

2017 ANNUAL REPORT



CSBA

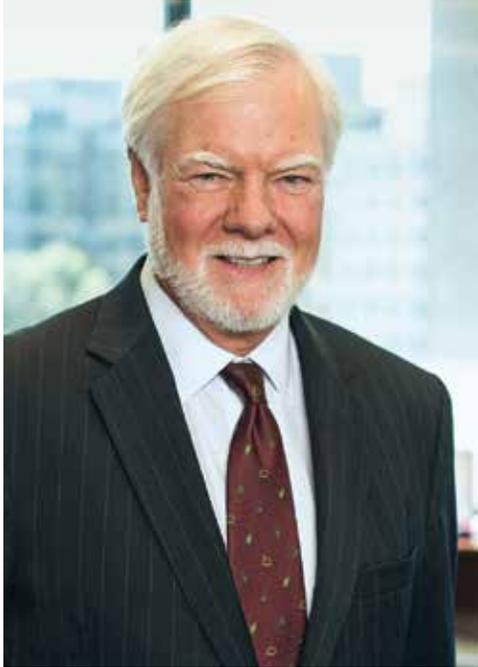
Center for Strategic and Budgetary Assessments



“I am grateful for CSBA’s influential contribution to improving the security and defense of our Nation.”

– General David L. Goldfein, USAF Chief of Staff

MESSAGE FROM THE CHAIRMAN OF THE BOARD



and conflict, the challenges of maintaining strong military capabilities in a fiscally constrained environment, and the impact emerging technologies may have on our military's future force structure. Our reports are widely distributed, and Tom Mahnken and his exceptional team of experts are often quoted in the media, serving as key resources in framing the nation's most critical defense policy debates.

2017 was also a year of significant renewal for the CSBA's

FOR MORE THAN TWO DECADES, the Center for Strategic and Budgetary Assessments has provided some of the highest quality and most innovative research on defense strategy, budgets, and the national security environment. CSBA experts are well known for their expertise in strategy simulations, force structure and planning, and the strategic choices facing Congress in allocating defense budgets, as well as for analyzing the relationships among these disparate topics, and we continue to excel in these areas.

In 2017, CSBA's work focused the attention of senior government officials and the public on the character of great power competition

board of directors. I was honored to welcome former Representative J. Randy Forbes; Adam Frankel, Senior Managing Director and General Counsel of Evercore; and Barbara Humpton, President and CEO of Siemens Government Technologies to the team. These individuals bring a wide range of experience to the board, but all of them have strong national security expertise, and their contributions of time and energy are already beginning to payoff for CSBA.

In 2018, CSBA will focus on crucial national security issues facing America and our allies. In addition to providing thoughtful and timely analysis to policy makers in both the executive and legislative branches

of government, we expect our work will be reflected in the National Defense Strategy, the Nuclear Posture Review, and the recommendations of the Congressionally mandated Commission on National Defense Strategy. We also plan to expand our efforts to educate the public and develop a new generation of strategic thinkers, both in Washington and across the country. CSBA's mission is to improve our understanding of the often arcane and opaque world of national security policy. Our contributions have been significant, but we believe our best contributions are yet to come.

Sincerely,

NELSON M. FORD
Board Chair

2017 WAS AN IMPORTANT YEAR for the nation, and for CSBA. The inauguration of a new presidential administration normally sets in motion a season of stock-taking, and the inauguration of Donald J. Trump has witnessed the most fundamental discussion of U.S. national interests and grand strategy in decades. CSBA's analysis and expertise has influenced this discussion, and CSBA's experts have been called upon to advise the formulation of the National Security Strategy, National Defense Strategy, Nuclear Posture Review, and Ballistic Missile Defense Review. CSBA is also well represented on the Congressionally-mandated Commission on the National Defense Strategy, which is chaired by Ambassador Eric Edelman and whose commissioners include Dr. Thomas G. Mahnken and General Jack Keane.

CSBA's work over the past year was guided by three priorities: First, we have done work to help understand the character of great-power competition and conflict in the 21st century. This includes assessing military balances and developing future operating concepts and capabilities. Second, we have sought to highlight the strategic choices that policy makers face in a challenging and fiscally constrained strategic environment. This includes identifying key operating capabilities, and capacity choices for the United States and its close allies, as well as identifying opportunities for innovation and change. Third, we have engaged in public and professional education and outreach, including on emerging strategies, new concepts and military technologies, and budget analyses to

inform national security decision makers.

Among the highlights of our research in 2017 are:

- CSBA's multi-volume Eurasian Defense Strategy study.
- CSBA's involvement in hosting a closed-door workshop and the launch of two CSBA reports at the annual Royal Australian Navy Sea Power Conference.
- The public release of CSBA's Fleet Architecture Study for the U.S. Navy.
- CSBA's continued support and development of the annual Directed Energy Summit in Washington, DC.
- CSBA's participation in the ongoing conversation on great power competition in conflict through the release of several reports on topics of U.S. strategy, U.S. deterrence, and the force structure of the U.S. military, as well as through congressional testimony, op-eds, and book talks.

In 2017 CSBA welcomed a number of new members to our team, to include Jack Bianchi, Captain Sharif H. Calfee, Gillian Evans, Adam Lemon, Rick Russo, Sherril Stone, and Toshi Yoshihara. In addition, we welcomed J. Randy Forbes, Adam Frankel, and Barbara Humpton to CSBA's board of directors.

In 2018 we will continue to spark and stoke debates on critical national security issues through our research and analysis. We will remain focused on the challenges the United States and its close allies face in a new era of great-power competition and conflict.



We will identify the critical strategic choices that decision makers in the United States and abroad will face in coming years. We will also expand our professional education and outreach efforts beyond traditional audiences for our research.

Sincerely,

THOMAS G. MAHNKEN
President and Chief Executive Officer



“Critical Assumptions and American Grand Strategy will be a valuable resource and a great addition to our library at the Home of the Commandants.”

