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ALTERNATIVE APPROACHES TO DEFENSE STRATEGY AND FORCE STRUCTURE

HEARING

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

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ALTERNATIVE APPROACHES TO DEFENSE STRATEGY AND FORCE STRUCTURE

THURSDAY, OCTOBER 29, 2015

U.S. SENATE
COMMITTEE ON ARMED SERVICES
Washington, D.C.

The committee met, pursuant to notice, at 9:32 a.m. in Room SD-G50, Dirksen Senate Office Building, Senator John McCain (chairman) presiding.

Committee members present: Senators McCain, Inhofe, Sessions, Ayotte, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Reed, Nelson, Manchin, Shaheen, Gillibrand, Blumenthal, Donnelly, Hirono, Kaine, King, and Heinrich.

OPENING STATEMENT OF SENATOR JOHN MCCAIN, CHAIRMAN

Chairman MCCAIN. Well, good morning. We're pleased to have with us today a group of witnesses that will present a variety of alternatives on how to reimagine, reshape, and realize, and resize our military for the future.

Before I go further, I'd like to just mention to members of the committee that, now that, hopefully, we will have completed our work, assuming that the agreement will be passed by both Senate and House, and signed by the President, on the NDAA [The National Defense Authorization Act], I intend to embark, with, hopefully, the participation of every member of the committee, on extensive examination of our force structure, of our challenges in the future, our need for reforms in every area of national defense. And I would seek and urge both subcommittee chairmen and ranking members, as well as all members, to engage in a series of examinations of national defense in every—all of its aspects and so that we can come up with a continued reform package to follow on the modest beginnings in this year's NDAA.

I know that Senator Reed is committed to the same prospect, and I know that we can embark on this odyssey in a completely bipartisan fashion. I think the men and women who are serving deserve it, but I think, more than that, America deserves a thorough examination of how we can best equip our military in the ability to defend this Nation in very turbulent times. So, I'll be having a meeting of the committee next week so that we can discuss this in greater detail.

So, we are pleased to have Thomas Donnelly, Resident Fellow and Co-Director of the Marilyn Ware Center for Security Studies at the American Enterprise Institute; Shawn Brimley, Executive Vice President and Director of Studies at the Center for a New

American Security; Andrew Krepinevich, President of the Center for Strategic and Budgetary Assessments; Christopher Preble, Vice President for Defense and Foreign Policy Studies at the Cato Institute; and Dakota Wood, Senior Research Fellow for Defense Programs at the Heritage Foundation.

I welcome all of you today.

Last week, former Secretary of Defense Robert Gates echoed what senior national security leaders have testified to this committee all year, that, while we should not forget or downplay the dangers we faced in earlier times, the current global threat environment is uniquely challenging, complex, and uncertain. Many of our adversaries have spent the past decade, and more, investing billions to build up and reshape their militaries and developing technologies to thwart America's military advantages. As we'll hear today, many of the technologies that made America the unparalleled global military power just 15 to 25 years ago, such as precision-guided munitions and stealth, are proliferating to others at a dangerous speed and scale. Our adversaries are also finding new—fielding new technologies from cyber to counterspace in order to defeat our traditional military advantages asymmetrically.

At the same time, we face growing networks of violent Islamist extremists that will engage us in a low-technology conflict of ideas and wills for years, even decades, to come. As the bipartisan National Defense Panel [NDP] warned, in the future, quote, "conflicts are likely to unfold more rapidly, battlefields will be more lethal, operational sanctuary for U.S. forces will be scarce and often fleeting, asymmetric conflict will be the norm. In this rapidly changing environment, U.S. military superiority is not a given."

Yet, since the end of the Cold War, now a quarter century ago, the United States has maintained a similar, but ever shrinking, version of the military we built during the 1980s. In constant dollars, we're spending almost the same amount on defense now as we were 30 years ago. But, for this money today, we're getting 35 percent fewer combat brigades, 53 percent fewer ships, 63 percent fewer combat air squadrons, and a lot more bureaucracy and overhead. Yes, our forces are now more capable than ever, but they are not capable of being in multiple places at once. Capacity still matters, especially given the numerous potential contingencies we face around the world. What's more, our adversaries are more capable, too—many, significantly so. Our military technological advantage is eroding fast. Add that to the years of arbitrary defense spending cuts and foolish cuts imposed by the Budget Control Act and sequestration, and we are now facing the dual problem of a quantitative and qualitative erosion of our military edge.

At the level of strategy, we are now living through an all-too-familiar pattern in American history. A period of international exertion is followed by the desire to cut defense spending and research from the—and retrench from the world. That inevitably goes too far, and we end up courting disaster through inaction and self-imposed harm done to our ability to project power and influence. That is where we are today: relearning that underreaching can be as dangerous as overreaching, if not more so.

Now more than ever, we need a clear strategy, or strategies plural, to guide our actions and defense investments. Unfortunately,

all too often senior leaders in our government do not even seem able to define the concept. When pressed for a strategy, they offer objectives and general interest inputs and means, hopes and dreams, but not a strategy, not a description of the way they will marshal limited means to achieve their ends. That's how we heard—and let's get—we get what we heard on Tuesday, "the three R's" ["Ruqqa, Romadi, and Raids," the lines of effort against the Islamic State in Iraq and the Levant unveiled by Secretary of Defense Ashton B. Carter at an October 29, 2015 hearing before the Senate Armed Services Committee]. What's worse, the national security strategy has become a speechwriting exercise designed to please all constituencies. It tells us preciously little about strategy, as does the Quadrennial Defense Review [QDR], which, as many of—our witness told us last Thursday, has become more of a sustained explanation of the program of record.

Strategy, like governing, is to choose. We must set priorities, we must determine what missions are more important than others, what capabilities we must have at the expense of others, and there are no shortcuts around strategy. Doing more with less is often just a rationalization for doing less. And, while we need more money for defense, more money spent in the wrong ways and on the wrong things will still fail if we think we can succeed with business as usual. We cannot.

That is why defense reform is so important, not merely as a cost-saving measure, although there are certainly costs to save at the Department of Defense [DOD], but because we need to be smarter and more innovative about how we prioritize our national security interests, how we use our military power to achieve our policy objectives, and what size and shape our military must be to succeed now and in the future.

The choices entailed here will not always be popular in all quarters of the defense establishment, but these are the choices we must make to ensure our military is built and postured to deter and, if necessary, defeat our adversaries.

That is the purpose of today's hearings and hearings in the future. And I look forward to the testimony of our witnesses.

Senator Reed.

STATEMENT OF SENATOR JACK REED

Senator REED. Well, thank you very much, Mr. Chairman.

Let me join you in thanking the witnesses for being here today.

Gentlemen, your expertise, your insights, are particularly important as we cope with the issues the Chairman has laid out. Thank you very much.

Again, let me thank the Chairman for providing the committee with this opportunity to take a deliberate and holistic review of the Defense Department organization, structure, missions, and, essentially, look forward very creatively and thoughtfully. So, thank you, Mr. Chairman.

As the Chairman pointed out, last week we were privileged to have former Secretary of Defense Bob Gates and a host of other experts, former officials, historians, academicians. They talked about the Defense Department, the strategic context, and going forward. It is worthwhile, as the Chairman has done, to quote Dr. Gates. He

said, "Americans, including all too often our leaders, regard international crises and military conflict as aberrations, when, in fact, and sad to say, they are the norm." Dr. Gates also repeated his conclusion, informed by more than four decades of public service, that our record in predicting the future remains perfect: We have never gotten it right. Because of this, Dr. Gates said, "We must place a premium on acquiring equipment and providing training that give our forces the most versatile possible capabilities across the broadest possible spectrum of conflict."

Now, following Dr. Gates' testimony, we heard comments from several of last week's panelists about outdated DOD processes and the way in which our strategic guidance is crafted, including the National Security Strategy and the Quadrennial Defense Review. Among other things, our witnesses highlighted that these documents consume significant energy and resources, and are frequently overtaken by global developments by the time they are published. I would be interested in hearing each of our witnesses' comments about this process and how it can be improved.

Another theme of Dr. Gates' testimony was the need for strong civilian leadership in the Department, particularly by the Secretary. While this point is self-evident, Dr. Gates emphasized that, "Satisfying critical operational and battlefield needs cannot depend solely on the intense personal involvement of the Secretary." He continued, "The challenge is how to institutionalize a culture and incentive structure that encourages wartime urgency simultaneously with long-term planning and acquisition as a matter of course."

Now, several of our witnesses today have previously stated that the Department's organization and processes are outdated. Once again, I'd be interested in updating and giving us more insights on these particularly important issues.

Given the dynamic and evolving security challenges facing our Nation today, and nearly 30 years after the passage of Goldwater-Nichols, it is appropriate to ask what missions our military should perform in the future, how that military should be structured and postured to most effectively carry out such tasks, and how we might reform the development of strategic defense guidance to make those products more relevant to planning and budgeting efforts.

I commend the Chairman for leading us in this effort.

Thank you.

Chairman MCCAIN. Dr. Krepinevich.

STATEMENT OF ANDREW KREPINEVICH, PRESIDENT, THE CENTER FOR STRATEGIC AND BUDGETARY ASSESSMENTS

Dr. KREPINEVICH. Thank you, Mr. Chairman, Senator Reed, members of the committee. Thank you for inviting me to appear before you here today to present my views on this important topic.

Given limited time, I would like to summarize my testimony by making five points.

Chairman MCCAIN. Could I just say, all witnesses' complete statement will be made part of the record.

Dr. KREPINEVICH. Thank you, Mr. Chairman.

Again, it's in the context of, I would guess—I would say, a medical analogy. First, you need a good diagnosis of the environment you're in before writing the prescription. A lot of times, I think we like to go from the threat environment to talking about forces and equipment and the defense program. But, as you pointed out, Mr. Chairman and Senator Reed, the key connective tissue really is the strategy that tells us how we're going to develop a defense program that most effectively helps protect our interests and achieve our objectives.

My first point is that we are now in a period where we face threats that are growing in scale and shifting in form from those against which we've spent most of the last quarter century planning for. There are three revisionist powers in three key regions of the world, regions that Presidents of both parties, going back decades, have declared to be vital to our security. These powers are interested in overturning, in significant ways, the rules- based international order that has benefited us and our allies and partners over an extended period of time. Aside from these three revisionist powers—China, Russia, and Iran—we also see the rise and empowerment of radical nonstate groups and entities.

In terms of the scale of the problem, we're also seeing a shift in the form of the challenges they present. Any good strategy involves developing sources of advantage that you can use to exploit your enemies' weaknesses. We've seen this, in part, through the diffusion of advanced military technology. So, for example, the Chinese, in particular, focusing on the tendency we've had to operate in permissive environments, areas where our operations aren't contested. So, developing capabilities to go after our battle networks and also our forward bases and large mobile platforms, like aircraft carriers.

Second, if our adversaries can't take us on directly, in those cases, they've gone more toward the protracted warfare. They've also engaged in acts of ambiguous aggression, whether it's "the little green men" in the Ukraine, proxy warfare that Iran has waged against us throughout the Middle East for over 30 years, and also paramilitary forces in the form of organizations like China's coast guard that are pushing and advancing its interest to overturn the international order in East Asia.

We also find the potential for ambiguous aggression in new warfare domains—space, cyberspace, and the undersea—where it may be very difficult for us to detect acts of aggression, or attribute them once we have detected them.

Finally, there's a—what is called "the second nuclear age," which I think really could be better described as a new age of strategic warfare. If you look at Russian and Chinese military writings, not only do they talk about nuclear weapons, but they talk about new kinds of nuclear weapons, with specified effects, very low-yield weapons, using weapons in warfare, where, in many cases, we consider nuclear weapons to be nonusable, but also the role that—conventional capabilities. The Chinese talk about the United States' global conventional strategic strike capabilities, something that perhaps we haven't really thought through in detail. There's also the issue of cyberwarfare and the ability of cyberweapons to hold certain targets at risk that perhaps were once reserved only for nu-

clear weapons. So, an array of new challenges on a greater scale and presented to us in a different form.

Now, in confronting these challenges, we confront them with diminished resources. As a percentage of our gross domestic product, our defense budgets are declining over time. In terms of the budget itself, we have rising personnel costs. The cost per servicemember since 9/11, in real terms, has gone up over 50 percent. This means, over time, if the budget doesn't outgrow the rate of personnel cost growth, what you have are diminished resources for things like training, equipping, modernization of the force, and readiness.

We also find that our capital stock, our inventory of planes, tanks, ships, and guns, while more formidable than that possessed by any other power in the world, may depreciate at an accelerated rate if the form of the challenges presented to us is shifting. And, in fact, it is. So, our emphasis on—for example, on forward deploying forces to large bases, when you have adversaries that are mastering the revolution in precision warfare, increasingly able to target these bases with high accuracy may make what was once a source of reassurance to our allies and partners a source of, actually, anxiety and lack of assurance.

Finally, if there's an arms race going on between ourselves and our allies and partners, it's more of a disarmament race, or a race to the bottom. Our allies and partners, particularly in Europe, have failed, in most cases, to meet the NATO [the North Atlantic Treaty Organization] standard for 2 percent of GDP [Gross Domestic Product] deployed—or invested in defense. Japan, which, under the Abe government—another one of our powerful allies, potentially powerful allies—has said some impressive things recently, and adopted some very, I think, forward- looking policies. But, again, we've yet to see Japan break through that 1-percent-of-GDP barrier.

So, again, we're not just restricted to our budget, in terms of how we respond to threats and the increasing scale and shifting form of the challenges we face, but, in terms of the budget itself, how the budget is distributed, our capital stock, and the ability or the willingness of our allies and partners to step up when they're needed, I think there's a growing disconnect between the threats we face and the means we have to address them.

Consequently, I think there is a need for a well- designed strategy, one that employs our resources most effectively to maximize the effect of these limited resources. Unfortunately, I think we have lost a great deal of our competence to do strategy well. I don't think this is a military problem or a civilian problem. I don't think it's a Republican problem or a Democrat problem. I think it's a problem that's developed since the end of the Cold War. In the '90s, when we didn't have a threat, we didn't have to focus very much on strategy. After 9/11, when, as Secretary Gates said, the tap was open, in terms of defense spending, we didn't, again, have to make tough choices. Now we're in that kind of period again, where resources are limited, and perhaps diminishing, where the threats are growing. It is about time that we begin to focus on strategy.

One final comment. In terms of the size and scope of our military, in terms of the forces we have and the mix of where they're positioned around the world, we have to come up with a strategy before we can make informed decisions about those kinds of issues.

How are we going to deter China from advancing its revisionist aims in the Far East? Is our objective to defend the first island chain? Have we made that public? Have we made that clear? If we have, are we going to defend it by positioning forces there in what would be called a forward defense posture? There are arguments, called offshore control, that we ought to limit our focus to simply blockading China as a way of discouraging and deterring acts of aggression or coercion. That has an enormous effect on the kinds of forces, where you position them, what we ask of our allies. So, first, you have to come up with that strategy.

I'll close with a quote from a British admiral, Jackie Fisher, who, along with Nelson, is regarded by many Brits as their two greatest admirals. And Fisher said, "A lot of members of Parliament ask me what kind of a navy do we need, and how many ships, and of what type, and I tell them, the first thing you have to do is make up your mind how you're going to fight." Or, as we would say, how you're going to deter and fight if you need to. He said, "How many of us have made up our minds?" And then, famously, he said, "And how many admirals even have minds?"

Thank you, Mr. Chairman.

[The prepared statement of Dr. Krepinevich follows:]

STATEMENT BY DR. ANDREW F. KREPINEVICH

Mr. Chairman, Senator Reed, Members of the Committee, thank you for inviting me to appear before you today to present my thoughts on the critical issue of our defense strategy.

I have followed this issue for over four decades now, beginning with my studies as a cadet at West Point. My doctoral dissertation focused on our strategy during the Vietnam War, and my military service on the staff of three defense secretaries and in Andrew Marshall's Office of Net Assessment during the Cold War gave me an opportunity to witness strategy formulation at the highest levels in the Defense Department. After retiring from the Army, my interest in military strategy has continued, over the last two decades, during my time as president of the Center for Strategic and Budgetary Assessments. Today I will provide a framework for thinking about our defense strategy, along with some preliminary thoughts regarding strategy, its relationship to operational concepts, force sizing, force posture, missions, and capabilities.

It is my strong belief that the need for a well-crafted U.S. defense strategy has never been greater since the Cold War's end. Today the United States confronts three revisionist powers in three different regions that have long been viewed by administrations of both parties as vital to our national security. These powers are actively challenging the rules-based international system that has enabled a generation of relative peace and unparalleled prosperity. The scale of the challenge posed by these powers far exceeds that of the minor powers and radical non-state groups that formed the basis for much of our defense planning over the past quarter century. At the same time, the means available to address these challenges are diminishing. Just as important, the form of the challenges presented by our existing and prospective adversaries is shifting, in some cases dramatically.

This suggests that we will likely need to develop different ways of deterring our enemies, and of defeating them if deterrence fails. Our military will require a significantly different force sizing construct, operational concepts and doctrine, and corresponding changes in our force structure and capabilities. This effort should be informed by (and inform) the strategy we adopt. Put another way, how our military deters, and how it fights depends on our security interests, the threat posed to those interests, the resources available to address those threats, and how we can best employ those resources. The "how" is the province of strategy.

BACKGROUND TO THE CURRENT SITUATION

The United States has been an active global power for nearly three-quarters of a century. The experience and cost of fighting two world wars convinced the leaders of both major U.S. political parties that the emergence of a hostile hegemonic power

on the Eurasian landmass would constitute a major threat to both our security and economic prosperity. If such a nation or coalition succeeded in dominating the key power centers of Eurasia, it would possess the military potential—the manpower, natural resources, and industrial capacity—to overturn the global balance of power and isolate the United States, putting our security at risk and challenging our access to the global commons.

The U.S. strategic objective of preserving a balance of power to forestall the rise of a hostile hegemon was evident during World War I, when the United States intervened in Europe to prevent Germany from establishing a dominant position on the Continent. Following that war, Washington attempted to retreat from global affairs and put its trust in Great Britain to preserve the global military balance, much as it had done over the previous two centuries. Yet a little more than two decades later U.S. policymakers confronted the possibility that Nazi Germany's conquest of much of Europe and Imperial Japan's move to establish a Greater East Asia Co-Prosperity Sphere would find hostile powers dominating much of Eurasia, leaving Washington without any major allies and isolated in the Western Hemisphere. The United States responded by supporting the allies—Great Britain, Nationalist China and the Soviet Union—through means such as Lend Lease, convoy escorts in the western Atlantic Ocean, and the economic embargo of Japan. After the attack on Pearl Harbor, the United States became a fully active belligerent, taking the lead in Europe's Western Front and in the Pacific Theater of Operations as well. Following the war, it became clear that Great Britain could no longer sustain its position as the world's principal global "balancer." This convinced a majority of the American political elite and the American public that there was no alternative to the United States shouldering the responsibilities of global leadership, particularly given the Soviet Union's rise and communism's threat to the existing international order.

The threat of Soviet expansion from the Eurasian heartland into Western Europe (driving U.S. forces off the continent), Northeast Asia (isolating Japan, perhaps in league with China), and the Persian Gulf (seizing the region's petroleum reserves and gaining a permanent foothold along the Indian Ocean littoral) had a lasting impact on virtually every aspect of American military power. For instance, the United States forged alliances and partnerships with frontline nations across the Eurasian Rimland, principally to augment U.S. military capabilities (thereby helping to maintain a strong economic foundation at home), and to secure the forward bases and access agreements it needed to defend the homeland in depth and project power against emerging threats.

Despite the passage of time and the Soviet Union's collapse in 1991, the objectives of U.S. security policy have remained remarkably consistent. They can be generally summarized as keeping major threats as far away from the U.S. homeland as possible, thereby leveraging the country's favorable geographic position and strategic depth; collaborating with highly capable allies and partners; preserving favorable military balances in key regions along the Eurasian periphery; and maintaining sufficient access to the global commons—to include the air and maritime domains and expanding over time to include the space and cyberspace domains—in order to sustain a forward defense posture while preserving access to key trading partners and vital natural resources.

While these security objectives have endured, the defense strategy and military posture for securing them has shifted over time. This is a function of factors such as the changing character of the threats to U.S. security objectives; the attitude of the American people; increasing partisanship in the American political system; the development of new means of warfare; changes in the U.S. alliance portfolio and in the contributions of U.S. allies and partners; and the United States' varying ability to mobilize its economic and manpower resources for defense.

THE COLD WAR ERA

The U.S. defense posture in Europe in the early years of the Cold War relied heavily on the country's advantage in nuclear weapons to deter aggression, with forward-based conventional forces serving primarily as a "tripwire" to enhance deterrence by increasing the chances that a Soviet attack would ensure U.S. entry into the war, thereby also reassuring America's NATO allies. As the Soviets began deploying substantial numbers of nuclear weapons, the U.S. defense posture shifted to rely relatively less on nuclear weapons and more heavily on large, forward-deployed conventional forces in Europe to mount a successful defense (or at least raise the risks to Moscow of being able to launch a successful conventional invasion), and to meet the challenge posed by Soviet proxies in the developing world, such as by expanding the Special Forces and employing U.S. state and non-state proxies.

In the 1970s, the Soviets continued building up their nuclear forces despite having reached what many U.S. policy-makers and military strategists considered to be a rough parity with the United States. Moscow also enjoyed what appeared to be an advantage in conventional forces. Rather than trying to match the Soviets tank-for-tank, plane-for-plane, and ship-for-ship, the United States adapted its defense strategy to emphasize an area of emerging (and what some perceived to be a likely enduring) advantage in information-related technologies. Thus, during the Carter administration, the U.S. formulated an "Offset Strategy" with the Defense Department giving priority to developing "information-intensive" capabilities such as stealth aircraft, precision-guided munitions, undersea sensor beds, increasingly quiet (and thus difficult to detect) submarines, advanced reconnaissance satellites, and the Global Positioning System.

Following the United States' defeat in the Vietnam War, Washington also shifted its emphasis away from such interventions and toward greater reliance on regional partners in the developing world. In the early 1980s increased reliance was placed on supporting non-state proxy forces, such as the Mujahedeen in Afghanistan and the Contras in Nicaragua, to wage unconventional wars that imposed disproportionate costs on the Soviet Union.

THE UNIPOLAR ERA

Following the Cold War's end the U.S. defense posture shifted once again. With the Soviet Union's collapse, the United States was left as the world's sole superpower with no immediate major threat to its security interests. With no extant great power rival and none on the immediate horizon, longstanding concerns over the emergence of hostile hegemons seemed anachronistic, while the threats posed by rogue nations (including nuclear proliferation) and terrorist groups became the most pressing concerns for U.S. policymakers and strategists. At the same time, Europe was largely free of major power rivalry due to the weakness of Russia, while most East Asian nations were more preoccupied with economic growth than military competition. Thus the United States was able to concentrate much of its attention on the broader Middle East—locus of the most proximate challenges to Eurasian stability as well as the most immediate threats to U.S. security.

Consequently both Democratic and Republican administrations made major cuts in the U.S. military's size and modernization programs and called home a large portion of America's forward-deployed forces. The "frontier" forward-defense posture of the Cold War era was progressively reduced as U.S. forces were re-positioned in the continental United States and shifted toward an expeditionary posture. Following the First Gulf War, the U.S. military found itself increasingly engaged in minor conflicts in the developing world, such as in the Balkans, Haiti, Rwanda and Somalia, while conducting residual security operations centered on Iraq. Operations against irregular threats such as these expanded greatly following the 9/11 attacks. Large U.S. and allied expeditionary forces were deployed to Afghanistan and Iraq to conduct stability operations, while American and allied Special Forces engaged in sustained global counter-terrorist operations. In summary, in the quarter-century following the fall of the Berlin Wall, the U.S. military has increasingly emphasized expeditionary operations against modestly equipped irregular forces.

THE RISE OF REVISIONIST POWERS

The U.S. military's large and protracted campaigns against radical Islamist forces in Afghanistan and Iraq, combined with a significant erosion of the U.S. Government's fiscal position, did much to convince President Barack Obama to withdraw all U.S. forces from Iraq in 2011 and end all American combat operations in Afghanistan in 2014. In 2011, the administration negotiated an agreement with Congress designed to reduce the large deficits the government had been running since the onset of the Great Recession. The result, the Budget Control Act of 2011, requires substantial reductions in defense spending over ten years amounting to nearly $1 trillion when compared to the projections submitted by President Obama in his fiscal year (FY) 2012 budget.

While U.S. defense budgets have typically increased and declined as threats to the country's security have grown and faded, respectively, the same cannot be said regarding the current situation. Indeed, despite the Obama administration's efforts to reduce U.S. involvement in countering radical Islamist groups, their strength has increased rather than decreased in recent years. To paraphrase Leon Trotsky, "The United States may not be interested in waging war against radical Islamists, but radical Islamists are waging war on the United States."

As the Islamist State in Iraq and the Levant (ISIL) and other Sunni extremist groups, like al-Qaeda, demonstrate, radical Islamism remains a persistent threat.

Yet the challenges posed by radical Islamism are relatively modest when compared to the increasingly belligerent activities of three revisionist powers: China, Iran, and Russia, which threaten long-standing U.S. interests in the Western Pacific, Middle East, and Europe, respectively.

China and Russia far outstrip the capabilities of any terrorist organization or minor power, such as Iraq and North Korea, that formed the basis for much of our defense planning over most of the past two decades. Moreover, in East Asia and the Middle East there are other threats to American and allied security aside from China and Iran, respectively. In the case of the former, the challenges posed by a nuclear-armed North Korea cannot be underestimated. Nor can resurgent radical Sunni Islamism be ignored in the Middle East. Our military strategists are thus confronted not only with prioritizing their efforts across three Eurasian regions, but also within regions. The problem is further complicated in that Sunni and Shi'a extremists pose a threat not only to U.S. security interests, but view each other as enemies.

In East Asia, China's continuing economic growth has fueled its revisionist ambitions and enabled a large-scale, sustained military buildup, one that is beginning to shift the local balance of power in its favor. As a result, Beijing has been emboldened to act more assertively toward its neighbors, as reflected in its expanding its territorial claims, which include not only Taiwan, but also most of the South China Sea and Senkaku Islands.

In Europe, Russia's recent behavior suggests that its 2008 military campaign against Georgia was not an aberration, but rather an initial effort to overturn the prevailing regional order. By seizing the Crimea, waging unconventional warfare in eastern Ukraine, and engaging in military deployments that threaten its East European neighbors, Moscow has made it clear that it does not accept the post-Cold War political order in Europe. Russia's recent deployment of forces to Syria suggests that it is once again both willing and able to employ its military to advance its aims beyond its "near abroad."

Finally, Iran continues to support extremist groups that seek to destabilize friendly regimes across the Middle East, while questions remain about its willingness to accept stringent restrictions on its capacity to build nuclear weapons. Moreover, the region remains wracked by ethnic and religious tensions instigated by Iran and its proxies, and by radical Sunni Islamist groups.

Together, these developments have greatly increased the scale of the security challenges confronting the United States relative to what they were less than a decade ago.

MILITARY CHALLENGES

Moreover, the *forms* of the threats posed by these three revisionist states are in some important ways quite different from the Soviet threat of the Cold War era. Beijing, Moscow and Tehran are accumulating military capability at different rates, on different scales, and in varying levels of sophistication. When combined with other factors, such as geography, demography and political culture, each poses a unique challenge to U.S. security interests. Disruptive change in the military competition is almost certainly under way in the following areas.

The Battle Network Competition

During the Cold War, the U.S. military focused considerable attention on electronic warfare, or what the Soviets called "Radio-Electronic Combat." As both superpowers began deploying satellites in substantial numbers during the 1960s, space became the focus of increased competition as well. Following the Cold War, however, the U.S. military entered a period when its command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) operations were conducted in benign (or uncontested) environments. This happy circumstance no longer exists. The entrance of Russia and (especially) China into direct military competition with the United States means that the U.S. military can no longer count on its C4ISR capabilities being immune from attack.

Although China is the pacing threat, its emphasis on attacking the U.S. military's "nervous system" in the form of its battle networks is hardly unique. According to the U.S. intelligence community, "Russian leaders openly maintain that the Russian armed forces have antisatellite weapons and conduct antisatellite research." [1] Likewise, Russia and Iran both have active and capable cyber warfare programs, as evidenced by Moscow's apparent use of computer network attacks against Estonia in

[1] James R. Clapper, "Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community," Senate Select Committee on Intelligence, January 29, 2014, p. 7, available at *http://www.intelligence.senate.gov/140129/clapper.pdf*.

2007 and Georgia in 2008, as well as Tehran's alleged attacks on Saudi Aramco in 2012.

The Mature Precision-Strike Competition

For nearly seventy years—beginning with the buildup of American military forces for an anticipated invasion of Japan in the summer of 1945, and through the Korean, Vietnam and both Gulf wars, as well as innumerable lesser operations in places like the Balkans, Dominican Republic, Panama, and Somalia—the United States has repeatedly been able to deploy and sustain its forces over lengthy air and sea lines of communication to forward theater ports, airfields, and staging areas immune from serious attacks; and achieve air superiority using short-range platforms based in close proximity to an area of operations.[2] These favorable conditions have had a profound influence on U.S. force structure and contingency planning.[3] Yet, as in the case of U.S. battle networks, the era of uncontested U.S. global force projection is rapidly drawing to a close, due in large part to the proliferation of conventional precision-strike capabilities. Combined with improvements in guidance kits, wide-area sensors, communications links, data processing systems, and other key information technologies, this is enabling conventional munitions to become increasingly lethal over progressively greater ranges—and against both fixed and mobile targets. The United States, however, no longer enjoys the commanding position in the precision-strike regime that it occupied in the two decades following the end of the Cold War.[4]

Once again China is the pacing threat. The People's Liberation Army (PLA) is fielding a variety of advanced surveillance and strike capabilities to support its anti-access/area denial (A2/AD)[5] forces, with an eye toward progressively shifting the East Asian military balance in Beijing's favor. Although China's precision-strike capabilities far exceed those of most other nations, Iran and Russia appear to be following its example, albeit in more modest fashion. Ultimately, in a conflict against an adversary that possesses large numbers of guided weapons along with the battle networks needed to locate distant (and mobile) targets, and coordinate complex operations, the U.S. military may find that air and seaports of debarkation, forward bases and staging areas, and mobile high signature assets such as major surface combatants are increasingly vulnerable to attack.

