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Before the

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO RECEIVE TESTIMONY ON GLOBAL SECURITY
CHALLENGES
AND U.S. STRATEGY

Tuesday, March 12, 2024

Washington, D.C.

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5
6 U.S. Senate

7 Committee on Armed Services

8 Washington, D.C.
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10 The committee met, pursuant to notice, at 9:30 a.m. in
11 Room SH-216, Hart Senate Office Building, Hon. Jack Reed,
12 chairman of the committee, presiding.

13 Committee Members Present: Senators Reed [presiding],
14 Gillibrand, Blumenthal, Hirono, Kaine, King, Peters, Kelly,
15 Wicker, Fischer, Cotton, Ernst, Scott, and Schmitt.
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1 OPENING STATEMENT OF HON. JACK REED, U.S. SENATOR FROM
2 RHODE ISLAND

3 Chairman Reed: Good morning. The Committee meets
4 today to discuss a range of global security challenges to
5 the United States. As the Biden administration's National
6 Defense Strategy has made clear, we are in a long-term
7 strategic competition with China and Russia. Ultimately,
8 this competition is not just a rivalry of military or
9 economic power but also a competition of ideas. This
10 requires us to develop an understanding of our potential
11 adversaries' strengths, weaknesses, philosophies, and
12 objectives. This is where the knowledge and insights of the
13 experts before us today are so valuable.

14 Dr. Paul Scharre is the Executive Vice President and
15 Director of Studies at the Center for a New American
16 Security. He is an expert on the future of technology and
17 warfare, particularly with regard to artificial intelligence
18 and autonomous weaponry, and has authored several
19 influential books on these issues. Dr. Scharre worked
20 previously as a policy expert in the Department of Defense
21 and served as an Army Ranger with multiple combat tours.
22 Thank you.

23 Dr. Hal Brands is a Senior Fellow at the American
24 Enterprise Institute and serves as the Henry Kissinger
25 Distinguished Professor of Global Affairs at the Johns

1 Hopkins School of Advanced International Studies. He worked
2 previously as Special Assistant to the Secretary of Defense
3 for Strategic Planning and was a lead writer for the 2018
4 National Defense Strategy Commission. He has authored
5 several books on U.S. grand strategy and statecraft.

6 Thank you both for joining us today and for your long
7 careers of service to the nation.

8 Our objective today is to examine the national security
9 issues that this Committee should consider as we prepare the
10 fiscal year 2025 National Defense Authorization Act. There
11 is a common understanding on the Committee that the future
12 of America's national security is tied to our competition
13 with China. To keep pace and maintain America's edge, the
14 Department of Defense must understand China's competitive
15 tactics, develop new competitive tools of its own, and
16 integrate with our allies and partners.

17 For several decades, the People's Liberation Army has
18 studied America's way of war and focused its efforts on
19 covering our advantages. China has invested in offsetting
20 technologies like anti-access and aerial denial systems,
21 artificial intelligence, unmanned vehicles, hypersonics, and
22 nuclear weapons. Further, Beijing has leveraged a
23 combination of military and civil power against its
24 neighbors, include statecraft, economic pressure, coercion,
25 and deception. China has sought ways to achieve its

1 national objectives while avoiding a direct military
2 confrontation with the United States military. As the
3 Defense Department's new Joint Concept for Competing states,
4 China seeks to win without fighting. The strategy warns
5 that if we do not adapt our approach, compete more
6 effectively, the United States risks ceding strategic
7 influence, advantage, and leverage while preparing for war
8 that never occurs. Indeed, the document warns that the U.S.
9 could lose without fighting.

10 Just as Chinese leaders have studied America's way of
11 war, we need to study theirs. With that in mind I would ask
12 our witnesses for your assessment of how China is evolving
13 its competitive strategies and objectives. I would also
14 appreciate your views on what military and non-military
15 factors are mostly likely to impact Chinese decision-making
16 with respect to potential action against Taiwan and other
17 regional partners.

18 Even as we chart this long-term competition with China,
19 we must recognize the current threat Russia poses. Let's be
20 clear. Russia's war against Ukraine is an active threat to
21 our national security. Vladimir Putin has repeatedly said
22 that if he succeeds in Ukraine he intends to reunify former
23 Soviet states. This will almost certainly involve direct
24 military conflict with a NATO country, requiring the United
25 States to send our own men and women into harm's way. We

1 must continue our support for Ukraine so we can defeat Putin
2 and cripple his ability to wage war elsewhere.

3 As we are seeing in Ukraine and the Middle East, the
4 nature of conflict and deterrence is evolving quickly.
5 Cyber information and space operations can shape the
6 battlefield as fundamentally as air, land, and sea power.
7 The interconnected nature of these activities must drive the
8 way we develop and field new technologies.

9 The Defense Department continues to develop the
10 Combined Joint All-Domain Command and Control, or JADC2,
11 concept, which would be a force multiplier in this regard.
12 JADC2 will enable the Joint Force to detect, analyze, and
13 act on information across the battle space quickly using
14 automation, artificial intelligence, and predictive
15 analysis.

16 If we can field these technologies and mass these
17 techniques then we must quickly include our allies and
18 partners in the system. Indeed, forging and maintaining
19 strong international partnerships is likely to be the
20 decisive factor in any future conflict. We have seen this
21 through Ukraine's remarkable performance against Russia, and
22 it will hold true in the Indo-Pacific.

23 I look forward to our witnesses' testimonies, and I
24 thank them again for their participation.

25 And let me now recognize the Ranking Member, Senator

1 Wicker.

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1 STATEMENT OF HON. ROGER WICKER, U.S. SENATOR FROM
2 MISSOURI

3 Senator Wicker: Thank you, Mr. Chairman. Our Chairman
4 has just delivered a rather sobering opening statement.

5 Today's witnesses are here to help this Committee take
6 stock of changing threats to American interests. They will
7 help us reflect on our progress in mitigating and combating
8 those threats over the past year or so.

9 The scorecard does not look good.

10 The Chinese Communist Party shows no sign of stopping
11 its military modernization project. In fact, China added 30
12 ships last year compared to our overall reduction of 2. In
13 fact, the People's Liberation Army also continues to improve
14 its force readiness with complex exercises focused on the
15 so-called reunification of China with Taiwan.

16 The CCP also continues its regional aggression on other
17 countries' sovereign rights. For example, they have
18 repeatedly harassed the Philippines' resupply ships in the
19 Second Thomas Shoal. Although the San Francisco summit
20 between Presidents Biden and Xi produced some feel-good
21 headlines, Xi concluded the summit by reminding the United
22 States that he intends to control Taiwan, peacefully or not.

23 A year ago, we all hoped for significant progress in
24 Ukraine's much-awaited offensive. That progress fell short.
25 We failed to capitalize on temporary Russian weakness, and

1 now face a Vladimir Putin increasingly convinced he can win
2 in Ukraine, or at least outlast us and outlast everyone
3 else. And China, Iran, and North Korea are all contributing
4 to Russia's war effort.

5 Much has also changed in the past year with Iran.
6 Tehran has used the chaos following Hamas' October 7th
7 massacre as an opportunity to have its proxies attack U.S.
8 forces more than 160 times, including with deadly
9 consequences in Jordan and in the Red Sea. Iranian-armed
10 Houthis also continue to attack critical global maritime
11 commerce in the Red Sea.

12 Not to be outdone, North Korea seems to have moved into
13 an offensive war preparation mode. This shift from a long-
14 held defensive posture is a significant development which
15 further complicates the picture in East Asia.

16 Worse yet, all four of these adversaries drastically
17 deepened their military and economic cooperation over the
18 past year, even as we implement a National Defense Strategy
19 that largely considers each adversary individually. And I
20 struggled to use the word "implement" because it seems to me
21 that we have a strategy that is not being fully attempted.

22 I would like to hear from the witnesses how they assess
23 the current threats from all of these adversaries.

24 2023 was a discouraging year for U.S. national
25 security, and 2024 will be worse without substantial

1 investment in our military forces. This Committee recently
2 heard about challenges across maritime, air, and space
3 domains, as well as challenges with insufficient inventories
4 of long-range munitions in the Indo-Pacific theater. If we
5 have any hope of deterring threats from China, we need to
6 act immediately to enhance our capabilities.

7 Our needs across the combatant commands and within the
8 services are much too long to list here. We need more
9 submarines. We need more amphibious ships. We need to give
10 our servicemembers more visibility through intelligence,
11 surveillance, and reconnaissance tools. We need more
12 torpedoes. We need more of the SM-6 multi-role missiles,
13 more of the Tomahawk strike missiles our ships and
14 submarines carry, and more of the Long-Range Anti-Ship
15 Missiles that allow us to hit enemy ships precisely from a
16 safe distance. And we need all of these things now.