– General Robert B. Neller, USMC, Commandant of the Marine Corps

THE FUTURE OF NATIONAL SECURITY

The Center for Strategic and Budgetary Assessments (CSBA) is an independent, non-partisan, non-profit public policy research institute established to promote innovative thinking and debate about national security strategy, defense planning, and military investment options for the 21st century.

For more than two decades, the Center for Strategic and Budgetary Assessments has provided consistent, high-quality, and innovative research on defense strategy, budgets, and the security environment. With notable alumni including Michael Vickers, Robert Work, and Todd Harrison, CSBA experts have worked to analyze U.S. defense strategy, force structure and planning, and defense budgets in the effort to reconcile these interrelated subjects, contributing extensively to the Revolution in Military Affairs debate, the development of an AirSea battle concept, and discussions on the strategic choices necessary for the transformation and modernization of the U.S. military in the face of sequestration. Under the leadership of Dr. Thomas G. Mahnken since 2016, CSBA remains instrumental in guiding the nation's most

critical defense policy debates as a small but powerful group comprising experts with extensive experience in the field of national security—many of them military veterans and former senior level policy makers from the Department of Defense, State Department, and the National Security Council—supported by a dedicated staff of accomplished executives and scholars.

CSBA's mission today is to promote innovative thinking and debate about national security strategy, defense planning, and military investments, as well as to provide timely, impartial, and insightful analyses to senior members of the executive and legislative branches, the media, and the broader national security establishment to make informed decisions regarding strategy, security policy, and resource allocation.

Research Methods

ANALYTIC STUDIES

CSBA’s analytic studies look 20–30 years into the future and are informed by history. They frame security developments in a broader context of strategic competition and identify critical areas of competition, particularly with regards to technological development, as well as the competitive advantages and disadvantages of the United States and potential adversaries. They take into account bureaucratic considerations and their influence on policy.

CONCEPT DEVELOPMENT

CSBA’s operational concepts link strategies and capabilities to achieve strategic objectives. They consider future technological and political developments and explore the utility of elements of the program of record, including potential additions, enhancements, or necessary alterations. Promising operational concepts may be validated by wargaming.

SCENARIO DEVELOPMENT

CSBA employs an “alternate futures” scenario development methodology. We believe that the future cannot be predicted, but also that scenarios can be used to think through various potential challenges. Our scenario development has been successfully employed by a variety of U.S. and allied government sponsors.



Ambassador Eric Edelman was a speaker at the annual Reagan National Defense Forum in December 2017. The theme was “Reinvesting in Peace through Strength.”

WARGAMING

CSBA’s wargaming methodology is designed to elicit the insights of a well-informed community of subject-matter experts on important, evolving issues, not to generate predetermined outcomes. CSBA wargames are intended to question prevailing assumptions underlying current and potential U.S. military concepts of operations, discover essential U.S. and adversary capabilities, identify capability and capacity shortfalls, and highlight potential areas of strategic advantage or disadvantage.

WORKSHOPS AND SEMINARS

CSBA workshops and seminars expose participants to new issues and concepts. They explore different approaches to thinking about strategic challenges designed to elicit non-obvious ideas and insights and provide a forum for discussion. They are also a way to critically review ideas and concepts in development.

BUDGETARY ANALYSIS

CSBA provides trusted insight on current defense spending and resource allocation, acquisition issues and reform, extraordinary funding for ongoing military operations, Department of Defense efficiency initiatives, historical spending trends, and future defense spending levels.

SPECIAL PROJECTS

CSBA is a flexible organization with a broad base of expertise, well suited to conduct or participate in a variety of additional work that may not fall into any specific category. Special projects in the past have included QDR “Red Team” efforts such as the 2005 “Downing Report” on SOF, congressional studies, and consulting for allied governments.



CSBA President Thomas Mahnken discusses the book *Australia's American Alliance* with its co-editors, Dr. Peter Dean and Dr. Brendan Taylor, at an event in April, 2017.





“CSBA’s thoughtful suggestions greatly assist us as we work to develop the right policy process and strategies.”

– Lieutenant General H. R. McMaster, United States Army,
Assistant to the President for National Security Affairs

COMPETITION AND CONFLICT IN THE 21ST CENTURY

In 2017, CSBA's research in this area focused on the following areas:

ASSESSING MILITARY BALANCES

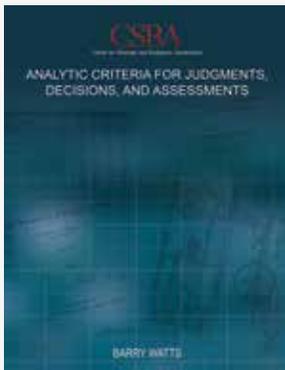
Examines how changes in the strategic and operational environment strengthen or weaken areas of U.S. military advantage

GREAT-POWER COMPETITION AND CONFLICT

Explores how the United States, China, and Russia seek strategic advantages in peacetime and in war in order better to prepare the United States and its close allies for the challenges of today and tomorrow

FUTURE OPERATIONAL CONCEPTS AND CAPABILITIES

Assesses how innovative concepts and capabilities can help the United States and its close allies overcome operational challenges and seize opportunities on the future battlefield.



Report: December 2017

Analytic Criteria for Judgments, Decisions, and Assessments

Barry Watts

Choosing analytic criteria for making strategic choices or judging historical outcomes is a recurring, if not universal, problem. It recurs because no general method for choosing *appropriate* criteria is known to exist despite the early hopes for methodological innovations ranging from macroeconomic models to operations research, systems analysis, and game theory. In this report, Barry Watts explores historical case studies of attempts to tackle the criterion problem as it applies to models for making strategic decisions—a problem for which there have been multiple answers of varying complexity. It appears, for the time being, that in the absence of a formula or all-purpose methodology for choosing appropriate analytic criteria, such choices will continue to have a substantial subjective element.