Modern Sub-Conventional Warfare

Precision weaponry (such as precision-guided rockets, artillery rounds, mortars and missiles, or G–RAMM, as well as anti-tank guided munitions (ATGMs) and shoulder-fired surface-to-air missiles) has the potential to augment profoundly the military potential of irregular proxy forces.[6] Non-state actors—especially groups such as Hezbollah with significant resources, state sponsors, or both—are embracing the precision revolution by acquiring guided anti-aircraft, anti-armor, and anti-personnel weapons that were, only a decade or so ago, beyond their reach.[7] If this

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[2] Andrew F. Krepinevich, *The Military-Technical Revolution: A Preliminary Assessment* (Washington, DC: Center for Strategic and Budgetary Assessments, 2002). This is a reprint of the assessment written in the Office of the Secretary of Defense in 1992; and Jan van Tol with Mark Gunzinger, Andrew Krepinevich, and Jim Thomas, *AirSea Battle: A Point of Departure Operational Concept* (Washington, DC: Center for Strategic and Budgetary Assessments, 2010).

[3] Mark Gunzinger, *Shaping America's Future Military: Toward a New Force Planning Construct* (Washington, DC: Center for Strategic and Budgetary Assessments, 2013).

[4] Barry Watts, *The Maturing Revolution in Military Affairs* (Washington, DC: Center for Strategic and Budgetary Assessments, 2011); and Barry Watts, *The Evolution of Precision Strike* (Washington, DC: Center for Strategic and Budgetary Assessments, 2013).

[5] Anti-access capabilities are used to prevent or constrain the deployment of opposing forces into a theater of operations, whereas area-denial capabilities are used to restrict their freedom of maneuver once in theater. See Andrew F. Krepinevich, Jr., "The Pentagon's Wasting Assets," *Foreign Affairs,* Vol. 88, No. 4 (July/August 2009). For an overview of China's military capabilities and strategy, see Office of the Secretary of Defense. *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2014* (Washington, DC: Department of Defense, 2014).

[6] During the Second Lebanon War in 2006, Iran's proxy Hezbollah proved surprisingly capable against the Israeli Defense Force during their month-long conflict. Yet Hezbollah possessed only ATGMs and a few anti-ship cruise missiles (ASCMs) to augment a substantial arsenal of rockets, artillery, mortars and missiles (or "RAMM"), none of which had precision guidance.

[7] On Hezbollah's capabilities in particular, see Nicholas Blanford, *Warriors of God: Inside Hezbollah's Thirty-Year Struggle against Israel* (New York: Random House, 2011). Non-state actors armed with precision-guided weapons are often cited as the chief example of "hybrid" threats that combine guerrilla tactics with capabilities that were until recently widely available only to states. For discussions of this concept, see Frank G. Hoffman, "Hybrid Warfare and Challenges," *Joint Force Quarterly No. 52* (2009); and Williamson Murray and Peter R. Mansoor,

Continued

trend continues, even irregular armed groups like Hezbollah and Daesh may be able to establish denial zones on, above, and even beyond their territory.

Today China, Iran and Russia are employing paramilitary forces, non-state proxies, and/or soldiers in disguise (also referred to as "little green men") in pursuing sub-conventional acts of aggression against their neighbors. Unfortunately, this form of military competition has often proven particularly troublesome for the United States.

The Second Nuclear Age

The nuclear competition has become both different and in some ways more complex than was the case during the Cold War, which was dominated by the United States and the Soviet Union. Since the Cold War new nuclear powers have emerged. A regional nuclear competition has emerged in South Asia between, India and Pakistan, and one may develop in the Middle East between Iran and Israel. There are concerns that a nuclear-armed Iran may trigger a nuclear proliferation cascade across the Middle East, perhaps involving Saudi Arabia, Turkey and other states as well.[8] Moreover, the United States and Russia have reduced their arsenals to levels far below those of the Cold War. Consequently the barrier to entry to great power nuclear status has been lowered. This could tempt China and perhaps India and/or Pakistan (currently the leading producer of nuclear weapons) to augment their arsenals to "superpower" levels. Such an "n-player" nuclear competition among comparable powers would likely be characterized by higher levels of uncertainty and, perhaps, crisis instability as well.[9]

The era of precision warfare is further complicating matters. During the Cold War the "firebreak" between conventional and nuclear weapons was relatively stark. The advent of precision-guided munitions in large quantities that, in some instances, can cover targets previously reserved for nuclear weapons has provided the U.S. military with a significant advantage over its prospective rivals. Both China and Russia are developing their own precision warfare capabilities. In the interim, both have sought to offset the U.S. advantage in precision warfare by improving their atomic arsenals, in some cases by developing nuclear weapons with extremely low yields and/or focused effects (such as an electromagnetic pulse). The result is a progressive blurring of the distinction between nuclear and conventional weapons and the firebreak that has, in the minds of many, helped to discourage nuclear weapons use.

The Second Nuclear Age, as it has been called, is also changing the strategic landscape regarding the role of defenses as well as crisis stability. With the emergence of small nuclear powers, modern air and missile defenses may prove effective against nuclear missile attack in some circumstances, even if the offense still enjoys an overall advantage. States with large nuclear arsenals that are also major advanced economic and technology powers may be able to field effective defenses against minor nuclear powers. In the case of minor nuclear powers that are in close geographic proximity to one another (such as India and Pakistan, or (prospectively) Iran and Israel), owing to the speed at which ballistic missiles travel, both sides' attack warning times would be compressed from the twenty to thirty minutes or so that existed between the two Cold War superpowers to perhaps a little as five to six minutes. This time compression will place enormous strain on the early warning and command and control systems of nuclear rivals in close geographic proximity to one another—assuming they have the technical, human and material resources to field, operate and maintain them.

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eds., *Hybrid Warfare: Fighting Complex Opponents from the Ancient World to the Present* (New York: Cambridge University Press, 2012).

[8] Andrew F. Krepinevich, *Critical Mass: Nuclear Proliferation in the Middle East* (Washington, DC: Center for Strategic and Budgetary Assessments, 2013). See also Bob Graham and Jim Talent et al., *World at Risk: The Report of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism* (New York: Vintage, 2008), available at *http://www.absa.org/leg/WorldAtRisk.pdf;* William J. Perry and James R. Schlesinger, *et al., America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (Washington, DC: United States Institute of Peace Press, 2009), available at *http://www.usip.org/sites/default/files/America's—Strategic—Posture—Auth—Ed.pdf;* and Bradley Bowman, *Chain Reaction: Avoiding a Nuclear Arms Race in the Middle East,* S. Prt. No. 110–34 (Washington, DC: U.S. Government Printing Office, 2008), available at *http://www.gpo.gov/fdsys/pkg/CPRT–110SPRT39674/html/CPRT–110SPRT39674.htm.*

[9] Fred Charles Iklé et al. *The Diffusion of Nuclear Weapons to Additional Countries: The "Nth Country" Problem* (Santa Monica, CA: RAND Corporation, 1960); Fred Charles Iklé, "Nth Countries and Disarmament" *Bulletin of the Atomic Scientists* Vol. 16, no. 10 (December 1960), available at *http://csis.org/images/stories/ikle/038.BulletinAtomicSc1960.pdf;* and Andrew F. Krepinevich, *Critical Mass: Nuclear Proliferation in the Middle East* (Washington, DC: Center for Strategic and Budgetary Assessments, 2013).

Other problems loom as well. One is the potential of cyber weapons to corrupt early warning data and command-and-control systems. Another concerns the lack of understanding of how the culture and personalities of those controlling nuclear weapons in the new nuclear powers calculate cost, benefit and risk. Simply stated, the character of the nuclear competition is undergoing a fundamental and potentially dangerous shift.

RESOURCE CHALLENGES

The Budget

Since World War II, as threats to U.S. security have increased, generally the resources allocated to meet them have increased as well. Correspondingly, in periods where threats appeared to be receding, the resources allocated for defense typically declined. This is not the case now. The U.S. defense budget, as a percentage of GDP, is expected to decline from over four percent in 2010 to less than three percent by 2020, a decline of over 25 percent.

Further complicating matters since 9/11, maintaining an all-volunteer force has seen personnel costs increase dramatically, crowding out spending on training, readiness and new equipment. With respect to modernization, the challenge is made more acute by the cancellation of a series of new systems due to concerns regarding cost growth, over-ambitious technical requirements, and questionable performance, among others.[10] As discussed above, emerging security challenges could accelerate the depreciation of the military's existing equipment stocks.

Allies and Partners

Ideally, under these circumstances Washington could prevail upon its allies and partners, particularly those that are among the most advanced states of the developed world, to take up some of the slack. Reality, however, finds the opposite: Our European allies with the largest GDP—Germany, France and Great Britain—have seen their allocations for defense (as a percentage of GDP) fall from an average of 1.6, 2.9 and 3.2, respectively, during the period from 1995–1999, to 1.3, 1.9, and 2.4 percent in 2013.Our European allies with the largest GDP—Germany, France and Great Britain—have seen their allocations for defense (as a percentage of GDP) fall from an average of 1.6, 2.9 and 3.2, respectively, during the period from 1995–1999, to 1.3, 1.9, and 2.4 percent in 2013.1A[11] Japan, which boasts the world's third largest economy, remains tethered to its self-imposed ceiling on defense spending at 1 percent of GDP, and has recently failed to reach the modest level.1A[12]

In summary, the means available to both the United States, its allies and partners to defend their interests are declining while those available to the three revisionist powers are increasing. Thus the United States finds itself progressively less capable of pursuing a "rich man's strategy" of simply outspending its competitors. Instead it will need to figure out a way to prevail by crafting a "smart man's strategy." It also means that dificult choices will have to be made regarding U.S. defense priorities.

This is not to say that the United States and its allies should seek to maintain a level of defense spending pegged to a particular percentage of their GDP. The level of defense spending should be a function of many factors, among them: the scale and form of the security challenges to our interests; the level of risk we are willing (and able) to accept to those interests; social factors (such as the cost of maintaining a volunteer force versus a draft); the defense strategy chosen (e.g., one that adopts an objective of mounting a successful forward defense versus a mobilization strategy that maintains a relatively small active force); and how effective a strategy one is able to craft (i.e., one that makes the most efficient use of resources, aligns friendly strengths against an enemy's weaknesses, imposes disproportionate costs upon the enemy in conducting a long-term competition, etc.). That being said, and all other factors being equal, the decline in resources projected to be devoted to defense relative to those being invested by the revisionist powers suggest the United States is accumulating risk to its ability to preserve security interests at an alarming rate, one that even a well-designed strategy may be unable to offset.

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[10] Among the major programs terminated or greatly truncated are the Army's Future Combat System, Crusader artillery system, and Comanche helicopter; the Navy's CG(X) cruiser and DDG (1000) destroyer, the Air Force's Airborne Laser and F–22 fighter, and the Marine Corps' Expeditionary Fighting Vehicle.

[11] The corresponding U.S. percentages are 3.2 and 4.4. One might interpret this as the United States increasing its military efforts in part to offset the decline in its allies' efforts. As noted, U.S. defense funding is now in decline as well when measured as a share of GDP.

[12] Although Japan, under the Abe government, has sent strong signals that it intends to increase its defenses, it remains to be seen whether it will match its words with deeds.

The situation described above finds the United States entering a period of heightened security challenges—in both their scale and form—not witnessed since the late 1940s and early 1950s when the Soviet Union and Communist China emerged as major threats to U.S. and allied vital interests in Europe and the Far East. The geopolitical threat was compounded by profound discontinuities in the military competition driven in part by the development of nuclear weapons, thermonuclear weapons, ballistic missiles, and military satellites, all within the span of little more than a decade.

Faced with growing threats and declining or, at best, plateauing resources, the need for well-crafted regional defense strategies and an integrated U.S. global defense strategy and posture is clear. Yet the U.S. Government has lost much of its competence to do strategy well.[13] The Defense Department's approach to strategy is primarily driven by *process*—the QDR is undertaken every four years, not sooner, not later—than by *need* or from an understanding that strategy is not an occasional effort, but a constant endeavor.

This view is shared by some who have been deeply involved in U.S. defense strategy formulation. Andrew Marshall, who recently retired as head of the Office of Net Assessment, Office of the Secretary of Defense, declared before his departure:

> There's a disinclination ... as compared with the interest in and the capacity to do this kind of thing [*i.e.,* strategy], that characterized the early part of the Cold War. It just has disappeared in the U.S. Government.
>
> [W]hen you look at what the government has mainly produced as so-called strategies, [they] are, first, simply lists of good things they want to happen. They have nothing about how you're really going to get there ... [T]hey are focused entirely—to the extent that they pay any attention to the opponent—it is his strengths that they get into the business of reacting to. Whereas strategy ... [involves] exploiting the weaknesses of the other side, or your strengths. The big problem in the Defense Department is that the minute you start categorizing our strengths and advantages then the Services faint, because their sales pitch on the Hill is [focused on] our weaknesses, or the strengths of the other side.[14]

President Dwight D. Eisenhower noted that any strategy, no matter how good it might be, is at the mercy of constantly changing events. This does not mean that efforts to develop strategy do not matter; rather it is the need, undertaken on a continuing, persistent basis to identify new sources of competitive advantage in a constantly changing world that matters most. As Eisenhower put it, "[T]he secret of a sound, satisfactory decision made on an emergency basis has always been that the responsible official has been 'living with the problem' before it becomes acute."[15] Or, as he put it, "Plans are useless ... planning is indispensable."[16]

The decline of competence when it comes to defense strategy can also be attributed to the fact that strategy requires not only persistent effort, but that it also is something that is difficult to do well. Eisenhower realized this and noted that:

> The basic principles of strategy are so simple that a child may understand them. But to determine their proper application to a given situation requires the hardest kind of work from the finest available staff officers.[17]

Consequently he tasked small groups of highly competent strategists to develop strategy.[18]

Yet for a variety of reasons the current development of U.S. defense strategy is not undertaken by proven strategists, but as part of a bureaucratic process involving hundreds of people. It is not a persistent endeavor, but an occasional undertaking.

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[13] Andrew F. Krepinevich and Barry D. Watts, *Regaining Strategic Competence* (Washington, DC: Center for Strategic and Budgetary Assessments, 2009).

[14] Andrew W. Marshall, Remarks at a Senior Roundtable on Strategy, Center for Strategic and Budgetary Assessments, Washington, DC, September 25, 2007.

[15] Robert R. Bowie and Richard H. Immerman, *Waging Peace* (Oxford. UK: Oxford University Press, 1998), p. 89.

[16] Richard Nixon, *Six Crises* (Garden City, N.J.: Doubleday, 1962), p. 235.

[17] Dwight D. Eisenhower, Crusade in Europe (New York: Doubleday, 1948), p. 36.

[18] An example of this is Eisenhower's so-called Solarium Project, which proved instrumental in developing NSC 162/2, one of the foundational Cold War strategy documents.

STRATEGY AND THE DEFENSE POSTURE

As President Eisenhower observed, the crafting of a good strategy is a very challenging proposition. Consequently, the best I can do at present is to provide a sense of how to think about the problem.

The first order of business is to answer the question: "What are we trying to do?" or "What do we seek to accomplish?"

Next, what, given the resources—human, technical and material—likely to be available to us, are our options for accomplishing the objectives we have set for ourselves? Simply put, having identified what we are trying to achieve and the means at hand to accomplish the task, what choices are available regarding how we are going to link the two. The "how" is our strategy. Only after choosing a strategy can we make informed decisions regarding our defense posture, such as operational concepts, doctrine, force size and mix, basing posture. [19]

To give you a sense of what I am talking about, permit me to offer two examples. The first is our strategy for defending Western Europe during the Cold War. The second examines our current approach to the Western Pacific.

Example: Cold War Europe

Given our longstanding interest in preventing the rise of a hostile hegemonic power in Europe, early in the Cold War we set containing Soviet power as our objective under the key assumption that time was on our side in this competition and that, given enough time, the Soviet system would fail. The military objective we set in the key theater of operations—Western Europe—was to deter Soviet aggression and, if deterrence failed, to end the war on terms favorable to us and our NATO allies. The military strategy we chose was the forward defense of Western Europe.

The principal means for executing this strategy changed over time. Early on the United States relied on its advantage in nuclear weapons and employed a "tripwire" conventional force in Western Europe. As the Soviet Union expanded its nuclear arsenal more emphasis was given to conventional forces.

Simultaneously, operational concepts that set forth how our forces might best accomplish their missions were developed and refined. This effort reached its apex in the early 1980s when the Air Force joined with the Army to develop AirLand Battle. This operational concept called for U.S. and NATO forces to hold the line against the initial wave of Warsaw Pact forces while also engaging the second wave coming from Eastern Europe and the western Soviet Union. Plans were made and exercised for the rapid reinforcement of Army and Air Force units from the United States to Western Europe, with their equipment pre-positioned in West Germany to accelerate the process.

Our Navy and Marine Corps built upon this concept with their own. The Navy sought to accomplish its mission of safeguarding the sea lines of communication from North America to Europe by keeping Soviet forces north of the so-called Greenland-Iceland-UK (or "GIUK") gap through an operational concept known as the Outer Air Battle. Meanwhile, the Marine Corps pre-positioned equipment in Norway to enable its rapid deployment to that country to help secure NATO's northern flank.

These integrated concepts, which were also coordinated with our NATO allies, gave a clear sense as to the size and shape of the forces we would need, the kind of equipment that would serve them best, the division of labor between the Services, and the kind of support our allies might provide that would prove the most valuable.

Example: Today's Western Pacific

I assume that the United States is not abandoning its longstanding interest in preventing the rise of a hostile hegemonic power in the Far East. The only revisionist power in the region that seeks to establish such a dominant position is China. Let me further assume that our pivot or rebalance to the Asia-Pacific is designed, to an increasing degree, to prevent China from achieving its revisionist aims through coercion or aggression. Given China's expanding territorial claims, the so-called First Island Chain, running through Japan's main islands and its Ryukyu Chain, through Taiwan and then along the Philippine Islands before stretching across the Malay Peninsula, is likely to be the focal point of the military competition. Importantly, the United States has alliances with both Japan and the Philippines and remains committed to the security of Taiwan.

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[19] That being said, the choice of a strategy should be informed by the kinds of operational concepts available for executing it. The range of plausible operational concepts are themselves limited by, among other things, the kinds of capabilities available, those that may be deployed over the planning horizon, basing alternatives, the contributions of allies, and so on.

How do we plan to meet these commitments? What is our military strategy for maintaining our interests in this region?

We have several plausible strategies we might pursue, most of which are not mutually exclusive. One is to commit to a forward defense of the First Island Chain. Or we might rely on a tripwire force as we did in Europe in the early days of the Cold War, implying that we are prepared to "go to the brink" of nuclear war if need be. Then there is the mobilization strategy pursued in World War II, ceding territory while amassing overwhelming military power to pursue what proved to be a long and costly, but successful counter-offensive. There is the strategy of "Offshore Control," that calls for a distant blockade of China as the best way to achieve our security objectives.

Depending upon the strategy that emerges out of these options (there are other possibilities as well), we can begin to make sense of how well our current and projected force posture supports it. At present, however, neither the American people, nor its Congress, nor our allies have a sense of our military strategy in the Western Pacific remotely comparable to what we achieved during the Cold War in Europe. Nor are efforts by the strategic studies community in recent years to fill the vacuum a substitute for such a strategy.[20] Moreover, this challenge exists not only in the Western Pacific, but also in other regions of long-standing vital interest and to key domains such as space, cyberspace and the seas that enable access to these regions.

SUMMARY

The strategic pause that characterized the immediate post-Cold War era is long past. We are confronted with growing security challenges and are accumulating strategic risk at an alarming rate. At the same time the resources available to address these challenges are diminishing. As the gap widens between the threats to our interests and the means we have available to meet them, we need to employ these resources as effectively as possible. Hence the acute need for a well-crafted strategy.

Given our circumstances, there is an understandable eagerness to have answers to many questions, such as: What kinds of capabilities do we need? What kinds of forces? What is the proper division of labor between the military services, and between our military and those of our allies? Where should our forces be positioned? But informed responses to questions like these cannot be arrived at without knowing our strategy, and developing one will require persistent effort by talented strategists, and sustained involvement by our senior political and military leaders. There is no short cut.

About the Center for Strategic and Budgetary Assessments

The Center for Strategic and Budgetary Assessments (CSBA) is an independent, nonpartisan policy research institute established to promote innovative thinking and debate about national security strategy and investment options. CSBA's goal is to enable policymakers to make informed decisions on matters of strategy, security policy and resource allocation. CSBA provides timely, impartial and insightful analyses to senior decision makers in the executive and legislative branches, as well as to the media and the broader national security community. CSBA encourages thoughtful participation in the development of national security strategy and policy, and in the allocation of scarce human and capital resources. CSBA's analysis and outreach focus on key questions related to existing and emerging threats to US national security. Meeting these challenges will require transforming the national security establishment, and we are devoted to helping achieve this end.

Chairman MCCAIN. I'll take that as a personal insult.
[Laughter.]
Dr. KREPINEVICH. Beat Navy.
Chairman MCCAIN. Mr. Wood.

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[20] See, for example, Jan van Tol with Mark Gunzinger, Andrew Krepinevich, and Jim Thomas, *AirSea Battle: A Point of Departure Operational Concept* (Washington, DC: Center for Strategic and Budgetary Assessments, 2010); Mark Gunzinger with Chris Dougherty, *Outside-In: Operating from Range to Defeat Iran's Anti-Access and Area-Denial Threats* (Washington, DC: Center for Strategic and Budgetary Assessments, 2011); T. X. Hammes, "Offshore Control is the Answer," *Proceedings,* 2012; and Andrew F. Krepinevich, "How to Deter China: The Case for Archipelagic Defense," *Foreign Affairs,* March-April 2015.

STATEMENT OF DAKOTA WOOD, SENIOR RESEARCH FELLOW, DEFENSE PROGRAMS, THE HERITAGE FOUNDATION

Mr. WOOD. Chairman McCain, Ranking Member Reed, members of this committee, thank you for this opportunity to contribute to your effort to better understand factors that shape the U.S. military.

My remarks today are a more concise summation of the submitted testimony.

I'm delighted to know that this committee is challenging all aspects of defense—U.S. defense policy. And this session on force-sizing rationales and military capabilities is an important step in that process.

Obviously, there are differing opinions on how and why the military should be postured and equipped to defend U.S. interests. With Russia in Ukraine and Syria and threatening NATO, Iran deeply involved in operations across the Middle East and expanding its military portfolio, China behaving ever more provocatively in the Asia-Pacific region, and North Korea developing longer-range, presumably nuclear-capable, missiles with the assessed ability to reach the United States, having the right forces in sufficient quantity is critically important.

In recent work with which I've been involved as editor of the Heritage Foundation's Index of U.S. Military Strength, we took a different approach to considering how might—how one might think about sizing U.S. military and posturing it for the future. Instead of trying to predict where forces might be needed, and for what type of conflict, we chose to look at what history tells us about the actual use of military force. We also reviewed other top-level studies on national defense requirements, to include the bottom-up review in 1992 in the QDR and NDP reports. What we found was that, from the Korean War onward, the United States has found itself in a major war every 15 to 20 years, and, in each instance, used roughly the same size force. Further, each of the nine major studies came to roughly the same recommendations for end strength, major platforms, and large unit formations. In general, the historical record in these studies indicate the U.S. needs an Active Army of about 50 brigade combat teams, a Navy approaching 350 ships, an Air Force of at least 1,200 fighter attack aircraft, and a Marine Corps based on 36 battalions. This size force would provide the U.S. the ability to fight a major war or handle a major sustained contingency, while also having sufficient capacity to sustain large-scale commitments elsewhere and respond to an emergent crisis, should a major competitor try to take advantage of a perceived window of opportunity. In other words, the force enables the country to handle one major crisis while deterring competitors from acting opportunistically.

This historical record spans 65 years, encompassing decades of technological advancements, various geographic regions, enemy forces, economic conditions, and even shifts in political control of the executive and legislative branches of the U.S. Government.

There are practical realities in the use of force that also override nearly all other factors. The nature of war and the operating spaces within which it is waged require large forces to control territory or to deny such to an enemy force. Numbers really do matter. Sus-

tained stability operations require a large rotational base. Conventional combat operations require sizable forces to replace combat losses and to rotate fresh units into battle. Small numbers of exquisitely equipped forces are inadequate to such situations and can lead to a force that is overly sensitive to combat losses or is quickly worn down by numerous deployments in rapid succession.

Numbers also matter in preparing for the future. When the force is small and is already hard-pressed to meet current operational demands, little capacity is available to prepare for the future. If we truly believe that new ways are needed to maintain a competitive advantage over opponents, then a portion of the force must be available for experimentation, whether by reducing current demands on the force or enlarging the force so that it can do all the things being demanded of it. Instead, we continue to see further reductions and increased workload.

Former Secretary of Defense Robert Gates recently appeared before this committee, as has been noted. One of his major points was that the U.S. continually cycles between ramping up for a crisis that no one predicted or believed would happen, and then cutting the force to some bare minimum once the crisis is over, with folks blithely assuming that another crisis won't come along in short order or that we will somehow be able to predict when, where, and against whom it will occur.

Modern technologies do provide U.S. forces core advantages in many areas, especially against similarly equipped opponents. But, they are usually expensive and can come at a cost and capacity. We should continue to explore the advantages of unmanned systems, advanced C4ISR networks, and precision-guided munitions, but should not lose sight of the fact that numbers matter more, especially when combat losses remain a feature.

On our current modernization path at existing levels of funding, we are likely to find ourselves with a military equipped with state-of-the-art capabilities, yet incapable of conducting sustained operations against a credible opponent. This potential outcome is quite troubling and is something this committee should seriously consider.

So, to sum it up, I'd emphasize that numbers matter, the capacity of our military for a great variety of operations is at least as important as how it is equipped, if not more so. The overall size of the force, and how much of it is used in major contingencies, appears to be independent of technology, perhaps even strategy, internal organization, or force-sizing rationale. And too small a force has profound consequences for its readiness, health, and strategic value.

Once again, I thank you for the opportunity, and I look forward to answering your questions.

[The prepared statement of Mr. Wood follows:]

STATEMENT BY DAKOTA L. WOOD

Chairman McCain, Ranking Member Reed, and members of this Committee: It is a great honor to testify before you today to share my thoughts on sizing and shaping the U.S. military such that it can defend the national security interests of the United States. Thank you for this opportunity to contribute to this discussion.

The views I express in this testimony are my own, and should not be construed as representing any official position of The Heritage Foundation.

I am delighted to know that this Committee is in the process of challenging all aspects of U.S. defense policy, starting with the underpinnings of national security interests, challenges to those interests, and practical approaches to relevant strategies. This session on force sizing rationales, the appropriate mix of military capabilities, and the multitude of issues that impact the ability of the U.S. military establishment to ready itself for effective action is an important step to ensuring America and its interests are adequately protected.

The problem, of course, is that there are differing opinions about the specifics of each of these. How many conflicts and of what type? Against what sort of opponent and for what period of time? What might be the role of advanced technologies and to what extent should future forces be shaped to account for such? That this committee has decided to aggressively tackle these challenging questions is not only laudable, but critical to ensuring Congress is appropriately informed in its deliberations on resource allocation.

This general topic has spurred a cottage industry of sorts. After fourteen years of continuous military operations, the loss of nearly 7,000 service members and almost 50,000 wounded,[1] and (by some accounts) a direct monetary expense of at least $1.6 trillion,[2] to dubious benefit vis-a-vis U.S. interests, some openly question whether the U.S. military has lost its competency for winning wars. Now, with Russia in Ukraine and Syria and threatening NATO, Iran deeply involved in operations across the Middle East and expanding its military portfolio, China behaving ever more provocatively in the Asia-Pacific region, and North Korea developing longer-range missiles with the assessed ability to reach the United States, presumably with a nuclear warhead, the military services, senior civilian leaders within the Department of Defense, and a host of public and private institutions with an interest in national security affairs are all attempting to determine what changes are needed to ensure America has the military it will likely need in the years to come.

A number of organizations and individuals have suggested various models. The American Enterprise Institute argues for a three-theater standard as the basis for sizing U.S. forces.[3] Michael O'Hanlon, from the Brookings Institution, makes the case for a 1+2 construct, one large war and two smaller contingencies, noting a wide range of scenarios that would call for substantial ground forces in particular.[4] At the Hudson Institute, Seth Cropsey, Bryan McGrath, and Timothy Walton state that the size of the Navy should be based on a three-hub framework that demands 16 aircraft carriers and assorted support vessels[5] while Jerry Hendrix, at the Center for a New American Security, argues the carrier's days are numbered, at least when populated with conventional aircraft, and that more attention needs to be paid to unmanned systems.[6] Add to this the superb work of others like John Stillion and Bryan Clark from the Center for Strategic and Budgetary Assessments, in air[7] and naval warfare,[8] respectively, who are challenging conventional thinking about these areas of competition and it is plain to see that this committee has ample material from which to draw in considering how big our forces need to be, what should inform their shaping, and what capabilities they likely need to possess.

