building forces to deter. We should build forces to attack and defend, and, if we do this properly, it will help our national leaders create the conditions of deterrence.

And for those of you thinking this is a difference without a distinction, I am asking you to consider the science of our profession not the art of its employment. Consider this ... imagine being asked to deter a missile attack. Soon the mind begins to boggle with all of the pros and cons of conducting the attack, factors that might enhance the penalties or downplay the benefits. How best to alter another's decision calculus when we probably have limited insights into the motivations, constraints and restraints? This is problematic. Now consider being asked to defend against a missile attack. The questions that come to mind are more quantifiable. How many missiles, on what trajectory, altitude, speed? What's their target? Can we use technology to intercept the missile in flight? Can I harden or hide the target to negate the missile's effect? The science of this operational challenge is knowable, definable, and it's not as difficult to conceive of activities to accomplish this mission. The art of influencing the adversary to 'not take the action to begin with' is much harder to quantify and translate into mission-oriented activities, and, even in so doing, it is infinitely dynamic in time and place, mostly guess-work, and, therefore, unsuited to effectively determine our force design.

Again, this is not a repudiation of deterrence as a policy or a grand strategy. Quite the contrary, I think it is the most desirable end state for any national security apparatus. But we must do our part, as air and space service chiefs. We must focus on the military specifics of that national security apparatus. In other words, we must organize, train and equip forces that can provide offensive and defensive capabilities and capacities that punish aggressors and protect and defend our national interests. In designing these capabilities, we must focus on the "D" verbs of military action (deny, degrade, disrupt, destroy) and avoid 'deter' as an action for military forces due to its inherent ambiguities. If we do this right, the net result is a condition of deterrence that maintains a safe, secure, and stable international environment, which is the ultimate goal of our national security policy. To summarize the answer to the first question, I'll say that deterrence is well-suited to grand strategy or as a policy but less suitable as a construct to help militaries effectively organize, train and equip.

So now let's turn to the second: "Are there limits to what can be deterred?" To start, remember what I said about Brodie's view of deterrence — in his view, only when the most severe consequences are assured and well understood can we truly achieve deterrence. Strategic nuclear weapons are therefore a singular example, because all else pales into insignificance in the face of annihilation. That same level of certainty simply does not exist for other sets of military conditions.

Another key consideration in determining what can be deterred is noting that we have an intrinsic understanding that rational actors will not respond disproportionately to a non-nuclear attack. Would a cyber-attack or a downing of an RPA drive a nuclear response? It hasn't yet, and I think it's highly unlikely to in the future. This is the essence of Deterrence Theory — nuclear attacks being reserved for only existential interests and, with assurance of nuclear counterstrike, a state of nuclear deterrence exists between nuclear powers. The problem is that the strategic

stability that this creates makes it an attractive logic to apply elsewhere.

Since 1945, we have experienced cycle after cycle of escalation and de-escalation. Time and again, when factored, nuclear weapons have served as a tool of political exchange and, no matter how close we've come to the brink, they have not been used again. This evolution has conditioned us to normalize and even extend nuclear deterrence logic beyond its practical limits. We have allowed 'deterrence' as a concept to morph from a very specific existential edge case into a caricature — an overly simplistic logical reduction of the theory.

Today, all too often, there is a view in military circles that 'deterrence' is a cost-benefit calculus that can be manipulated to preclude or dictate an adversary's actions. In short, we have led ourselves to conclude and believe that we can use the military logic of nuclear deterrence to be more broadly applied. Bit by bit, we have subconsciously absorbed the notion that, if done right, we can use military force to deter all sorts of actions that run counter to our national interests. But, in practice, as we have seen, there are limits to deterrence. So, in determining where these limits are, perhaps, it is necessary first to describe the characteristics of effective deterrence. I would propose there are three broad characteristics. First, there must exist credible capabilities to conduct activities that deny benefits and impose costs. Second, these capabilities must be observable in order to establish sufficient credibility. Finally, the consequences of action must be unambiguous, unacceptable, and clearly put the aggressor at a disadvantage. The difficulties created by the subjectivity of ambiguity, acceptability, and clarity brings us right back to Thucydides.