Testimony: December 2017

Statement Before the Senate Armed Services Committee on U.S. Policy and Strategy in the Middle East

Eric Edelman

Chairman of the Senate Armed Services Committee, Senator John McCain and Ranking Member, Senator Jack Reed hosted a hearing to explore the U.S. policy and strategy in the Middle East. CSBA Counselor Eric Edelman was invited to give testimony. Given that U.S. policymakers have considered access to the region's energy resources vital for the United States and its allies in Europe, and given the region's geopolitical importance as a strategic location linking Europe and Asia, Edelman proposed measures to solidify U.S. strategy in the area and secure strategic aims.

Testimony: November 2017

Statement Before the Senate Armed Services Committee on Recommendations for a Future National Defense Strategy

Thomas G. Mahnken

The United States exists today in a world characterized by the reality of great power competition and the growing possibility of great power war. It also faces increasingly capable regional rogues, such as North Korea and Iran, as well as the need to maintain a global counterinsurgency campaign against jihadist terrorist groups. Yet the United States possesses limited resources—or more accurately limited political will to muster the resources—to meet this increasingly competitive environment. The National Defense Strategy can serve as a powerful tool to focus and organize the Department of Defense to ensure that the United States maintains and bolsters its competitive advantages in an increasingly challenging environment.

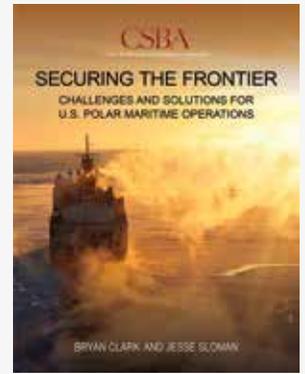


Report: October 2017

Securing the Frontier: Challenges and Solutions for U.S. Polar Operations

Bryan Clark, Jesse Sloman

This study describes the challenges and opportunities America and its allies face in the Arctic and Antarctic and proposes new roles and missions, operational concepts, and capabilities U.S. naval and air forces should pursue to protect and further U.S. and allied national security interests in the high latitudes.

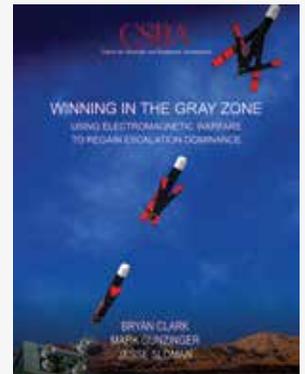


Report: October 2017

Winning in the Gray Zone: Using Electromagnetic Warfare to Regain Escalation Dominance

Bryan Clark, Mark Gunzinger, Jesse Sloman

This follow-on study to the 2015 report “Winning the Airwaves: Restoring America’s Advantage in the Electromagnetic Spectrum” describes how U.S. forces could create new options to counter the “gray zone” and hybrid warfare tactics being employed by Russia and China. The report proposes new operational concepts and associated technologies for electromagnetic warfare to enable precise strikes and electronic attacks, including ways to use swarms of small unmanned vehicles or loitering payloads that are currently under development.

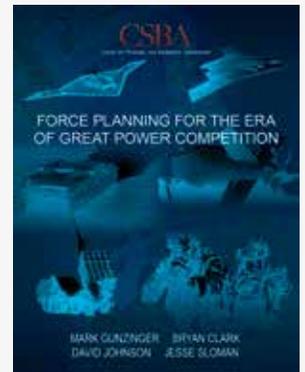


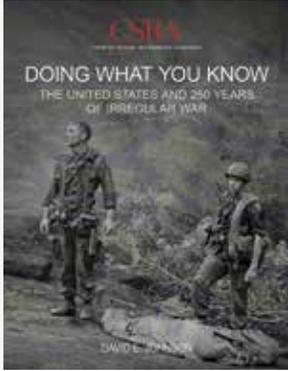
Report: October 2017

Force Planning for the Era of Great Power Competition

Mark Gunzinger, Bryan Clark, Dave Johnson, Jesse Sloman

In 2013, CSBA released a report that recommended priorities for a force shaped to operate in the contested environments of the Asia–Pacific and other regions. This follow-on report recommends DoD shift its future force planning toward developing new operating concepts and capability mixes needed to deter, and if necessary defeat, aggression by China and Russia. These concepts should explore how combinations of advanced military capabilities, such as manned and unmanned long-range, penetrating ISR and strike systems, networked and distributed EW systems, and future directed energy weapons could help sustain or in some cases regain the U.S. military’s overmatch against greater power competitors.





Report: August 2017

Doing What You Know: The United States and 250 Years of Irregular War

Dave Johnson

The United States has a long history of engaging in irregular wars and countering insurgencies, one that predates our independence. Although many of these efforts were successful, others were not. To understand what worked, what did not, and why, this report assesses the measures, both coercive and benign, that the United States has used in a limited number of pivotal cases to determine if U.S. irregular warfare and counter-insurgency (COIN) approaches have changed significantly over the past two centuries. It also makes recommendations for the future.

Testimony: July 2017

Statement Before the Senate and Armed Services Committee Subcommittee on Seapower Options and Considerations for Achieving a 355-ship Navy

Bryan Clark

To address the changing strategic environment, the Navy increased its force structure requirement earlier this year to 355 ships from the previous level of 308 ships. Today's fleet of 276 ships, however, falls far short of both metrics. The approximately 80 additional vessels the Navy needs to build are the highly capable warships that will enter the fleet over the next decade. These ships will be more expensive than their predecessors, and, despite the desire of the administration and some in Congress to increase defense spending, Pentagon budgets remain capped by the 2011 Budget Control Act and 2015 Bipartisan Budget Act. The DoD will either need relief from budget caps and more funding to expand the fleet or accept that it will not be able to keep up with its great power competitors.

“I found the discussion with the CSBA team extremely interesting and this helped provide me with a better understanding not only of the perception of the challenges that we face but also of the action necessary to strengthen our collective security.”