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[1] iCasualties: Operation Iraqi Freedom and Operation Enduring Freedom Casualties, iCasualties.org, (October 28, 2015).

[2] Richard D. Hooker, Jr. and Joseph J. Collins, "Lessons Learned from the Iraq and Afghan Wars," Foreign Policy Research Institute, October 2015, *http://www.fpri.org/docs/hooker—collins-lessons.pdf* (October 28, 2015).

[3] American Enterprise Institute, To Rebuild America's Military, October 2015, *http://www.aei.org/wp-content/uploads/2015/10/To-Rebuild-Americas-Military.pdf* (October 28, 2015).

[4] Michael E. O'Hanlon, *The Future of Land Warfare* (Washington, D.C.: Brookings Institution Press, 2015), *http://www.brookings.edu/research/books/2015/the-future-of-land-warfare* (October 28, 2015).

[5] Seth Cropsey, Bryan McGrath, and Timothy Walton, *Sharpening the Spear: The Carrier, the Joint Force, and High-End Conflict,* (Washington, D.C.: The Hudson Institute, October 2015), *https: // s3.amazonaws.com / media.hudson.org/files/publications/201510SharpeningtheSpear TheCarriertheJointForceandHighEndConflict.pdf* (October 28, 2015).

[6] Dr. Jerry Hendrix, *Retreat from Range: The Rise and Fall of Carrier Aviation,* (Washington, D.C.: Center for New American Security, October 2015), *http://www.cnas.org/sites/default/files/publications-pdf/CNASReport-CarrierAirWing-151016.pdf* (October 28, 2015).

[7] John Stillon, *Trends in Air-to-Air Combat: Implications for Future Air Superiority,* (Washington, D.C.: Center for Strategic and Budget Analysis, April 2015), *http://csbaonline.org/publications/2015/04/trends-in-air-to-air-combat-implications-for-future-air-superiority/* (October 28, 2015).

[8] Bryan Clark, *Commanding the Seas: A Plan to Reinvigorate U.S. Navy Surface Warfare,* (Washington, D.C.: Center for Strategic and Budget Analysis, November 2014), *http://csbaonline.org/publications/2014/11/commanding-the-seas-a-plan-to-reinvigorate-u-s-navy-surface-warfare/* (October 28, 2015).

In recent work with which I have been involved as editor of The Heritage Foundation's Index of U.S. Military Strength,[9] we took a different approach to considering how one might think about sizing the U.S. military and posturing it for the future. Instead of trying to predict where forces might be needed and for what type of conflict, we chose to look at what history tells us about the actual use of military force. We also reviewed the research of the top-level studies on national defense requirements from the past few decades, beginning with the Bottom-Up Review of 1992 through the latest Quadrennial Defense Review and National Defense Panel reports. What we found was that from the Korean War onward, the United States has found itself in a major war every fifteen to twenty years and in each instance used roughly the same size force. Likewise, each of the nine major studies came to roughly the same recommendations for end strength, major platforms, and large unit formations. In general, the historical record and these studies indicate the U.S. needs an active Army of 50 brigade combat teams (or an end-strength of approximately 550,000 soldiers), a Navy approaching 350 ships, an Air Force of at least 1,200 fighter/attack aircraft, and a Marine Corps based on 36 battalions. This size force would provide the U.S. the ability to fight a major war or handle a major sustained contingency while also having sufficient capacity to sustain large-scale commitments elsewhere or respond to an emergent crisis should a major competitor try to take advantage of a perceived "window of opportunity." In other words, this force enables the country to handle one major crisis while deterring competitors from acting opportunistically.

I find this especially interesting in that this record spans sixty-five years, encompassing decades of technological advancements, various geographic regions, enemy forces, economic conditions, and shifts in political control of the executive and legislative branches of government.

It might be the case that each of the study groups found itself captive of previous work, but given the variety of participants and strategic contexts, it seems more likely that the groups simply could not dismiss the practical realities of the United States as a global power. Further, the historical record itself, capturing the actual use of force in vastly different decades, regions, and operational settings, says something about the enduring nature of war. I realize I am painting with a rather broad brush, but at this level of discussion, where Congress must determine how many hundreds of billions of dollars to spend and millions of people to retain in uniform, I think this is actually helpful. Trying to precisely define requirements when the breadth of scenarios is so great and our ability to predict is so poor seems a fool's errand.

There are practical realities in the use of force that override nearly all other factors. The nature of war and the operating spaces within which it is waged—on land, at sea, and in the air—require large forces to control or to deny control by an enemy force. It takes a lot of people to control hundreds of square miles of territory, a significant urban area, or to interact with a large population. Similarly, the vast expanses of sea and air easily measuring thousands of square miles place substantial demands on fleets of ships and aircraft.

Then there is combat itself and sustained military operations of all types. In both instances, numbers really do matter. Sustained stability operations require a large rotational base as we have most recently seen in Iraq. Conventional combat operations, especially against a peer or near-peer competitor, require sizable forces to replace combat losses and to rotate fresh units into battle. Rotational "presence" missions and efforts meant to "build partner capacity" likewise call for a sufficiently large base of units to perform such tasks in many areas over time. Small numbers of exquisitely equipped forces are inadequate to such situations and can lead to a force that is overly sensitive to combat losses or is quickly worn down by numerous deployments in rapid succession with little time to recover in between.

Then we come to the matter of preparing for the future and here, too, numbers matter. Nearly every voice in the debate over defense planning calls for innovation. In many cases this chorus focuses on technological innovation but many pundits also note the need to explore new operational concepts, creative ways of blending evolving technologies into existing forces, new organizational concepts that leverage emerging technologies, and even new ways of leveraging old tools. Often overlooked in this debate is the necessity of having the resources available to do all of this experimentation, resources that include people, units, and high-level institutional attention in addition to funding. In fact, the people part is arguably the more important component. Yet when the force is small and is already hard-pressed to meet current operational demands, little if any capacity is available to do the things ev-

[9] Dakota L. Wood, ed., *2016 Index of U.S. Military Strength,* (Washington, D.C.: The Heritage Foundation, 2015), *http://index.heritage.org/military/2016/* (October 28, 2015).

eryone agrees are essential to prepare for the future. If we truly believe that new ways are needed to maintain a competitive advantage over opponents, then a portion of the force must be made available for such experimentation whether by reducing current demands on the force or enlarging the force so that it can do all the things being demanded of it. Instead, we continue to see further reductions and increased workload.

Just one week ago, former Secretary of Defense Robert Gates appeared before this committee and noted that "turbulent, unstable, and unpredictable times have recurred to challenge U.S. leaders regularly since World War II," and that "Americans, including all too often our leaders, regard international crises and military conflict as aberrations when, in fact and sad to say, they are the norm."[10] He continued to say that "we always discover . . . that we [go] too far in cutting" and find we "need to rearm . . . but the cost in treasure and in the blood of our young men and women is always far higher than if we had remained strong and prepared all along." The point he was making was that the U.S. continually cycles between ramping up for a crisis that no one predicted or believed would happen and cutting the force to some bare minimum once the crisis is over, with folks blithely assuming that another crisis won't come along in short order or that we will somehow be able to predict when, where, and against whom it will occur.

As for needed capabilities, discussions about such usually come down to "all of the above." As soon as we conclude that one form or another of warfare is obsolete, it comes roaring back with a vengeance. Billions of dollars are spent to field the latest in unmanned platforms or fused-intelligence support systems only to find that irregular forces using improvised weapons and lacking any modern combat systems prove yet again that a determined enemy operating on his home soil and fighting "total war" in his own eyes can routinely frustrate, if not defeat, U.S. "limited war" objectives despite our material advantages.

Yes, modern technologies provide U.S. forces clear advantages in many areas, especially against similarly equipped opponents, but they are usually expensive and can come at a cost in capacity. Should we continue to explore the advantages of unmanned systems, advanced C4ISR networks, precision guided munitions, and the like? Certainly. But we should not lose sight of the fact that numbers matter in war especially when combat losses remain a feature.

On our current modernization path at existing levels of funding, we are likely to find ourselves with a military equipped with state-of-the-art capabilities yet incapable of conducting sustained operations against a credible opponent. This potential outcome is quite troubling and is something this Committee should seriously consider.

So, to sum up, I would emphasize that:

- Numbers matter. The capacity of our military for a great variety of operations is at least as important as how it is equipped, if not more so.
- The overall size of the force and how much of it is used in major contingencies appears to be independent of technology, strategy, internal organization, or force-sizing rationale.
- Too small a force has profound consequences for its readiness, health, and strategic value.

Once again I thank you for this opportunity and look forward to answering your questions.

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[10] Robert M. Gates, "Future of Defense Reform," testimony before the Committee on Armed Services, U.S. Senate, October 21, 2015, *http://www.armed-services.senate.gov/imo/media/doc/Gates—10–21–15.pdf* (October 28, 2015).

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Chairman MCCAIN. Dr. Preble.

STATEMENT OF CHRISTOPHER PREBLE, VICE PRESIDENT FOR DEFENSE AND FOREIGN POLICY STUDIES, THE CATO INSTITUTE

Dr. PREBLE. Thank you, Senator McCain, Senator Reed, distinguished members of the committee. It's an honor to be here.

I would like to focus on how current U.S. national security strategy shapes the international system, and discuss an alternative strategy for the future. I'll then briefly address a few of the military capabilities required under this new strategy.

The single word that best describes U.S. foreign policy today is "primacy," a strategy that hinges on a forward- deployed military poised to stop prospective threats before they materialize. Primacy reassures our allies, thus discouraging them from taking steps to defend themselves and their interests. As one government document explained, our preponderant military power aims to deter "potential competitors from even aspiring to a larger global or regional role."

Leaving aside the question of whether the strategy is actually preventing rivals from challenging U.S. power—and Dr. Krepinevich suggest that it's not—the costs have been considerable. The American taxpayers, and especially American troops, have borne the burdens of primacy, while U.S. allies have been content to focus on domestic priorities as their underfunded defenses languish. Going forward, we should ask more of our security partners. We shouldn't merely expect them to support us when we use force abroad. Rather, we should expect them to address urgent threats to their security before they become regional or global ones.

What are these threats? We are quite good at identifying a dizzying array of them, but far less proficient at prioritizing among them. Under primacy, the United States is expected to address all threats in all vital regions at all times. A more resilient world would not be so overly dependent upon the military power of a single country. Restraining our impulse to use the U.S. military when our vital interests are not directly threatened would move us in that direction.

Reluctance to use our military power allows for a smaller one, but we must first revisit our security relationships. Alliances that advance common interests are acceptable. The current arrangement, whereby we agree to defend our allies, and they agree to let us, is not.

Let me turn now to three aspects of the overall force structure consistent with a foreign policy of self-reliance and restraint: a capable Navy, a credible nuclear deterrent, and a flexible mobile Army.

I'm very proud to have served the United States Navy. I have a great naval name. Plus, I grew up in Maine, where, you might

have heard, they build ships. So, yes, I'm a Navy partisan. But, my support for a strong and capable Navy is more than just parochial, it is integral to a strategy of restraint. In thinking about the missions that our Navy may be expected to perform, and the ships that it will need to perform them, we shouldn't focus on numbers of ships in the fleet today, but, rather, on the cost and capabilities of those of the future. Investing a substantial share of the shipbuilding budget on just a few aircraft carriers—for example, exquisite technologies, as Mr. Wood said—leaves less money for small surface combatants. And where do submarines fit in the mix? The budget must also account for them. Understanding these tradeoffs is crucial.

We should not build our fleet around the supposition that it will be continuously engaged in offensive operations all around the world. The U.S. Navy should be a surge force capable of deploying if local actors fail to address threats, not a permanent-presence force committed to preventing bad things from happening all the time and everywhere.

What about our nuclear deterrent? Maintaining a credible nuclear deterrent is a key component of U.S. national security policy, under restraint, but does not require nearly 1,600 nuclear warheads deployed on a triad of delivery vehicles. A smaller nuclear force, based entirely on submarines, would be more than sufficient. The triad grew up during the Cold War, but it's not clear, in retrospect, that it was ever actually required to deter Soviet attacks against the United States. The case for the triad today is even more dubious. No adversary can destroy all U.S. ballistic missile submarines, let alone all three types of delivery vehicles, and there would be time to change if the circumstances did.

Lastly, what about our ground forces? Our troops are overtaxed. We've asked much of them, and they have responded honorably, but they cannot do everything, and they cannot be everywhere. More troops is not the answer. A more judicious use of those that we already have is.

In that context, we should consider the wisdom of armed nation-building—a.k.a. counterinsurgency, or COIN. To observe that the United States is ill-suited to such missions is not the fault of the U.S. military. The American people will support missions to strike our enemies with a vengeance, but most doubt that nation-building is worth the effort. The public skepticism is warranted. The crucial factors for success in COIN are beyond the capacity of outside forces to control, and the track record of democratic powers pacifying uprisings in foreign lands is abysmal.

Then again, Americans are accustomed to doing the impossible, if that's what's required. The real reason why we will not master state-building is that it's not needed. We should deal with threats as they arise, and drop the pretense that we must succeed at nation-building abroad in order to be safe here at home.

If we revisit the other possible rationales for a large standing Army, if we reduce our permanent overseas presence, and encourage other countries to defend themselves, we could rely more heavily on reservists here at home, here stateside.

In conclusion, it's generally assumed that the roles and missions that we assign to our military will grow more onerous. It is unrea-

sonable to expect our military to do more with less. Many would solve this means/ends mismatch by increasing the means. We should reconsider the ends, as well.

The military's roles and missions are not handed down on stone tablets from Heaven, they are chosen by policymakers right here on Earth. Strategy must take account of the resources that can be made available to execute it. Increasing the military budget in order to implement a primacy strategy entails telling the American people to accept cuts in popular domestic programs, higher taxes, or both, so that our allies can neglect their defenses. It seems unlikely that Americans will embrace such an approach. The best recourse, therefore, is to reconsider our global policing role, encourage other countries to defend themselves and their interests, and bring the object of our foreign policy in line with the public's wishes.

Thank you.

[The prepared statement of Dr. Preble follows:]

THE PREPARED STATEMENT BY CHRISTOPHER A. PREBLE

Senator McCain, Senator Reed, and distinguished members of the committee, thank you for the opportunity to testify this morning. It is an honor to be here.

This is a vital undertaking. There is an urgent need for the United States to clarify its national security goals, to craft a strategy that prioritizes those goals, and to consider the tools necessary to achieve them. Our military forces of the future should conform to that strategy.

I will focus first on how U.S. foreign policy has shaped the international system. Second, I will explain the flaws of our current grand strategy, and propose an alternative, with a particular focus on the role that U.S allies and partners should play in the future. Lastly, I will briefly touch on some of the capabilities that the U.S. military requires to carry out its vital missions.

UNDERSTANDING U.S. FOREIGN POLICY

U.S. foreign policy is crippled today by a dramatic disconnect between what Americans expect of it and what the nation's leaders are giving them. If U.S. policymakers don't address this gap, they risk pursuing a policy whose ends don't match with the means the American people are willing to provide.

What is our foreign policy? To the extent that it can be summarized in a single word, that word is "primacy": a foreign policy that hinges on a forward-deployed military geared to stopping prospective threats before they materialize. Primacy holds that it would be too dangerous to allow other countries to defend themselves and their interests. Some will botch the job, necessitating costly U.S. intervention later. Others will succeed too well, unleashing arms races that would alter the delicate balance of regional or international relations. Thus, primacy reassures; it discourages other countries from defending themselves and their interests.

For much of the past two decades, these underlying premises of U.S. foreign policy have not changed, although the preferred terms or phrases to describe it have. Other popular variations include "deep engagement," "unipolarity," "liberal hegemony," or the particularly grandiose "benevolent global hegemony."

President Obama favors "leadership." That word appears 35 times in his latest National Security Strategy.

His predecessors have all had similar aspirations, although most managed to work in a few more synonyms. It all boils down to primacy.

For example, at the dawn of the post-Cold War era, officials in the George H.W. Bush administration aspired for the United States to be the sole global power. Now that the nation's long-time rival was gone, the object of U.S. foreign policy, according to an early draft of the Defense Planning Guidance, was to "prevent the reemergence of a new rival" capable of challenging U.S. power in any vital area, including Western Europe, Asia, or the territory of the former Soviet Union. To accomplish this task, the United States would retain preponderant military power, not merely to deter attacks against the United States, but also to deter "potential com-

petitors"—including long-time U.S. allies such as Germany and Japan—"from even aspiring to a larger regional or global role." [1]

Leaving aside, for now, the question of whether the strategy is preventing rivals from challenging U.S. power, the costs have been considerable. Primacy, notes MIT's Barry Posen, "encourages less-friendly states to compete with the United States more intensively, while encouraging friendly states to do less than they should in their own defense, or to be more adventurous than is wise." [2]

For the most part, American taxpayers, and especially American troops, have borne the burdens of primacy, while U.S. allies have been content to focus on domestic spending, and allow their underfunded defenses to languish. Because U.S. security guarantees to wealthy allies have caused them to under-provide for their own defense, they also have less capacity to deal with common security challenges, from ethnic violence in the Balkans in the late 1990s, to combatting terrorism and piracy in the Middle East, South Asia, or the Horn or Africa in the 2000s, to averting state collapse in North Africa today.

But there is an even more dramatic problem underlying U.S. foreign policy today: it requires U.S. leaders to push, prod, and occasionally even hoodwink Americans into taking on unnecessary tasks. Even strong advocates of primacy concede that it might not be realistic to expect Americans to bear the burdens of global governance indefinitely, and admit to the need for misdirection and subterfuge.

"Americans," Michael Mandelbaum grudgingly admitted in his book, *The Case for Goliath,* "approach the world much as other people do . . . .For the American public, foreign policy, like charity, begins at home." For that reason, above all others, Mandelbaum predicted, "the American role in the world may depend in part on Americans not scrutinizing it too closely." [3]

It is no longer appropriate to expect Americans to remain ignorant about our foreign policy. Primacy served us well immediately after the end of World War II, when the nations of Europe and East Asia were physically broken and fiscally broke, and we wanted to prevent the reemergence of Japan and Germany as rivals. Protecting our Asian and European allies continued to make sense during the Cold War, as long as our absence from those continents would have left an imbalance of power that the Red Army or Communist China could exploit.

But we should ask more of our allies and security partners today and in the future. We shouldn't merely expect them to support us when we act militarily abroad. We shouldn't merely demand that they allow us to use our facilities in their lands, often on their behalf. Rather, we should expect them to act first, to address urgent threats to their security, before they become threats to their wider region, or the world.

On the subject of threats, I do not believe that we are living in the most dangerous time in human history, or even in my lifetime. There are dangers in the world; there always have been, and there always will be. We are quite good at identifying a dizzying array of possible threats. [4] An effective national security strategy will prioritize among them, and identify the best tools to mitigate them.

In that context, the key question is what Americans should be prepared to do to address which threats, and what will be expected of others. Whether you agree with me or not about today's threats as compared to those a generation ago, or a century ago, the best approach would involve many countries who are willing and able to confront potential local or regional challenges.

Under the current model, the United States is expected to address all threats, in all regions, at all times. We need a new grand strategy, one that expects other countries to take primary responsibility for their protecting their security and preserving their interests. We need a resilient international order, one that is not overly dependent on the military power of a single country. We need capable, self-reliant partners. And we must restrain our impulse to use the U.S. military when our vital interests are not directly threatened.

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[1] "Excerpts From Pentagon's Plan: 'Prevent the Re-Emergence of a New Rival'," *New York Times,* March 8, 1992.

[2] Barry Posen, *Restraint: A New Foundation for U.S. Grand Strategy* (Ithaca, NY: Cornell University Press, 2014), p. 24.

[3] Michael Mandelbaum, *The Case for Goliath: How America Acts as the World's Government in the 21st Century* (New York: Public Affairs, 2005), pp. 173, 224.

[4] See, for example, John Mueller and Christopher Preble, eds., *A Dangerous World? Threat Perception and U.S. National Security* (Cato Institute, 2014).

A NEW PROFILE OF POWER

Such a grand strategy, built around a greater skepticism toward military intervention, leads logically toward a new profile of power: namely, a smaller military oriented around defending U.S. security and U.S. interests.

We should not reduce our military without first rethinking how those forces will be used. If a finite number of assets are stretched to the limit to cover excessive global commitments, there is a serious risk that we will damage morale and readiness, thus contributing to a "hollow force"—a military that appears capable on the surface, but that is, in actuality, crippled by inferior equipment, insufficient maintenance, and inadequate training.

We must work over the next decade to renegotiate or abrogate security relationships. Alliances for mutual defense, and to advance common interests, are acceptable; the current inequitable arrangement, whereby we agree to defend our allies, and they agree to let us, is not. It is unreasonable to expect U.S. taxpayers to foot the bill when U.S. interests are not at stake.

Put another way, the days of the U.S. military serving as the world's global constabulary, responding to every 911 call, from every corner of the world, should end.

For the balance of my time, I'm going to focus on three aspects of the force structure consistent with a foreign policy of self reliance and restraint: a capable Navy, a credible nuclear deterrent, and a flexible, mobile Army.

A Focused Navy

I'm proud to have served in the United States Navy. I spent about six months at Navy schools in Newport, Rhode Island, and then three years on the guided missile cruiser *USS Ticonderoga*, mostly in Norfolk, Virginia, but also two deployments overseas. I have a great naval name. I grew up in Maine, as did about 10 generations of Prebles before me. They build ships at Bath just across the Kennebec River from where some of my ancestors first settled.

I am a Navy partisan. There is no point in trying to conceal that fact. But my support for a strong and capable Navy reflects more than just parochialism and ancestral pride. And my love of the institution, and the men and women who serve in it, informs my attitudes about the missions that our Navy should be expected to perform, and the ships that it will need to perform them.

The number of ships in the U.S. Navy has declined precipitously since the late-1980s. In those days, we were confronting a globe-straddling Soviet empire with a vast and capable blue-water navy. I remember it well. I was a young midshipman in the Navy ROTC program at George Washington University, and the SecNav back then, John Lehman, famously aspired to build a 600-ship navy.

But times have changed. The Soviet Union is where it belongs: on the ash heap of history. And the ships that we deploy today are vastly more capable than the Cold War-era ships, some of which were considerably older than the sailors who deployed on them. We shouldn't, therefore, focus on numbers of ships in the fleet today, per se, but rather on the mix of vessels, and especially their costs and capabilities to perform key missions.

Those costs include opportunity costs. Choosing to invest a substantial share of the Navy's total shipbuilding budget on just a few Ford-class aircraft carriers necessarily means that we will buy fewer small surface combatants, especially cruisers and destroyers. I also believe that we need a successor to the Oliver Hazard Perry class frigates, the last of which was decommissioned earlier this year. The costly and disappointing littoral combat ships may not be the answer. And where do submarines fit into the mix? The shipbuilding budget must also account for them, both ballistic missile submarines and fast attack boats. Understanding these tradeoffs is crucial. Are we prepared to say that a single platform costing $14 billion is worth more than six or seven DDGs? Can the United States build a small surface combatant for less than $500 million? Other countries can, so why can't we?

We should not build our fleet around the supposition that it will be continuously engaged in offensive operations across the planet. Under a strategy of self-reliance and restraint, the U.S. Navy will be a surge force, capable of deploying if local actors prove incapable of addressing threats, not a permanent presence force, committed to preventing bad things from happening, all the time, and everywhere.

Safeguarding the flow of essential commodities and finished goods was a core mission for the U.S. military during the Cold War, when the Soviet Navy aspired to close vital sea lanes of communications (SLOCs), and they appeared to have the ability to do so, at least for a time. Today the situation is far different. Few international actors have an incentive to close major international waterways, and those that are so inclined—e.g pirates, bandits, and various non-state actors—lack the ca-

pacity to do so. They can disrupt. They can threaten. They cannot deny the use of these waterways to determined shippers backed by capable nation states.

Sea-lane control in the modern era aims to ensure the free flow of goods and is therefore primarily defensive in nature. Given that the sea-control mission will be shared with other countries, most of whom will be operating in close proximity to their home waters, our force planning can focus on our core obligations, principally in the Western Hemisphere. That mission could be supported by small surface combatants, including destroyers, and possibly a new class of frigates. In the unlikely event that a regional conflict threatened to close a distant strategic choke point, naval and air forces from many different countries would be able to respond, augmented by U.S. forces as necessary.

In this context, we should revisit the decision to build a number of very large and costly aircraft carriers. These vessels are not well suited to the sea control mission, and will become increasingly vulnerable to defensive weapons that force them to operate at greater and greater distances from shore. The investment in such exquisite technology—a single platform that consumes a substantial share of the total shipbuilding budget—raises serious questions about how such platforms will actually be deployed in an era of defensive dominance. Simply put, will any future president of the United States risk losing even a single such vessel? And what interests would justify taking such risks?[5]

A Small but Credible Nuclear Deterrent

Maintaining a credible nuclear deterrent is a key component of U.S. national security policy, but U.S. security does not require nearly 1,600 nuclear weapons deployed on a triad of delivery vehicles—bombers, land-based intercontinental ballistic missiles (ICBMs), and submarine-launched ballistic missiles (SLBMs). A smaller nuclear deterrent based entirely on submarines would be sufficient to deter attacks against the United States. It might be more politically feasible to reduce to a dyad of delivery vehicles—SLBMs with either bombers or ICBMs—but that would signal the triumph of parochial interests over the needs of U.S. security.

The triad grew up during the 1950s as a result of competition between the military services. The rationales were thin at the time, and quickly were superseded by dramatic technological improvements that the services chose to downplay. As the competition for resources abated in the 1960s, the Navy and the Air Force stopped denigrating each others' nuclear delivery systems and began arguing on behalf of the triad as an article of faith. It is not clear, in retrospect, that a triad was ever required to deter Soviet attacks against the United States or U.S. allies.

Maintaining a guaranteed second-strike for deterrence was never the only goal, but today's submarines are also capable of counterforce (i.e. first-strike) missions.

U.S. power today makes the case for the triad even more dubious. Survivability is no longer a feasible justification. No adversary has the capability to destroy all U.S. ballistic submarines, let alone all three types of delivery vehicles, and there would be time to adjust our nuclear force posture if that circumstance changed.

Overinvesting in nuclear weapons and nuclear delivery vehicles, even if such expenditures represent only a small share of the total military budget, nonetheless diverts resources that could be more effectively invested elsewhere. We should build and maintain only what we need.[6]

Flexible Ground Forces Postured for Defense, Not Nation Building

What about our ground forces? Some argue that the Army and Marine Corps are well-suited for counterterrorism missions, because they rely on precision firepower and they are more adept at separating terrorists and terrorist-sympathizers from innocent bystanders.

But the belief that a larger military is necessary, or even effective, at reducing the threat of terrorism is mistaken. Counterterrorism is not an especially personnel-intensive endeavor, and, to the extent that it is, the people most heavily involved are not, and should not be, members of the military.[7]

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[5] See, especially, CAPT Henry J. Hendrix, USN (Ret.) "At What Cost a Carrier?" Disruptive Defense Papers, March 2013, Center for a New American Security, *http://www.cnas.org/files/documents/publications/CNAS%20Carrier—Hendrix—FINAL.pdf.*

[6] See Benjamin H. Friedman, Christopher A. Preble, and Matt Fay "The End of Overkill? Reassessing U.S. Nuclear Weapons Policy," Cato Institute White Paper, September 24, 2013, *http://www.cato.org/publications/white-paper/end-overkill-reassessing-us-nuclear-weapons-policy.*

[7] For more on this point, see Paul R. Pillar and Christopher A. Preble, "Don't You Know There's a War On? Assessing the Military's Role in Counterterrorism," in Benjamin H. Fried-

Continued

And what of the supposed need for more troops to conduct Iraq and Afghanistan-style conflicts—regime-change operations followed by years of armed nation building? Some Americans believe that our failings in those countries, especially in Iraq, are a function of having too few "boots on the ground." From that flows the logical conclusion that we need more people in boots.

The idea that our military is stretched too thin because our commitments exceed our means to achieve them is widespread. The best way to resolve this imbalance, however, is to rethink the ends, as opposed to merely increasing the means.

No one disputes that our troops have been overtaxed by the wars in Iraq and Afghanistan. But the problem of too few troops chasing too many missions predated 9/11. We have asked the members of our military—and especially those men and women in the Army and Marine Corps—to be the lead instrument of our foreign policies ever since the end of the Cold War. Our troops have responded honorably, but they cannot do everything, and they cannot be everywhere.

More troops are not the answer. A more judicious use of the troops that we already have is. Rather than increase the size of the Army and Marine Corps, we should reduce the number of active-duty personnel in both services, and transition to a smaller force augmented by a capable ready reserve.

We should also pause to consider the wisdom of armed nation building, what the military also calls counterinsurgency (COIN). When the United States chooses to shuffle the political deck in a weak or failing state, it needs men and women on the ground to do the work. Bombs can't build schools or bridges, reform legal codes or root out corruption. They can't convince the locals that we care about them enough to stick around for the long haul and will be there to protect them if the irreconcilables return to exact vengeance.

And that backlash is nearly inevitable; those driven out of power will fight to regain what they lost. FM 3–24, the military's COIN manual, explains "Insurgencies are protracted by nature. Thus, COIN operations always demand considerable expenditures of time and resources."