17 I welcome our witnesses' suggestions on how to improve
18 the Pentagon's ossified planning, contracting, and budgeting
19 processes, which continue to prevent us from producing cost-
20 effective programs on time and at scale.

21 I would also be interested in our witnesses'
22 perspective about the sufficiency of the overall topline
23 defense budget. The budget proposed yesterday by President
24 Biden requests yet another significant cut in defense. He
25 proposed this even as the Chinese Communist Party announced

1 a 7.2 percent defense budget increase just last week. Is it
2 too much to ask that we return to the generous portion of
3 GDP that gave us more than a decade of peace during the
4 Reagan era?

5 We continue to ask our military to do too much with too
6 little, and that needs to change. I hope this Committee,
7 Mr. Chairman, on a bipartisan basis, is prepared to act this
8 year to ensure we address this looming national security
9 crisis.

10 Thank you, sir.

11 Chairman Reed: Thank you very much, Senator Wicker.

12 Dr. Scharre, please.

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1 STATEMENT OF PAUL SCHARRE, Ph.D., EXECUTIVE VICE
2 PRESIDENT AND DIRECTOR OF STUDIES CENTER FOR A NEW AMERICAN
3 SECURITY

4 Dr. Scharre: Thank you, Chairman Reed, Ranking Member
5 Wicker, and distinguished Senators. Thank you for having me
6 here today.

7 We live in a period of tremendous technological change.
8 This creates opportunities for the United States but also
9 for our adversaries. The U.S. military must adopt
10 technology faster than its competitors. The bulk of
11 technological innovation is occurring outside DoD, and DoD
12 must prioritize spinning-in commercial technologies and
13 harnessing them for military advantage. This contest to
14 rapidly adopt commercial technologies is an all-too-level
15 playing field with our competitors.

16 China also has access to world-class technology
17 companies, and the PLA is working to "intelligentize" its
18 forces. DoD needs significant institutional change to keep
19 pace with the speed of technological innovation. Without
20 these changes, we risk falling behind competitors and the
21 U.S. military being unprepared in a future conflict.

22 DoD cannot lead in 21st century technologies with a
23 20th century bureaucracy. The tech innovation landscape has
24 changed dramatically in the past half century, but DoD
25 institutions have not kept up. It is not merely that the

1 technology itself has advanced. That alone would be
2 manageable. The problem is that the role that DoD plays in
3 tech innovation has changed, but DoD has not yet
4 sufficiently adapted to this new reality.

5 The Defense Department used to be the main driver of
6 global innovation, but not anymore. In 1960, DoD alone
7 controlled 36 percent of global R&D spending. DoD could
8 single-handedly drive the shape of technological evolution
9 around the world. DoD could make bets that others had to
10 respond to.

11 Now today this dynamic has reversed. DoD controls only
12 3 percent of global R&D. Two trends have caused this shift.
13 First, the Federal Government's share of U.S. domestic R&D
14 has fallen, with the private sector picking up the slack.
15 And second, the U.S. share of global R&D has dropped from
16 nearly 70 percent in 1960 to 30 percent today.

17 And a combination of these trends in the
18 commercialization and globalization of research and
19 development has dramatically changed the role that DoD plays
20 in technology development. Instead of being a trend-setter,
21 DoD is forced to react to technology trends exogenous to the
22 defense industry.

23 The dominant trend in global technology innovation
24 today is the information revolution. Network connectivity
25 and bandwidth, big data, AI and machine learning, genomics,

1 Internet of Things devices, and computing hardware are all
2 advancing at literal exponential rates. To give just one
3 example, the amount of computing hardware used to train
4 cutting-edge machine learning systems, such as large
5 language models like ChatGPT, has grown 10 billion-fold
6 since 2010, and is doubling every 6 months. This is much
7 faster than the historical 24-month doubling in chip
8 performance associated with Moore's Law. This has dramatic
9 implications for the military. Few other technologies are
10 advancing this quickly. Missiles are not 10 billion times
11 faster than they were in 2010.

12 Yet information technologies are advancing at a
13 breathtaking pace, creating new opportunities for military
14 applications, and these technologies are so widely
15 available, coming out of a highly globalized, commercially
16 driven R&D ecosystem, that our competitors have similar
17 opportunities.

18 DoD should prioritize investment in digital
19 capabilities that are riding these exponential curves
20 -- autonomy, robotics, sensors, communication networks,
21 data, cloud computing, cyber, and electronic warfare, for
22 example.

23 And we can already see evidence of this dynamic in the
24 war in Ukraine, with the proliferation of small,
25 commercially available drones and counter-drone electronic

1 warfare and jamming systems. Our adversaries will
2 capitalize on these technologies. The only question is
3 whether the United States also competes or falls behind.

4 In recent years, DoD has created a slew of new
5 innovation organizations such as DIU, AFWERX, SOFWERX, CDAO,
6 and others, and many of these have yielded tangible
7 successes. Yet DoD has often struggled to innovate quickly
8 at scale.

9 The Defense Department must move beyond bespoke
10 solutions to one-off problems are scale commercial tech
11 adoption across the \$800 billion enterprise. DoD will need
12 Congress' support to move fast, be flexible, experiment with
13 new technologies, engage non-traditional companies, and take
14 risks. Thank you.

15 [The prepared statement of Dr. Scharre follows:]
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1 Chairman Reed: Thank you very much, Dr. Scharre.
2 Dr. Brands, please.

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1 STATEMENT OF HAL BRANDS, Ph.D., SENIOR FELLOW AT THE
2 AMERICAN ENTERPRISE INSTITUTE, HENRY A. KISSINGER
3 DISTINGUISHED PROFESSOR OF GLOBAL AFFAIRS AT THE JOHNS
4 HOPKINS SCHOOL OF ADVANCED INTERNATIONAL STUDIES

5 Dr. Brands: Chairman Reed, Ranking Member Wicker,
6 distinguished members of the Committee, thank you for
7 inviting me. Let me just make three brief points at the
8 outset here.

9 First, it is a perennial cliché to say that the
10 international landscape is more threatening and complex than
11 it has been at any time in decades. Today that cliché
12 actually happens to be true. All three key regions of
13 Eurasia are experiencing severe conflict or the threat of
14 conflict. Today we have Russia's war in Ukraine, the war
15 between Israel, Hamas, and all of the violent spillover it
16 has produced across much of the Middle East, as well as the
17 growing threat of conflict with China in the Western
18 Pacific.

19 When you add in the other persistent threats the U.S.
20 must contend with from an increasingly belligerent North
21 Korea to a nuclearizing Iran to the persistent threat of
22 violent extremism, I think it is fair to say that the U.S.
23 faces more and more severe security challenges than at any
24 time since the end of the Cold War, and perhaps even going
25 back farther than that.

1 Second, to Senator Wicker's point, the connections
2 between the threats the U.S. faces are growing, as is the
3 threat of conflict that spans multiple regions. Ties
4 between Russia and China, Russia and Iran, Russia and North
5 Korea, and China and Iran are all becoming strongly and more
6 tightly interwoven, which means that the conflicts in which
7 these various actors are engaged, or could engage in, are
8 becoming more tightly interconnected, as well.

9 I go into this issue in greater detail in my written
10 statement, but let me just say that my gravest concern about
11 the international security environment right now is not that
12 U.S. adversaries will mount a comprehensive, highly
13 coordinated assault on the international order. It is that
14 the regional conflicts in which they are engaged will fuel
15 and feed on each other, creating an atmosphere of growing
16 global disorder.

17 As I mentioned, the U.S. right now already faces hot
18 wars in two of the three key Eurasian theaters. If China
19 were to attack Taiwan or otherwise violently upend the
20 status quo in the Western Pacific, all three key theaters of
21 Eurasia would be engulfed in violent conflicts
22 simultaneously, a situation the world really has not seen
23 since the run-up to World War II.

24 Third, the U.S. is not adequately prepared for the
25 world it presently faces. For much of the past decade, the

1 U.S. has been transitioning toward a one-war defense
2 strategy in a world where it could easily face conflict in
3 two or three theaters simultaneously. As we have seen since
4 Russia invaded Ukraine, the U.S. defense industrial base
5 would struggle enormously if the United States were engaged
6 in a major conflict. U.S. defense spending is about as low,
7 give or take, as a percentage of GDP, as it has been at any
8 time since the late 1940s.