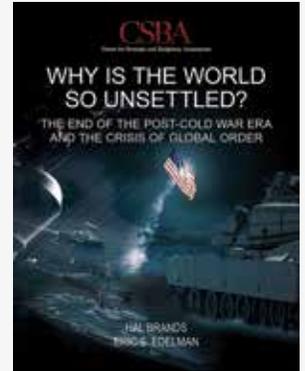
– General Sir Chris Deverell, KCB, MBE, ADC Gen, Commander, Joint Forces Command

Report: May 2017

Why Is the World So Unsettled? The End of the Post-Cold War Era and the Crisis of Global Order

Eric Edelman, Hal Brands

U.S. foreign policy is likely to be wracked by crises in the coming years. Yet crises are often symptoms of deeper structural transformations, and the fundamental fact of international politics today is that the post-Cold War era has reached its end. That period was defined by uncontested U.S. and Western primacy, a marked decline in ideological struggle and great-power conflict, and a historically remarkable degree of global cooperation in addressing international disorder. Today, however, the international system has reverted to a more contested state. The core characteristics of the emerging era are the gradual but unmistakable erosion of U.S. and Western primacy, the return of sharp great-power competition across all three key regions of Eurasia, the revival of global ideological struggle, and the empowerment of the agents of international strife and disorder.



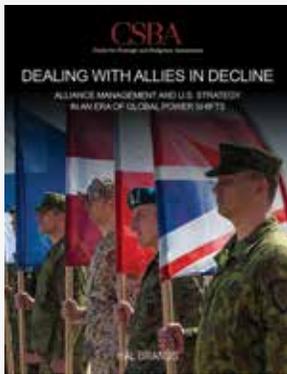
Testimony: May 2017

Statement Before the House Armed Services Subcommittee on Seapower and Projection Forces

Jesse Sloman

Today, the U.S. Navy and Marine Corps field the world's largest and most capable amphibious fleet, with three Marine Expeditionary Units (MEUs)—totaling nine ships and over 6,000 sailors and Marines—deployed every day. Despite the enormous combat power that a 21st century MEU can bring to bear, the margin of military superiority that U.S. amphibious forces can expect to enjoy has eroded over the last several decades. Potential adversaries have developed new capabilities specifically intended to counter American strengths. Nowhere are these threats more evident than in the Western Pacific, where the steadily increasing size and sophistication of China's missile forces provide the People's Liberation Army (PLA) with a potent means of contesting America's regional presence.





Report: April 2017

Dealing with Allies in Decline: Alliance Management and U.S. Strategy in an Era of Global Power Shifts

Hal Brands

Alliances have been a central pillar of American grand strategy for decades, and the geopolitical and economic strengths of U.S. allies have contributed enormously to the effectiveness of American policies. Yet over the past two decades, many American allies have been in sharp relative decline as their shares of global economic and military power have decreased significantly. This report considers the challenges that allied decline has begun to pose for American strategy and offers recommendations for how U.S. policy-makers can still compete effectively in a world in which their allies are not as strong as they once were.



Report: March 2017

Critical Assumptions and American Grand Strategy

Hal Brands, Peter Feaver, William Inboden, and Paul D. Miller

Every grand strategy rests on a set of critical assumptions about how the world works. Today, the assumptions underpinning American grand strategy are becoming more contested and uncertain than at any time in a generation. This report examines America's grand strategy in the post-Cold War era, explores the global and regional assumptions that are now coming under strain, and offers suggestions for how U.S. planners can best adapt to a more competitive and uncertain world.

“CSBA’s advice on identifying opportunities based on America’s asymmetric advantages reinforced an important point raised earlier in our course. CSBA can be assured that it has made a positive contribution in educating the next generation of national security leaders.”

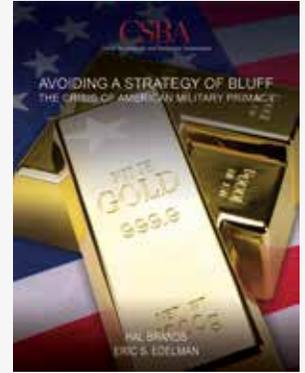
– Brigadier General Chad T. Manske, USAF Commandant, National War College

Report: March 2017

Avoiding a Strategy of Bluff: The Crisis of American Military Primacy

Hal Brands and Eric S. Edelman

Following the Cold War, the United States possessed unrivaled military primacy, both globally and in all the world's key strategic theaters. Yet today, Washington faces military challenges that are both more severe and more numerous than at any time in decades, precisely as its own defense cutbacks have significantly reduced U.S. military capabilities. The result has been a creeping crisis of American military primacy as the margin of superiority to which the United States has become accustomed has diminished and a growing gap between U.S. commitments and capabilities has emerged. Closing that gap will require a significant, sustained defense buildup in the years to come.



Testimony: March 2017

U.S. Steel and Military Shipbuilding

Bryan Clark, Congressional Steel Caucus Annual State of Steel Hearing

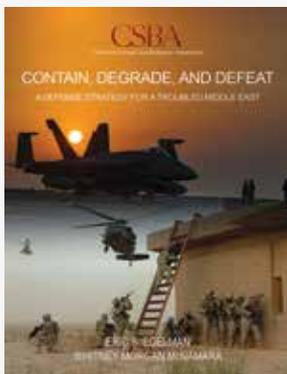
With a new administration in place, Congress will have a wide range of investment and regulatory initiatives to consider. These actions could significantly impact the health and output of the U.S. steel industry, which is an essential contributor to U.S. national security. Military and homeland security programs such as armored vehicles, aircraft, and ships represent only about 3 percent of U.S. steel demand. These capital investments, however, are built with American-made specialty steels not generally used in construction, appliances, or automobiles. Providing the wide range of steels needed by defense manufacturers requires a healthy and diverse American steel industry. Shipbuilding for the U.S. Navy and Coast Guard is the largest single use of American steel for military and homeland defense, with steel making up about half of a warship's weight. The military shipbuilding industry exemplifies the need for a robust steel industry.