The United States is ill suited to such missions. This is not the fault of the U.S. military. The American people will support missions to strike our enemies with a vengeance, but solid majorities believe that the nation-building efforts in Iraq and Afghanistan weren't worth the effort. The widespread opposition to deeper involvement in the Syrian civil war demonstrates that the public's skepticism hasn't abated.

The public's instincts are correct. If you understand the culture, if you avoid counterproductive violence, if you integrate civilians and make reconstruction operations a reward for cooperation, if you train the local forces well, if you pick your allies wisely, if you protect enough civilians and win their loyalty and more, you might succeed. But even avoiding a few of those ifs is too much competence to expect of any political and military leaders. Many of the crucial factors for success are simply beyond the capacity of outside forces to control. That is why insurgencies in the last century generally lasted for decades and why the track record of democratic powers pacifying uprisings in foreign lands is abysmal. [8]

Then again, Americans are accustomed to doing the impossible if the impossible is truly necessary. The ultimate reason why Americans will not master counterinsurgency and state-building is that it is not necessary. The supposed link between terrorism and state failure is weak to nonexistent. Terrorists operate in many perfectly healthy states (including Spain, the U.K. and, most recently, France), while many weak or failing states don't serve as launching pads for violent extremism directed at Americans. We should deal with threats from Yemen or Somalia or Afghanistan as they arise and drop the pretense that we can or must construct a modern nation state in any of those places in order to defeat transnational terrorism.

If we are unlikely to embark on protracted nation-building missions for decades on end, and if the military, particularly our ground forces, are not the best tool for counterterrorism, we should revisit the other possible rationales for a large standing Army. The principal advantage of having that force, 20 to 30 percent of which is forward deployed in foreign bases, is that it is quite easy for it to become involved in foreign wars, without attracting too much attention by the American people, or

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man, Jim Harper, and Christopher A. Preble, eds., *Terrorizing Ourselves: Why American Counterterrorism Policy Is Failing and How to Fix It* (Cato Institute, 2010).

[8] From Benjamin H. Friedman, Harvey M. Sapolsky, and Christopher Preble, "Learning the Right Lessons from Iraq," Cato Institute Policy Analysis no. 610, February 13, 2008, *http://www.cato.org/publications/policy-analysis/learning-right-lessons-iraq*. See also Gil Merom, How Democracies Lose Small Wars: State, Society, and the Failures of France in Algeria, Israel in Lebanon, and the United States in Vietnam (New York: Cambridge University, 2003). See also Jeffrey Record, Beating Goliath: Why Insurgencies Win (Washington: Potomac Books, 2007).

their representatives here in Congress. The public is rarely engaged to the point of debating why we might be involved in such wars, let alone how to win them. This hardly seems like an advantage at all. If we reduce our permanent overseas presence and encourage other countries to defend themselves, we could rely more heavily on reservists serving stateside. And when there are calls for deploying U.S. forces abroad, and those reserves are mobilized into the active force, we can be sure that that will trigger a national debate.

Let me be clear: this isn't just about saving money; it's about spending money wisely. Ronald Reagan said, "Defense is not a budget issue. You spend what you need." He was right, which is why it is crucial that we understand what we need. The misallocation of funds—whether for platforms the Pentagon doesn't need, or bases it doesn't want or personnel it won't use—takes away from other priorities. We need a balanced force focused on defending vital U.S. interests, not a top-heavy force geared to fight the last decade's wars or to defend others who can and should defend themselves.

CONCLUSION: RETHINKING ENDS AND MEANS

In the debate over military spending that is now raging, it is generally assumed that our foreign policy, and thus the roles and missions that we assign to our military, will remain unchanged—or at least will not become less onerous. It is unreasonable to expect our military to do the same, or more, with less. It is unfair to the troops and their families. This noble sentiment explains the current push to increase the Pentagon's budget above the spending caps imposed by the bipartisan Budget Control Act of 2011. Many people believe that the only way to address the means/end mismatch is to remove the fiscal constraints.

But the military's roles and missions are not handed down from heaven. They are not carved on stone tablets. They are a function of the nation's grand strategy and informed by the dominant intellectual paradigms at a given point in time.

That strategy must take account of the resources that can be made available to execute it. Under primacy, in the current domestic political context, increasing the means entails telling the American people to accept cuts in popular domestic programs, higher taxes, or both, so that our allies can maintain their bloated domestic spending and neglect their defenses.

It seems unlikely that Americans will embrace such an approach. "Defending our allies' security" ranked near the bottom of Americans' foreign policy priorities—tied with "Limiting Climate Change"—in the Chicago Council on Global Affairs' most recent report on American public opinion and U.S. foreign policy.[9] The best recourse, therefore, is to reconsider our global policing role, encourage other countries to defend themselves and their interests, and bring the object of our foreign policy in line with the public's wishes.

Chairman MCCAIN. Mr. Donnelly.

STATEMENT OF THOMAS DONNELLY, RESIDENT FELLOW AND CO-DIRECTOR OF THE MARILYN WARE CENTER FOR SECURITY STUDIES, THE AMERICAN ENTERPRISE INSTITUTE

Mr. DONNELLY. I would like to reiterate my thanks to the Chairman, to the Ranking Member, and to the committee for this opportunity. This is, indeed, a really critical topic.

As many people have said before me, defense planning is strategy. On the other hand, strategy is not the place that we should be starting, I don't believe. Nor should we be starting with threats, nor operational capabilities. The place to start is really with a reflection upon the internal or—not internal, but continuing security interests of the United States. This is a lesson that I learned while serving as a staff scribe to the National Defense Panel and the QDR Independent Panel before that. The distinguished members of those panels took all the QDR briefings that were available, and then began to scratch their heads. They found themselves deeply

[9] Dina Smeltz, Ivo Daalder, Karl Friedhoff, and Craig Kafura, "America Divided: Political Partisanship and U.S. Foreign Policy," Chicago Council on Global Affairs, 2015, Appendix Figure 2, p. 45.

dissatisfied with what they heard. But, what they came away from simply—not by taking the briefings or reading any documents, but by reflecting on the behavior of the United States since 1945, if not before—was that there was a consistent pattern of American behavior, and this they both consolidated in a remarkably concise way. They said—and it's in both reports—that the principal security interests of the United States are having a secure homeland, by which we mean not just North America, but the Caribbean basin, access to, commercially, and the ability to militarily exploit the commons—that is the seas, the skies, cyberspace, and space—and a favorable balance of power across the three critical theaters in Eurasia—Europe, East Asia, and the Middle East; and finally, that, because we were Americans, it was important to us to preserve a decent quality of international life. When there was a humanitarian crisis or the threat of a genocide, the United States could not stand by idly, and would be willing to use military force to intervene.

So, if those are the purposes of our power, then we can ask the how-to strategy question. But, without that azimuth to orient on, it's—then any strategy will do, any set of capabilities will do, and any size force will do, as we have heard from the previous three witnesses. On the other hand, if you want to preserve the international system as it exists, which I think is not only wise, possible, but something of a moral obligation. Our children would not look kindly on us, would hold us accountable, if we failed to prevent the remarkable post-Cold-War peace that's now beginning to slip away. It's been remarkably peaceful. There hasn't been a great power war. It's been remarkably prosperous. There are more middle-class people on this planet than there have been in any previous period of history. And, most of all, it's the freest international system that anyone can record. So, it has great benefits. It's fundamentally sound. But, it requires us to reengage now. I believe that time in defense planning, in strategy- making, is equally as important as numbers of troops or the quality of weapon systems.

So, I have just four basic yardsticks that I want to suggest that you should consider in appraising defense strategies. They are derived, in a moment of shameless commerce, from the report that we just put out a couple of weeks ago. But, there are really four fundamental tenets in that.

First of all, the force-sizing construct really needs to be a three-theater construct, not a two-war construct or a one-and-a-half-war construct, as recent defense reviews have framed them, but something that's relevant to the international politics of the moment. As I said, the principal driver of military force structures is preserving this favorable balance of power in the Middle East, in East Asia, and in Europe. That's possible for us to do. Deterring Russia and China is not an impossible task, but it requires us to be not simply capable of establishing supremacy in combat, but deterring them from crossing of the line in the first place. Therefore, we must be present.

And there is no status quo to preserving the Middle East that's worth the cost. So, if you're going to be responsive to the situation that we, you know, read about every day in the newspapers, we want to reverse the course of events. The trends are negative, and

accelerating. So, simple deterrence is not likely to be acceptable in those theaters. Those theaters are all very different in character and geography. Land-based forces in Europe, but obviously play the central role. Likewise, in the Pacific, my maps show a lot of blue there, so maritime forces are at least critical for presence. And in the Middle East, probably all sorts of forces are necessary.

So, we need to balance and a variety of forces. If we make strategic choices and geopolitical choices by accentuating one form of military power over another, then we'll find ourselves behind the eight ball, as we have found ourselves in the last two decades.

Secondly, capacity matters. That's the most immediate problem that the military faces. I look at the history of the past 15 years, and my takeaway was that we did not have sufficient force, despite belatedly expanding the Active Duty Army and the Marine Corps, despite employing Reserve- component forces at record numbers, and despite employing Marine—or, pardon me, naval and Air Force officers in ground missions, to successfully prosecute campaigns in Iraq and Afghanistan simultaneously. We did not meet our own two-war standard. And those wars were relatively small wars, by historical standards. So, the first thing, and the thing that we can do in a timely way to meet the crisis of the moment, is to increase the capacity of the force that we have.

That said, I agree completely with the testimony of people like Andy Krepinevich that new capabilities are needed. However, I think the time factor needs to be applied in this regard, as well. As much as it would be great to have warp drives and photon torpedoes, and cloaking devices and all the things that American and international science can invent, it's important to field new capabilities now. We have a very few number of programs that we can throw money at. This is not like the Reagan years, where there was a warm and diverse defense industrial base that could digest a lot of money rapidly. Ronald Reagan decided not to build either the B-1 or the B-2, but to build both. We won't have—even though we've just chosen the company team to build a new bomber, that is not likely to be actually fielded within the span of the next administration. So, we have to put money where it can show some return. We can't afford to wait another 10 years to get new capabilities into the field.

And finally, we have to pay the price. Reforms are important, no doubt. And I would urge the committee to focus on structural reforms, like the Goldwater-Nichols Act, which was an ideal way of fighting the Cold War and was passed into law just as things began—just as the Soviet Union passed into the dustbin of history. It's remarkable that we can support combat outposts deep in Afghanistan or Iraq with F-18s from a carrier, but it's not the most efficient or effective way to do that.

There are things that we can do now, and we need to be able to have a sustained increase in our defense establishment. Many people, including the NDP report, have talked about getting back to the Gates baseline budget of 2012. Well, that's not going to be sufficient, for sure. That's a good first step. But, getting back to something like a 4-percent base, which is affordable, sustainable, and is the kind of spending that would be necessary to build the force that would be sufficient to protect and defend and advance our geo-

political interests and allow the United States to continue to be the leader of the free world.

Thank you.

[The prepared statement of Mr. Donnelly follows:]

STATEMENT BY THOMAS DONNELLY

I must begin by thanking Chairman McCain, Ranking Member Reed and the committee for the opportunity to offer you whatever insights I can on the most profound subject of national security strategy. My testimony today is derived from the study we at AEI published earlier this month; I will rely heavily on ideas developed by the team at the Marilyn Ware Center, including your former colleague Sen. Jim Talent and my longtime colleagues Gary Schmitt and Mackenzie Eaglen.

Military force planning and defense budgeting, more than any other activities of the federal government, set the course of U.S. national security strategy. If strategy-making involves aligning ends, ways and means, it is the military means that most determine success. War aims can and frequently do change quickly; ask Abraham Lincoln. So, too, do strategies; ask Ray Odierno, just retired as Army chief of staff. The means, however, are harder to transform; ask Donald Rumsfeld, who wished to be the "secretary of transformation" and found himself forced to "go to war with the Army he had."

The presumption behind Rumsfeld's desire for transformation and his lament about the force he inherited has become a paralyzingly common one in the post-Cold War era. Indeed, it would appear to be the presumption behind much of the testimony the committee has heard in previous sessions in this series of hearings, and I would be very surprised if some of my friends on this panel don't reiterate those points. While I, too, believe that certain reforms and new technologies should be introduced as rapidly as possible—I would like to equip our troops with warp drives, cloaking devices and photon torpedoes as soon as they are invented—my "alternative approach" today will be to point out the benefits of continuity. I believe that there is an urgent need to reassert American geopolitical leadership by rebuilding American military power, that the crisis is now and in the near-term future and that, because the underlying structures of the "world America made" remain sound, it is possible to keep it from unraveling. Moreover, because the blessings of this American moment—that is, an enduring global great-power peace, a remarkable extension of economic prosperity and a historically unprecedented expansion of political liberty—represent the fulfillment of our national purpose, that it would be a moral failure of the gravest sort to do anything less than our utmost to preserve what our predecessors fought for, or to bequeath to our children what they deserve.

I would like to begin the case for continuity by pointing out the constancy of American strategic purpose, at least since the end of World War II. The two recent blue-ribbon panels chartered by Congress to assess the Defense Department's defense reviews concurred on a succinct definition of U.S. goals: we have sought to "secure the homeland," meaning North America and the Caribbean Basin; to assure peaceful access to and the military ability to exploit the "commons" at sea, in the skies, in space and in cyberspace; maintain a favorable balance of power in the three critical regions of Europe, East Asia and the greater Middle East; and to work to preserve a decent quality of international life by preventing atrocities such as genocide or ameliorating the effects of natural disasters. It should also be observed that the panels were forced to deduce these goals by reflecting on the pattern of American behavior, not by reference to the QDR or the formal national security strategy. That is to say, this is what we have done, but not what we have said we would do, let alone what we have planned to do.

Thus the gap between our traditional strategic reach and our current military grasp has widened and still grows. When the 2010 QDR independent Panel and last year's National Defense Panel analyzed the administration's defense reviews, they were reluctant to express anything beyond dissatisfaction with the existing force-planning construct. As the NDP put it: "[G]iven the worsening threat environment, we believe a more expansive force-sizing construct—one that is different from the [current] two-war construct, but no less strong—is appropriate."

Where the NDP stopped, we at AEI started. While recognizing the fact that we lacked the sort of resources that the Pentagon can call on in its QDR process, we felt compelled by the urgency of the moment to advance specific recommendations, at least to frame the debate that is needed. What we lacked in depth we made up for by directness. We came to four broad conclusions. The Defense Department must:

- **Adopt a "three-theater" force construct.** To remain a global power, the United States must preserve a favorable balance of power in Europe, the Middle East and East Asia. The ways and means of doing so differ from theater to theater. Deterring further Russian and Chinese aggression requires forces that are powerful and constantly present, backed up by sufficient forces based in the United States to respond, quickly win the initiative and favorably conclude any crisis or conflict that may occur, even one that may last a long time. While both theaters demand advanced aerospace capabilities, the principal presence missions would call on maritime forces in the Pacific and land-based forces in Europe. In the Middle East, the situation is quite different; there is no favorable status quo to defend and the trends are getting worse rather than better. Securing our regional interest requires not just presence but also mounting an effort to reverse the rising tide of many of our adversaries: Iran, ISIS, al Qaeda and its associates and, for the first time in many decades, Russia. But while the demands differ in each region, the United States must address each individually and simultaneously in order to preserve the global order; activity in each theater is necessary but none is by itself sufficient to achieve our goals. As a global power, America cannot "pivot" among these theaters, nor can it retreat to the continental United States. And there are good reasons to maintain very diverse sorts of forces.
- **Increase military capacity.** The reductions in the size of the U.S. military of the past three decades have been the most pressing problem of national defense. Since the end of the Cold War, American soldiers, sailors, airmen and Marines have been unrelentingly deployed. After 9/11, they were not sufficient in number to successfully conduct campaigns simultaneously in Iraq and Afghanistan, despite a massive mobilization of reserve component troops; an increase, though tardy, in active-duty numbers; and innovative employment of Navy and Air Force leaders in ground missions. Neither the rapid introduction of new equipment such as the massive mine-resistant vehicles nor the renaissance in counterinsurgency operations could make up for the lack of forces. Despite advances in technology that have improved the precision and tactical effectiveness of weaponry and combat units, numbers still matter in war. The daily headlines demonstrate the destabilizing effects of our withdrawals, not just from the Middle East, but from Europe and indeed East Asia as well; even before the end of the Cold War, the United States gave up its position in Southeast Asia by closing the massive facilities in the Philippines. Now, thanks to the constraints imposed by the 2011 Budget Control Act, the capacity of U.S. forces will be further diminished to levels not seen since America emerged in the early 20th century as a global power.
- **Introduce new capabilities urgently.** Programs to transform the technological and tactical prowess of the U.S. military or offset the new weaponry now fielded by adversaries have been a strategic disaster; the failure to modernize across the force since the 1980s now leaves America's armed forces without the kind of great technological advantages that allowed it to "shock and awe" its enemies and conduct decisive operations with very few casualties. "Skipping a generation" of procurements has simply allowed others to catch up. Now the Pentagon has little choice but to buy what it can—what is now available or could be made available rapidly—quickly and economically. This means accelerating the small number of mature procurements still left on the books, such as the F–35 and the Littoral Combat Ship, despite their problems and imperfections. Second, the spirit of innovation should be applied to reviving those programs that could be reworked to give important new capabilities. The F–22, for example, could be refitted with F–35-era electronic systems, or the Zumwalt-class destroyer, which has a larger hull and vastly more powerful engine than the Arleigh Burke, could be redesigned not as a pocket battleship but as an air-and-missile defense platform with a rail gun and then perhaps with directed energy weapons. Third, programs ready for development, such as the Long Range Strike-Bomber, should be fully funded so that they can be fielded within the next five years. In sum, near-term modernization and innovation must take precedence over longer-term transformation.
- **Increase and sustain defense budgets.** The defense cuts of the early Obama years and the further reductions mandated by the Budget Control Act have merely accelerated a pattern of defense divestment that began a generation ago. No amount of internal reform can offset the cuts, and the damage is too great to repair within the course of a single presidential term. The current Defense Department and the shriveled defense industry cannot, as they stand now, in-

telligently spend a Reagan-era-style level of budget increase; the late 1970s and early 1980s provided a much more robust base from which to grow. Therefore a sustained reconstruction of U.S. military capacity and capability is called for; while it is critical to address urgent needs, it is also imperative to carry through a substantial program of rebuilding for at least a decade. A "two-target" investment strategy is required: first, return military budgets to the level set by former Defense Secretary Robert Gates in his original 2012 budget. Second, defense budgets should gradually be built to an affordable floor of 4 percent of gross domestic product that would sustain the kind of military America needs.

Sound defense planning demands a long-term perspective, focusing not on what changes—threats and technologies—but on what remains constant—the security interests of the United States and American political principles. Since 1945, the one constant of international politics has been the military power of the United States. That proposition now demands new proof, and our next commander-in-chief should expect to be tested, as John Kennedy was by Nikita Kruschev: have the retreats and "pivoting" of recent years become the new American norm, or will there be a renewed commitment to the traditions of American strategy and international leadership? Absent sufficient military means, there can be but one answer to that question.

Chairman MCCAIN. Mr. Brimley.

STATEMENT OF SHAWN BRIMLEY, EXECUTIVE VICE PRESIDENT AND DIRECTOR OF STUDIES, THE CENTER FOR A NEW AMERICAN SECURITY

Mr. BRIMLEY. Thank you, Mr. Chairman, Ranking Member Reed, and distinguished members of the committee. I'm truly honored to be—to appear before you today, and also to testify along with my distinguished colleagues.

In my statement, I argue that America's Armed Forces are the most highly trained, equipped, and experienced in the world, yet the margin of their battlefield superiority is eroding. I believe we are seeing the slow but steady erosion of America's military technical superiority. Unless that trend is arrested, and arrested soon, America's Armed Forces will find it more difficult to prevail in future conflicts.

Modern U.S. military strategy depends on technological superiority. This was a consistent pillar of strategy during the Cold War, the inter-war years that followed, and even the wars of the post-9/11 era. This edge was the product of intentional Cold War strategy designed to increase the quality of U.S. forces to help offset Soviet numerical advantages. And this strategy ultimately resulted in capabilities, like the GPS [Global Positioning System] constellation of satellites, stealth aircraft, and precision-guided munitions. The resulting monopoly on these technologies that we enjoyed is among the reasons the United States stood alone and triumphant at the end of the Cold War. The erosion in American military technical superiority is occurring because the technologies that underwrote that position are rapidly proliferating across the world, and there's nothing that we can do to stop it. The same technologies that U.S. forces enjoyed a monopoly on for decades are now central to the defense strategies of our competitors. This development, alone, is shaking the foundations of U.S. defense strategy and planning.

In my statement, I describe at some length how the velocity of global change, coupled with the accelerating diffusion of military power, is shaping the contours of tomorrow's likely battlefields in three important ways:

First, precision munitions will dominate battlefields. These weapons have now proliferated so extensively that nearly any actor who desires to employ them can do so effectively on the battlefield. And we have only just begun, as a community, to grapple with a world in which even nonstate actors will be able to hit anything they aim at.

Second, the sizes of battlefields will expand. The proliferation of precision munitions and the ISR [intelligence, surveillance, and reconnaissance] networks that support their employment are increasing the effective range of military units. Our adversaries will not only be able to hit what they can see, but also strike U.S. forces accurately over longer and longer distances.

Third, concealing military forces will become more difficult. More actors are developing sophisticated capabilities designed to find and target their adversaries. On future battlefields, finding the enemy will be much easier than hiding from him.

I believe these features of the operating environment—ubiquitous precision munitions, larger engagement zones, and more transparent battlefields—are clearly apparent today. For instance, the obvious hesitancy on the administration's part to assert freedom-of-navigation rights in the South China Sea, in my mind, is due, at least in part, to China's multi-decade investment in long-range guided anti-ship ballistic and cruise missiles. We see Russia deploying and reinforcing what our top military commander in Europe, General Breedlove, calls anti-access bubbles over parts of Ukraine and Syria, or even the way nonstate actors, like Hezbollah and some inside Syria today, are using advanced anti-tank guided munitions. The logical extension of these trends into the future should concern us all.

In order to better prepare for this emerging reality, we need to demand creative thinking from the Pentagon and across the entire defense community concerning how to change operational concepts. These are the things which guide how U.S. forces plan to engage adversaries in different plausible contingencies. Core operational concepts will need to focus more on enhancing our abilities to strike at range, persist inside contested areas for long periods of time, disperse our forces over wide geographic areas, while still retaining the ability to consolidate or amass our firepower, when needed. And I describe these ideas at some length in my written statement.

If our operational concepts begin to evolve along these lines, I believe it will help guide us towards a defense investment portfolio that does three fundamental things:

First, shore up our air and maritime power projection capabilities by employing land- and particularly carrier-based unmanned strike platforms—and I note the Chairman's leadership in this regard; emphasizing submarines that can attack from concealed positions; developing dispersed undersea sensor grids and unmanned attack platforms that can persist inside an adversary's contested maritime zones for long periods of time; and, as we heard the other day, ensuring the new long-range strategic bomber is procured in numbers large enough—so 100 planes is very important, I think—to constitute a credible sustained power-projection ability.

Second, we need to ensure U.S. ground forces are rapidly adapting to guided munitions warfare by pushing guided munitions down into the squad and even the individual level for our ground forces; experimenting robustly with robotic ground systems and air systems that can obviate the need to risk human beings in some high-risk missions; and developing platforms that can deploy alongside our dismounted units to provide them some protection from adversaries' guided munitions.

Third, and finally, ensure our forward bases and deployed forces can defend against guided munitions by more aggressively funding research and development of directed energy systems and exploring innovative basing concepts that can disperse U.S. military forces across larger geographic areas.

Mr. Chairman, America's finely honed military technical edge is eroding, and U.S. policymakers have a closing window of opportunity to arrest this trend. For decades, our adversaries were convinced that U.S. forces would be able to see them first and shoot them first, due to our overwhelming advantage in precision-guided munitions and the means to deliver them at a time and place of our choosing. If this erosion is allowed to continue, the credible deterrent power of the United States will erode, as well, causing significant disruptions to the global balance of power. And we must not let that happen.

Thank you for the great honor of testifying before you.

[The prepared statement of Mr. Brimley follows:]

STATEMENT BY SHAWN BRIMLEY

THE ONGOING DISRUPTION IN MILITARY AFFAIRS

America's armed forces are the most highly trained, equipped, and experienced in the world—yet the margin of their battlefield superiority is eroding. Whether our armed forces and international allies and partners are facing the determination of a dictatorship fighting for its continued existence, a rising power determined to flex its military power in pursuit of its maritime interests, or a former great power doggedly refusing to cede influence in its near abroad, beneath those headlines is a consistent trend that powerfully influences the nature of these and other security competitions. That trend is the slow but steady erosion of America's military-technical superiority, something that U.S. policymakers have come to assume and a feature of the international system that our core allies depend on for their security and, in some cases, their survival. Unless that trend is arrested, America's armed forces will find it more difficult to prevail in future conflicts.

Modern American military strategy depends on technological superiority. This was a consistent pillar of strategy during the Cold War, the interwar years to follow, and the wars of the post-9/11 era. American presidents are rightfully loath to send military personnel into the breech without a clear qualitative military edge. What was once an element of deliberate strategy has, over the course of decades, evolved into a presumption of technological superiority.

This presumption stems from nearly thirty years of the United States enjoying an unrivaled military-technical edge in conventional weapons. This edge was deliberately honed by the adroit use of defensed-directed research and development spending in the twilight years of the Cold War. This military-technical strategy—referred to as the "offset strategy"—served to spur first a revolution in military affairs and then a broader societal shift that thrust the world headlong into the information age. That underlying investment portfolio bequeathed advanced computer networking or what became the Internet; the global positioning constellation of satellites; stealth technologies; advanced intelligence, surveillance, and reconnaissance (ISR) platforms; and precision guided munitions or "smart weapons." The resulting monopoly on precision munitions and the efficient means of their delivery is among the reasons the United States stood alone and triumphant at the end of the Cold War, and enjoyed unrivaled military superiority in the decades that followed.

But today's Pentagon leaders are conveying with some urgency the view that this defining military-technical edge is eroding to the point where the United States can no longer rest its defense strategy on the confidence that it enjoys a qualitative military edge against plausible future adversaries. That we can no longer do so portends a seismic disruption in military affairs.

The erosion in American military-technical superiority is occurring because the technologies that underwrote that position are now nearly fully proliferated throughout the international system. The United States must now deal with advanced integrated air defense systems, stealth technologies, and, most problematically, precision guided munitions. The same technologies that U.S. forces enjoyed a monopoly on for decades are now central to the defense strategies of America's competitors. This is *terra incognita* to U.S. defense planners, who are now several generations removed from those who worked under the daily pacing threat of a near-peer competitor with global military reach.

THE VELOCITY OF CHANGE AND DIFFUSION OF MILITARY POWER

The erosion of America's military-technical edge is exacerbated by two overarching trends that are driving the emerging security environment and powerfully shaping U.S. defense strategy and planning: the *velocity of geopolitical change* and the *accelerating diffusion of military power.*

The velocity of geopolitical change could very well be unprecedented in the modern era. Several trends here are worth highlighting. First, the erosion of state power typified by the ongoing collapse of Arab regimes and the implications throughout the Middle East and Europe are unprecedented in their scale and pace. Second, the return of great power politics driven by the rise of China as a global maritime power and the resurgence of Russian determination to maintain continental influence in its near abroad. Third, the rapidly changing geopolitics of energy driven by the shale oil revolution that is positioning North America to be a net energy-exporter by the end of the decade. Any one of these "macro" trends would be sufficient to cause significant disruption in global affairs, but that all three are occurring simultaneously will greatly complicate U.S. statecraft and the formulation of cohesive national security strategy. [1]

These trends are all complicated by the accelerating diffusion of military power. [2] The very forces unleashed, in part, by the Pentagon's Cold War-era research into advanced computer networking (to ensure the survivability of U.S. nuclear forces and hence the credibility of their deterrent power) helped spur a commercial revolution that thrust the world into the information age. This in turn accelerated the diffusion of military power by supercharging globalization and creating the broader knowledge economy, which together served to lower entry barriers that heretofore prevented many state and non-state actors from acquiring advanced military technology. [3] The result of this diffusion of military power has been to expand the employment of advanced technology both horizontally (i.e. more actors are employing them) and vertically (i.e. the technology is employed throughout an actor's military organizations).

These ongoing geopolitical trends and the diffusion of military power described above are causing the security environment to evolve at a pace that makes defense planners and strategists uncomfortable as it raises the risks of strategic surprise and the resulting consequences.

CONTOURS OF THE OPERATIONAL ENVIRONMENT

The forces driving the evolution of the security environment shape the contours of what defense planners call the "operational environment"—the space within which military forces will compete with one another in peacetime and engage in violent action when asked to do so. There is a spectrum of activity along which military leaders must prioritize the creation, training, equipping, readiness, and geographic posture of military forces. Assessments of the likely operational environment must inform such choices.

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[1] There are, of course, other significant global trends. See the National Intelligence Council report *Global Trends 2030: Alternative Worlds.* On the geopolitics of energy, see Elizabeth Rosenberg, *Energy Rush: Shale Production and U.S. National Security* (Washington DC: Washington DC: Center for a New American Security, 2014). On the rise of China see Robert Kaplan, *Asia's Cauldron: The South China Sea and the End of a Stable Pacific* (New York: Random House, 2014).

[2] See Michael Horowitz, *The Diffusion of Military Power: Causes and Consequences for International Politics* (New Jersey: Princeton University Press, 2010).