In his histories, Thucydides observed that nations go to war for three fundamental reasons: fear, honor, and interest, which is a useful insight but does little to help us predict the future because the manifestation of these and the pressures, influence, and intensity that they bring are extremely sensitive to circumstance and very dynamic in their interaction.

When honor is at stake, national leaders may accept unanticipated amounts of risk, and they may actually welcome threats to enable them to demonstrate courage. Honor is incredibly cultural. It is never easy to guarantee the forms that honor might take or the lengths to which an actor will go to secure it.

When fear is the prime motivator, assessments of consequence become skewed. Leaders can rationalize that compliance or appeasement is far more costly than resistance, even if that does not seem to be the case from an external or third-party viewpoint.

But, of the three, interest is by far the hardest to measure effectively. Even if one nation can understand the interests of another, there is very little chance that it will value them in the same way. If we struggle enough to understand our own underlying motivations, do we believe that we can accurately calculate the resources an adversary will commit to secure a benefit? More to the point, would we value denying that benefit so much so that we would commit the same level of resources?

What Thucydides unknowingly instructs us on is that fear, honor, and interest are inherently tough to assess because of extreme subjectivity in the concepts of ambiguity, acceptability, and

clarity. The third defining characteristic of effective deterrence eludes us. Trying to guess or interpret how an adversary may act, therefore, can muddy military decision-making and create room for speculation and error. All too often, rigorous assessment can give way to wishful thinking.

So, nuclear weapons are the exception rather than the rule because they eliminate all ambiguity and replace it with cold certainty. Fear of assured and devastating destruction trumps all else. And that's why nuclear deterrence — and only nuclear deterrence — has a record of spectacular success.

To summarize the answer to the second question, nuclear attacks can be deterred by a nuclear armed nation. However, because of the challenge of meeting this third characteristic of deterrence—unambiguity, unacceptability, and a clear disadvantage to an aggressor — extending deterrence to other military circumstance has serious limitations.

Again, I want to emphasize I only mean limitations in the sense of being a guiding light for organizing, training and equipping military forces. Deterrence in grand strategy and describing ideal national security end states is valuable and worthwhile. In contrast, the extension of the logic from nuclear to non-nuclear deterrence is suspect from a military perspective, particularly when you try to imagine what 'deterrence in space' might look like.

Now that I've laid out the broader point in excruciating detail, let's narrow our focus to the space domain. Here, the key question is: "Can we deter an attack on space assets?" I hope after that extended preamble you understand why I say a better question for military leaders is: "How do we defend against an attack on space assets?" Or a broader question: "How do we protect our interests in, from, and to space?"

When I was a young space operator, the space domain was largely benign, so we focused on assured access with launch and ground networks and optimizing space missions that supported other forces like with communications; positioning, navigation, and timing; and ISR. But now, threats to these capabilities have been fielded, and we recognize now that we will have to contest the space domain in order to use it effectively. This relatively new mission of space superiority will mirror air superiority as it seeks to protect our capabilities and deny the adversary the use of theirs.

For the U.S. Space Force to accomplish the mission of space superiority, we have proposed a theory of success called Competitive Endurance. The theory includes three key tenets: avoiding operational surprise, denying first-mover advantage, and conducting responsible counterspace activities. And this theory is key because these key tenets guide us in all the supporting decisions that must be made.

For example, what systems do we need to disrupt or deny an adversary's space-based targeting? What training do our operators need to counter adversary tactics? How do we enhance mission resiliency in a cost-effective way? How do we fuse data on an operationally relevant timeline to avoid surprise? In short, the tenets help us organize, train, and equip to perform specific military activities rather than pursue a more esoteric concept like deterrence.

The success of Competitive Endurance comes when our forces can anticipate aggression; protect our space missions; and deny, degrade, or disrupt an adversary's space capabilities. Obviously, we believe, if we do these things effectively, we will contribute to the broader efforts to maintain an effective state of deterrence. But rather than organizing, training, and equipping to deter, we do it to accomplish specific military missions.

The U.S. Space Force's approach acknowledges that we cannot be expected to deter all disagreeable, concerning, or aggressive behaviors. But, we will be able to react and respond in a manner that preserves a stable security environment, discouraging more drastic behaviors. This back and forth constitutes great power competition, and maintaining a state of competition with adversarial nations is far more preferable to crisis or conflict. Competitive Endurance strives to promote stability.