Testimony: March 2017

Future Fleet Architecture Studies

Bryan Clark, House Armed Services Committee

The U.S. Navy is at a crossroads, with each major ship type undergoing a transition over the next several years. These changes come as the United States faces security challenges it has not encountered since the end of the Cold War. The Navy should reevaluate the fleet's configuration before it misses the opportunities associated with this time of transition. Deterring increasingly capable great powers and countering more aggressive regional adversaries will require new operational concepts, force packages, posture and basing, readiness cycles, and manned and unmanned platforms, as well as updated sensors and weapons. The fleet architecture studies directed by the Congress in the 2016 NDAA were intended to address these needs for the fleet of 2030.

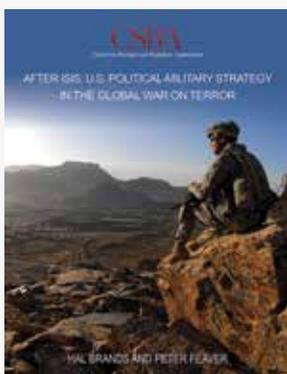


Report: March 2017

Contain, Degrade, and Defeat: A Defense Strategy for a Troubled Middle East

Eric S. Edelman and Whitney Morgan McNamara

The Middle East presents an enormous set of difficulties for policymakers against a backdrop of long-lived conflict and turmoil that is likely to persist for a generation—or perhaps longer. The United States has historically been successful in accomplishing its strategic objectives in the region, and it can be again if it develops a clear strategy that aligns ways, means, and ends and builds up capable partners in the region to contain Iran’s ambitions and defeat violent jihadists. Without such a strategy, both challenges will otherwise threaten the governments of America and its partners.



Report: March 2017

After ISIS: U.S. Political-Military Strategy in the Global War on Terror

Hal Brands and Peter Feaver

When the United States and its coalition partners defeat the Islamic State in Iraq and al-Sham (ISIS) militarily by collapsing its control of key areas in Iraq and Syria, that operational victory will not necessarily prevent remnants of ISIS from reforming at a later date, nor will it bring a larger strategic triumph in the global war on terror. As long as large parts of the greater Middle East remain founts of ideological extremism, the United States will continue to confront a dangerous challenge from jihadist terrorism. Hal Brands and Peter Feaver assess America’s strategic options after ISIS and conclude that an enhanced version of the approach that the Obama administration took to defeating ISIS represents the best strategy for waging a dangerous conflict that is likely to endure for many years.

“Critical Assumptions and American Grand Strategy” has had wide-ranging influence across the interagency and is now standard reading in NCTC’s Directorate of Strategic Operational Planning (DSOP). We appreciate CSBA’s time, expertise, and affability in discussing issues of such importance to the national security enterprise.”

– Todd Veazie, Chief, Programs, Resources and Assessments Group
National Counterterrorism Center



At the March release of the CSBA report *Contain, Degrade, and Defeat: A Defense Strategy for a Troubled Middle East*, Ambassador Eric Edelman, Whitney McNamara, and Hal Brands sat on a discussion panel.



CSBA's *Contain, Degrade, and Defeat: A Defense Strategy for a Troubled Middle East*, a report detailing a U.S. strategy for the Middle East authored by Eric Edelman and Whitney McNamara, was released in March 2017 to an audience of defense and international security reporters and specialists.

Brief: March 2017

Improved Conventional Munitions Policy

David E. Johnson and Ryan Boone

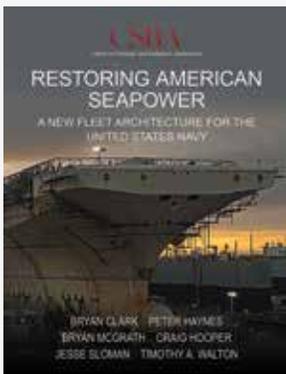
The United States is unilaterally divesting itself of its cluster munitions by 2018. It is doing so based on a 2008 policy decision to comply with the Oslo Treaty, which restricts the use of cluster munitions, even though the United States is not a signatory to this treaty. Much has changed since 2008. Russia is using cluster munitions, also called improved conventional munitions (ICM), in Ukraine and Syria. Furthermore, both Russia and China are proliferating these weapons to other countries. Further removal of ICMs from the U.S. arsenal should be halted, pending a suitable replacement.

Report: February 2017

Restoring American Seapower: A New Fleet Architecture for the United States Navy

Bryan Clark, Peter Haynes, Bryan McGrath, Craig Hooper, Jesse Sloman, and Timothy A. Walton

CSBA's *Restoring American Seapower: A New Fleet Architecture for the United States Navy* proposes a new fleet construct for the U.S. Navy to pursue over the next two decades. The Navy will need to take a different approach to deterring great power competitors than it did against regional powers such as Iraq. This new approach will also require innovative operating concepts, adaptive force packages, and a more distributed and robust naval posture that emphasizes effectiveness over efficiency. Together, new ways of operating, new deployment approaches, and new force packages require a larger and more diverse fleet of ships, aircraft, and unmanned systems. If the U.S. Navy does not pursue such a new architecture, by the 2030s the United States may not be able to compete effectively with great powers such as China and Russia or even regional powers such as Iran. This will undermine its alliance relationships, its economic health, and ultimately its place as an exceptional country.



“A broad awareness of the issues facing the Nation and the Navy is critical in priming the Fellows before they report to their institutions. Engagements with the key thinkers in national security provide the critical discussions and the diverse viewpoints our Fellows need. CSBA’s participation in these discussions was invaluable.”

– Vice Admiral J. C. Aquilino, U.S. Navy, Navy Federal Executive Fellow Program

Report: February 2017

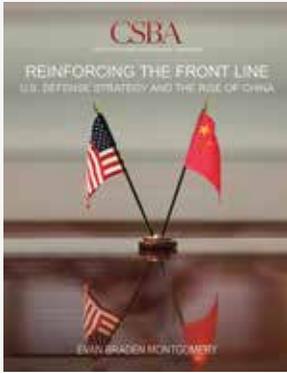
U.S. Strategy for Maintaining a Europe Whole and Free

Eric S. Edelman and Whitney Morgan McNamara

In this report, authors Eric S. Edelman and Whitney Morgan McNamara outline a number of options the United States has for countering and limiting Russian political-military moves. Absent steps in this direction, the United States will find it difficult to meet the challenges that Russia has managed to present to European security. The result might well be a European security order that is less stable and less conducive to national prosperity than what we have experienced since the end of the Cold War.