9 In other words, there is a growing gap between the
10 challenges the U.S. faces and the resources with which it
11 can face them. The longer that gap persists and the larger
12 it grows, the greater the likelihood it will be revealed by
13 our adversaries, at a time and place of their choosing, and
14 at a tremendous cost to global stability and our own
15 security. Thank you.

16 [The prepared statement of Dr. Brands follows:]

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1 Chairman Reed: Thank you very much, gentlemen, for
2 your very insightful testimony.

3 Dr. Scharre, with regard to technology, could you
4 briefly describe the strategy of DoD today and what you see
5 as its strengths and weaknesses.

6 Dr. Scharre: Yes, of course, Senator. So I think that
7 when you look at the DoD's national defense S&T strategy, I
8 think one of the things that they have done very well is
9 list a number of different critical technologies. DoD, of
10 course, has been doing this for the last several years and
11 then updating them. And the most recent one has a couple
12 different bins that they have put these in, which I think is
13 somewhat helpful to organize them.

14 I think there might be two things that I would suggest
15 would be helpful to the Department to do to add onto this.
16 One would be a sense of prioritization among these, that can
17 drive actually spending and investments. The problem is
18 things is not really a list of priorities. It is a shopping
19 list. It is just a lot of things. It is all the things.

20 And to their credit, past DoD leaders, some of them
21 have made very clear priorities. When he was Deputy
22 Secretary of Defense, Bob Work said robotics, AI, autonomy,
23 his number one priority. When he was Under Secretary,
24 Michael Griffin said hypersonics, directed energy, his top
25 priorities.

1 The concern that I have in looking at this is, you
2 know, both of things cannot be the number one thing, right,
3 and I think it would be helpful for the Department to have a
4 repeatable process internally, a rubric, for prioritizing
5 technologies that they could come then to excellent
6 audiences, to the Hill, to industry, to others to say here
7 is our process, these are the questions that we ask, looking
8 at where the technology is coming from, its operational
9 effects, its rate of growth, and based on those factors we
10 have decided these are the ones that are the most important,
11 and this is the way it is going to drive our decisions. And
12 a process that everyone else could look at and understand it
13 would be transparent, instead of just kind of individual
14 leaders saying, well, I think this is more important.

15 And I think the other factor that I do not see included
16 too often is looking at the rate of growth of these
17 technologies, which I think matters quite a bit in sort of
18 what do you think is going to be most impactful in maybe the
19 relatively near future. You need to look at that
20 differential rate of growth.

21 Chairman Reed: Thank you very much.

22 And Dr. Brands, before the 2023 Ukraine
23 counteroffensive you were urging more rapid support of the
24 Ukrainian forces. Now we find ourselves in a position where
25 we are deadlocked over this supplemental. What is your view

1 on the importance of the supplemental and the timing of
2 getting it done?

3 Dr. Brands: I think it absolutely crucial in the sense
4 that, one way or another, 2024 is going to be a difficult
5 year for Ukraine, where they will largely be on the
6 defensive. The question is whether 2024 can be a year in
7 which Ukraine can resist Russian advances and prepare itself
8 for another counteroffensive, perhaps in 2025, and the
9 supplemental is absolutely vital on both of those counts.
10 Without additional U.S. aid there just will not be the
11 wherewithal to mount another offensive, and as we are seeing
12 right now, without U.S. aid Ukraine will start to run
13 critically short of capability that it needs just to hold
14 the line where it is.

15 The Ukrainian withdrawal from Avdiivka was occasioned
16 largely by the fact that Ukrainian forces simply did not
17 have the ammunition to hold very strong defensive positions
18 that they held there. When you take into account that most
19 Ukrainian defensive lines are not as well developed or
20 strong as the ones that they had to leave in Avdiivka, the
21 reality is that if they do not get this aid from the United
22 States they are going to find it very difficult just to keep
23 the line in place over the course of this year, which will
24 further complicate the question of how the war ends on terms
25 successful for Ukraine.

1 Chairman Reed: And following that up, you have made
2 the point that the danger might not be a concerned axis of
3 enemies that come after us together but one exploiting the
4 fighting in one region, et cetera. And this raises the
5 question of China's kind of observation of what is going on
6 in Ukraine. So Dr. Brands, your views on that.

7 Dr. Brands: I think one of the most constructive
8 influences on China's calculus relative to Taiwan over the
9 past couple of years has been the degree to which Russia has
10 struggled in Ukraine and the degree to which a coalition of
11 countries, mainly advanced democracies, has rallied to help
12 support Ukraine in its fight for survival.

13 So I think it would be extremely damaging if the United
14 States were essentially to throw in the towel in Ukraine and
15 to allow Ukraine to be defeated, because the message that
16 would send to Xi Jinping and other people who are observing
17 U.S. behavior very closely is that the West may talk tough
18 but ultimately you can outlast the United States and get
19 your way in the end.

20 Chairman Reed: Thank you. And I will let the Ranger
21 get the last word. Do you concur, Dr. Scharre?

22 Dr. Scharre: I do, absolutely, and I do think that, as
23 Dr. Brands points out, our threats would worsen in Europe if
24 we were to not continue to support Ukraine. In the end we
25 would have an emboldened, stronger Russia as a result, which

1 would be a much larger burden for us in terms of defending
2 our allies in Europe, and the effects would be felt around
3 the world, including most acutely with China, and impact
4 their calculus.

5 Chairman Reed: Thank you very much. Senator Wicker,
6 please.

7 Senator Wicker: Thank you, Mr. Chairman. Dr. Brands,
8 let me ask you about the National Defense Strategy. The law
9 requires the Secretary of Defense to review the adequacy of
10 the strategy and update it if circumstances have changed.

11 Now we got the latest strategy in October of 2022, 17
12 months ago or so. Do you think events have changed? Do you
13 think this situation has changed enough over that time that
14 the Secretary needs to review the adequacy of the strategy
15 and make changes?

16 Dr. Brands: I think two critical things have changed
17 since the strategy was finalized and released in 2022. The
18 first is that the assumption that Russia would emerge from
19 the Ukraine war significantly weakened and ultimately
20 defeated is no longer as tenable as it once was. We are
21 seeing a Russia that is doing fairly well on the battlefield
22 right now, and furthermore, is aggressively mobilizing
23 economically and militarily in a way that will allow it to
24 present a continuing threat to the eastern front of NATO for
25 many years to come after this war ends.

1 The second thing that has changed, obviously, is that
2 the Middle East has erupted once again. This was not a
3 calculation that was foremost in the crafting of the
4 National Defense Strategy. And so we are seeing increased
5 persistent demands on U.S. military power in the Red Sea, in
6 the Gulf of Aden, in Iraq and Syria, and in a variety of
7 other places where the U.S. is trying to push back against
8 Iran and its proxies.

9 So when you put those two things together I think it
10 indicates that we are living in a rather different world
11 than was expected when the strategy was released.

12 Senator Wicker: Do we ever adequately fund the
13 National Defense Strategy?

14 Dr. Brands: Well, "ever" is a strong statement. I
15 guess I would say that the gap between our requirements and
16 our resources is bigger at times and smaller at times, and I
17 worry that it has gotten bigger in recent years. If you
18 just think about defense spending as a percentage of GDP,
19 during the Cold War the United States spent, on average,
20 about 7.5 percent of GDP on defense. During the 1980s,
21 during the period of the Reagan buildup, it was about 6
22 percent, 6.5 percent, on average. We are at about half of
23 that today, just north of 3 percent.

24 And so when you compare that at the threat landscape
25 that the United States faces to historical trends of defense

1 spending, I think indicates that the gap between resources
2 and commitments is getting larger.

3 Senator Wicker: Well, sir, in a recent Foreign Affairs
4 essay, you mentioned that it is going to be hard to
5 dramatically ramp up military spending until it is
6 politically expedient, and you mentioned the possibility of
7 Americans being convinced only in the case of a jarring
8 geopolitical shock.

9 But let me ask you to comment on that. You know, we
10 had a jarring political shock in Pearl Harbor, because we
11 were not ready. During that time you mentioned that we were
12 spending 6, 7 percent of GDP the Cold War. We never really
13 had a jarring shock, did we?

14 Dr. Brands: We had shocks that were lesser than Pearl
15 Harbor but that did catalyze significant growth in U.S.
16 defense spending. So the Korean War, for instance, that led
17 to a massive expansion of U.S. defense spending from I
18 believe somewhere in the neighborhood of 3 or 4 percent of
19 GDP up to about 14 percent of GDP, at the height of that
20 conflict.

21 Senator Wicker: Okay. And let's move ahead to the
22 Carter administration, the end of the Carter administration,
23 and then the beginning of the buildup in GDP under Reagan.
24 What were those numbers?