[3] One of the first to talk about the "democratization of violence" was Fareed Zakaria in *The Future of Freedom: Illiberal Democracy at Home and Abroad* (New York: W.W. Norton, 2003).

Based on the likely security environment outlined above and insight derived from assessments of recent conflicts, there are three trends that will directly shape the battlefields on which future U.S. military forces will fight: the proliferation of precision munitions; the expanding size of battlefields; and the increasing ability to find and target military forces.

First, precision munitions will dominate battlefields. The United States held a near-monopoly on the use of precision-guided munitions since they were introduced at scale during the 1991 Gulf War.[4] Precision munitions enable military forces to hit targets with near-zero miss—in other words, accuracy becomes independent of range. The introduction of precision munitions ushered in a revolutionary break in warfare that is accelerating throughout the international system. Precision munitions have now proliferated so extensively that nearly any actor who desires to employ them can do so effectively on the battlefield. Defense analysts refer to this dynamic as the ongoing maturation of the precision strike warfare regime.[5] As retired Lieutenant General George Flynn, U.S. Marine Corps, has noted, " . . . the prospect of even non-state actors being able to hit more or less everything they aim at with precision guided mortars, artillery, and short-range rockets is not only worrisome, but unavoidable as relatively inexpensive guided weaponry proliferates world wide."[6] The implications for military strategy are significant, and Pentagon planners must now assume that any future adversary will employ precision munitions against U.S. forces.

Second, the size of the battlefield will expand. The proliferation of precision munitions and the battle networks that support their employment are increasing the effective range of military units. The introduction of guided munitions at all levels of operation means not only that military units can hit what they can see but also that the ranges across which they can do so can increase. This is not simply a challenge in the air and maritime domain, where U.S. forces have had to deal with the proliferation of precision munitions for some time, but increasingly will pose serious challenges for U.S. ground forces. The introduction of guided rockets, artillery, mortars and even bullets will make ground combat far more lethal, as the ability to maneuver using terrain features to shield forces from enemy fire will become much more difficult against an adversary with precision munitions and supporting battle networks. This dynamic will cause the ranges at which opposing forces first engage in violent action to increase across all operating domains.

Third, concealing military forces will be more difficult. More actors are developing sophisticated intelligence, surveillance, and reconnaissance capabilities designed to find and target their adversaries. From high-end capabilities including space-based surveillance, networked multi-static radars, and surveillance drones, to the effective use of cloud computing, commercial imagery services, and real-time analysis of social media platforms, it is becoming harder to conceal the presence and movement of military forces from adversaries who are determined to find them. The nature of an actor's awareness of adversary forces will differ, but it seems clear that on future battlefields, *finding* the enemy will be easier than *hiding* from him.[7]

These trends are distinct in nature, and will interact with one another in different ways depending on the particular theater and the domain (e.g. air, ground, maritime, space).[8]

A future operating environment characterized by the use of precision munitions, over larger areas, coupled with surveillance networks that make battlefields less opaque will require new vectors for force development, military posture, and concepts of operation. Moreover, it seems clear that the proliferation of precision munitions, expanding combat ranges, and a more transparent battlefield will result in future conflicts being far more lethal to all combatants.

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[4] Early antecedents of guided munitions stem as far back as the wake-homing torpedoes that emerged at the end of World War II. See Barry Watts, *The Evolution of Precision Strike* (Washington DC: Center for Strategic and Budgetary Assessments, 2013). Also see Robert Work and Shawn Brimley, *20YY: Preparing for War in the Robotic Age* (Washington DC: Center for a New American Security, 2014).

[5] See Andrew Krepinevich and Barry Watts, *The Last Warrior: Andrew Marshall and the Shaping of Modern American Defense Strategy* (New York: Basic Books, 2015).

[6] As cited by Barry Watts in *The Maturing Revolution in Military Affairs* (Washington DC: Center for Strategic and Budgetary Assessments, 2011): p.11. Also see Dan Lamothe, "More Accurate Artillery Concerns General," *The Military Times* (April 20, 2010).

[7] This dynamic is explained well in Michael Vickers and Robert Martinage, *Future Warfare 20XX Wargame Series: Lessons Learned Report* (Washington DC: Center for Strategic and Budgetary Assessments, 2001).

[8] It's possible that many of the dynamics that are apparent in the physical domain also have some similarities to dynamics in the cyber domain. But for the purposes of this argument I focus only on the physical warfighting domains.

THE EROSION OF AMERICA'S MILITARY EDGE

The dynamics of the security environment outlined above coupled with the likely implications for how future battlefields will evolve are certain to require significant modifications to U.S. defense strategy. There is a broad and growing recognition that the proliferation of precision munitions and their associated battle networks throughout the international system and all the implications that stem from the shift from the unguided-to guided-weapons era are actively eroding long-standing pillars of U.S. defense strategy.

One must only take a cursory glance at recent newspaper headlines to see this dynamic at work. For instance, the obvious reticence of U.S. policymakers to challenge China's unilateral island-building activity in contested areas of the South China Sea is partly due to the fact that Chinese military capabilities are much more threatening to U.S. military forces than at any time before. China's acquisition and deployment of sophisticated integrated air defense systems and, in particular, precision-guided anti-ship ballistic and cruise missiles pose serious threats to U.S. air and naval forces. For instance in March 1996, when China conducted live-fire military exercises and missile tests off the coast of Taiwan, the United States dispatched two aircraft carrier strike groups into the mouth of the Taiwan strait in a significant show of force and resolve. The United States could do so at relatively low levels of risk given the immaturity of China's air and naval forces. After nearly two decades of China's deliberate investment into modernizing its military forces however, the relative superiority of America's military posture in the Asia-Pacific is much less pronounced, and thus even traditional displays of military power such as freedom of navigation assertions through international waters have become more complex and potentially dangerous affairs. Through their patient and deeply strategic military investments, Beijing has now made significant progress in eroding America's military-technical edge in the Asia-Pacific. This dynamic has worrisome implications for regional stability, particularly given the rising military tensions between China and several key U.S. allies in the region including Japan and the Philippines.

The dynamics that are shaping military competitions playing out in the Asia-Pacific region are also becoming increasingly apparent in other theatres. Russian aggression in Crimea and Eastern Ukraine, as well as their operations in Syria, were facilitated by their ability to construct what top NATO commander General Philip Breedlove has called "anti-access bubbles" in these areas.[9] The rapid deployment of integrated air defense systems—radars, surface-to-air missiles, and modular ISR architectures—quickly gave Russia the freedom of action, in Crimea at least, to engage in rapid ground operations take and hold territory. And in Eastern Ukraine and Syria, the ability to quickly create "nogo" areas of airspace has helped to buttress Russia's partners and increase deterrence against other actors, including the U.S. and NATO. Moreover, Russia's recent cruise missile strikes against targets in Syria from naval vessels in the Baltic Sea is further evidence that America's competitors are confident in their abilities to fully employ advanced military technologies that heretofore only the United States could or would use in wartime.

Not only have major military competitors like China and Russia made great strides into the guided-munitions warfighting regime, but these technologies have diffused to the point where almost any plausible state or non-state actor will employ them in some way. For instance, Hezbollah employed guided anti-armor and also anti-ship munitions to notable effect during the 2006 war with Israel.[10] And today, U.S.-supported rebel groups in Syria are reportedly employing similar types of weapons against Assad's military forces. There is every reason to expect that any significant military actor will employ advanced anti-armor, -ship and -air munitions in the future. This dynamic will be extremely challenging to address if U.S. forces are ever asked to engage in sustained military operations against an adversary with access to these types of weapons. In this respect, recent large-scale conventional operations in Iraq and Afghanistan may turn out to be among the last sustained en-

[9] Thomas Gibbons-Neff, "Top NATO general: Russians starting to build air defense bubble over Syria," *The Washington Post* (September 29, 2015).

[10] Deputy Secretary of Defense Robert Work, in an April 2014 speech at the Army War College described this at some length: " . . . when the IDF crossed swords with Hezbollah [in 2006], they were caught by surprise. Hezbollah—fighters were armed with advanced anti-tank missiles, thousands of long-range rockets, Chinese-made Silkworm anti-ship missiles, advanced man-portable anti-air missiles, and unmanned aerial vehicles (UAVs). They had very simplistic, but very effective battle networks to employ them. They practiced irregular warfare, but at the same time maneuvered effectively against Israeli armored columns, proved proficient in indirect fire, and they used swarms of heavy anti-tank missiles to great effect."

gagements against adversaries that are not fully able to employ guided munitions and rudimentary battle networks supporting their use.

Clearly the ongoing diffusion of military power is problematic to U.S. defense strategy, and the loss of a near-monopoly position with respect to the employment of guided munitions on the battlefield will be a defining feature of the operating environment for U.S. forces, but one must be careful not to overstate the case. The United States remains the most capable military actor in the international system and will remain so for the foreseeable future, even given the constrained levels of defense spending seen in recent years. The erosion of America's military edge does not mean U.S. forces will be unable to fight and win the nation's wars, but it does strongly imply that battlefield victories will come at increasing levels of cost and risk in terms of lives lost and resources spent.

REESTABLISHING A MILITARY-TECHNICAL EDGE

Of all recent Pentagon leaders, current Deputy Secretary Robert Work has been the most detailed in his public accounting of how the U.S. military is losing technical dominance over its adversaries. It is worth quoting him at length describing the scope and scale of the challenge:

> "Looking back on the [1990s], we enjoyed conventional dominance across the spectrum. Our global command and control network was unparalleled and it really wasn't under any type of a cyber attack threat. Our space assets, which provided us the ability in a simple theater-wide battle networks, weren't really threatened. We enjoyed freedom of access on the land, in the air, on the sea, under the sea, in cyberspace. In contrast, we have potential competitors all across the spectrum, developing capabilities and challenges in all domains. Our space assets are now at more risk than they have ever been. Our global command and control system is at more risk than it has ever been. Several nations are developing capabilities that threaten to erode our ability to project power over trans-oceanic distances, which is what makes us the only global military superpower. The so-called A2/AD capabilities include advanced anti-ship and anti-air missiles, as well as new counter-space, cyber, electronic warfare, undersea and air attack capabilities. We are seeing levels of weapons development in other states that we have not seen since the mid-'80s, when we faced a near peer military competitor in the Soviet Union." [11]

The implications of what Secretary Work outlines are far-reaching, striking as they do at the very foundation of U.S. defense strategy and doctrine. Two paradigmatic cases are worth discussing: air and maritime power against near-peer competitors; and the likely contours of future ground combat.

AIR AND MARITIME POWER PROJECTION

First, the increasing opacity of future battlefields, the expansion of engagement ranges, and the prevalence of guided munitions are combining in ways that call into question the ability of the joint force to project striking power against an adversary. Put another way, these dynamics mean that America's forward military presence, whether on land, in the air, or on the sea, will be within range of an adversary's guided munitions much earlier than was the case when they were designed and built; and that U.S. power projection capabilities will need to engage an adversary at much greater distances than previously planned.

The best contemporary case concerns the way U.S. defense planners conceive of the aircraft carrier and its embarked air wing. As military historian Jerry Hendrix describes in the recent report *Retreat from Range: The Rise and Fall of Naval Aviation,* the singular purpose of U.S. aircraft carriers designed during the Cold War—the so-called "supercarriers"—was to launch and recover aircraft able to carry heavy ordnance payloads over long distances. This was to enable U.S. naval forces to project power (conventional and nuclear strike missions) beyond the engagement ranges of Soviet air and maritime defensive systems. With a complement of bombers, long-range attack aircraft, and air superiority fighters, the carrier air wings for most of the Cold War could perform deep strike missions at about 1000 nautical miles (nm) from the carrier. [12] For a variety of reasons, principally judgments about the favorable security environment in the immediate post-Cold War period, the

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[11] Robert Work, *Speech to McAleese / Credit Suisse Defense Programs Conference* (Washington DC: March 17, 2015).

[12] Jerry Hendrix, *Retreat from Range: The Rise and Fall of Carrier Aviation* (Washington DC: Center for a New American Security, 2015).

Navy was permitted to emphasize operational concepts that prioritized the number of sorties the air wing could generate. This was not without some logic, for as Hendrix describes: "The campaigns that the nation and the Navy found themselves participating in gave a false sense of permanence. Operation Desert Storm in 1991, operations in Yugoslavia from 1995 to 2000, and the 2003–2012 Iraq War were all conducted in permissive maritime environments that allowed U.S. aircraft carriers to operate just offshore of target nations, maximizing the on-station time of their aircraft." [13] The prioritization of "close-in" operational concepts for carrier operations has resulted over time in an air wing with an average unrefueled range of less than 600nm.

Given the increased prevalence of long-range guided munitions and battle-networks—of the type that China has spent decades procuring, among others—operational concepts that presume an ability to establish air or maritime dominance sufficient to enable close-in engagement ranges seem quite unrealistic. Unless Pentagon and Navy leaders can drive change sufficient to enable long-range strike missions from aircraft carriers, this critical "day 1" mission will be deferred to other elements of the joint force, which would call into sharp relief the very purpose and mission of the aircraft carrier—heretofore the crown jewel of U.S. power projection.

The aircraft carrier is not the only element of America's power projection force that is increasingly vulnerable given the trends outlined above. Advances in air defense systems make stealth aircraft easier to detect; America's space-based satellite constellations are more vulnerable to attack and disruption; and U.S. military bases in and around contested regions are more exposed to higher volumes of accurate ballistic missiles that will stress even the most advanced defensive systems.

Ground Combat

Second, these trends will cause profound disruption in ground combat. While U.S. ground forces are and will remain the most effective in the world at the core mission of closing with and destroying the enemy, the U.S. Army and Marine Corps are likely to undergo a very disruptive period, as the guided munitions-revolution has not yet fully taken hold at the level of the individual soldier. The kinds of revolutionary air and maritime capabilities that became apparent to the world in the 1991 Gulf War—smart munitions and sensor grids—are rapidly now emerging in infantry combat. For instance, we are now seeing the emergence of precision-guided infantry weapons, including:

- Lightweight anti-personnel drones carried and employed at the infantry squad which can dive bomb targets from above;
- Handheld laser-guided grenade launchers that carry integrated electronics that enable precise detonation to maximize lethality;
- Miniature guided missiles launched from currently fielded grenade launchers that can hit targets beyond 2 kilometers;
- Large-caliber rifle rounds that can maneuver during flight to hit laser-designated targets; and
- Firearms with integrated fire control systems to counteract the effects of the shooter's movement and increase accuracy by an order of magnitude. [14]

These types of emerging technologies will likely first be employed by U.S. or allied forces but will rapidly proliferate globally in part because many of these capabilities are derived from commercial products. These technologies will expand the engagement ranges for mounted and dismounted infantry, significantly complicate or obviate the ability to use terrain features for cover and concealment, and hence make the battlefield far more lethal. All the while, the ongoing proliferation of anti-tank guided munitions will continue, as will the evolution of the kinds of sophisticated antipersonnel devices (e.g. IED and EFPs) seen in Iraq and Afghanistan.

In both these cases—air and maritime power projection and ground maneuver warfare—the loss or relative diminution of long-relied upon U.S. advantages will necessitate major changes in operational concepts and the capabilities required to execute them.

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[13] See Hendrix, *Retreat from Range,* p. 50. See also Seth Cropsey, Bryan McGrath, and Timothy Walton, *Sharpening the Spear: The Carrier, the Joint Force, and High-End Conflict* (Washington DC: Hudson Institute, 2015).

[14] I am indebted to my CNAS colleague Paul Scharre, whose work in this area will soon be publicly available in his paper, *Uncertain Ground: Emerging Challenges in Land Warfare* that will provide greater context and description of these trends and the implications for strategy, planning, and procurement. Another recent publication worth examining is Michael O'Hanlon, *The Future of Land Warfare* (Washington DC: Brookings Institution Press, 2015).

VECTORS FOR DEVELOPING THE FUTURE FORCE

New operational concepts must be developed to address the vulnerabilities in defense strategy outlined briefly above. Operational concepts define the ways in which U.S. military forces plan to employ military means to accomplish desired political ends. They are the critical connective tissue that enables effective theater and operational planning, and they should guide the Pentagon's force development priorities. The credibility of these concepts undergirds U.S. deterrence just as much as the capabilities inherent in specific military platforms. "The United States must be able to give some sense of how it can *make war* against opponents who can contest U.S. military superiority in their regions . . . " argues defense analyst Elbridge Colby, " . . . and *how it can make such war in a way* that the costs and risks of the conflict would in some reasonable sense be correlated with the gravity of the interest at stake." [15]

Whether concerning air and maritime power projection, or in ground combat scenarios, the likelihood is rapidly rising that U.S. forces will soon encounter adversaries that can, in temporary or sustained ways, achieve a degree of parity or overmatch. Given this emerging reality, existing operational concepts will need to be updated and many will require revision to ensure U.S. forces can operate effectively and achieve success on future battlefields. While difficult to capture the range of current operational concepts with a broad brush, current planning tends to assume that qualitatively superior U.S. forces will be able to operate beyond adversary engagement zones, penetrate them if required, locate enemy forces, and prevail over numerical superior forces by concentrating precision munitions at the point of attack.

Given that future battlefields will be more transparent, the use of precision munitions ubiquitous, and engagement zones spanning larger distances, future U.S. operational concepts will require greater focus on the following characteristics:

- ***Range.*** U.S. forces in any domain will need to be able to target and engage adversaries over longer engagement ranges.
- ***Persistence.*** U.S. forces, particularly in the air domain, will need to stay inside contested zones for longer periods of time to find and engage an adversary's mobile assets.
- ***Disaggregation.*** Future military forces will often need to disaggregate into smaller components in order to present adversaries with more complex targeting challenges.
- ***Dispersion.*** Forces will need to spread out those disaggregated units across wider geographic areas to fully take advantage of networked sensors and fires.
- ***Mass.*** Dispersed forces will still need to find ways to concentrate firepower and/or platforms at particular points to overwhelm an adversary.
- ***Concealment.*** Military forces will need to: improve core stealth technologies (e.g. to reduce radar cross-sections); shift emphasis within a certain warfighting domain (e.g. submarines as primary attack platforms instead of increasingly vulnerable surface ships); and create innovative ways to distract or distort an adversary's means of detection (e.g. advances in electronic attack and cyber capabilities).

It seems clear that if opposing forces are roughly in qualitative parity, battlefield outcomes may increasingly turn on which adversary can generate quantitative superiority at key points. Such superiority will stem from different platforms depending on the scenario, but will ultimately boil down to the number of munitions that can be brought to bear against an adversary. Whether long-range missiles, bombs dropped from aircraft, or munitions fired from armor or infantry units, battlefield outcomes featuring roughly equal opponents will tend to be governed by the one that can bring more mass to the fight.

It is important to underscore how different this dynamic is from much of current U.S. military strategy and force planning, which has spent decades planning and executing operations with technically superior forces that can detect, target, close with, and engage a surprised adversary with the overwhelming application of precise force. U.S. defense leaders must do all they can to maintain a qualitative mili-

[15] Elbridge Colby, "America Must Prepare for Limited War," *The National Interest* (October, 2015). Emphasis mine.

tary edge, for the modern history of U.S. military strategy suggests that competing for numerical superiority with an adversary plays to their strengths, not ours. [16]

IMPLICATIONS FOR MILITARY PLATFORMS AND POSTURE

The transition from a world in which the United States has a clear qualitative military edge to one in which our military forces must "fight fair" against an adversary is a transition that must be prevented. A major focus for Congress, the Pentagon, and all those interested in preserving military-technical superiority for U.S. forces should be the development of a comprehensive bipartisan strategy to do so. Thankfully, for nearly a year, the Pentagon, under the leadership of Secretary Ash Carter and Deputy Secretary Robert Work, has been developing the contours of such an approach. Hopefully, the ongoing FY2017 budget deliberations inside the Pentagon will soon result in a clear commitment to invest against the challenges outlined above. A notional list of priorities for capability investments and posture that stem from the above discussion would include:

First, shore up air and maritime power projection by:

- Employing land and carrier-based unmanned strike platforms that can penetrate sophisticated integrated air defense systems, locate mobile targets, and deploy significant munitions payloads. Automated aerial refueling would fully realize the game-changing ability of unmanned platforms, significantly extending the striking distance of U.S. military forces.
- Emphasizing submarines that can attack an adversary from concealed positions, ideally with platforms with larger payload capacities (e.g. the planned Virginia Payload Module designed to triple the strike capacity of future Virginia-class submarines; as well as the planned Ohio-replacement program).
- Developing dispersed undersea sensor grids and unmanned attack platforms that persist inside an adversary's contested zones for months at a time, credibly posing the threat of surprise close to an adversary's shores (e.g. DARPA and the Office of Naval Research are experimenting with long-duration unmanned underwater vehicles and so-called "upward-falling payloads").
- Ensuring the new Long-Range Strategic Bomber (LRS–B) is procured in numbers large enough (the planned buy of 100 planes) to constitute a credible ability to sustain power projection missions against an adversary over the course of a long-duration air campaign.

Second, ensure U.S. ground forces are rapidly adapting to guided-munitions warfare by:

- Pushing emerging guided munitions capabilities down to squad-and individual-level.
- Experimenting with robotic ground systems that can obviate the need to risk humans in some high-risk logistics and surveillance missions, and some "advance to contact" tasks.
- Ensuring that unmanned aerial systems are pushed down to the platoon and squad-level to better enable dismounted troops to find adversaries over longer ranges.
- Developing platforms that can deploy alongside dismounted units that can provide greater protection from an adversary's guided rockets, artillery, missiles and mortars.

Third, ensure U.S. forward bases and deployed forces can better defend against an adversary's guided munitions by:

- Aggressively funding continued research and development of directed energy systems that can defend against guided rockets, artillery, missiles, and mortars.
- Exploring innovative basing concepts that can disperse U.S. military forces across larger geographic areas (e.g. austere locations with prepositioned equipment that can be rapidly reinforced during a contingency).

[16] Some notable recent defense research is exploring ways in which the United States could attempt to generate numerical or quantitative battlefield advantages by fully embracing the emerging contours of robotic warfare. See two reports by Paul Scharre, Robotics on the Battlefield Part 1: Range, Persistence and Daring (Washington DC: CNAS, 2014), and Robotics on the Battlefield Part 2: The Coming Swarm (Washington DC: CNAS 2015).

ARREST THE EROSION WHILE WE CAN

America's finely honed military-technical edge is eroding, and U.S. policymakers have a closing window of opportunity to arrest this trend. The consequences of failure are clear and troubling. The maintenance of a clear military-technical advantage is a foundational element of American defense strategy and must remain so. For decades, certainly since the 1991 Gulf War—America's adversaries were convinced that U.S. forces would be able to see them first and shoot them first due to our overwhelming advantage in precision-guided munitions and the means to deliver them at a time and place of our choosing. If this erosion is allowed to continue, the credible deterrent power of America's military forces will lessen as well, potentially causing significant disruptions to balances of power around the world.

The likelihood of America's adversaries employing sophisticated guided munitions against our forces and those of our allies and partners necessitates far-reaching changes to overall defense strategy, force development and modernization efforts, concepts of operation and contingency planning, and global basing and posture. An adversary that can establish even temporary advantages in guided munitions and the means of their delivery could potentially put U.S. forces on equal qualitative footing, which would foist the requirement to generate quantitative battlefield advantages back into the forefront of military preparations to a degree that today's defense planners would find extremely difficult to do successfully.

Fortunately, senior Pentagon leaders understand the scale and scope of this challenge, and are building on the strong history of previous attempts to offset an adversary's military advantages to do the same in time to prepare for future conflicts. The report of the 2014 bipartisan National Defense Panel also highlighted the erosion of America's military-technical superiority.[17] It is vital that Congress supports the Pentagon's efforts, and holds its civilian and uniformed leaders accountable for making the necessary changes in defense strategy and planning before it is too late. The stakes could not be higher, for they concern nothing less than the foundations of American military power and its beneficial effect on the stability of the global order.

Chairman MCCAIN. Well, I thank the witnesses. And I think it's very important, and I hope that all of our witnesses will read your written statements, which I think are very important, as well.

I'll tell the witnesses, a little over a year from now, very little over a year from now, we're going to have a new President of the United States. And let's suppose that you are called over to see the incoming President of the United States, and he—he or she wants to talk about defense. What's your first recommendation to the new President of the United States?

We'll begin with you, Mr. Brimley.

Mr. BRIMLEY. Thank you, Mr. Chairman.

My advice would be to invest his or her political capital early on, working with Members of Congress, to reestablish a baseline defense budget that is robust enough to fund what the Pentagon's been arguing for some time, along with your leadership and the leadership of others. And, as I said in my written statement, I think the erosion of our qualitative military edge has to be addressed. Size is important. The quantity is important. But, I worry that, unless the—if we allow this erosion of our military technical edge to continue at this pace, it will pose great danger to our men and women we will ask, and the future Commander in Chief would ask, to put in harm's way, at some point.

Chairman MCCAIN. Mr. Donnelly?

Mr. DONNELLY. I would suggest that the President try to reposture American forces farther forward, particularly in the Pacific,

[17] See report of the 2014 National Defense Panel, *Ensuring a Strong U.S. Defense for the Future* (Washington DC: U.S. Institute of Peace, 2015). The report argues in part: "In this rapidly changing environment, U.S. military superiority is not a given; maintaining the operational and technological edge of our armed forces requires sustained and targeted investment." (p.2).

particularly in the South Pacific, but also in Europe, in the Middle East. That's something that he or she could do, even with the force that will be inherited, and it is an important first step towards reassuring our allies that the United States is serious about preserving the world that we live in today.

Chairman MCCAIN. Out of curiosity, Dr. Preble, are you related?

Dr. PREBLE. Very distantly, sir. I did the research, years ago. It's about as distant as you possibly can get, so—but, 12 generations away, so——

Chairman MCCAIN. Still a great name.

Dr. PREBLE. It is a great name. Thank you, sir.

My advice to the new President—it gets back to strategy. Strategy is about choosing. And that means setting priorities. We have not done a very good job of that. Now, I understand that when you articulate those priorities, you send signals, some of which are not necessarily welcome, some of which are necessary. And I do think it's important to send a quite different message to our allies that we will forever have their back, forever and ever, and that they're not expected to do anything to assist us. I don't think that's wise. I don't think that's, over the long term, going to be effective. I just—I don't believe that it's—that the United States has the ability to foresee, for many, many other countries, what their security priorities are better than they can.

Chairman MCCAIN. Mr. Wood.

Mr. WOOD. Thank you, Mr. Chairman.

I believe that the President needs to clearly define U.S. national security interests, and then resource those commensurate with those interests. I mean, how could you do otherwise? So, if you're not willing to devote the resources necessary to serve, then you have to recast your interests and the role you want to play in the world. We have seen the impact of a baseline budget of $500 billion with erosion, Army dropping from 520,000 down to 490-, 450-, potentially lower than that. We've seen the degradation in readiness. We've seen the shrinkage of capacity for U.S. military forces to do things. So, if we want to maintain a primary role in the world, the leading primary role in the world, then we need to resource that, commensurate with those level of interests.

So, I think the recent budget deal, where we're got, what, $607 billion, I think, when it's all added up, is merely to stem the erosion that we have seen. It's not going to buy back significant numbers of readiness, you're not going to rebuild brigade combat teams, where we've seen them drop from 45 down to 32. So, that's a bare minimum that folks have been able to agree to.

So, I think the funding needs to increase. The services themselves will figure out how to solve operational challenges. They need that breadth of capability and capacity to do the experimentation, the testing, see how new technologies are brought into it. But, if they don't have the capacity to do that, with capacity made possible by adequate funding, then we're not going to be able to get ahead of that curve, and we'd better have a terrible record of trying to predict what the next war will be, against who, what the characteristics of it will be, what symmetries or asymmetries will be actually in that mix, in that current conflict. But, to have that kind of ability to test those kinds of things, capacity, I think, is the over-

arching need, and it's finding the adequate funding to have the military, commensurate, again, with the U.S. role in the world.

Chairman MCCAIN. Dr. Krepinevich?

Dr. KREPINEVICH. I think the first order of business, assuming we continue to sustain the vital interests that we've established for ourselves in the Middle East, the Far East, and Europe, is to come up with a strategy to deal with the three revisionist powers, to describe what the priority is among those three, not only in the near term, but over time, so it's a time-sensitive strategy. I think my going- in position would be that, in the Far East, we need a defense posture, a strategy of forward defense; I think in the Middle East, it has to be low footprint combined with expeditionary posture; and I think in Eastern Europe, it would be a tripwire force, with the potential for reinforcement, if necessary. And I think, finally, we need to come up with a strategy to address the problem of what I would call modern strategic warfare that involves not only nuclear weapons now, but advanced nuclear weapons, defenses against missiles and cruise missiles, cyberweapons, and advanced conventional weapons capable of attacking targets that were once reserved only for nuclear weapons.

Chairman MCCAIN. My time is expired, but I would ask the witnesses to give me a written response to what you think is the future of the aircraft carrier.

[The information referred to follows:]

DR. KREPINEVICH. This is a complicated question for which there is no easy answer. Anyone who tells you they have the answer with respect to the carrier's future has not taken the time and intellectual effort needed to arrive at even an informed opinion.

Let me provide you with a few observations regarding long-term trends in maritime warfare with an eye toward providing a framework for thinking about this important question. I've put some of the salient passages in italics.

For over two decades, the U.S. military has enjoyed a near-monopoly in precision-guided weaponry and their associated battle networks. Recently, however, the proliferation of these capabilities to other militaries and nonstate entities is gathering momentum.