With the February release of CSBA's U.S.-Europe strategy as part of a larger Eurasian defense strategy, Senior Fellow Hal Brands, Counselor Eric Edelman, and Analyst Whitney McNamara presented as part of a discussion panel. Ambassador Edelman and Ms. McNamara introduced their report, *U.S. Strategy for Maintaining a Europe Whole and Free*, and Dr. Brands spoke about his soon-to-be-released report, *Dealing with Allies in Decline: Alliance Management and U.S. Strategy in an Era of Global Power Shifts*.



Report: February 2017

Reinforcing the Front Line: U.S. Defense Strategy and the Rise of China

Evan Braden Montgomery

To date, Washington’s preferred option in critical regions like East Asia can be described broadly as “forward defense”: preparing to counter threats when and where they materialize rather than responding either directly long after aggression has occurred or indirectly by imposing costs in other theaters. By clearly and credibly signaling that the United States will oppose an adversary’s aims and come to the assistance of its allies, forward defense has underpinned both deterrence and assurance—and, as a result, has underwritten stability in the regions where it matters most.

Testimony: February 2017

Reshaping the Military

Bryan Clark, Senate Armed Services Committee

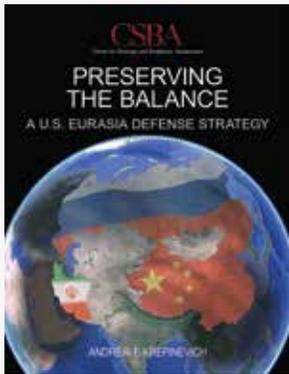
The United States is at an inflection point in its national security. After enjoying almost three decades of military superiority, the United States now faces competitors with strategies and capabilities that could circumvent, undermine, or defeat the defense posture and forces of America and its allies. In some regions and mission areas, the U.S. military is already behind those of its potential adversaries. If we fail to reshape our military and implement new ways to deter aggression, respond to provocation, suppress terrorism and insurgency, and protect the homeland, we risk the security assurances upon which our alliances are based and, with them, the security and economic health of the United States. Senator McCain’s white paper, *Restoring American Power*, recognized the loss of U.S. military overmatch. The paper’s recommendations to rebuild U.S. forces would significantly improve America’s ability to counter the efforts of its competitors and adversaries.



In February 2017, reporters and news outlets filmed Dr. Thomas Mahnken's presentation on *Reinforcing the Front Line: U.S. Defense Strategy and the Rise of China*, which details CSBA's U.S.-Asia strategy.



At the release of *Reinforcing the Front Line: U.S. Defense Strategy and the Rise of China* by Dr. Evan Montgomery, C-Span filmed CSBA President Thomas Mahnken fielding questions on the report.

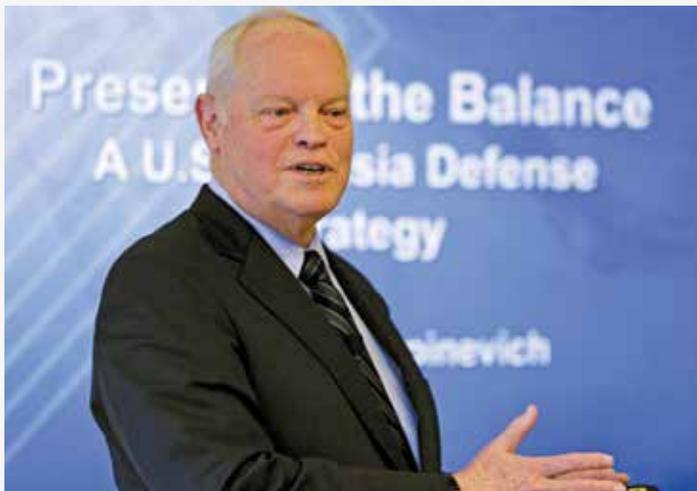


Report: January 2017

Preserving the Balance: A U.S. Eurasia Defense Strategy

Andrew F. Krepinevich

Now more than ever, the United States needs to formulate an effective defense strategy to preserve U.S. interests in a strategic environment characterized by looming international and domestic challenges. This report focuses on the United States' long-standing interest in preventing the rise of a hegemonic power on the Eurasian land mass capable of dominating its human, technical, and material resources. Such a development would represent a major threat to U.S. national security. With this core interest in mind, the strategy presented in this paper calls for major changes in U.S. defense posture.



As a Distinguished Senior Fellow and President Emeritus of CSBA, Dr. Andrew Krepinevich spoke at the release of CSBA's first of four reports detailing a U.S. Eurasian Defense Strategy in January of 2017.



At a CSBA event in January, editor of Defense and Aerospace Report Vago Muradian took notes on the presentation of CSBA's overarching Eurasian defense strategy paper.



CSBA's Randy Forbes and Eric Edelman were guest panelists at the Naval War College's 68th annual Current Strategy forum held in June in Newport, RI.

“Intellectual engagements with CSBA and its key thinkers in national security provide thought provoking discussions and a variety of viewpoints our strategists need. CSBA’s participation in these discussions was invaluable and I cannot thank you enough.”