25 Dr. Brands: So I believe at its peak under the Reagan

1 administration the U.S. was spending north of 6 percent of
2 GDP on defense.

3 Senator Wicker: And we avoided during that time a
4 jarring geopolitical shock, did we not?

5 Dr. Brands: Yes.

6 Senator Wicker: Dr. Scharre, just real quickly, the
7 technologies are important. In my opening statement I said
8 we need more submarines, we need more amphibs, we need more
9 missiles. The fact that we need to gain the lead in DoD in
10 technologies does not take away from the fact that we need
11 more tools, more ISR, more missiles, more ships. Is that
12 correct?

13 Dr. Scharre: Yeah, I think that is true. I mean, we
14 obviously need physical platforms. We need ships. We need
15 submarines. I also think it is true -- and I think,
16 actually, the Department understands this -- that what is on
17 those platforms matters more than just the raw numbers. But
18 we do need numbers, and that is a major problem right now
19 for the Department.

20 Senator Wicker: Lack of numbers is a major problem.

21 Dr. Scharre: Absolutely.

22 Senator Wicker: Thank you. Thank you, Mr. Chairman.

23 Chairman Reed: Thank you, Senator Wicker. Senator
24 Hirono, please.

25 Senator Hirono: Thank you, Mr. Chairman. So we

1 already spend north of \$800 billion for defense. Dr.
2 Brands, you are suggesting that we double this to over a
3 trillion. So it is not just how much we are spending, it is
4 what we are spending on, is it not? So are we spending
5 defense dollars in the kind of priorities that you would
6 expect us to be spending this money on?

7 Dr. Brands: I think there are many constructive
8 initiatives underway within the Department to try to prepare
9 the U.S. for some of the conflicts that it might face. So I
10 think a lot of the operational concepts that are being
11 devised by the services that are geared toward conflict in
12 the Western Pacific are promising.

13 I think, though, that ultimately all of those concepts
14 require munitions, they require platforms, they require a
15 number of things, where quantity really does matter. And so
16 I think that while it is very important that we have the
17 thrust of our defense program right, it is very important
18 that we resource it adequately, as well.

19 Senator Hirono: Well, when you said quantity does
20 matter, because at some point the fact that China has so
21 many more quantities of planes and ships and everything
22 else. Our country, we could meet the challenge of China,
23 for example, through innovation, and both of you are now
24 saying that we are falling behind in our technological
25 innovation. And you say, Dr. Brands, that the NDS, which

1 came out sometime in late 2022, is already not accurate with
2 regard to Russia's powers and also what is happening in the
3 Middle East.

4 So what do we need to do to ensure that we are
5 actually, we have the capacity to assess the needs that we
6 have militarily based on what is going on in the world. Not
7 to mention, by the way, how important are the alliances that
8 we have at a time like this when we are facing the conflicts
9 in the Middle East and in Russia and Ukraine? Either one of
10 you.

11 Dr. Brands: I can talk about alliances and perhaps the
12 assessment issue. We have been fortunate over the past
13 couple of years in that we have gotten a real-time education
14 in the demands that modern war and major war would present
15 for the U.S. Defense Department. We have seen in Ukraine
16 the enormous quantities of munitions and platforms that
17 would be consumed by a war between the U.S. and Russia, let
18 alone the U.S. and China. So I think we have gotten a
19 greater education in sort of the order of magnitude of what
20 a major conflict would demand.

21 On the question of alliances, just briefly I would say
22 that alliances are perhaps our greatest force multiplier in
23 international affairs. They give us access and influence in
24 key regions. They allow us to add the capabilities of other
25 countries to our own. They give us the ability to influence

1 the calculations of adversaries in an important way. And in
2 those and other ways, I think they add dramatically to the
3 influence the U.S. can exert on the international stage.

4 Senator Hirono: I agree with you, and recently we have
5 the Quad Alliance, the AUKUS agreements, trilateral
6 relationship with the Republic of Korea, Japan, and us, the
7 renegotiation of funding of the compact nations. So those
8 are all very critical to our ability to be ready in meeting,
9 I think, the demands of the near-peer people in China and
10 Russia.

11 So I am just curious. You both talk about how we are
12 falling behind in terms of our technological decision-
13 making. We recently got the report of the National Defense
14 -- sorry -- Defense Industrial Strategy. So do we need
15 some kind of a national defense that focuses on
16 technological advancement?

17 Dr. Scharre: Yeah, I think the new strategy and the
18 defense industrial base was excellent, and I think actually
19 the big challenge there is resourcing it. Because, in
20 particular, the Ukraine conflict has highlighted for us
21 these particular problems that we have seen in the defense
22 industrial base, especially in munitions procurement. And
23 it has given us, in many ways, a golden opportunity to
24 address those problems now, ahead of a potential conflict
25 with China, both to increase munitions capacity and then

1 scale production, and then look elsewhere in the defense
2 industrial base where we probably have similar problems.

3 Senator Hirono: Well, but you both highlighted that we
4 are falling behind in terms of our technological
5 capabilities. So do we need to have a special group, an
6 entity, or the development of a strategy that focuses on DoD
7 capabilities in the technology area? Do we need a specific
8 group that is paying attention to that need within DoD?

9 Dr. Scharre: I think so. I think maybe there are two
10 maybe challenges I would see. One would be some
11 improvements to how DoD thinks about S&T investments itself
12 in terms of the prioritization and the trends. But also at
13 a national level we are now competing with China at a
14 national level in technology competition, and we do not
15 really have anyone at the national level looking at that
16 holistically. We have seen not just DoD but Commerce and
17 other elements of national power come into form. I think we
18 need to think more strategically about how to use those
19 elements of national power.

20 Senator Hirono: Do you agree, Dr. Brands? I am
21 running out of time, but maybe you can respond briefly.

22 Dr. Brands: Yes.

23 Senator Hirono: Thank you. Thank you, Mr. Chairman.

24 Chairman Reed: Thank you, Senator Hirono. Senator
25 Fisher, please.

1 Senator Fischer: Thank you, Mr. Chairman. Dr. Brands,
2 many analysts today, they seem to be relatively confident
3 that the risk of Chinese aggression is overblown. Do you
4 think that confidence is misplaced?

5 Dr. Brands: I would not hold a great degree of
6 confidence in our ability to predict that China will not use
7 force in the Western Pacific over the next several years, in
8 part because even if it is not to China's advantage to do
9 so, we have seen from the Ukraine war and many other cases
10 in history that the leaders often make bad decisions. They
11 often make bad decisions when they sit atop authoritarian
12 regimes where information flow is very restricted and there
13 is a lot of incentive to tell the person at the top what he
14 or she wants to hear.

15 I worry also because the reality is that the military
16 balance in the Western Pacific is changing dramatically, and
17 it is changing in real time. The U.S. has done a variety of
18 important and constructive things over the past several
19 years to try to arrest the erosion of deterrence, everything
20 from the coalition-building efforts that have been discussed
21 to some of the operational concepts that are being put in
22 place today. But the reality is that the scale of the PLA
23 buildup is just such that I worry we are losing rather than
24 gaining ground.

25 So the one statistic that always stands out to me is

1 that between 2022 and 2023, the PLAAF added 400 fourth-
2 generation fighters, so basically F-16 equivalents, to its
3 inventory. And when you start getting into numbers like
4 that, even a qualitatively superior military, which the
5 United States clearly has, may struggle to defend Taiwan or
6 otherwise uphold its commitments in the region.

7 So as this decade goes on, if the balance continues to
8 shift I would become more worried about the PRC's propensity
9 for aggression.

10 Senator Fischer: And Dr. Brands, the United States has
11 relied heavily on sanctions against Russia. And when we
12 watch the aftermath now of that in Ukraine it has failed to
13 destroy. Russia's economy was initially anticipated, you
14 spoke to that earlier, that the Russians are moving ahead
15 with that. Do you think that China would be more
16 susceptible or less so to those sanctions than Russia, and
17 why?

18 Dr. Brands: I think it is complicated, Senator. On
19 the one hand, China is a harder sanctions target than Russia
20 because its economy is bigger, it is more diversified, and I
21 think the financial implications of going after the Chinese
22 economy in the way that the United States and its allies
23 went after the Russian economy would be more globally severe
24 than they have been in the Russian case. So for all of
25 those reasons it might be more difficult to inflict even the

1 level of pain on China that the U.S. and its allies have
2 done to Russia.

3 The flip side of it, however, is that China is also,
4 because it is more globally integrated it is more dependent
5 on the global economy than Russia is. So the threat of
6 having access to Western markets severed would, I think, be
7 more impactful for China than it would for Russia, because I
8 do not see how China can accomplish its objectives without
9 access to the global economy over time.