Back to the history, in his study of major wars that shaped the international order up to World War II, military strategist Capt. B. H. Liddell Hart found that only about 2% of battles were won as a result of a direct attack and, even then, at great cost. Indirect attacks, misdirection, and what he called "the power of endurance to last"— all far more effective in successful campaigns against a near-peer adversary.

That power of endurance to last is very much at the heart of Competitive Endurance, and it is enhanced and sustained by an interconnected web of capabilities designed to protect and defend. It is for this reason, precisely, that we value our alliances and partnerships so dearly.

Only by working together can we truly achieve the endurance required to implement Competitive Endurance over the long years ahead. Fortunately, our allies and partners remain an unparalleled source of enduring strength and competitive advantage, particularly in the domain of space.

And this is not just a good idea; it is part of U.S. policy. Our Classified Space Security Guidance, issued in June 2023, directs the U.S. "to increase integration with allies and partners on space activities, operations, plans, capabilities, and information sharing for mutual benefit in response to growing space and counterspace threats and to protect U.S. forces from hostile uses of space ..."

The United States is proud to be part of an ever-growing group of allies and partners — many of them in the room today — a group of partners that are all working together to increase resiliency, redundancy, and interoperability of all space-based capabilities to enhance our collective security.

Along these lines, we endeavor to lead efforts in the responsible, peaceful, and sustainable use of space, and this includes promoting international norms of responsible behavior.

Let me give you some examples of what I'm describing. In 2023, we conducted the first bilateral space cooperation dialogue with the Indian Ministry of Defense. We advanced discussions with our Japanese partners on finalizing our unique space domain awareness hosted-payload

partnership. Collaboration between the U.S. and Norway enabled the integration of U.S. payloads onto two Norwegian satellites to provide 24/7 protected satellite communications for forces operating in the Arctic.

Another good example is Operation Olympic Defender, which improves mission assurance and enhances collective resilience alongside Australian, British, and Canadian allies. In April, U.S. Space Command formally invited France, Germany and New Zealand to participate in Olympic Defender, moving forward.

And exercises like Global Sentinel bring together multinational partners in a single venue to wrestle with and resolve space security issues. These efforts have been extraordinarily successful in expanding key partnerships by demonstrating and strengthening a multinational concept of operations.

Each of our nations has its own respective capabilities in the space domain — its own strengths to share. Whether that be in SATCOM, space domain awareness, launch, or whatever else, by unifying and aligning that strength towards robust protect and defend activities, we can capitalize on our capabilities to enable deterrence. It's a matter of finding our form and giving it proper function: unity of effort for collective defense that ensures a sustained and long-term advantage over anyone who might care to threaten it.

So, to summarize this long, drawn out history class today, we touched on Thucydides and his doomed retelling of classical deterrence; Brody and his modern recontextualization of nuclear deterrence; and how these influenced our development of Competitive Endurance. Finally, I discussed our collective need to focus on specific, tangible military capabilities and activities that allow us to protect and defend and ultimately secure our interests in, from, and to space.

In the end, what I'm advocating for, here, is a change in focus and a clarification of thought. Deterrence is the rightful and worthy province of our civil and political leaders, and we must stand ready to support it. To do that effectively, I propose we design our forces and orchestrate our activities around military functions like 'protect' and 'defend,' which we can more tangibly pursue, rather than 'deterrence,' which is a more nebulous and complex concept.

There are a number of areas where we are — and where we can — work together towards that goal. Areas like coordinated investments in viable, visible defensive capabilities, tactics, and doctrine. Areas like mutual space domain awareness and data sharing. Areas like alliance building and defining and adhering to responsible behaviors in space.

Together, we must foster an environment conducive to civil and commercial space activities. Together, we must find innovative ways to protect our space systems from attack and protect allied forces from space-enabled tracking and targeting.

Together, we must delegitimize space activities that exacerbate the growth of orbital debris and put our space assets and the lives of our astronauts at risk.

These are no small tasks, but the world is watching, both our friends and our adversaries, to

judge how we collectively respond to the challenges of these historic times. Looking around this room, I firmly believe we are up to this challenge.

Thank you again for including me and allowing me to dive back in history. Thanks for inviting me here today, and I'm very much looking forward to our discussion!

Semper Supra!