– Vice Admiral J. C. Aquilino, Vice Admiral, U.S. Navy

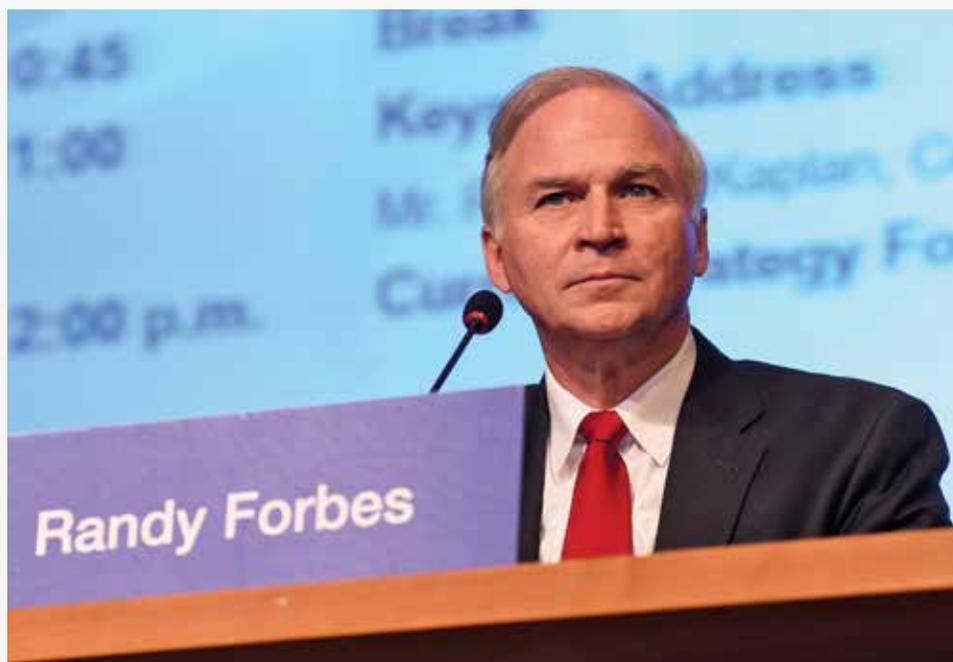


For the 40th anniversary of the *Journal of Strategic Studies*, CSBA hosted a discussion on the state of the field of strategic study. CSBA counselor and JSS editorial board member Ambassador Eric Edelman, among other CSBA colleagues and experts, attended and spoke at the event.



At an event hosted on June 16 by CSBA and the *Journal of Strategic Studies*, Dr. Thomas Mahnken, Dr. Joe Maiolo, Ambassador Eric Edelman, Dr. Hal Brands, and Dr. Toshi Yoshihara led a discussion on the current state of strategic studies.

Naval War College Foundation Fellow and CSBA board member Randy Forbes, participated in a panel discussion for the 68th annual Current Strategy Forum at U.S. Naval War College in June 2017.



In Tokyo on November 14, Senior Fellow Mark Gunzinger, as a guest of the Japan Air Self Defense Force, gave a presentation on CSBA-developed gray zone warfare concepts to an audience of international air power experts at the annual Self Defense Force's 2017 Air Staff College Seminar.

“CSBA’s participation made the NIDS International Forum on War History such a productive and successful one.”

– Tatsuo Yamamoto, President, National Institute for Defense Studies



STRATEGIC CHOICES

CSBA plays an essential role in sparking a more informed debate on defense budgeting and resourcing. CSBA's Budgetary Studies and Strategic Choices program provides an independent source of budgetary analysis to help those both in and out of government understand budgetary trends; the near-and long-term implications of prospective trade-offs; the second-order consequences of changes to the defense program; and how they fit within the overall context of U.S. defense policy and strategy.



Report: December 2017

Analysis of the FY 2018 Defense Budget and Trends in Defense Spending

Katherine Blakeley

President Trump's FY 2018 defense budget promises a "historic" defense buildup. At \$603 billion in the base national defense budget, some \$54 billion over the Budget Control Act caps, it grows the size of military slightly and boosts RDT&E efforts, but doesn't move the needle on procurement. Does the FY 2018 budget request build the military the U.S. needs? Will Congress succeed in funding more for defense?

Brief: January 2017

Senator McCain and Outlining the FY18 Defense Budget

Katherine Blakeley

At the beginning of his administration, President Trump promised a swift expansion in American military strength; he promised to make the U.S. armed forces "so big, so powerful, so strong, that nobody—absolutely nobody—is gonna mess with us." To this end, this brief covers how Senator McCain's white paper, *Restoring American Power*, attempts to frame the debate over the defense budget in FY 2018 and beyond. The white paper not only laid out a big increase in defense spending, but also detailed a plan for how these spending increases would result in greater military capability. Acknowledging the ongoing abuse of OCO funding as a way around the BCA caps, Senator McCain called for repealing the BCA caps and transitioning these enduring costs back into the base budget.



On May 18, Dr. Katherine Blakely presented a preview of the Trump Administration's FY 2018 budget request, forecasting the overall defense budget and major service priorities.

Analyst Ryan Boone shows off the features of CSBA's new workshop and wargame facility to civilian and military guests.





Defense industry and policy leaders discussed the possibilities for future workshops and wargames in CSBA's new conference facility with Senior Fellow Mark Gunzinger (left).

Testimony: January 2017

U.S. Defense Budget for Fiscal Year 2018: Testimony before the Senate Armed Services Committee

Thomas G. Mahnken

Senator McCain's *Restoring American Power* is a thoughtful and much needed contribution to the debate over defense strategy and resources. CSBA's diagnosis of the situation and recommendations accord with those detailed in the paper in many respects. The bottom line is that the United States requires more resources for defense if we are to continue to safeguard America's national interests in an increasingly competitive environment. Specifically, the United States needs increased investment in both readiness and modernization.

Strategic Choices Exercises

CSBA's Strategic Choices Tool (SCT) was enhanced and expanded to become one of the most powerful tools for defense strategy and budget planning and is the only tool of its kind. The SCT is designed to illuminate challenges and foster better linkages between the U.S. Defense budget and force structure. It accomplishes this by asking users to conduct long-term defense planning, develop new operational concepts, assess alternative force structures and postures, identify areas for greater investment or divestment, and evaluate the division of labor between the United States and its allies.

The Strategic Choices Tool allows users to explore alternatives defense investment priorities and develop strategies for future plans and programs, highlighting how future plans should differ from current plans. Driven by a user's view of threats to national security and the best strategy for addressing them, users rebalance defense force structure and investments over two five-year moves that correspond to consecutive FYDPs. The U.S. tool includes over 1,200 force structure and capability options across twelve areas, including air, sea, ground, manpower, readiness, and R&D.