10 Senator Fischer: Dr. Scharre, do you have any comments
11 on the sanctions on China, what we would see there?

12 Dr. Scharre: Yes, thank you, Senator. Actually, a
13 colleague of mine, Emily Kilcrease, at the Center for a New
14 American Security, recently released a very detailed
15 analysis of this, and I am happy to share it with you all
16 afterwards, looking at different elements of China's economy
17 and their exposure to potential sanctions. And there are a
18 lot of areas, particularly in the defense sector, that are
19 fairly insulated because they are not tied into the global
20 economy, but their banking sector, in particular, is one
21 that does have some vulnerabilities.

22 I think those are places where we want to think
23 strategically about how do you leverage that? How do you
24 sustain those vulnerabilities, because China is certainly
25 aware of them, and they are looking to shore up their

1 defenses and be less vulnerable. How do you sustain those?
2 And then in the run-up to a potential conflict, how would
3 you think about strategically leveraging them, potentially
4 as a means of deterrence, which is a new way of thinking
5 about sanctions than we have necessarily done in the past,
6 but I think there is a lot of value there.

7 Senator Fischer: And how would you both characterize
8 the relationship between Beijing and Tehran?

9 Dr. Brands: I think that China has been investing in
10 this relationship over the past few years in hopes of
11 strengthening its ties to a key player in the region. I
12 think that China, however, has to balance its relationship
13 with Iran with its efforts to deepen its relationship with
14 Saudi Arabia and other key states in the gulf. So there may
15 be a governor on how far the China-Iran relationship can go
16 that is less present in other cases where you have
17 autocratic countries coming together.

18 Senator Fischer: Thank you very much.

19 Chairman Reed: Thank you, Senator Fisher. Senator
20 Kaine, please.

21 Senator Kaine: Thank you, Mr. Chair, and thank you to
22 the witnesses.

23 Dr. Brands, you talked about China's perception of the
24 slow pace of Russia in Ukraine, and that that has affected
25 their thinking about their own military ambitions. And in

1 particular you cited China's observation that when the
2 democracies link arms it is pretty formidable. We do not
3 have NATO in the Indo-Pacific, but we do have sort of a
4 latticework of alliances -- the Quad, the improved
5 relationship between Korea and Japan, an improving
6 relationship with the Philippines, and AUKUS.

7 I would like you to each talk about -- this Committee
8 has done a lot of work on AUKUS, as has the Foreign
9 Relations Committee. There is funding for some parts of
10 AUKUS in the supplemental bill pending in the House right
11 now. I would like you to talk about how you view the AUKUS
12 framework Pillars 1 and 2 in terms of our security posture
13 in the Indo-Pacific.

14 Dr. Brands: I think it is incredibly important in a
15 handful of different respects. In one respect, simply the
16 geography of AUKUS is very important because it is proof of
17 concept of how the United States can leverage individual
18 alliances in order to bring countries together into a larger
19 network of actors that are committed to pushing back against
20 Chinese power, even when those countries span regional
21 boundaries.

22 Obviously, the piece of AUKUS that gets a lot of
23 attention, and rightly so, is the submarines piece of it,
24 and that is important because undersea warfare is, I think,
25 one of the few areas where the U.S. still enjoys

1 unquestioned superiority over China, even at the vast
2 distances of the Western Pacific.

3 Because it will take some time for the submarine
4 dimension of AUKUS to really bear fruit, I think the other
5 pieces of it, whether it is the advanced capabilities piece
6 or sort of the accompanying piece, which is increased access
7 and presence in northern Australia, are particularly
8 important in terms of developing the ability to bring power
9 to bear in a conflict in the Western Pacific and affecting
10 China's calculations in terms of how a conflict would go
11 over the next 5 to 10 years.

12 And so as important as that is in its own right it is
13 also a critical bridge to the point where you can start to
14 bring some of the undersea capabilities to bear.

15 Senator Kaine: Dr. Scharre, other thoughts?

16 Dr. Scharre: I think given the timing dimension I
17 might prioritize things that involve joint exercises, things
18 that demonstrate to China that jointness in our ability to
19 operate with our allies in the region, things that involve
20 basing posture kind of things. And I would, in particular,
21 emphasize things that are not physical capabilities but
22 institutional elements of collaboration. So things like
23 joint planning together, which we already obviously have
24 deep ties with Australia and the U.K., but things like
25 bringing them on board in terms of planning to actually, in

1 the event of a conflict, enable us to be able to fight
2 effectively together.

3 Senator Kaine: Australian sailors are already going
4 through the training program at the nuclear power school
5 with U.S. Navy and in South Carolina Australian shipbuilders
6 are already here training at a manufacturing excellence
7 facility in Danville, Virginia. So we are moving out before
8 the sub transfers in the 2030s, which I am impressed by.

9 Let me conclude with an area where I am not happy with
10 alliances and that is the Red Sea. I am worried about the
11 lack of a real strategy in the Red Sea with the Houthis
12 trying to defend shipping, I think, makes some strategic
13 sense. But President Biden and others have acknowledged
14 they do not think firing more missiles at the Houthis is
15 going to lead the Houthis to fire fewer missiles. In fact,
16 it seems like the pace might be escalating.

17 And in particular I am concerned that the burden of
18 defending commercial shipping in the Gulf of Aden and the
19 Red Sea is pretty heavily on the U.S.'s shoulders. I think
20 it is just the U.S. and the U.K. that are engaged in any
21 kinetic activity to knock down Houthi drones and missiles.
22 I believe the Italian navy might have engaged in one kinetic
23 activity to protect an Italian-flagged vessel.

24 Why are not more nations engaging in this defense in
25 the Red Sea when their probably commerce and trade is more

1 affected by the Houthi attacks than is the U.S. economy?

2 Dr. Brands: Senator, I think the basic problem is that
3 many of them do not have the capability to do so. Even in
4 cases where our allies might be included to help out in
5 providing this critical public good they are running short
6 of the resources. So Australia had their debate about
7 whether they would contribute to Operation Prosperity
8 Guardian and ultimately decided they would not, because I
9 believe Australia has a total of three ships that could be
10 useful in this sort of context, and they have decided that
11 they are needed closer to home.

12 So the lack of resources relative to challenges
13 unfortunately is not a distinctly American problem. It is a
14 larger free world problem at this moment.

15 Senator Kaine: I yield back. Thank you, Mr. Chairman.

16 Chairman Reed: Thank you very much, Senator Kaine.

17 Senator Schmitt, please.

18 Senator Schmitt: Thank you, Mr. Chairman. Thank you
19 both for being here. Dr. Brands, in your book I am really
20 interested the Danger Zone book, and how you balance, in
21 trying to understand the Chinese perspective, they certainly
22 view themselves as a, you know, 5,000-year-old civilization,
23 the middle kingdom, who, the last 200 years, has been an
24 aberration, a humiliation, in their view. They are not
25 going to let that happen again, they have a longer view, all

1 those sorts of things that are sort of baked into the
2 understanding of their mentality and how they are on the
3 march now, in a very real way, and probably more than people
4 think. Their shipbuilding capacity alone is striking, and I
5 am not sure many people in the general public understand
6 that. They have a bigger navy -- not a better navy, but a
7 bigger navy.

8 So that longer view, and you write about the 2020s
9 being absolutely critical, which is a very short-term issue
10 in setting the stage for this longer, great powers
11 competition. You have got the demographic cliff that they
12 are facing. They are no longer publishing a lot of economic
13 data. Their youth unemployment, which I think drives -- GDP
14 is really important to us. I think unemployment for the
15 Chinese is most important, for a variety of reasons. When
16 you are an authoritarian regime a lot of young men not
17 working is a real problem.

18 So how do you balance this, in your view of how they
19 view where they are at right now -- and, of course, you have
20 got this big Taiwan question -- where they are at right now.
21 Do they view that as, in your estimation, as a reason to go
22 quicker, or do they fall back to the traditional view of the
23 longer-term strategy?

24 Dr. Brands: Senator, my view -- and this is by no
25 means a unanimous view among China watchers, I should add

1 -- but my view is that China is being motivated by a
2 dangerous mixture of weakness, strength, and personalization
3 at this point. The weakness comes from the demographic and
4 economic problems that you noted, which are already having a
5 pronounced effect on Chinese growth, and that effect will
6 only become more pronounced over time. At the same time,
7 the military modernization program is still going
8 gangbusters, if you look at the increases in military
9 spending.