The extended period during which the U.S. military has enjoyed a major advantage in this aspect of the military competition suggests it may be slow to appreciate the progressive loss of this advantage. Nowhere is this more the case than in the maritime domain, where U.S. freedom of maneuver has rarely been challenged in conflict since World War II, and then with only modest effects. This era, which now stretches over nearly seventy years, may make it more difficult for the U.S. military to adapt to the "new normal" in which existing and prospective enemies have precision-guided munitions (PGMs) and, in some cases, the associated battle networks and long-range strike systems that form what the Russians termed "reconnaissance-strike complexes."

Further complicating matters is the fact that the maritime competition has long since moved beyond purely a contest of ships and submarines at sea. Since the early days of World War II, land-based aircraft have played a major role in the maritime balance, followed by missiles of ever-greater range, speed, and lethality. In recent years military capabilities and systems in space and cyberspace have become major factors in determining the balance, further complicating efforts to assess the competition. Thus while naval forces, strictly speaking, are those that operated on or below the surface of the water, the maritime competition is influenced by forces operating in all domains.

Further increasing the "degrees of difficulty" in assessing the emerging mature maritime precision-strike regime are changes in the character of the maritime domain itself. Maritime geography has undergone a marked transformation since the last time U.S. maritime power was seriously challenged in war. This stems from the expanding undersea economic infrastructure. A state's economic assets at sea were once thought of primarily as cargo-bearing ships. Today in many places the undersea continental shelves host a complex energy extraction and transport infrastruc-

ture that is increasingly accessible, even to nonstate entities. Add to this a thickening web of undersea telecommunications cables. Aside from the challenge of defending this undersea infrastructure, there are concerns that some states with expansive views of what constitute their exclusive economic zone (EEZ) could also affect the competition in ways that would limit freedom of maneuver in the maritime domain, including a maritime power's ability to map the undersea and to maneuver in neutral states' EEZs in wartime.

As has been the case for millennia, maritime access will likely remain contested most strongly in littoral regions. Similar to the Royal Navy's experience when it encountered torpedo boats and torpedoes, mines, and submarines—the first modern anti-access/area-denial (A2/AD) defenses—in the late nineteenth and early twentieth centuries, today's U.S. surface fleet may find it prohibitively costly to operate in the littoral regions against adversaries in a mature maritime precision-strike regime. And since modern scouting and strike systems can operate over much greater distances than those of a century ago, a robust maritime A2/AD defensive network could extend out hundreds of miles from the shore, intersecting with a rival's similar network to create a No Man's Land or "no-go zone" of operations. This would affect a wide range of maritime missions, to include sea control and denial, strike, presence, commerce raiding and defense, and blockade and counter blockade.

While it is easy to make the case for a mature maritime precision-strike regime differing from today's maritime environment, actually spelling out those differences poses many problems. The first concerns the broad development of military capabilities—that is, the diffusion of precision-guided munitions and development of extended-range scouting forces linked to strike forces through battle networks. Recent promising advances in directed energy could greatly enhance communications along with air and missile defenses. New generations of nuclear weapons could enable their use while creating far less destruction than those associated with Cold War "Armageddon" arsenals. Hypersonic missiles, should they prove practicable and affordable in substantial numbers, could greatly reduce engagement times. Cyber weapons may prove able to fracture battle networks and corrupt information provided by scouting forces. Advances in artificial intelligence could enable robotic systems to conduct complex operations independent of human control, moving from an era of unmanned weaponry controlled by humans to autonomous weaponry. The broad advance of military capabilities greatly increases the uncertainty entailed in describing the salient characteristics of a mature maritime precision-strike regime.

The challenge of determining what this means for the aircraft carrier's future is further limited by a lack of data. It has been roughly seventy years since two major maritime powers fought each other. In that time the advances in maritime capabilities have been dramatic. Yet the data on the relative value of these new capabilities are meager, culled from minor conflicts that may stimulate as many false conclusions as useful insights.

The challenge is further compounded in that the more advances there are in military capabilities, the wider the range of paths competitors might pursue in exploiting their potential within a mature maritime precision-strike regime. While some light might be shed on this matter by examining a competitor's geographic position, strategic culture, stated geopolitical objectives, economic and technical resources, and the ability to mobilize them for military purposes, at best it reduces uncertainty at the margins. As several prospective key competitors—India, Iran, and Japan, in particular—have yet to move aggressively toward fielding the forces that would characterize a mature maritime precision-strike regime, it seems ill-advised to predict what path they may pursue, let alone the ultimate outcome.

There is the matter of operational concepts. Competitors may choose a certain path in fielding new capabilities (and blending them in with existing capabilities), but this does not necessarily tell us how competitors will employ those capabilities in war.

While these barriers to predicting the character of a mature maritime precision-strike regime are formidable, they are not an excuse for failing to try. An informed assessment of such a regime that takes these conditions into account can serve two useful purposes. First, it can reduce the level of uncertainty, though modestly, as to what will characterize the competition. Second, an assessment can provide an informed point of departure—a "Mature Maritime Precision-Strike Regime 1.0"—at the outset of what must be an ongoing, persistent, iterative process to refine and enhance our understanding of this emerging competitive environment.

Absent a major break in the arc of history, there is no uncertainty about at least one aspect of a mature maritime precision-strike regime: It will emerge in time. What might characterize the competition in a mature maritime precision-strike regime? Among the major findings of this assessment are the following:

The seas, especially for the United States, will become more highly contested than they have at least since the Cold War. The gradual expansion of what we today call A2/AD zones that began over a century ago will continue, following what appears to be a period of aberration since the Cold War's end.

Advances in military capabilities since World War II, such as satellites, sensors, very long-range ISR, and strike platforms and missiles, have created the potential to "shrink" the world's oceans to what we might call "Mediterranean Size."

There will be different classes of maritime powers. Modest maritime powers will be able to strike fixed targets in their littoral region, whereas a smaller number will have the ability to strike fixed targets at extended ranges, defined as beyond the littoral and perhaps out to a 1,000 nautical miles (nm) or more. More advanced powers will be able to strike mobile targets, though again, only some will be able to do so on a significant scale at extended range. Maritime powers will also be distinguished by their ability (or lack thereof) to attack the undersea infrastructure and mobile undersea targets, and to do so at extended range. The ability to frustrate and defend against this range of attacks will also differentiate the maritime powers from one another.

The vulnerability of surface vessels—warships and merchant ships—will increase dramatically in such an environment. Absent a major breakthrough in antisubmarine warfare (ASW), undersea craft—submarines, unmanned undersea vehicles (UUVs), and autonomous undersea vehicles (AUVs)—will preserve their stealth.

In this environment, attempting to operate surface warships and merchant ships in the enemy's littoral regions, at least early in a conflict, will likely be prohibitively costly for even the most formidable maritime power. Even beyond the littoral, the growth of extended-range scouting and precision-strike forces may find competitors creating a "No Man's Land" for surface ships.

In such a wartime environment, a surface fleet may spend most of its time operating outside the enemy's A2/AD maritime Bastions (and perhaps No Man's Land as well), conducting periodic short-duration dashes inside the enemy's A2/AD perimeter to launch strikes and execute other missions. The fleet's ability to do so will be influenced greatly by the range and stealth of its strike systems, by its ability to counter the enemy's command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR) systems—its battle network—that supports its weapons, and by its ability to survive an attack.

Thus although today aircraft carriers possess the U.S. fleet's greatest combat potential, unless they can project that potential over much greater ranges than is currently possible, they will run a high risk of detection and damage or destruction in a mature maritime precision-strike regime. Under these conditions, smaller surface platforms with longer-range, survivable strike elements may be attractive for a fleet in a mature maritime precision-strike regime. During the interwar period aircraft carriers were able to conduct effective strikes at ranges far greater than could the other ships in the order of battle. The advent of the missile age, particularly the rise of precision-guided missiles, however, has significantly altered—if not reversed—the situation: Some missiles can now outrange the aircraft on today's American carriers, and will continue to do so for the foreseeable future, at least with respect to manned aircraft.

While surface warships may have the option of not steaming in harm's way, transport ships that provide badly needed supplies may not have that option. Indeed, with the range of scouting and strike systems (including nuclear-powered submarines) having increased so dramatically, commerce protection may prove difficult or even impractical, in a mature maritime precision-strike regime. If so, a competitor's level of economic self-sufficiency could represent a major advantage, especially in an extended conflict. Those competitors who are relatively self-sufficient may be incentivized to posture themselves for protracted war, and be content to keep their seaborne commerce outside an enemy's effective scouting and strike ranges. Those who are not highly self-sufficient may be compelled to posture for a short campaign, undertake a major (and costly) program to stockpile strategic materials, or both.

While precision offers accuracy independent of range, it does not offer range independent of cost. Thus only maritime powers of the first rank are likely to possess significant numbers of extended-range scouting and strike systems to threaten mobile targets, as well as the battle networks to enable the effective coordination of their activities. Hence a key aspect of initial operations between two first-class maritime powers will likely involve efforts to seize control of the maritime No Man's Land that is contested primarily by their extended-range scouting and strike forces as a precursor to defeating their A2/AD forces. Depending upon how they are employed, carriers could make an important, and perhaps decisive contribution to such operations, particularly if their air wing is comprised of aircraft with ranges significantly greater than those we have today.

In this fight, as in much of the overall struggle for maritime supremacy, winning the "hider-finder" or scouting competition will prove crucial to establishing a maritime balance sufficiently favorable for a competitor to accomplish key missions at and from the sea. Winning or at least dominating this competition will almost certainly be essential for maritime forces to strike mobile targets effectively and avoid wasting strikes on low-value fixed targets. The ability to "scout" by reading the enemy's codes through cryptanalysis, jamming of communications links, or deleting or corrupting an enemy's scouting data through cyber operations could prove decisive.

When scouting forces are mutually degraded, mobile targets may need to be engaged quickly, especially at extended range where scouting forces are likely to be minimal. This may put a premium on arming the scouting elements where possible, or engaging with missiles, as opposed to munitions carried by air platforms, given that missiles—particularly ballistic missiles—can travel substantially faster than any aircraft or with submarines employing homing torpedoes.

Aside from preserving one's own scouting force, a major challenge for competitors will be to determine when the enemy's scouting force has been defeated or depleted. Thus accurate battle damage assessment (BDA) will be critical; however, it will also likely prove challenging, especially in the case of cyber and electronic attack. If a competitor has high confidence in his BDA against the enemy's scouting element, he can move forces that would otherwise be highly vulnerable into No Man's Land or even the enemy's A2/AD maritime Bastions. Given the importance of effective scouting in a mature maritime precision-strike regime, however, friendly forces must anticipate that the enemy may feign a loss of his scouting ability, particularly in the cyber and electromagnetic domains, in the attempt to draw friendly forces into an ambush.

As increasing the range of precision strike forces cannot be achieved independent of cost, these forces will likely be in relatively short supply and limited to only the most advanced maritime powers. This suggests there may be a need to rethink the relative value of surface warships' staying power, including not only active air and missile defenses, but also armor and damage control. Put another way, measures such as armor and damage control may drive up significantly the number of scarce extended-range strike assets required to achieve a mission kill or to sink a ship.

What will likely be plentiful are advanced sea mines. Moreover, over time it seems increasingly likely that the distinction between "smart" mines and UUVs will blur, making mines even more formidable. Yet the cost of even the most advanced mines will be only a small fraction of that for a modern warship. This suggests that mines will become an increasingly important part of a maritime competitor's A2/AD littoral defense force, particularly if they can be emplaced in deeper waters.

The undersea domain is almost certain to play an increasingly important role in a mature maritime precision-strike regime, for several reasons. First, submarines (especially nuclear-powered submarines) are likely to be one of the few naval assets (in addition to extended-range missiles and long-range carrier air) capable of operating at acceptable risk in the maritime No Man's Land and penetrating the enemy's A2/AD defenses. Submarines may continue evolving into "mother ships," carrying AUVs, UUVs, mines, towed payload modules, and special operations forces (SOF), along with their traditional complement of torpedoes and missiles—creating an undersea "combined arms" force capable of conducting a range of missions, albeit on a relatively modest scale. Second, since the last clash between major maritime powers in World War II, an undersea economic infrastructure has emerged centered primarily on energy extraction and communications cables. This infrastructure will likely prove an attractive target in future wars. To the extent multiple competitors are involved in such a war, a major challenge for a competitor attempting to defend his infrastructure may be accurately identifying the source of an attack.

Despite the many uncertainties regarding the competition, if history is any guide it will involve many of the weapon systems and other military capabilities that are either in the competitors' armed forces today, or in their current procurement programs. This is due in part because competitors are often hesitant to scrap expensive existing capital stock, such as major surface warship and submarines, aircraft, and satellites whose service life spans decades. The problem may be compounded for many traditional major maritime powers, the United States in particular, that have entered a protracted period of fiscal limits, in part owing to a dramatic rise in personnel costs and an increasingly dysfunctional weapons acquisition system. Ironically, those maritime powers with the most maritime capital stock—the United States especially—may have the least flexibility in terms of fielding new capabilities. This may be mitigated, however, to the extent that a maritime platform is designed with an open architecture that enables enhanced or alternate sensors, electronics, weapons, and other payloads to be upgraded quickly.

That said, history suggests that even a modest shift in the composition of maritime capital stock when combined with appropriate operational concepts can make an enormous difference in the overall balance. This was demonstrated by Germany's small submarine force at the outbreak of World War I and the handful of carriers possessed by the U.S. and Imperial Japanese navies at the beginning of World War II in the Pacific. Hence an important factor in determining the future maritime balance will be the ability of the competing military institutions to innovate, or transform (innovate on a scale sufficient to exploit a military revolution), with advantage accruing to those competitors that identify the best methods (i.e., operational concepts) for employing existing and emerging capabilities to their advantage. Thus the ability to identify, test (through analysis, gaming, simulation, and exercises) and refine these concepts is often crucial to maintaining or enhancing a competitor's position. Limitations on manpower—both its quantity and quality—will be a major factor in limiting and shaping a competitor's approach to the mature maritime precision-strike regime.

There are several operational concepts that have merit in advancing thinking beyond the environment assumed here—that is, one in which the spread of precision-guided weaponry has reached its mature stage along with corresponding scouting forces (such as UAVs and satellites) and battle networks. While a detailed assessment of these concepts is beyond the scope of this assessment, several general operational concepts associated with maritime missions are outlined.

A key part of the competition will involve restoring maritime freedom of maneuver by reducing an enemy's long-range A2/AD capabilities and seizing control of the maritime No Man's Land. How might this be accomplished? Options include operational concepts centered on:

Winning the "scouting campaign," in part by introducing attractive false targets, making real targets less detectable (such as through stealth and curtailing electronic emissions), degrading enemy communications, and injecting false information into the enemy's battle network. This will permit the employment of maritime forces and "shell-game" tactics, enabling forward land-based forces to operate at an acceptable cost;

Depleting the enemy's long-range strike systems that, given their cost, are likely to be a relatively small part of its force structure, thereby enabling friendly forces to operate relatively freely in No Man's Land and to operate more aggressively within the enemy's A2/AD defenses, or maritime Bastion;

Drawing the enemy out from his maritime Bastion through, for example, distant blockade, to compel him to seek a quick resolution to the conflict; and Engaging in peripheral campaigns (e.g., physically seizing key areas outside the immediate area of competition, such as sources of key resources for the enemy). This may compel the enemy to over-extend his military resources (especially his extended-range scouting and strike systems), while enabling friendly forces to concentrate theirs at the key point of decision.

In brief, U.S. planners will likely confront an increasingly dynamic environment in which they must address both how the emergence of a mature maritime precision-strike regime will affect the U.S. military's ability to conduct maritime missions and what countermoves the United States could undertake. The objectives of these countermoves should be to improve the U.S. competitive position, and include those actions that could shape the competition's path in ways favorable to U.S. interests.

Where do we go from here in understanding the emerging maritime competition? If history is any guide, success will require persistent effort over time. This assessment is only a first step in what will be a long and fitful path toward the mature maritime precision-strike regime.

To the extent this assessment has merit, it can inform the debate within the professional military and strategic studies community regarding the regime's characteristics. The debate can be further enriched by considering how some of the key variables—such as directed energy, electronic warfare, advanced-design nuclear weapons, cyber munitions, and competitor paths—could significantly shape and influence the regime and the U.S. competitive position. Priority should also be given to identifying how the United States would like to see such a competition evolve over time. Success here will enable further thought as to how the United States might influence competitors to pursue competitive paths less threatening to U.S. interests. This effort has historically been facilitated by first developing operational concepts that enable maritime forces to address challenges and exploit opportunities that might emerge in the new regime. Since the competitive environment is dynamic, and since analysis of the operational concepts should provide additional insights into their strengths and weaknesses, these concepts must be regularly refined. This can be accomplished through well-designed wargames, simulations, and maritime exercises.

The process described here need not be expensive; indeed, the savings realized from such an effort are potentially substantial. Accurately gauging the characteristics of a mature maritime precision-strike regime could help the U.S. military avoid investing in capabilities ill-suited to meet future challenges, thereby allowing resources to be allocated to areas that provide the United States with a distinct and enduring competitive advantage.

Although the benefits of embarking on such an effort are clear, it will occur only if senior leaders—particularly senior civilian policymakers and U.S. Navy leaders—take up the challenge and find a way to institutionalize the process described here. This is their great opportunity to sustain U.S. maritime dominance or, should they fail to seize it, running the risk that this dominance will not long endure.

DR. PREBLE. "Aircraft carriers have been central to U.S. Navy force planning for decades, and for good reason. A single CVN boasts a suite of capabilities that cannot easily be matched even by a combination of many smaller vessels. But that does not mean that the aircraft carrier is the best platform for all missions, or even most missions. Specifically, aircraft carriers are ill-suited to operating in restricted waterways, or close to a potentially hostile shore. Carrier-based aircraft are at a distinct disadvantage when operating against comparable aircraft based on land. The carrier itself, meanwhile, may be particularly vulnerable to small units employing a host of asymmetric means, including suicide attacks by determined foes desperate to disable the single greatest symbol of U.S. power. There is no peer competitor today or in the medium-term future who could challenge the U.S. Navy's dominance on the high seas, but several countries could do so in their home waters and littorals close to their shores.

"A shift in U.S. strategy away from primacy and toward resilience, self-reliance and restraint would enable a quite different U.S. Navy force structure. Specifically, the Navy would transition from being a permanent presence force, deployed primarily overseas, to a flex force, based in the United States and operating chiefly in the Western Hemisphere, but capable of projecting power over great distances when necessary to preserve vital national interests.

The U.S. Navy under restraint would be focused, first and foremost, on defending the waters closest to the United States. That Navy would also be well-positioned to cover much of the Western Hemisphere, in concert with capable allies in the region. And while that force should retain some large-deck aircraft carriers for the foreseeable future, the shift in strategy should facilitate the faster adoption of some number of smaller, next-generation aircraft carriers focused on the launch and recovery of unmanned aerial vehicles. The resulting force might have the same, or a similar, number of total flat-tops, but presumably at a lower cost to build and operate than a fleet organized around 11 or 12 100,000+ ton CVNs.

MR. WOOD. I believe the carrier will have broad utility for many years to come. As I mentioned in my written testimony, the pro- vs anti-carrier debate is captured quite well in the Hudson and CNAS publications I referenced. They are well worth the time to read. Yes, the proliferation of cruise missiles in particular (launched from land, aircraft, and ships (surface and submarines)) and other forms of guided munitions (e.g. swarming UAVs, unmanned surface and subsurface craft) will pose increasingly challenging threats but they won't increase linearly without counters. In other words, the U.S. will continue to develop responses to such advances so we shouldn't assume that an advance in a weapon will simply make its primary target obsolete. Further, carriers have broad utility beyond their use in a high-end engagement against a peer competitor in a highly contested/lethal environment. Major wars do occur with regularity but only once a generation or so. In the 15–20 years in between, the U.S. has ample need for an ability to project airpower in ways and places not easily supported by land-based aviation. The aircraft carrier simply provides the U.S. flexible options in a multitude of scenarios. Perhaps it is useful to try imagining U.S. power projection and its ability to respond to events without having aircraft carriers in its inventory. Having said that, I also think the flight deck needs to change to account for advances in unmanned systems. Critics of incorporating unmanned aircraft often cite the difficulty of operating different types of aircraft in the flight deck cycle but this isn't really much of an issue. Aircraft carriers have contended with multiple types of aircraft having different characteristics for decades. Yes, fewer types simplify mattes but strict efficiency should not override utility and combat value. I can envision a Navy that has a few supercarriers akin to the new Ford class (we're already building them and will have them for 40 years) but with many more mid-size carriers that serve as platforms for unmanned systems. We have ample experience with this sort of platform if one thinks about our LHA/LHD/LPH ships.

Chairman MCCAIN. I ask that, because the aircraft carrier has been the backbone of the Navy, as we all know, since World War II, and there's significant questions about the carrier itself, its size, the air wing, the role. So, I would appreciate that answer. That's one of the issues that we're going to be grappling with when we're talking about a $10- or $12 billion weapon system.

I thank the witnesses.

Senator Reed.

Senator REED. Well, thank you very much, Mr. Chairman.

I, too, want to thank the witnesses for very thoughtful and insightful comments.

Let me ask all of you a question. It's been highlighted in all of your comments. One of the most rapid areas of change is technological innovation, which is worldwide. It's affecting ourselves and it's affecting our competitors. The other dynamic which I'd ask you to focus on is, a lot of this—the technological change is taking place outside formal government procurement channels, defense industries, you know, military installations, its private sector. How do we sort of fit that into our operations in DOD?

So, let me start with Dr. Krepinevich and go right down, Mr. Wood, down the panel.

Dr. KREPINEVICH. I think that's integral to the so- called third offset strategy. My sense is, as some of my colleagues have mentioned, that the advantage we have developed for ourselves in battle networks and precision warfare that was based on the decision in the 1970s to exploit information technologies as a source of competitive advantage, that advantage is now a wasting asset. So, where do we go next?

If you look, as you said, Senator, where technology is going today, whether it's big data or robotics or directed energy, those technologies are widely diffused, they're available to anyone with the resources to buy them and develop them. So, historically speaking, I don't think, as my former colleague Bob Work and I have discussed—you look back at the 1950s or the 1970s, you actually have to look back at the inter-war period, the period in the 1920s and '30s. In that period, you had a number of great powers. I have mentioned the revisionist powers we're dealing with now. Technologies that were moving very quickly then—in the automotive industry, in radio, radar, aviation—were available to us, the Germans, the Japanese, the Brits, and so on.

What made the difference in World War II were two things. Number one, operational concepts, who figured out how best to employ those emerging technologies. So, when it came to mechanization, aviation, radio, the Germans developed blitzkrieg based on that. The French didn't. Okay, 6 weeks. You look at other aspects, the first integrated air defense system, that was the British. The Germans were a little bit behind on that. So, it was a combination of figuring out best to leverage that new technology to deal with the problems that you identified. It was also the speed at which you could develop and apply that. So, we start World War II with eight aircraft carriers. We end the war with 99—99 aircraft carriers of all types.

This gets, I think, back to the issue of time. How effectively can exploit time? I think that's one of the reasons I would certainly

commend the committee for its focus on defense reform, because we are a terrible competitor when it comes to exploiting time. The better you can exploit time, the less standing military capability you need. The better you can exploit time, the more range of possibilities that are open to you. The better you can exploit time, the more uncertainty you generate in the minds of your adversaries because of the potential directions you can go in.

So, I think, in terms of, you know, your point about "technology is widely diffusing"—I think those are going to be the two critical discriminators. Who develops the best operational concepts, and who can do it fast?

Senator REED. Dr. Wood. My time is diminishing.

Mr. WOOD. Very quickly, then. I think we need to have units and formations available to incorporate or experiment with these things as they come in, because the change is so rapid. So, what residual—what capability do we have that's free enough to do the type of experimentation that Dr. Krepinevich mentioned in that interwar period? Secondly, we need formations that are able to operate independently. We've become critically dependent on a massive interconnected system that, if the enemy compromises, the entire formation is now vulnerable. So, distributed operations with dispersed units that can operate independently, GPS, independent kinds of precision munitions, closed-loop kinds of com systems. You know, those kinds of things, where, when one part of the formation can take a hit, and the rest of the force can continue on.

Senator REED. Thank you very much.

Again, my time is diminished.

Dr. Preble, a comment?

Dr. PREBLE. Very quickly. The—I'm concerned about the proliferation of technology down to nonstate actors and non-—you know, weak states, and especially—it brings us into an era, it seems to me, of defensive dominance, which does then raise issues of, will we risk truly exquisite platforms, exquisite technologies, and risk large numbers of lives if we're projecting power into other people's areas. So, this new era of defensive dominance.

Senator REED. Thank you.

Mr. Donnelly, then Mr. Brimley.

Mr. DONNELLY. Okay, sorry. Red means go.

Again, I think our principal task is to understand what our geopolitical purposes are. Technologies, as Dr. Krepinevich suggested, mean different things to different people in different circumstances. So, we have to figure out what elements of this technology are essential to us, and our job is—still will be, as it was in 1942, to figure out how to have an effect on the far side. We do not want to, you know, experience another, sort of, Pearl Harbor-like event. Our purposes are quite different than they were in 1941. We are trying to preserve an international system, not build one from scratch.

Senator REED. And finally, Mr. Brimley.

Mr. BRIMLEY. Thank you, sir. And, very quickly, I'd just, number one, associate myself entirely with Dr. Krepinevich's comments. And the only thing I'd add to those is, I understand that this committee is holding a hearing on the Goldwater-Nichols Act. And I think—looking at that piece of legislation in particular, I think the 1986 or '87 Nunn-Cohen amendment to that Act that created

[United States] Special Operations Command—SOCOM—has unique acquisition authorities that it has used pretty well to go direct into the commercial industry and pull things and experiment with them and bypass a lot of the acquisition bureaucracy. I think, you know, investigating deeper into those kinds of authorities, how they've been used, and how they might be replicated across the force would be a very interesting discussion.

Senator REED [presiding]. Well, thank you very—again, thank you very much for your testimony, gentlemen. It was superb.

On behalf of Chairman McCain, let me recognize Senator Inhofe.

Senator INHOFE. Thank you very much.

Well, first of all, just an observation here. I think you already observed this, that we've had a lot of great hearings on this condition, on the subject of today. They kind of fall into two categories. We had hearings with the uniforms present, with a lot of those people who were responsible for the mess that we're in right now. And then we've had the others, who are the outside experts. And that's—certainly, you fall in that category. We, last week, had five professors, and that was really, really useful, to see from the outside. You know, we're hanging around here, and we listen to each other. I like to listen to those who are outside.

I would also kind of single out one individual. That's Dakota Wood. He's—certainly has spent time—what, two decades in the Marine Corps, and is—has been an outstanding leader in America. And, far more significant than that, he's from Claremore, Oklahoma, and he is—and that's one of the homes of Will Rogers, so you see a lot of the characteristics that he exhibits are similar to those of Will Rogers.

So, let me read something. And this is 30-35 years ago, but—you go back, compare what—the criteria that was set out in developing a defense budget under the Reagan administration with what's happening today. And I'll ask you to respond. Of course, Dakota, you've already read this.

He said—and this is 1983—he said, quote, "We start by considering what must be done to maintain peace and review all the possible threats against our security." Okay? "Then a strategy for strengthening peace and defending against those threats has to be agreed upon. And finally, our defense establishment must be evaluated to see what is necessary to protect against any and all of the potential threats. The cost achieving these ends is totaled up, and the result is the budget for national defense."

What do you think about that strategy, Mr. Wood?

Mr. WOOD. Well, I think we have—as many members here have already noted previously, that we—this has been a budget-driven exercise, and so it's, How much money do we want to spend on defense? And then we try to make do with that. So, I think what was—what Ronald Reagan was getting at with that is figuring out what it is that you want to be in the world, where your priorities are at, and then resourcing that, commensurate with those interests.

So, it should be strategy-driven. It should be U.S. interests-driven. And then, if you want to shoulder that burden, you have to find, you know, the funding and the resources to be able to do that.

Senator INHOFE. But, to do that, it has—you have prioritize where it is. Now, I think most of us up here—I can't speak for the—all of the rest of them—that's our number-one priority of what we're supposed to be doing here. I mean, that's—even the Constitution agreed. Anyone disagree with that?

Yes, sir.

Mr. DONNELLY. It's the second part that I would disagree with. I've come to believe that—particularly since the passage of the Budget Control Act, that, in effect, what we've seen over the last 5 years is, if not an articulated strategy, a de facto strategy, wherein the President and, say, the more libertarian members of the House of Representatives agree that America is doing too much in the world, and that if we take away the means of mischief, that we'll get into less mischief. Again, I don't think that it's anything like in our—in a formal strategic review process. But, there's broad consensus that—for the United States to step back from its traditional engagement in the world——

Senator INHOFE. Yeah. Well, let me just get on record and tell you, I don't agree with that. And I have made it very clear to those individuals that you—without naming them—have this philosophy.

By the way, you were very specific in your written statement. I'd read that before you restated it here. And that is, we should—one of the things we should do is to adopt a three-theater force construct. I agree with that. And I've watched it deteriorate down, as you've pointed out, to a two-theater, and one-and-one-half, and so forth.

I'd like to know what some of the rest of you think. What about you, Dr. Krepinevich?

Dr. KREPINEVICH. Senator, I believe that we don't have unlimited resources. And so, it's never going to be possible to eliminate every threat to our security. To a certain extent, the amount we spend on defense is a function of how—of our risk tolerance. You know, the more we spend on defense, the more we can reduce the—theoretically, the risk to our security.