10 And so you have a country whose long-term economic
11 prospects are dimming as its near-term military position
12 becomes stronger. Historically, that has been a recipe for
13 trouble, because that is exactly the sort of combination
14 that tempts countries to use force sooner rather than later
15 to lock in advantages while they still can. It is
16 reinforced, in this case, because China's fortunes have
17 become increasingly entangled with Xi Jinping's fortunes, as
18 he personalizes the political system and does away with this
19 system of something closer to collective rule that China had
20 for a couple of generations after Mao Tse-Tung.

21 And so you sometimes hear Xi Jinping say things like,
22 "The question of Taiwan cannot be passed down from
23 generation to generation." That is sometimes read as him
24 saying, "It cannot be passed down to the next generation of
25 Chinese leaders."

1 And so when you put all those things together it makes
2 me worry that we may be dealing with a China that is in a
3 bit of a hurry by the time we get to the latter part of this
4 decade.

5 Senator Schmitt: And he is already in an unprecedented
6 third term.

7 Dr. Brands: With no indication that he is planning on
8 stepping down any time soon.

9 Senator Schmitt: Correct. And so if you were a
10 betting man, if you had to place a wager, red he goes, black
11 he does not go, where are you betting?

12 Dr. Brands: I think an operation against Taiwan would
13 be sufficiently daunting that there are lots of things that
14 the U.S., Taiwan, and other countries in the region can do
15 to drive down the chances of a Chinese attack on Taiwan.
16 But on the current trajectory I am very worried about where
17 we will end up.

18 Senator Schmitt: And then one last question about the
19 CCP and China. So there has always been this sort of
20 natural distrust between them and Russia, or the USSR, or
21 the Russian Empire, whatever phase Russia is in. How do you
22 view that? Even though they seem to be working more
23 collaboratively than they have in recent memory, there is
24 still this natural tension. They share a border. How do
25 you gauge the reality of that relationship right now?

1 Dr. Brands: The historic mistrust is still there. In
2 fact, China will occasionally print maps that show it
3 controlling parts of Russia, as it is currently constituted.
4 And certainly I think the Russians, in particular, know that
5 if China comes anywhere close to achieving its ambitions in
6 Eurasia that is going to be a very challenging situation for
7 Russia itself. Those concerns are rather distant at the
8 moment.

9 Ideologically, these are two countries. They are both
10 autocratic powers trying to make it in a world dominated by
11 a democratic superpower. They both view the United States
12 and its allies as their primary enemies. And by all
13 indications, Xi and Putin seem to have similar world views
14 and get along fairly well.

15 So those historic tensions may reassert themselves, but
16 perhaps not on a timeline that would help us in this decade
17 or a little bit beyond.

18 Senator Schmitt: So maybe the United States exploiting
19 some of those traditional differences as opposed to driving
20 them together probably makes the most sense for us, right?

21 Dr. Brands: It could. I will spare you a long
22 excursion into history, but if you look back at the prior
23 Sino-Soviet relationship, the U.S. actually pursued a
24 strategy in the '50s of trying to drive them closer together
25 as a way of exploiting those frictions within the

1 relationship. And I would argue that it worked fairly well
2 at the time.

3 Senator Schmitt: Okay. Thank you.

4 Chairman Reed: Thank you, Senator Schmitt. Senator
5 King, please.

6 Senator King: Thank you, Mr. Chairman. I would like
7 to thank both of you for very thoughtful and insightful
8 testimony. Talking about some of the issues that we have
9 already touched upon, in 1962, as you have testified, our
10 defense was something like 8 or 9 percent of GDP. Today it
11 is under 3 percent. The projection I just saw was 2.7 for
12 2024.

13 The cornerstone of our national security policy is
14 deterrence. I would argue that this dramatic decline, by
15 two-thirds, is a chink in the armor of deterrence. Would
16 you concur? In other words, the Chinese and the Russians
17 and others look at that number as part of measuring how
18 fearful they should be of our ability to respond.

19 Dr. Brands: I think it is certain unhelpful, Senator,
20 and I think that whether it is the number they look at or
21 the speed at which the U.S. would exhaust its munitions
22 inventory in a particular conflict, those are precisely the
23 sort of issues that would worry me about whether deterrence
24 was eroding.

25 Senator King: The second question along those lines is

1 our failure to continue to support Ukraine, how would that
2 affect Xi's calculus in terms of Taiwan and his analysis of
3 our staying power?

4 Dr. Brands: I think Xi is predisposed to think that
5 the United States and its allies lack the endurance and the
6 stamina to hold the line against China and its partners over
7 the long term. And so if the United States were to
8 terminate support for Ukraine or would allow Ukraine to be
9 defeated, I think it would simply reinforce that perception,
10 which would be unhelpful, as Dr. Scharre had pointed out,
11 not just in Europe but in the Asia Pacific as well.

12 Senator King: Dr. Scharre, do you agree?

13 Dr. Scharre: Absolutely. I mean, Xi already believes
14 that America is in decline, that we do not have staying
15 power, and it would certainly reinforce that assumption that
16 even in the event of a conflict, if the United States were
17 to be directly engaged in defending Taiwan, that we simply
18 would not be able to go the distance and China could outlast
19 us.

20 Senator King: And my impression from the initiation of
21 the Ukraine war was that Xi was somewhat surprised by the
22 reaction of the West, the unification, expansion of NATO,
23 and that surprise and concern would be dissipated if we
24 indeed abandoned Ukraine.

25 Dr. Scharre: Right. Precisely.

1 Senator King: I like it when witnesses say precisely
2 in answer to a question.

3 I want to go back to the very beginning, and also I
4 want to associate myself with the questions of Senator
5 Wicker in terms of the GDP percentage. The American public
6 does not realize, we hear this big number, \$800 billion, and
7 at ten times other countries, but in terms of the percentage
8 of our economy devoted to defense it has fallen by almost
9 two-thirds in the last 60 years.

10 R&D, real problem. New technologies win wars. Genghis
11 Khan conquered the world because of the invention of the
12 metal stirrup. The longboat turned the tide. The British
13 had 5,000 at the Battle of Agincourt, the French 20,000.
14 The use of the longboat was generally considered by
15 historians to be crucial in turning that battle, and indeed,
16 the 100 Years War.

17 I worry, it is obviously that there are new
18 technologies that we have been slow. Directed energy and
19 hypersonics are the two that strike me as most obvious. How
20 do we get the Pentagon to understand the role of new
21 technology? Dr. Scharre, what is your view?

22 Dr. Scharre: I think that the Defense Department,
23 basically in its DNA, understands the value of technology.
24 I actually think what is missing right now is a sense of
25 where the priorities ought to lie, because I think the DoD

1 is still stuck in a mindset from the 1960s where DoD
2 believes that it has to invent all the technologies itself.
3 But there is so much technological innovation happening
4 outside the Defense Department that I think that is going to
5 matter more.

6 And I would say that it is true that technology is
7 absolutely critical to winning wars, but what matters most
8 is finding the best ways of using the technology. That is
9 clear looking at history. So having institutional processes
10 that can figure out how do we capitalize on this. Because
11 in many ways --

12 Senator King: One of the problems -- we have had
13 testimony to this Committee that smaller companies in
14 Silicon Valley do not even bother applying for contracts to
15 the Department of Defense because it is so cumbersome, slow,
16 and we are losing access to innovation.

17 Dr. Scharre: I would actually, so even worse, we are
18 building barriers to access, right. Those barriers are
19 self-constructed by us, red tape that makes it hard for
20 companies that would like to work with DoD to work with us.
21 And so we need to find ways to tear down those barriers.

22 Senator King: In the meantime, we are spending \$5
23 million a missile to knock down \$200,000 to \$300,000 drone
24 out of the Houthis, when directed energy could do it for
25 about 50 cents a shot. We have just got to break down this

1 barrier, both in terms of working with smaller and
2 innovative companies but also, as you say, taking advantage
3 of technologies developed in the private sector and then
4 transferring them into our arsenal, if you will.

5 Thank you very much, Mr. Chairman. I yield.

6 Chairman Reed: Thank you, Senator King. Senator
7 Gillibrand, please.

8 Senator Gillibrand: Hi. Thank you so much for your
9 testimony today. I want to ask some larger questions.

10 The United States has always had a theory that mutually
11 assured destruction and deterrence would restrict an
12 adversary from taking the United States on domestically
13 anywhere in our country. And we have an assumption that we
14 would never have to defend a war here in the United States.
15 Well, that assumption does not play out when you are looking
16 at the arena of cyber or AI or other types of disruption
17 that could be lethal.

18 So we have seen cyberattacks over the last 5 years in
19 an array of places -- solar winds, shutting down our supply
20 chain for food, affecting oil production and delivery. We
21 have seen cyberattacks in every industry, whether it is in
22 health care most recently, or in banking, or in any domain
23 within the United States.

24 Yesterday I sat on the Intel hearing, and asked each of
25 the witnesses, from Director Burns to Director Haines and

1 other military personnel doing intelligence for DIA and
2 other entities, and I asked them the question of -- I gave
3 one example. Let's say an adversary decides to use AI and
4 different kinds of generated content to spew out false
5 information from an elected leader or a candidate to such a
6 degree that it misleads the American public in a U.S.
7 election. What are you doing to prevent that or to respond
8 to that efficiently, and who here is responsible for telling
9 the American people the facts of any given incident? None
10 of them had a plan, and none of them took responsibility for
11 the protection of the United States.

12 So I would like to get your assessment of how do we
13 protect the United States? Let's just say China, in its
14 effort to invade Taiwan, uses the first 2 or 3 months to
15 just do as many cyberattacks as possible in our critical
16 infrastructure, around our bases, around our ability to
17 launch from, let's say Guam, which they just tested a few
18 months ago, takes our electric grid, takes out our capacity,
19 creates chaos, undermines the economy significantly. We
20 have no plan to defend against that. And I think the
21 response is, well, you have got the FBI, which is a response
22 organization, you have got CISA, which can offer best
23 practices but has no mandate, but you have no one who is in
24 charge of protecting anything in CONUS.

25 So I would like you to talk about how should we realign

1 our assessment of what the role of the Department of
2 Defense, NSA, CIA, national security operations and forces,
3 what is the responsibility to protect America from an attack
4 from an adversary in the United States, whether it is cyber,
5 to create chaos and death and destruction, or any other type
6 of attack, from, you know, drones attacking our bases, or
7 spy balloons hovering over our most secret assets. What
8 should the United States be doing?

9 Dr. Scharre: Well, thank you, Senator. I would look
10 at both of these, the cyber dimension and the disinformation
11 one, as warning shots that we are getting now, none of which
12 have been critical yet to the U.S. but we have an imperative
13 to respond to these, to shore up our defenses.

14 I think on the cyber front there is clearly a lot more
15 we could do. We continue to have challenges. I mean, as
16 you point out, just recently in the health care system, and
17 putting the onus on industry putting in place government
18 standards for cybersecurity across a wide range of sectors
19 that has been critical to be shoring up our defenses here.

20 On the disinformation, too, there are a wide range of
21 things that we could be doing. So for example, requiring
22 that AI-generated content is watermarked and is labeled
23 appropriately when it is online, something like a bot
24 disclosure law, that if someone is using AI -- California
25 has this -- they have to share that it is AI generated, and

1 then cracking down on foreign efforts to message, whether
2 using AI or elsewhere, and spread disinformation here in the
3 United States, are all things that I think we should be
4 doing now.

5 Dr. Brands: Senator, I would not add anything
6 substantial. I would just say that when the U.S. war games
7 potential Taiwan conflicts or things like that, the homeland
8 dimension is often the piece that gets short shrift, in
9 large part because, you know, war-gaming is traditionally a
10 DoD competency so it focuses heavily on that aspect of the
11 response. But the more that you can get relevant
12 stakeholders together to really game through what the
13 domestic disruptions would be in this sort of conflict, the
14 more I think you can get them talking about the ways in
15 which their responsibilities might overlap or where they
16 might need to develop new competencies in order to defend
17 the U.S.

18 Senator Gillibrand: Thank you.

19 Chairman Reed: Thank you, Senator Gillibrand.

20 Gentlemen, thank you for your excellent testimony. I
21 have one questions which was frequently overlooked today,
22 and that is we are emerging into a new world of nuclear
23 competition between three powers, not bipolar competition
24 which shaped the whole theory of deterrence. And then, of
25 course, we have the other nuclear entities -- North Korea,

1 Pakistan, and other countries.

2 So what is your take on how we should address this
3 nuclear issue?

4 One other point I would make is it used to be the
5 custom of every presidency to seek out at least one
6 agreement with the Russians, even if it was a minor one, but
7 we have not had much discussion about Russia, and China, I
8 do not think, will talk to us until they get up to our level
9 of missiles. But this is an issue that is overlooked often,
10 and since I have two extremely intelligent gentlemen here,
11 your view. And I will start with Dr. Scharre, please.

12 Dr. Scharre: Thank you, Senator. I would actually
13 argue that we have three interlocking problems. There are
14 others that complicate what you are describing. There is
15 certainly the fact that we are moving into a tripolar
16 nuclear era, with China's nuclear buildup. We have emerging
17 technologies that are complicating a lot of the strategic
18 dimensions, maybe outside of nuclear weapons, but in space
19 and elsewhere, of nuclear deterrence. And the also, of
20 course, we have seen with Russia an increased salience of
21 nuclear weapons, and a risk that we may actually see them
22 used in ways that maybe are heightened from what we might
23 have thought a couple of years ago.

24 I think it is clear that we need increased investments
25 in this space, that if we are going to maintain a deterrent

1 against two adversaries simultaneously we are going to need
2 more dimensions here. The simultaneity problem is, I would
3 argue, most acute in the nuclear dimension because of this
4 issue, more so than in the conventional space.

5 I think we are also going to need a lot of new
6 thinking. The reality is that sort of among the defense
7 intellectuals that work on these topics the sort of nuclear
8 community has, over many years, atrophied because nuclear
9 weapons have not been as salient until more recently. And
10 so I think increased war-gaming and studies and investments
11 to build up that intellectual capital and to get senior
12 leaders thinking about these challenges. Okay, if an
13 adversary uses a nuclear weapon in a conflict to try to
14 maybe terminate on their terms, how do we respond
15 accordingly?

16 Chairman Reed: Thank you. Dr. Brands, please.

17 Dr. Brands: Just three things, very briefly. One, the
18 scenarios that we worry about nuclear use now I think are
19 very different than they were during the Cold War. Now what
20 we worry most about is sort of limited nuclear use or
21 coercive use to back up limited conventional aggression as
22 opposed to in a conflict that would engulf Europe as a
23 whole, which indicates to me that the U.S. is probably going
24 to need more investment in limited nuclear capability of its
25 own to close the gap between the conventional arsenal and

1 the strategic deterrent.

2 The second is that the force sizing issue becomes
3 particularly complicated in a tripolar nuclear environment
4 because having enough to assure a second strike capability
5 against one adversary, that may not do you much good if you
6 then find yourself in a position of inferiority against
7 another. And so I am not convinced that we have given that
8 the attention that it deserves.

9 The third is that, unfortunately, I think bilateral
10 U.S.-Russia arms control is probably dead for the
11 foreseeable future. The good news is that that gives us a
12 chance to rethink what sort of arms control agreements might
13 be to U.S. advantage in an environment where most of them
14 may need to be trilateral rather than bilateral to begin
15 with.

16 Chairman Reed: Just a final point before I recognize
17 Senator Kelly, it may have been that China, for their own
18 benefit, gave us a little help in Ukraine, because I think
19 they were very, very much opposed to Putin's threats to use
20 nuclear weapons, not because of Ukraine but because they do
21 not want to see South Korea, Japan, et cetera, become
22 nuclear powers.

23 So it is a complicated world, and it is a new world for
24 us now, and I think we have to approach it that way. But
25 thank you.

1 Senator Kelly, please.

2 Senator Kelly: Thank you, Mr. Chairman, and thank you
3 to both of you for being here today.

4 As a member of the Senate Intelligence Committee, I see
5 firsthand the importance of intelligence gathering to our
6 national security and also to strengthening our
7 international partnerships. Building these relationships is
8 vital to advance our shared goals and protect the American
9 people.

10 As you said recently, Dr. Brands, strategy, quote, "is
11 the art of balancing power without subverting democratic
12 purpose," unquote, and there is clearly an art to successful
13 intelligence partnerships. Can you speak to how
14 intelligence partnerships are vital to the art of national
15 strategy?

16 Dr. Brands: Senator, I have looked at this mostly in a
17 historical context during the Cold War, and I guess I would
18 say that just as alliances are a force multiplier in
19 general, they are certainly a force multiplier when it comes
20 to intelligence. So one of the things we found historically
21 is that through our intelligence liaison programs with
22 allies we may gain access to expertise on particular
23 countries or regions that we have not invested in heavily
24 ourselves, if we look at the way that Australia, for
25 instance, can be helpful in understanding events in the

1 South Pacific.

2 We may also gain access to particular sources, human
3 sources, that the U.S. intelligence system may not have
4 access to itself. And so we end up being in a stronger
5 national position by dint of the relationships that we have
6 with other countries in this realm.