Senator INHOFE. Yeah.

Dr. KREPINEVICH. But, we can't eliminate it, because we don't have enough resources to do that.

I think another factor you have to consider is, what can our allies contribute? And oftentimes, it seems the more we do, the less they do. So, how do we come up with strategies to encourage our allies to do more and be less free riders on the security provided by the American people?

I think there's an element of social choice in this. You know, we have chosen, as a country, as a society, to have an All-Volunteer Force. That costs a lot of money. Other militaries don't have all-volunteer forces, and, you know, when we had a draft-era force, our costs were correspondingly less. As a society, we place a very high value on human life. We spent over $40 billion on MRAPs [Mine-Resistant Ambush Protected Vehicle], and another $20 billion on JIEDDO [Joint Improvised Explosive Device Defeat Organization], to minimize casualties. In World War II, the way the Russians cleared minefields was to move their infantry through it and consider it an artillery barrage. So, we've made a cultural and social

choice that we are going to invest a great sum of money to minimize casualties.

And I think, finally, strategy. What—you know, we—this always comes back to strategy. A strategy that—there's a group that advocates, as I mentioned, an offshore- control strategy, in the event of—as a way of discouraging conflict with China. And they call for a maritime distant blockade. That's a very different level of expenditure than what I've been talking about, which is archipelagic defense, which is quite a bit more costly.

Senator INHOFE. Yeah. I'm really sorry to interrupt you, but——

Dr. KREPINEVICH. Sure.

Senator INHOFE.—I'm well over my time right now, and I—let me just say, I kind of disagree in one area, because, in terms of the resources that we have out there, we have resources. We don't have priorities. And, in fact, in your statement you made that very clear, as to the percentage of GDP that we had at one time, and how it's deteriorated over a period of time.

So, I would only say that if you give me a written response, each one of you, in terms of this, I would appreciate that very much, and I can get that for the record, as to how the reprioritizing is—would give us the defense that we don't have now, and that we need.

[The information referred to follows:]

DR. KREPINEVICH. A reprioritization of our threats could have a major influence on the kinds of capabilities we need, where we need to position our forces within the framework of our global defense posture, and how we value our allies and their contributions.

The issue is as complicated as it is important. Unlike in the Cold War, today we face three revisionist powers in three different regions, each of which has long been deemed by presidents of both parties as vital to our security and economic well-being. I refer of course to Russia, Iran and China, which are seeking to overthrow the existing order in Europe, the Middle East and East Asia, respectively. We also confront the challenge posed by radical Sunni Islamist groups, and by proxy forces supported by Russia and Iran.

The most immediate threat is from radical Islamist groups. Yet they pose far less of a danger to our security than Russia, with its large nuclear arsenal; or Iran, whose proxies are active throughout the Middle East and who may further destabilize the region should it acquire nuclear weapons; or China, whose already formidable military potential is expanding more rapidly than that of any other major power.

Arguably the greatest threat to our long-term security involves the rise of China. Russia is beset by various woes—economic, demographic, and institutional—that will likely make them less of a threat over time. Iran's regime faces challenges that can be exploited, including an increasingly restive population at home and an apparent protracted decline in oil and gas prices. Here as well time seems to favor the United States. Thus, as your question suggests, we need to decide not only on what priority we give to addressing these threats, but also whether we places primary emphasis on near-term or longer-term readiness.

My personal view is that, since the threats to our security are growing, we need to increase significantly our defense effort across the board in the short term with respect to the threats outlined above.

In terms of relative emphasis, we need to devote a greater share of our resources to address the challenge posed by China. As I believe that, unlike China, time is on our side with regard to the challenge posed by Russia, I would anticipate that over time our defense effort in Europe would slowly decline. The same goes for Iran (unless it acquires nuclear weapons) and the radical Islamists. (I would be happy to discuss the reasons for my prioritization with you if you like.)

If you subscribe to this line of thinking, we will need a bigger military than the one currently envisioned in the administration's defense program, but also a significantly different kind of military. We would also need to make significant adjustments in our global basing posture and in what kinds of contributions we ask of our allies and partners.

DR. PREBLE. I believe that my written testimony addresses this question. We should reprioritize threats, and encourage—and in many cases demand—that capable allies take the lead in defending themselves. This would enable them to address those threats that are most urgent and proximate to them, and allow us to focus on a more manageable roster of threats to U.S. vital national interests. I would call attention to the following passage from page 3:

"I do not believe that we are living in the most dangerous time in human history, or even in my lifetime. There are dangers in the world; there always have been, and there always will be. We are quite good at identifying a dizzying array of possible threats. An effective national security strategy will prioritize among them, and identify the best tools to mitigate them.

"In that context, the key question is what Americans should be prepared to do to address which threats, and what will be expected of others. Whether you agree with me or not about today's threats as compared to those a generation ago, or a century ago, the best approach would involve many countries who are willing and able to confront potential local or regional challenges.

"Under the current model, the United States is expected to address all threats, in all regions, at all times. We need a new grand strategy, one that expects other countries to take primary responsibility for protecting their security and preserving their interests. We need a resilient international order, one that is not overly dependent on the military power of a single country. We need capable, self-reliant partners. And we must restrain our impulse to use the U.S. military when our vital interests are not directly threatened."

A grand strategy of resilience, self-reliance and restraint adopts a particular view of "defense" that is quite different from the conventional wisdom in Washington, DC, and among foreign policy elites. My colleague Benjamin Friedman and I addressed this confusion around "defense" several years ago. The relevant passages are excerpted below:

"The United States does not have a defense budget. The adjective is wrong. Our military forces' size now has little to do with the requirements of protecting Americans. The U.S. military is supposed to contain China; transform failed states so they resemble ours; chase terrorists; train various militaries to do so; protect sea lanes; keep oil cheap; democratize the Middle East; protect European, Asian, and Middle Eastern states from aggression and geopolitical competition; popularize the United States via humanitarian missions; respond to natural disasters at home and abroad; secure cyberspace; and more. The forces needed to accomplish this litany of aspirations can never be enough. Hence, neither can the defense budget. But the relationship between these objectives and the end they are supposed to serve—the protection of Americans and their welfare—is tenuous.

"In fact, defining the requirements of our defense so broadly is counterproductive. Our global military activism wastes resources, drags us into others' conflicts, provokes animosity, drives rivals to arm and encourages weapons proliferation. We can save great sums and improve national security by adopting a defense posture worthy of the name. Arguments about defense spending are arguments about defense strategy. What you spend depends on what you want to do militarily, which depends in turn on theories about what causes security. A more modest strategy—restraint—starts with the observation that power tempts the United States to meddle in foreign troubles that we should avoid. Restraint means fighting that temptation. It would husband American power rather than dissipate it by spreading promises and forces hither and yon."

MR. WOOD. If we believe that the threats posed by large states like Russia and China, who possess large nuclear inventories and very large, advanced, combined arms militaries, are real and more profound than the sort of threat posed by terror groups (suicide bombing of limited effect by comparison), then we should account for the carnage and loss of high-end conventional warfare . . . meaning, our thinking about force size, shape, capabilities, and use must account for attrition. Our current force and its capabilities, and the type of force we are currently funding and equipping with our modernization programs, can easily handle the sort of operations we have been engaged in since 9/11/2001. But it is not a force that can sustain substantial combat losses over time nor the rate of munitions expenditures that would occur in a "real" war against a large-scale, competent opponent. I realize I keep returning to this issue of "capacity" but I believe it has been entirely overlooked in current discussions about defense capabilities. Try imaging a return of land warfare in Europe should Russia attempt to expand its aggression to include the Baltics or perhaps Poland, if the U.S. needs to get serious in contesting Chinese expansion in the South China Sea, or coming to South Korea's aid should North Korea decide to renew hostilities. We do not have the ability to sustain operations in the face of the type of combat losses that would accompany such scenarios. As I stated in my writ-

ten testimony, our current modernization program (its high cost) is leading us to a well-equipped but small force.

Senator INHOFE. Thank you, Mr. Chairman.

Senator REED. Thank you very much.

And, on behalf of Chairman McCain, let me recognize Senator Manchin.

Chairman MCCAIN. Thank you, Mr. Chairman.

And, to all of you, thank you for being here and bringing your expertise, and sharing it with us.

And I'll start with you, Mr. Brimley, but I'd like all five of you to answer as quickly as you can, because we're really limited on time. But, if you could tell me what you think the greatest threat to our national security is, what—in your mind, what our greatest threat to our national security is.

Mr. Brimley.

Mr. BRIMLEY. Thank you, Senator.

At the risk of being, maybe, somewhat provocative, I'd say the number-one threat is, you know, our policymakers and the American people overestimating the ability—the abilities of the U.S. military to close with and destroy and confront and deter our enemies. I think that there's a growing gap, as I talk about in my written statement, between what our forces are designed to do and what our adversaries can contest us with. And I think—I would hate for the country to experience a level of strategic surprise——

Senator MANCHIN. You think we overreach——

Mr. BRIMLEY.—associated——

Senator MANCHIN.—may be overreaching?

Mr. BRIMLEY. I think there's an element of overreach, but, as the Chairman talked about in his opening statement, I think there's also an element of underreach, as we see, I would argue, in places like Syria and Iraq.

Senator MANCHIN. Mr. Donnelly?

Mr. BRIMLEY. I think there's a balance there.

Mr. DONNELLY. I would say the rise of Iran as a potential hegemon in the Middle East is really the——

Senator MANCHIN. Greatest threat we face?

Mr. DONNELLY. Because the Middle East is such a mess, and it's so critical to the whole system. It's the——

Senator MANCHIN. Yeah.

Mr. DONNELLY.—the point of most likely failure. And again, Iran's bid for hegemony there is——

Senator MANCHIN. Dr. Preble?

Mr. DONNELLY.—is the thing.

Dr. PREBLE. I think the greatest threat is what threatens our greatest strength, which is our ability to mobilize power through a strong, vibrant economy. And therefore, the greatest threat to our country is some—are the things that undermine the strength of our economy and reduce our ability to mobilize in the future.

Senator MANCHIN. Mr. Wood?

Mr. WOOD. Two different types. One is actors that can operate at scale, so when you have somebody like Russia or China, profound implications that dominate entire regions with very deep nuclear magazines. That's a different kind of threat than a North

Korea or Iran, which can be very sharp and erratic, and very pointed.

Senator MANCHIN. I'm just talking our national security, the greatest threat. So, you think Russia, with——

Mr. WOOD. I do. I think the more profound, enduring kinds of challenges are Russia and China.

Senator MANCHIN. Dr. Krepinevich?

Dr. KREPINEVICH. I would agree with Dakota Wood, in that I think the threats that could destroy us as a society, as a country, emanate from Russia and China. I think it's—the existential threat is nuclear conflict, although I would expand that to say that there is a blurring between nuclear and conventional weapons that's been occurring for the last 15-20 years or so, lower-yield nuclear weapons, more powerful conventional weapons, not clear. When you have a Russian military doctrine that says you escalate to nuclear use to de-escalate a conflict, that worries me.

Senator MANCHIN. Let me take this to another level now, if I may, sir. I'm so sorry to cut you off. Our time is so short up here.

I asked this question 5 years ago, and I had Joint Chiefs of Staff before me, and I'm brand new, 5 years ago, coming into the Senate. And I asked the question. And I was—Admiral Mullen, we asked—it was asked of Admiral Mullen, and I was intently listening, and everybody—"You all give me your opinion." He never blinked an eye, and he said, "The debt of this Nation is the greatest threat that we face." The debt of this Nation is the greatest threat we face.

So, Dr. Preble, I would say to you, Do you believe that we have enough money in the system—in the system, Department of Defense—if we can make the changes? Or are we unwilling to make the changes because we're going down a path where, if you throw more money—and I'm going to put it to you this way. I asked my grandfather one time, I said, "Hey, Papa, what's the difference between a Democrat and Republican?" "Oh," he says, "No problem, honey, I can explain that to you. If you put a pile of money on the middle of the table, tax dollars, they'll both spend it all, Republicans will feel bad about it, but they'll all, above all, spend it." So, with that, I don't think we can print enough money.

Tell me if we can make—if we just have to make sure we have enough.

Dr. PREBLE. We could, if we chose, fund our military at the level that Mr. Donnelly is talking about, or more, 4 percent, 5 percent, or more.

Senator MANCHIN. Sure.

Dr. PREBLE. We could. I don't think it's wise to do so. In real-dollar terms, because our economy has grown so much over the years, thankfully—in real-dollar terms, what we're spending now on our military is higher than the Cold War average in inflation-adjusted terms. So, we have——

Senator MANCHIN. So, we're not getting the bang for a buck.

Dr. PREBLE. Correct.

Senator MANCHIN. Gotcha.

What—I mean, so you're saying that we make some adjustments. It's not that we're—taxpayers are—I want to make sure we're giving our military everything we've got.

Dr. PREBLE. Right.

Senator MANCHIN. I totally committed to the military. But, people question about the money we're throwing at it, or the money that they're demanding, because I don't think you can print enough.

Dr. PREBLE. That's right, sir.

Senator MANCHIN. And you think it could be revamped.

Dr. PREBLE. Yes, sir.

Senator MANCHIN. And still protect our Nation. And still be a superpower of the world.

Dr. PREBLE. Yes, sir. All true. All the above.

Senator MANCHIN. Do any of you have any comments to that?

Dr. KREPINEVICH. Just a quick comment. If you look at the Cold War era, we spent an average of over 6 percent a year of our GDP on defense. We're on a path now to go below 3 percent. That's not the ultimate metric. A lot of that has to do with how wisely is the money spent, how great is the threat? My point was, the threats are growing——

Senator MANCHIN. Well, you all are using different parameters. I——

Dr. KREPINEVICH. Right. But——

Senator MANCHIN. You're using a different—Mr. Preble, and he's——

Dr. KREPINEVICH. Right.

Senator MANCHIN.—using GDP. And you're——

Dr. KREPINEVICH. Right. Well, the——

Senator MANCHIN.—using basically——

Dr. KREPINEVICH.—the point I want to make is, in terms of our overall national wealth, we are not in financial trouble because we're spending too much money on defense.

Senator MANCHIN. Gotcha.

Dr. KREPINEVICH. Paul Kennedy once spoke of imperial overstretch, the decline of great powers because they spent too much on defense. We are in the throes of entitlement overstretch and an unwillingness to fund those things that we actually want. And so, we're deferring that—we're deferring that burden to the next generation, and sticking them with the bill for what we're unwilling to pay for now.

Senator MANCHIN. Mr. Preble.

Dr. PREBLE. May I say, Senator, that I do think you will find a rare area of agreement of all five of us, to what he just said. We are not in fiscal distress because of the money we spend on our military.

Senator MANCHIN. Gotcha.

Dr. PREBLE. But, raising money—to increase the amount of money we spend on the military is constrained by the other things that we are spending on.

Senator MANCHIN. Thank you, Mr. Chairman.

Chairman MCCAIN [presiding]. I will be showing the committee the decline in the size of our military in the number of ships, in the number of brigade combat teams, in the—and also commensurate decline in capabilities, Dr. Preble. I know of no one who believes that we have sufficient capabilities to meet the challenges

that we face today, which have been outlined, at this percent of our gross domestic product. We just have an honest disagreement.

Senator Sessions.

Senator SESSIONS. Thank you, Mr. Chairman, for your opening comments and those of Senator Reed. I believe they're very wise and raise some very important questions that all of us need to think a lot about.

With regard to the question of debt being the greatest threat, well, I think the Admiral, in one sense, if you take it in this sense, was correct, that the larger our debt, you get to a point where you can't function anymore, and everything gets squeezed. So, if he's trying to maintain a certain defense budget, as long as our defense—our debt continues to surge, then it does inevitably squeeze the defense budget. Wish it weren't so, but it does. So, we tried to fund an increase in the defense budget this year, on the Republican side, based on the dangers that have surged around the world, and the President insisted that we equally defend—raise the same amount of money for nondefense. I mean, so at double the cost. This doesn't help us.

I believe, Mr. Krepinevich, you mentioned our allies' contributions. Met with some Germans recently, and we were in Estonia. Estonia is at 2 percent of GDP on defense. Germany is at 1.3. The German presiding officer here, with a good delegation, stood up and said, "I agree," when I raised this question, that it is unacceptable that the United States spends 70 percent of the cost of NATO. "You are correct, Senator," basically is what he told me. Secretary Gates, last week, talked about his plea, demand to Europe that they do a better job. And you, I believe, indicated that sometimes when we raise our spending, our allies reduce their spending. How do we deal with this?

Dr. KREPINEVICH. I think, Senator, we have inherited, or we have, right now, an alliance portfolio that we constructed in the 1950s, in a very different time, with a very different security environment. I think, if you look at the situation now, as we revise our strategy, I think it's also time to revise our alliance portfolio. Not to say that we dismiss long-term allies with whom we still have security interests, but I think, for example, in the case of Europe, we're going to have to look more to the eastern European countries and less to those of our traditional western European allies. I think, in the Middle East, obviously, Israeli is—the Israelis are, in a sense, a—you know, almost a de facto ally. There are other countries in the region, like the UAE [the United Arab Emirates], for example, that show an increasing interest in stepping up and providing for the regional defense.

Japan—I was in Kyushu, a few months back, their western army command. I was amazed at the level of effort they have going on right now on Kyushu and in the Ryukyu Islands in implementing what I call archipelagic defense. And I think the Abe government is gradually moving toward a more robust defense posture. We have non-allies, for example, like Singapore. The level of interest in contact between Japan and India is striking. So, I think part of it is to look at countries who live in dangerous neighborhoods. I mean, I think, to a certain extent, West Europeans haven't come to realize that their neighborhood is still dangerous.

Senator SESSIONS. Well, I think it's a problem. We need to keep the pressure on.

Mr. Donnelly, it seems to me that a big change has occurred—I'll ask you, from your experience, to comment—in the Middle East if Iran gets a nuclear weapon. I mean, there's not a country in the Middle East that this United States military couldn't topple its government in short order. But, is there a historic alteration of those circumstances that—if Iran would obtain a nuclear weapon?

Mr. DONNELLY. I think Iran is already getting the benefits of threatening to have a nuclear weapon. Again, I would offer that Iran's goal is regional hegemony. And then the nuclear question is—was a means, first of all, to deter us, but, secondly—so, they're getting the things that they wanted, and they're actually enjoying a run of success, as one might say, without—and they have the prospect of possibly having a legal nuclear capability within 10 years. So, they have a very clear path to becoming the dominant power in the Middle East without even having to cross the nuclear threshold, at this point. So, I think we kind of find ourselves in a worst-of-both-worlds situation, where the Iranians are getting what they want, and we're acquiescing on that, if not enabling it.

Senator SESSIONS. Well, thank you.

We're talking about strategy. I'll just—my time's up, but I notice Secretary Gates, last week, when he talked with us, said, "My concern is, we don't have an overriding strategy on the part of the United States in this complex challenge over the next 20 to 30 years." He says, "We seem to be thinking strictly in a—sort of month-to-month terms." I think that's a tremendously devastating comment by the Secretary of Defense that served in this administration and a previous administration, a man of great wisdom and experience. I don't believe we do have a strategy. And I think it's important—and I think it's possible to do it in a bipartisan basis.

Thank you.

Chairman MCCAIN. Senator Shaheen.

Senator SHAHEEN. Thank you, gentlemen, for your very thought-provoking testimony this morning.

I've been in several countries in Europe in the last 4 or 5 months, and one of the things that I heard everywhere I went was concern about our inability to respond to the propaganda that's being put both by Russia and by ISIS [the Islamic State of Iraq and Syria], and the impact that that is having on the potential for us to be successful in eastern Europe, in the Baltics, in Latvia, and we know the numbers around recruiting that ISIS has done in the Middle East. But, I was interested that none of you mentioned that, even though former Secretary Gates, last week, talked about our failure, that we have even dismantled USIA [United States Information Agency] in the '90s because we thought it was no longer needed. I wonder if anyone would like to comment on the need to do a better job, and the role that the Department of Defense should have in our response to the propaganda that's coming out of Russia and other opponents that we face.

Dr. Preble, you wanted to go first?

Dr. PREBLE. Senator, if I may, just quickly. I'm not—to your last point, I'm not convinced this is the right field for the Department of Defense. I'm not convinced of that. But, what I think we're see-

ing, strangely, is, in the same way that I talked about the proliferation of technology to nonstate actors, we're also seeing the proliferation of information and the ability of nonstate actors and weak states to control the information in a way that, not so long ago, was controlled exclusively by states.

Now, we recognize that there is a double-edged sword there, because state-controlled media also has its problems. And so, I think we just have to recognize that we are in a different environment in which it is far harder for a single large entity, even as large and as powerful as the United States, to shape that narrative. We have to rely on many more sources of information to sort of drown out that of ISIS or Russia, as the case may be.

Senator SHAHEEN. Mr. Donnelly?

Mr. DONNELLY. I think the problem is the message, not the means. I mean, young men with very few prospects respond to the spectacular violence that is in the ISIS videos. Vladimir Putin takes his shirt off and tries to look at virile as possible. So, our problem is that we don't have a message of strength, which is not the only message that we should be committing, but—communicating, but one that we must communicate. And it's just not very convincing. Because there's a proliferation of means of communication, I'm sure we would win this battle, and that it wouldn't require much government intervention to, you know, get the message out. It would just be nice to have a better message to try to communicate.

Senator SHAHEEN. Well, it's not clear to me that we're communicating much of a message at all at this point.

Mr. DONNELLY. I think we are communicating a message. I think we're communicating a message of withdrawal and retreat, loud and clear.

Senator SHAHEEN. But, I mean, we don't have a strategy and a means by which we are actively looking at responding to the propaganda that's coming out of Russia and ISIS.

Mr. DONNELLY. Again, I would just offer that the way to defeat their propaganda is to defeat their narrative, and we don't have a convincing story to tell at this point.

Senator SHAHEEN. Anyone else want to respond to that?

Mr. WOOD. Well, I agree with the general tenor of the discussions here. To counter propaganda, you have to be confident of who you are, what you represent, and why what you're offering is better than the other guy, right? So, what we're seeing is a lack of confidence, a lack of clarity of message, and a lack of assertiveness in saying that the United States, our value systems, and what we represent is a better path, that it's something better than the opposition. But, I think what we have been focusing on was actually the core idea of this particular panel. It had to do with military capabilities, force structure——

Senator SHAHEEN. Well, I—no, I understand that that was the idea, but I'm suggesting that we're missing a critical element of what should be part of our military—or at least our national security strategy.

Dr. Krepinevich?

Dr. KREPINEVICH. Just—and I'm not an expert on this by any means—but, it seems to me, fundamentally, we're talking about

the old story of hearts and minds. If you're trying to mobilize people, can you win their hearts? Can you, you know, convince them that you're going to provide a better future for them than the other side? And then minds. You can win my heart, but if, in my mind, I think the other side's going to win and I'm going to have to live with them, then you've lost me. So, hearts and minds. The—so, it's important to have the good narrative to win the hearts, but it's also to—also have the capability and a strategy that convinces them that, ultimately, you're going to succeed.

There's also a problem with the way the message is communicated. You know, the Russians present one problem, because it's state-based media. Groups like Daesh [ISIL], you know, they take advantage of modern technologies to reach mass audiences that—you know, 20-30 years ago, a nonstate entity couldn't dream of reaching. And so, you're looking at mass audiences, you're looking at a lot of microclimates, where you—it's almost a highly segmented market. And I think we're at square one on a lot of these issues. And it's—I think strategic communication is going to be—I don't know if it's a mission for the military. We used to call it propaganda. But, I do think it's going to be a mission for the U.S. Government, and an important one, because of the—what I would call the democratization of destruction, the concentration of greater and greater destructive power in the hands of small groups.

Senator SHAHEEN. I certainly agree with that.

And my time is up, but I would just make an observation as you talk about what kind of message are we communicating. As we watch the tens of thousands of refugees who are fleeing the Middle East, and conflicts in Afghanistan and Iran and Syria, they aren't fleeing to Russia or Iran. They're fleeing to the West, because they want to live in countries that have strong economies and have values that support—democratic values. And so, I would say we have a strong message. We're just not doing a very good job of communicating that.

Thank you, Mr. Chairman.

Chairman MCCAIN. Senator Ernst.

Senator ERNST. Thank you, Mr. Chair.

Gentlemen, thank you for being here today. This has been a very interesting discussion as we talk about strategy and force structure.

December 13th, 1636. That's the birth date of our modern National Guard. And, of course, I'm very proud of our National Guard's capabilities. And we have seen the National Guard participate in conflicts all around the globe, as well as in support roles in places such as Kosovo and Honduras and many other types of exercises around the world. And I would like to hear a little bit from all of you about what role that you think the Army National Guard should play. As I mentioned, we've been in support, combat sustainment roles, but we've also served in combat roles, as well. Just recently, our 2nd Brigade Combat Team from Iowa actually occupied battlespace in Afghanistan. So, there is an increasing reliance upon the Army National Guard, and they respond quite well, I believe, to the needs of the United States and our forces.

I would like to know that—if you believe the Army National Guard should be designated as an operational reserve of the Army, and if so, why, or, if not, why not?

Dr.—excuse me—Krepinevich? Say that for me, please.

Dr. KREPINEVICH. You said it right, Senator.

Senator ERNST. Okay, fantastic.

Dr. KREPINEVICH. Thank you. Thank you so much.

Senator ERNST. Thank you. I apologize.

Dr. KREPINEVICH. No, no, no.

Again, I think that gets back to Admiral Fisher's question, you know, "Tell me how you're going to fight. Tell me how you're going to deter." I think one of the big growth areas—if I could—if it's Krepinevich's strategy, I think, over the next 20 years, the big growth area in ground forces is going to be in rocket artillery, air defense, missile defense, coastal defense, and strike. I think that's going to be essential to have an effective defense of the first island chain. So, I think, in terms of an operational reserve or a second wave force or a reinforcing force, I think the National Guard could perform a function there.

In the Persian Gulf, if we were—I think the Guard, of course, has many capabilities that would support a low footprint mission, but also, if we had to have an expeditionary force there, obviously you're going to have to mobilize a certain amount of force. Again, I think a support—major growth area for there would be rocket artillery in its various forms.

And then, in eastern Europe, if you buy my idea that a tripwire force is what we're going to need because of limits on, you know, finances and manpower and so on, if we were to develop our own anti-access area-denial bubbles in eastern Europe, we would be relying on a lot of those kinds of systems, as well.

So, to the extent that the Guard—and I worked with the Guard a long time ago, in—when we had something called ARADCOM, the Army Air Defense Command——

Senator ERNST. Correct.

Dr. KREPINEVICH.—and they were off the charts, in terms of their capability and expertise in that area. So, I think certainly it's an operational reserve for those kinds of tasks. I think the Guard could perform a valuable function.

Senator ERNST. Wonderful. Thank you. I appreciate that.

Mr. Wood?

Mr. WOOD. I view it more as a strategic reserve, selected operational reinforcement of Active Army formations. And we've talked about the proliferation of technology, the increasing complexities of military operations, especially when you're coordinating and synchronizing operations at higher levels, when we talk about distributed operations—I mean, there's a skill set that becomes ever more complex and takes a lot of time to develop competencies in those areas. And so, I think the Active component, doing that 24/7, is a force of choice to go off and do these kinds of things that we're talking about, but you only have so much of that, so I think the strategic reserve capability, and then, in selected skill sets, where you could have Army Reserve, other service Reserves and National Guard units that would develop those kinds of things so it would plug into a larger structure. So——

Senator ERNST. Very good. Thank you.

Dr. Preble?

Dr. PREBLE. Quickly. I've spoken a little bit to this question in the written testimony. I have traditionally thought of the Reserves as a strategic reserve. And that was, of course, the intent when we moved away from the conscripted force to a volunteer force, that is to augment that smaller Active Duty well-trained force.

I do see value in engaging the public and communities in a way, when we wage war abroad and there are people from their community that are drawn away from their jobs and their families in a way that they weren't intending, because they're not full-time Active Duty, then it seems, at a minimum, we should have had a debate, or then we are having a debate, over where exactly are we fighting, and why. So, if it were—if we were to move to an operational reserve, and it also engendered a debate over the wars that we're fighting, and why, then I would support it.

Senator ERNST. Okay. And very briefly—my time is expiring—Mr. Donnelly.

Mr. DONNELLY. I would tend to more agree with—well, actually, both Andy and Dakota. You know, there used to be a National Guard artillery brigade that had long-term associations with every Army division. We got rid of those some time ago. So, there are roles that the Guard can play for early deployment, and so on and so forth, but if we find ourselves in a situation as we found ourselves, say, in 2006-2007, where we were using anything that looked—wore a uniform as a soldier, that is a testament to bad strategic planning and bad force planning.

Senator ERNST. Yes. Thank you.

Mr. Brimley?

Mr. DONNELLY. And not a knock on the Guard at all.

Senator ERNST. Mr. Brimley.

Mr. BRIMLEY. I would just quickly say, Senator, that the Guard is an operational reserve. They've been used that way for the last 10-plus years. And so, in my mind, I see them that way. I think there's value there. There's hundreds of thousands of former Active Duty troops who are now populating the National Guard. So, now is the time to think through, if they're to be used that way, how to do so.

I would just say that I'm a little bit—I've been frustrated to see relations between the Active Army and the Army National Guard deteriorate in recent years. I think there's—and there's a lot of blame to go around, there. But, I've been frustrated that the Active Army doesn't seem to think about the Total Army. It seems to think, first and foremost, about the Active Army, and then, and only then, do we think about the Army National Guard, and, to a lesser degree, the Army Reserve. I think, as you think about looking at Goldwater-Nichols, one of the questions we should be asking is, Has the elevation of the Chair of the National Guard to four-star status inside the formal Joint Chiefs of Staff—has that had second- and third-order effects that have complicated the relations between what should be a cohesive total Army?