7 Senator Kelly: One concern I have had lately is our
8 ability to gather intelligence in North Korea. We have got
9 an unpredictable actor with an arsenal, and without the
10 intelligence flowing in our direction it is just really hard
11 to make predictions on what he is going to do.

12 A little bit more on Ukraine. Dr. Brands, you have
13 also written extensively on our need to provide support to
14 Ukraine, and I agree that this is one of our top priorities.
15 You know, Putin is not going to stop with Ukraine if we do
16 not stop him in Ukraine.

17 In addition to supporting them militarily, can you give
18 your perspective on building an intelligence partnership to
19 support Ukraine in its struggle against Russia?

20 Dr. Brands: From what I read in the news, U.S.
21 intelligence support to Ukraine has been absolutely vital in
22 everything from helping the Ukrainian government understand
23 the nature of the threat that was coming at it in February
24 2022 and after, to providing more actionable insights in the
25 months and years that have followed.

1 But I would also, Senator, encourage people to think
2 about it the other way around, where the U.S. will gain
3 enormous benefits from an intelligence partnership with
4 Ukraine, because just to put it very bluntly, Ukraine has
5 fought Russia and we have not. Ukraine has gained insights
6 into the way that modern war works in a high-intensity
7 environment that even the U.S. military, with all of its
8 experience over the last 20-plus years does not have.

9 So I would prefer to think of it as a two-way
10 partnership in the sense that the U.S. itself will benefit
11 tremendously.

12 Senator Kelly: Yeah, and not just with intelligence.
13 I have made a couple of trips to Ukraine in the last 18
14 month or so, and I made this point with the Ukrainians. At
15 the beginning of this conflict, I mean, we had much better
16 intel on the Russians and experience, combat experience.
17 Fast forward 2 years later, I mean, they are the ones that
18 have been -- they are on the ground here fighting every
19 single day and fighting for their lives bravely. Now they
20 have that experience, and we have a lot to learn from them.

21 Dr. Scharre, you have written extensively about the
22 importance of AI in military operations. I also noted your
23 recent House testimony on the Replicator initiative, which
24 intends to field thousands of autonomous systems in about 2
25 years. Can Replicators successfully make long-term,

1 fundamental changes to the DoD acquisition process?

2 Dr. Scharre: I hope so. We will see. I think that
3 DoD set a very ambitious goal for itself. I think that is
4 good. They are going to need congressional support to make
5 that happen. I would like to see them succeed. I think it
6 is too early to tell, but hopefully.

7 Senator Kelly: And in my last minute could you comment
8 a little bit about how AI should be integrated into our
9 national strategy?

10 Dr. Scharre: I guess on a couple of levels. I think
11 certainly in the military space we need to be moving forward
12 very quickly to bring in AI technology, putting in place the
13 infrastructure on data and on computing hardware, cloud
14 computing, inside the DoD to make DoD ready for AI, to use
15 it effectively. But also nationally we need to protect our
16 advantages in AI. The best AI technicians are here in the
17 United States, and right now the reality is we are giving a
18 lot of those advantages for free to China, that a lot of the
19 technology proliferates very quickly to China, within 18 to
20 24 months. Those best AI models have gone open source, they
21 have proliferated to China. I think we also need to look at
22 protecting the crown jewels of U.S. AI advantage.

23 Senator Kelly: All right. Well, thank you. Thank
24 you, Mr. Chairman.

25 Chairman Reed: Thanks, Senator Kelly. Senator Cotton,

1 please.

2 Senator Cotton: Gentleman, welcome. Dr. Brands, last
3 Thursday night we had the President yelling at us for an
4 hour, sounding like it was 1941, with threats to democracy
5 around the world. Yesterday we got his budget. He seemed
6 more like Harry Truman in the 1940s or Bill Clinton in 1993,
7 drawing down our military after the wars. It only had a 1
8 percent increase in defense spending compared to last year's
9 request. Given continued high inflation, that amounts to a
10 real cut. China recently announced that it was going to
11 increase its defense budget by 7.2 percent.

12 Do you think the President's budget request accurately
13 and soundly addresses the severity of the threats that we
14 face today?

15 Dr. Brands: No. I worry both about the topline, and
16 then from what I can tell from a quick skim of the budget
17 submission, particularly what it will mean for procurement
18 in the coming years, where I think we are looking at an
19 absolute cute, which would be, even in relative, inflation-
20 adjusted terms, more severe still.

21 Senator Cotton: Could you tell us a little bit more
22 about the specific concerns you have on procurement, going
23 forward in the future?

24 Dr. Brands: Well, one of the major challenges we face
25 at this point is generating and procuring the number of

1 munitions we would need for particular contingencies as well
2 as simply some of the platforms that would be used to
3 deliver them. And so it is helpful to have investment in
4 R&D, in modernization and things that look forward down the
5 future. But you are not going to be able to get there
6 unless you have the money to actually buy things once they
7 become available.

8 And moreover, procurement spending at this point
9 provides a double benefit because the only way you can
10 really strengthen the defense industrial base is by
11 providing guarantees that money to buy things will actually
12 be there. If you are looking for firms to expand or ramp up
13 new production lines, invest in a new workforce, that is the
14 sort of money you need to be spending now that would make
15 possible further investments down the road.

16 Senator Cotton: A kind of multiyear procurement
17 authority, that some in Congress have resisted.

18 Dr. Brands: Yeah, I think that is going to be
19 critical.

20 Senator Cotton: Yeah. That is because you cannot
21 expect those companies, or more to the point, the companies'
22 owners in the form of their shareholders, to lay out
23 significant capital up front if they do not have confidence
24 of a return down the road?

25 Dr. Brands: If the business case is there, then they

1 will make the investments. But for the business case to be
2 there they have to be persuaded that this is not just a 1-
3 year bump in, say, procurement of 155 mm artillery
4 ammunition, or whatever the capability is, because otherwise
5 they cannot justify all the new investments that will be
6 necessary to get to that point.

7 Senator Cotton: Dr. Scharre, you are nodding your
8 head. Do you have anything to add to that?

9 Dr. Scharre: I do, and I guess I would add, Senator,
10 that, you know, we have heard from lots of experts in
11 government, outside of government I have talked to, Dr.
12 Brands, of course, has written extensively on this, that we
13 are entering this dangerous window at the end of the decade
14 with China.

15 It seems to me that if we believed that we would be
16 putting our Defense Department, our defense industry on a
17 wartime footing. We would be expanding capacity. We would
18 be increasing our defense industrial base capacity, building
19 our munitions stockpiles, building our ability to surge. We
20 have a few years of critical warning now, and we need to
21 seize that opportunity, or I think there is a very real risk
22 that we look back on this moment and realize that we missed
23 the opportunity to be ready.

24 Senator Cotton: Yeah. So you make those outlays now,
25 and you want to ensure companies will get a reasonable rate

1 of return on their investments now. Is there any reason to
2 think the world is going to be safer in 3 or 5 or 10 years
3 than it is now, and we will not need all that stuff we are
4 investing in? Dr. Brands, do you want to take that?

5 Dr. Brands: No, there is no reason to believe that.
6 We are going to be dealing with a hyper-revisionist and
7 perhaps hyper-mobilized Russia for some time to come. We
8 are going to be dealing with a China whose military buildup
9 continues at a very alarming rate. We are going to be
10 dealing with a North Korea whose nuclear arsenal and missile
11 arsenal is going to outpace U.S. missile defenses at some
12 point this decade, as well as all the challenges in Iran and
13 from terrorist groups. So no, there is no reason to think
14 the threat environment will become less severe.

15 Senator Cotton: Dr. Scharre?

16 Dr. Scharre: I might just add that the best thing that
17 we could do to buy down the risk of a conflict with China is
18 to make investments now that increase deterrence.

19 Senator Cotton: It is always costly, investment of
20 resources and national effort, to preserve the peace, but
21 more costly, I presume, to win a war when the peace is not
22 preserved.

23 Thank you, gentleman.

24 Chairman Reed: Thank you very much, Senator Cotton.
25 Gentleman, thank you for excellent testimony, and I hope

1 that this will not be the last time we have you before the
2 Committee and reach out for advice, and I encourage you to
3 feel free, please, to let us know what your thoughts are and
4 what we should be thinking about.

5 We are hopeful that having passed the last batch of
6 appropriations bills will get the defense bill done next
7 week, but if not then we have problems, immediate problems.

8 But again, let me thank you all for excellent testimony
9 and for your continued wise insights into the national
10 security of the United States.

11 With that I will adjourn the hearing.

12 [Whereupon, at 10:47 a.m., the hearing was adjourned.]

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