Senator ERNST. Yes. And that is a debate that we have had in recent months, as well. I do see an effort by General Milley and

General Grass to repair some of the conflict that we've had in the past.

So, thank you, gentlemen, very much.

Thank you, Mr. Chair.

Chairman MCCAIN. Senator Hirono.

Senator HIRONO. Thank you, Mr. Chairman.

And thank all of the panelists.

I do agree, Mr. Brimley, that we should have a close relationship—strong relationship between the Active Army and the National Guard.

You noted, in your testimony, that we have focused, militarily, on the quality of our military, and that we had—we held a technological edge, which is being eroded. And I do think that, when we lose our technological edge, then numbers begin to matter more, because, when you look at China and their modernization of its military, they will have more ships, more planes, et cetera. And, while they may not have the technological capability in these assets that we do, at some point their superiority in numbers shift and becomes a qualitative advantage.

So, when we focus on the technological edge that we need to retain, what would you suggest that we do? What specific things should we do to retain and regain our technological edge?

Mr. BRIMLEY. In my written—thank you, Senator—in my written statement, I outline some ideas in some depth. I would highlight two things for you now. One is to really make sure that all the services are embracing, truly embracing, the shift to unmanned systems and unmanned robotic systems. Some services are doing better than others. One of the debates that Chairman McCain is engaged on is the future of the carrier air wing, and the debate surrounding what unmanned aircraft from the carrier ought to look like, what would their roles be, how much—and what would their missions be. And I think that's an area where the Navy really needs to be pushed hard. Anytime you have emerging technology that fundamentally calls into question the role of traditional, say, pilots in this regard, you'll get a lot of natural bureaucratic tension and friction. And I think that's an area where civilians can really play a strong role, both inside the Pentagon and also in Congress.

Senator HIRONO. Mr. Donnelly, you noted, in your testimony, that you recommend the three-theater construct involving Europe, the Middle East, and East Asia. And in your looking at what we do in East Asia, could you elaborate a bit more on what we're doing with regard to an East Asia strategy, construct, and what more we should be doing there?

Mr. DONNELLY. Well, the policy of this administration has been to pivot to East Asia. And that's problematic, to begin with. Global powers don't pivot. It's not a kiddie soccer game, where everybody sort of follows the bouncing ball. But, I would say that it's notable where the Chinese are probing, in southeast Asia, where we are most absent. They are much more cautious when it comes to poking the Japanese, for example, in northeast Asia. So, despite the fact—I mean, I would agree that the development of Chinese military power is an important element and an essential issue for defense planning. But, the first order of business is get some presence there. Secretary Carter made a big deal the other day about the

fact that we were sending a destroyer to, you know, reestablish freedom of navigation. Again, the striking thing about that, to me, was not what was being done, which was very welcome, but the fact that it had taken so long to do it and that it required a couple-billion-dollar Arleigh Burke destroyer to safely go in those waters again. If we had been there over the course of the past couple of decades, maybe the reefs wouldn't have been paved into an airfield——

Senator HIRONO. So——

Mr. DONNELLY.—in the first place.

Senator HIRONO. Excuse me. Are you suggesting that we need a stronger forward presence in East Asia?

Mr. DONNELLY. Absolutely.

Senator HIRONO. And also to work——

Mr. DONNELLY.—southeast Asia.

Senator HIRONO.—a lot more closely with our allies in this area?

Mr. DONNELLY. Absolutely. The Filipinos are desperate to have us return to the region. Again, in this conversation about allies, we should focus on the allies. They were really front-line states, and they're the ones who are, again, most interested in having us return. And what they provide, which is a battlefield, is something that is very hard to put a pricetag on.

Senator HIRONO. For Dr. Preble and Dr.—Mr. Donnelly, I'd like your reaction to—a recent hearing, Dr. Thomas Mahnken, from the School of Advanced International Studies, stated that, "Strategy is all about how to mitigate and manage risk." And he feels that the U.S. has grown "unused to having to take risks and bear costs." Do you believe that we, as a Nation, have become too risk-averse? To both of you, to Dr. Preble and Mr. Donnelly.

Dr. PREBLE. I wouldn't say risk-averse. I would agree with the rest of the statement, which we have become less capable or adept at prioritizing. I think that, when we do see great risk-aversion, especially in the admirable desire to not see American soldiers be killed overseas, the question is, is the mission vital to U.S. national security? And I think you're much more risk-averse and much more averse to casualties when there isn't a clear sense of how that mission is serving U.S. national security interests.

Senator HIRONO. Very briefly, Mr. Donnelly?

Mr. DONNELLY. I would have a different definition to strategy, that is to achieve our national security goals, not so much to mitigate risk, per se. But, I do not believe that this Nation is risk-averse, if properly led.

Senator HIRONO. Thank you.

Thank you, Mr. Chairman.

Chairman MCCAIN. Senator King.

Senator KING. Mr. Chairman, before I begin my questioning, an inquiry of the Chair or perhaps of staff. What is the budget agreement due to the unfortunate veto of the national defense bill? Do we know?

Chairman MCCAIN. I think the deal is—would entail a $5 billion reduction that we, on the committee, are trying to work through; instead of $612 billion, it would be $607——

Senator KING. But, would the veto still—do we have to act on the veto, or is it withdrawn, or—what's the procedural situation?

Chairman MCCAIN. I—you know, I don't think you can withdraw a veto. I think we—I think we're going to have go through the drill again. Isn't that your understanding, Jack?

Senator REED. I do think so, sir.

Chairman MCCAIN. Yeah. I think we have to go through it again.

Senator KING. You mean repass the bill or override the veto?

Chairman MCCAIN. I think what we have to do is readjust the authorization by looking at the elimination of about $5 billion out of authorizing, then move it through the process again, I'm afraid. I hope not, but I'm afraid that——

Senator KING. I hope not, as well.

Chairman MCCAIN. Yeah.

Senator KING. I'm going to ask some fairly narrow and specific questions. I was surprised when you all said what you thought the most serious threat was. To me, the most serious threat is capability plus will. And what makes me lose sleep is North Korea. They certainly are developing the capability, and their will is unpredictable, as opposed to Russia or China, that have some semblance of a rational calculation of their interests.

Mr. Brimley, your thoughts about—I just don't want to wake up and say, "Who knew the—North Korea was going to fire a nuclear weapon at the West Coast?"

Mr. BRIMLEY. Thank you, Senator. I think that's an excellent observation. Certainly, in the near term, that is a huge strategic concern. I think the longer-term threat that is somewhat typified by your comment is the marriage of increased capability.

Senator KING. That's right.

Mr. BRIMLEY. And 15 years ago, in North Korea, to have an intercontinental ballistic missile that they could mate with a nuclear warhead that could target the continental United States would have been unthinkable.

Senator KING. And, of course, the follow-on question is, jihadists with a nuclear weapon in the hold of a tramp steamer.

Mr. BRIMLEY. Indeed. In 2004, Fareed Zakaria wrote a book called "The Future of Freedom," where he talked about the democratization of violence. And that's essentially what's happening in the international system. And what most concerns me in that world is, when precision-guided munitions are available to all of these actors, it's very scary.

Senator KING. Well, what bothers me about North Korea is that we all seem to be commenting and saying, "Oh, yes, they're developing nuclear weapons, they're developing a missile," and my question—and I'd like to take this for the record—is, What should we be doing about it, if anything? What are our alternatives?

[The information referred to follows:]

DR. KREPINEVICH. By far the greatest threat from North Korea is its nuclear capability. While very modest compared to our arsenal, Pyongyang is estimated to have as few as 6 to 8 weapons to as many as one or two dozen "weapon equivalents." (The term "weapon equivalents" is derived from estimated stockpiles of weapons-grade uranium and plutonium.) These weapons could be delivered by several means, including aircraft and ballistic missiles, or by something as simple as a cargo ship.

Given the likelihood that nuclear use by North Korea would trigger a devastating response that would end his regime, Kim Jong-un might be tempted to employ nuclear weapons only he believed his regime is directly threatened. If, for example, the North Korea economy were on the verge of collapse and Kim feared either a popular uprising or a military coup, he might view the use of nuclear weapons as the only

way left to him to extort large-scale economic assistance from Japan, South Korea, and/or the United States. He might use one as a "demonstration" with attacks on neighboring countries to follow if his demands were not met. Or he might seek to inflict as much damage in a nuclear strike in an effort to exploit the advantage of surprise.

There are several military actions the United States might (in conjunction with Japan and South Korea) take to reduce this threat. One is to enhance our air and missile defenses. Another is to develop munitions (such as earth-penetrating conventional weapons or advanced-design, low-yield nuclear weapons) capable of destroying the North's nuclear arsenal if it became clear Kim intended to employ such weapons.

Perhaps the most important factor in deterring Kim from employing nuclear weapons is to convince him that it will not spare his regime or him personally. This is not a matter so much of our weaponry as it is of Kim's perception of our current and future president and his/her willingness to follow through with such a threat if Kim were to employ nuclear weapons.

DR. PREBLE. I asked my colleague Doug Bandow, a senior fellow at the Cato Institute, to address this question. Doug has written extensively about North and South Korea, including, most recently, *The Korean Conundrum: America's Troubled Relations with North and South Korea,* co-authored with Ted Galen Carpenter. He has traveled extensively in the region, including a visit to North Korea in 1992. (His bio and links to his writings can be found here: *http://www.cato.org/people/doug-bandow.*) Mr. Bandow replies:

"For more than two decades Washington has tried both engagement and isolation with North Korea, but the latter's behavior has remained essentially unchanged. Today Pyongyang likely is a nuclear power, though with very limited capabilities. In the coming years it could have an arsenal like those possessed by Pakistan and Israel.

"That would be bad news, but the threat to America posed by the North is largely self-induced. North Korea aims its rhetoric at the United States because Washington confronts Pyongyang over issues of greatest interest to South Korea. American policymakers should shift responsibility for dealing with the North to Seoul and other regional players.

"The Democratic People's Republic of Korea is a brutal dictatorship. The regime possesses a large conventional military positioned for war and a growing arsenal of missiles and WMD. Nevertheless, the Kim dynasty's overriding goal appears to be regime survival.

"Washington should adopt a new approach, reducing confrontation between the U.S. and the DPRK. First, the U.S. should turn over responsibility for defending the Republic of Korea to South Korea, which possesses around 40 times the GDP and twice the population of the North. More than six decades after the Korean War ended the ROK should stop relying on American troops and taxpayers for its security.

"Second, Washington should acknowledge that North Korea is very unlikely to negotiate away its nuclear arsenal. Current policy has failed spectacularly. Indeed, there is little that any nation, probably including China, can do to influence decisions on regime security in Pyongyang.

"Washington should allow South Korea to take the lead in formulating policy toward the North. The U.S. also should indicate its willingness to open low-level diplomatic relations and initiate discussions with Pyongyang over a range of issues, including human rights. Further, the U.S. should approach Beijing, offering to work with it to address China's concerns over the potential consequences of a North Korean implosion in order to encourage it to put more pressure on the North. Moreover, American officials should share the North Korean problem with China, indicating that Washington would reconsider its opposition to South Korean and Japanese nuclear programs if the North continues to enlarge its arsenal.

"U.S. policy in Korea has succeeded admirably, allowing the ROK to develop a prosperous democracy. But foreign policy should reflect the ever-changing threat environment. Today Seoul can take over its defense. Equally important, as America withdraws its forces from the peninsula, Washington should off-load responsibility for promoting nonproliferation onto the North's neighbors, including China."

MR. WOOD. Review the type and amount of support we are providing to South Korea. North Korea is deterred by power. To the extent it perceives South Korea as weak, or alone (lacking robust support from the U.S. or others), it sees opportunity and inventive to act provocatively. The Kim regime must assess that its survival is at risk should it behave too badly. At present, this is the only factor that seems to moderate its behavior.

Senator KING. Second point, on the issue of the budget and Joe Manchin's questions, and Senator Sessions. I did a little quick calculation. If interest rates return to historic levels of 5.5 percent, the differential—the increase of 3 and a half percent between what we're running now—would exactly equal the current entire defense budget. It would be over—it would be something like $630 billion, just in the increased in interest charges. So, I think the national debt is a threat, not to define our defense budget—I'm not arguing that we should reduce it because of that. The real problem with the national debt is increasing demographics and health care costs. That's where the problem is. But, I think we have to be cognizant of it as a national security threat.

Number three, Mr. Preble, you talked about submarines as the possible—instead of the triad submarines—question is, How vulnerable are submarines to detection? My concern is that we not fall into the Maginot line trap.

Dr. PREBLE. Thank you, Senator. This has been a longstanding concern since we start—since the third leg of the triad, after all, was submarine-launched ballistic missiles in the late 1950s, and, from the very beginning, concern about the ability to detect them and undermining their capabilities. I think that, generally speaking, those concerns have been proved wrong, so far, over time, that each time that people claim that there is some exquisite technology or new technology that significantly undermines the stealthiness of our submarines, that they continue to perform extremely well.

As I pointed out in my statement, however, is that if that circumstance were to change, then we still have the flexibility to adapt other forces. But, for now, the combination of stealth and precision and other improvements in technology make ballistic missiles the best of the three platforms for——

Senator KING. But, you would agree that the key word there is "stealth."

Dr. PREBLE. Yes, sir.

Senator KING. And if their technological——

Dr. PREBLE. Yes, sir.

Senator KING.—erosion of that quality, then that creates a problem we need to be attentive to.

Dr. PREBLE. We need to be very attentive to it, yes, sir.

Senator KING. A question for the record for all of you is, How do we enforce the 2-percent standard? You all have mentioned it. We are carrying too much of the burden. What—I'd like some suggestions as to how that is carried out, rather than—in ways other than just imprecations to our allies.

[The information referred to follows:]

DR. KREPINEVICH. There is no way the United States can compel its NATO allies to make good on their commitment to allocate at least 2 percent of their GDP to defense.

There are, however, several things we might do to encourage our allies to meet their commitments. One is to tie certain U.S. defense efforts to those of our European allies. Poland, for example, is more concerned over Russia's behavior than is France, whose top priority at present involves ISIS and the situation in Syria/Middle East. Enhanced U.S. support for Poland could be tied to Warsaw's willingness to up its defense effort. Similarly, offering support for France in its efforts to suppress ISIS could be linked to France's willingness to provide greater support for our efforts to discourage Russia from engaging in aggressive action against our allies in Eastern Europe.

Finally, it is not only how much our allies spend, it also is a matter of how wisely they invest their defense funds that determines the effectiveness of their forces. We need to keep that in mind as well.

DR. PREBLE. I have written before about the problem of global public goods, especially the free-rider problem, and the difficulty of enforcing allies' commitments to contribute to collective defense. [See, for example, *The Power Problem: How American Military Dominance Makes Us Less Safe, Less Prosperous, and Less Free* (Ithaca, NY: Cornell University Press, 2009), pp. 96–104]. Most of this work, however, does not directly address Sen. King's question. My colleague Emma Ashford, visiting research fellow at Cato, recently did discuss allied burden sharing in a public forum. She agreed to summarize her remarks for the record. (Her bio and other writings can be found here: *http://www.cato.org/people/emma-ashford.*) Dr. Ashford replies:

> "The central flaw of today's NATO alliance is that United States bears the vast majority of NATO's burdens, not only with respect to spending, but also in operational terms. This has been acknowledged by a variety of senior policymakers: former Sec. of Defense Bob Gates' farewell speech, for example, argued that NATO has a "dim, if not dismal, future" if this discrepancy is not resolved. Despite this, and despite the threat many NATO members claim to feel from Russia, we have been almost entirely unsuccessful in getting other states to increase spending. Since the Russian invasion of Crimea in 2014, only one state (Poland) has increased its defense spending to the required 2 percent level.

"In addition, while it effectively illustrates the massive imbalance between U.S. and European contributions to NATO, the use of the 2 percent spending level as a measure can be misleading. First, that 2 percent spending figure provides no real indication of readiness or capacity. Indeed, for some states, that figure includes non-readiness related expenditures, such as pensions. Such contributions would still leave the United States bearing the brunt of NATO's operational costs. In the long-run, it may be more effective to work on increasing readiness and capacity contributions from NATO allies. Second, it obscures the fact that many NATO members are small countries, with limited practical ability to contribute. If we truly wish to reduce the burden on the United States, it is paramount that pressure be placed on Europe's larger states—Germany in particular—contribute an amount commensurate to their abilities.

"Ultimately, the United States has been unsuccessful at increasing NATO commitments from allies for one reason: while we continue to provide security for these states, they have no incentive to provide it themselves. Faced with Russian aggression in Crimea and Eastern Ukraine in the last year, most European nations did not seriously engage in discussions about how to increase defense spending or capacity. Instead, they turned to the United States, which offered a billion dollars for a European Reassurance Initiative. Though the scope of any additional US rotational troop presence in Europe is not yet known—the Pentagon is still preparing proposals—the United States has committed to contribute air support, Special Forces and intelligence support to the new NATO rapid reaction force. If we truly wish European nations to contribute more to NATO, then the United States must resist increasing our support in this way every time our allies profess the need to be reassured."

MR. WOOD. The U.S. must act more confidently and forcefully in "publicly shaming" NATO members who are not meeting the two-percent of GDP investment standard, but making such arguments with well-crafted, fact-based, historically validated points that show weakness not only invites aggression from competitors but also has a negative impact on national economies. The U.S. should be careful, however, of presuming that further cutbacks in U.S. spending and forward deployment of U.S. forces is the chief means to force allies to "step up" as they should. Even if Germany, France, Great Britain, and others found a way to dramatically reprioritize their national spending, which presumes that they somehow handle their own domestic situations far better than the U.S. is managing its own, it will take many years for them to bring their military capabilities up to a level they should be at. In the meantime, U.S. national security interests in Europe would be dependent on such success and the hope that nothing untoward happens in the interim . . . which means some element of increased risk to U.S. interests.

Senator KING. Finally—I'm not even going to—I'm going to screw up the pronunciation, as we all have—Krepinevich, how's that? Pretty close? Dr. Krepinevich, I think you made a really important

point: time is an issue. Senator Inhofe has a chart that shows the average time now to put a new aircraft in the field is 23 years. I would submit that if that had been the case with radar in the Manhattan Project, we'd probably be speaking another language here today. We have to be able to field new technologies faster. Cost is obviously a question. But, to talk about a new bomber that probably won't be built for 10 or 12 years, maybe not even then—I mean, we have to deal with this issue of time. I——

Dr. KREPINEVICH. Time is a resource every much as manpower is or, you know, technology is, or defense dollars.

Senator KING. Are we overthinking these new weapon systems, in terms of making them so complex that it becomes just—time just wastes——

Dr. KREPINEVICH. I think Secretary Gates had it almost right. He talked about performance characteristics, and he said, "We want everything that's possible, and a lot of things that aren't possible, in a new system." He talked about cost, and he said, "We treat cost as though cost is no object," and he talked about time and said, you know, time—again, everything is subordinate to performance. So, we sacrifice cost, in terms of no limits on cost; we sacrifice time, in terms of we seem to be willing to wait forever; and I think this is also—time is also linked to relevance, because it's a lot easier to know what kind of security challenges you're going to face in 2 or 3 years than in 20 or 30.

Senator KING. It——

Dr. KREPINEVICH. And so, his point was, "I'd rather have an 80-percent solution that you can give me within a reasonable cost and get on the ramp, or wherever, in a reasonable amount of time that's relevant to the threat." And that's why he canceled systems like Airborne Laser and Future Combat System, and so on.

Senator KING. I agree with that. And it seems to me that the message is exactly as you stated it, plus design and build these systems so that they can be upgraded over time, as—but get the system online.

Thank you very much, Mr. Chair.

Chairman MCCAIN. Thank you.

Dr. Krepinevich, known to many as "Andy"——

[Laughter.]

Senator REED. Mr. Chairman, we have a famous Coach K, and we have a famous Dr. K, from where I come from.

[Laughter.]

Chairman MCCAIN. Senator Blumenthal.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

I'm—I am more sympathetic, maybe, to the pronunciation of names, having a more difficult one to pronounce than Reed, McCain, and King. But, thank you all for being here. This has been an excellent discussion, and I have been following it in the midst of doing other duties.

And I think that, just to pursue a line of questioning that Senator King raised on stealth or, as Mr. Brimley referred to it as concealment, and just to quote one sentence in your testimony, "The nature"—quote, "The nature of an actor's awareness of adversary forces will differ, but it seems clear that, on future battlefields, finding the enemy will be easier than hiding from him." Senator

King rightly identified the advantage of submarines as their versatility and their stealth. The Ohio-class replacement promises to be far stealthier than any submarine now known, or perhaps imagined. But, I wonder, in terms of both your point, Dr. Preble, in relying on a smaller nuclear deterrent that may consist only of submarines, whether, in fact, we can pursue that objective, in light of the plausible point that finding our submarines will be, in fact, easier than hiding them. And obviously, we're at a loss here, because we can't talk about the technology in this setting. And, in fact, I might be at a loss to talk about the technology in any setting, in terms of my scientific or engineering expertise. But, maybe you could just expand on that point.

Dr. PREBLE. The—on the question of survivability as a function of concealment or stealth for the submarines, of course it's not nearly that our submarines are well hid, and continued improvements have made them, you know, kind of leaps ahead, but it is that there are many of them. When we talk about one leg of the triad, of course, it's not just one boat. It's 12 or 14 or 16. And so, we would have to believe that the advance in technology that made it so much easier to find those submarines was made without our knowledge and then sprung on us in a moment of surprise in which all of those vessels were all held vulnerable at the same time. I think that highly unlikely. Therefore, that's why—we wrote a whole paper on this subject. I'd be happy to share a copy, Senator. But, that is why we believe that, while some of the earlier arguments against the submarine in the early days of the triad were valid, those have been overcome over time through a combination of technological advances and changes in nuclear-use doctrine, which also explain why they are a suitable platform.

Senator BLUMENTHAL. The—I think that point is very powerful and convincing, certainly for the first 10 or 20 years, but the Ohio replacement is a sub that's going to last well into this century, and it may not be sprung on us in the first 5 years or even 10 years, but at some point one wonders whether that technology can't be developed.

Dr. PREBLE. Which I think speaks to the other conversation we've been having today about the essence of time and the length of time it takes to develop new technologies, and our seeming inability to adapt over time, which, of course, is not true. We are capable of adapting and revising technology in an iterative process. But, investing so much in a single platform, on the assumption that it will retain its technological edge for 40 or 50 years, I agree with you, is unreasonable.

Senator BLUMENTHAL. And, Mr. Brimley, I happen, by the way, to agree with you that we should never have a fair fight against an adversary, and—and I'm quoting you—one of our first steps should be to, quote, "shore up maritime power projection by emphasizing submarines that can attack an adversary from concealed positions, ideally with platforms with larger payload capacities, et cetera." And I wonder if you could, given the point that you made about concealment, expand on that thought.

Mr. BRIMLEY. Thank you, Senator, very much, for your—for quoting my written testimony.

I would just quickly expand on it by saying that there are fascinating levels of research that the Office of Naval Research is doing, but also DARPA [Defense Advanced Research Projects Agency]. I think part of the solution to this challenge is—like I said earlier, is to fully invest in the unmanned regime. So, in a world where stealth starts to erode, or our ability to sort of keep pace with those technologies comes into question, I think one of the investment ways we're going to have to deal with that is, get fully unmanned, into unmanned submarines, to the point where we can answer a little bit of the erosion of the qualitative edge with our enhanced ability to both generate more, in terms of quantity, but also take more risk with those platforms because they're—they will be unmanned. That's got to be a huge area. I take some solace by the fact that people like Secretary Bob Work, Secretary Carter, they are looking at this very closely, because I think it's—there's an agreement that this is an area of potentially large advantage for us if we invest in it.

Senator BLUMENTHAL. My time is expired. But, again, I thank all of you for this very thoughtful discussion.

Thank you, Mr. Chairman.

Senator REED [presiding]. On behalf of Chairman McCain, let me recognize Senator Sullivan.

Senator SULLIVAN. Thank you, Mr. Chairman.

And I appreciate the panelists coming and providing us with important insights on some issues.

I wanted to focus, Mr. Brimley, but really any of the panelists, on the issue of energy. And, you know, we've had a number of members of the administration—Secretary Carter, for example—but then other experts—General Jones, you know, the former NATO Commander, Marine Corps Commandant—they've all talked about this as a—really kind of an incredible new instrument of American power that, 10 years ago, we weren't focused on, because we really didn't believe we had it as something that was important. But, it is, and it's pretty remarkable that we're now the world's largest producer of gas, largest producer of oil, largest producer of renewables. Not by any real help from the Federal Government, all through the innovations in private sector.

So, would you care to comment on that, as how we should take advantage of that, and how the Federal Government can help—being from a State where energy is very important; we're a big producer of energy, looking to produce more—we have a large-scale—actually, a huge LNG [liquid natural gas] project that the State of Alaska's working on that would help our citizens with low-cost energy, but certainly would help, in terms of our strategic—the strategic benefits for our allies in Asia who need LNG—even the Chinese need LNG. So, I would just welcome comments on that. I know, Mr. Brimley, you talked about it in your testimony, but I welcome that for any other panelist.

Mr. BRIMLEY. Thank you, Senator. Very quickly.

I would just say, from a defense—as a defense analyst, I would say I'm very pleased by the fact that potentially by the end of this decade, North America will become sort of, quote/unquote, "energy independent."

Senator SULLIVAN. It's a remarkable development.

Mr. BRIMLEY. It is remarkable, although I would say that that's not a panacea; it's a global market. We will even—you know, we will still be importing and participating in the global market. We will have national interests that are intimately bound up in the security situations of other regions—Europe, the Middle East, et cetera. But, I would say, though, the geopolitics of this is going to be interesting, fascinating, potentially destabilizing. In a world where the exports from the Middle East are coming out of the Persian Gulf and they're not going west across the Atlantic, but they're going east into the Pacific, all sorts of, I would say, interesting dynamics will develop. The role of India and its forward defense posture. The role of China, how it invests in forward access points as it starts to invest in its global posture into the Persian Gulf. We need to be thinking very, very seriously about how to track these activities and how to react to them, because I think they will potentially be destabilizing.

Senator SULLIVAN. Any other thoughts? And particularly, what the Federal Government should be doing to encourage the ability to seize this opportunity. Everybody—every panelist we've had in the last 9 months has talked about, "This is a new instrument of American power, in terms of our foreign policy and national security." And yet, we—it's true, we do not have an administration that seems even remotely interested in it. They seem to don't like the term "hydrocarbons," and they don't want to recognize what is something that's pretty remarkable, in terms of a benefit to our country.

Mr. DONNELLY. I would caution about over-—I mean, making everything a national security issue both devalues the meaning of "security" and provides a temptation for everybody to try to make everything a national security——

Senator SULLIVAN. But, if you look globally and historically, there's a lot of——

Mr. DONNELLY. How——

Senator SULLIVAN.—a lot of conflicts have started and been resolved due to energy.

Mr. DONNELLY. And it's likely to continue to be that way. Look, I would agree that, say, becoming a stable source of energy for Japan would be a very important strategic plus for the United States.

Senator SULLIVAN. Or Korea.

Mr. DONNELLY. Or Korea. And, you know, other East Asian—you know, the TPP [Trans-Pacific Partnership] countries—having an alternative route of supply for those countries would be critically important.

Senator SULLIVAN. How about for Ukraine?

Mr. DONNELLY. If we could get it there in a timely way, you bet.

On the other hand, to sort of echo Shawn, there are bound to be destabilizing—there are already destabilizing aspects from the changes that are affecting the Middle East. The Saudis are spending down their cash reserves at a extraordinary rate to try to underbid, you know, fracking sources and stuff—also to offset Iran. But, what that will mean for the internal stability of the Kingdom is a pretty good question that probably has a host of answers, but all of which are bad. So, changing this regime that has been in

place for a number of decades now is going to have international political effects that almost certainly will have security implications for the United States, not all of them good.

Dr. PREBLE. I would just agree that the ability of U.S. energy producers to reach a global market should be as unencumbered as possible. And, to the extent the Federal law limits export of various products, that's——

Senator SULLIVAN. Or delays development——

Dr. PREBLE. Or delays development, it's also a problem, correct. But, I—the last point I'd make is that I—I would agree, here, with Tom—is that just because there are benefits economically does not make it, necessarily, a national security issue. I think we need to recognize it distinctly. And also, for many years, myself and my colleagues were frustrated by the talk that when or if we become energy independent, it will have a huge impact on our strategy. We said, for a long time, that should never the standard, because we can never be energy independent, we trade into a global marketplace, et cetera, et cetera. Now that that is happening, and I think soon will happen, I would like to see that particular argument taken off the table as why it is we behave the way we do, especially in the Middle East.

Senator SULLIVAN. Thank you, Mr. Chairman.

Senator REED. Well, thank you, Senator Sullivan.

On behalf of Chairman McCain, let me thank you, gentlemen, for extraordinarily insightful testimony, which is going to be a superb foundation for the hearings that the Chairman is envisioning leading up to, we hope, recommendations with respect to Goldwater-Nichols, but of many, many other aspects. A truly, truly impressive and helpful hearing.

Thank you very much, gentlemen.

And, with—again, at the direction of the Chairman, the hearing is adjourned.

[Whereupon, at 11:36 a.m., the hearing was adjourned.]

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