In 2017, CSBA incorporated the SCT into its wargame methodology for a variety of organizations. This included directing four exercises supporting U.S. government funded wargames, an exercise with a foreign partner, an exercise with SAIS graduate students, two exercises with the U.S. Army War College, an exercise with the Secretary of Defense's Corporate Fellows program, and an exercise for the Asia-Pacific Strategy course at Johns Hopkins University, organized by CSBA senior staff.

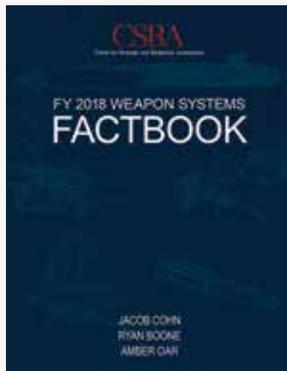


“CSBA’s passion and in-depth knowledge were strongly felt. We benefited much from the discussions with you [them] on the defense issues.”

– Admiral Tse-Chun, Vice Minister for Policy,
Ministry of National Defense, R.O.C.

PUBLIC AND PROFESSIONAL EDUCATION

CSBA seeks to educate the leaders of today and tomorrow on strategy, concepts, capabilities, and resources through a variety of public and professional education opportunities sponsored exclusively by CSBA or in conjunction with our academic and corporate sponsors. In 2017, CSBA also committed to expanding the defense and community's access to expert authors and thought leaders in relevant fields through a series of book talks and panels hosted at our new on-site conference facility.



Report: October 2017

FY 2018 Weapon Systems Factbook

Jacob Cohn, Amber Oar, Ryan Boone

The Weapon Systems Factbook summarizes the program plans and funding for each of the major acquisition programs with a Selected Acquisition Report and four additional programs: the new B-21 bomber; the Long Range Standoff Missile (LRSO); and the Ground Based Strategic Deterrent (GBSD), the future replacement for the Minuteman III. The Factbook is divided by categories of weapon systems: aircraft, air and missile defense, communications and electronics, ground systems, missiles and munitions, nuclear forces, shipbuilding, and space systems.

Secretary of Defense Executive Fellows Program

The Secretary of Defense Executive Fellows (SDEFPP) program was established by the Secretary of Defense in 1994 as a long-term investment in transforming U.S. forces and capabilities and is a key part of the Department of Defense (DoD) strategy to achieve its transformational goals.

Each year military officers and civilian employees from each military service are selected to receive their senior service college credit by training with sponsoring institutions (e.g., corporations, companies, commercial enterprises, etc.) that have earned a reputation for insightful long-range planning, organizational and management innovation, and implementation of new information and other technologies. Fellows form a cadre of future leaders who are knowledgeable in the organizational and operational opportunities made possible by their training throughout the year.

Before setting off to their sponsoring institutions, Fellows spend two weeks on site at CSBA participating in workshops that provide them with a basic understanding of a variety of defense topics ranging from military operations in Afghanistan, Iraq, and other geographic locations to cyber security and world demographics and their future security implications. The fellows' time at CSBA engages them in a structured discussion of first-order questions that shape national strategy and provide an examination of the



Admiral John Richardson, Chief of Naval Operations, delivered the luncheon keynote address to the guests of the CSBA/Booz Allen Hamilton 2017 Directed Energy Summit.



New in 2017, the CSBA/Booz Allen Hamilton Directed Energy Summit hosted an industry networking event where new concepts and technologies, such as this directed energy system, were on display.

transformations that may also be occurring in the corporate sector for their relevance to defense restructuring or planning.

Fellows have been assigned to such diverse and innovative businesses as: 3M, Accenture, Amazon, Amgen, Apple, Boeing, Booz Allen, Caterpillar, Cisco, DuPont, ExxonMobil, FedEx, General Dynamics, Google, Honeywell, Hewlett-Packard, Intel, JPMorgan Chase, Lockheed Martin, Merck, Microsoft, Morgan Stanley, Northrop Grumman, Oracle, Raytheon, Salesforce.com, SAP, Shell, Southern Company, SpaceX, Union Pacific, United Technologies, and more.

Asia-Pacific Strategy Course

This annual course, run by CSBA Senior Fellow Toshi Yoshihara, provides participants with a unique opportunity to interact with leading scholars and policymakers. Each year, participants learn about Asia's strategic importance, the great powers of the region, and the various U.S. strategies and operational concepts that might prove effective or beneficial in the region. Students are provided with an opportunity to test their own strategies for the region in a simulation-style wargame that serves as a capstone to the course. Past speakers have included Eliot Cohen, General John Keane, former Acting Chief of Staff of the Army; and former Congressman Randy Forbes.

At the 2017 Directed Energy Summit, co-hosted by CSBA and Booz Allen Hamilton in March, Ms. Mary Miller, the Acting Assistant Secretary of Defense for Research and Engineering, delivered the opening keynote address.





CSBA and Booz Allen Hamilton's 2017 Directed Energy Summit in March was attended by hundreds of the nation's electronic warfare policy specialists, researchers, and technologists.



CSBA President Dr. Thomas Mahnken introduced keynote speakers at the Directed Energy Summit in March.



Dr. Thomas Mahnken welcomed the Army keynote speaker, Major General William Hix, Plans & Policy, Deputy Chief of Staff G-3/5/7, to the Directed Energy Summit stage.

Directed Energy Summit 2017

The 2017 Directed Energy Summit focused on informing decision-makers across the U.S. defense policy, operational, funding and acquisition communities on the potential development and deployment of directed energy (DE) capabilities (high energy lasers, high power microwave/RF systems, and electronic warfare) within the next five years. This two-day event, co-sponsored by Booz Allen Hamilton and CSBA, brought together more than 500 government and industry stakeholders within the first 60 days of the new administration and Congress.

Australian Seapower Conference

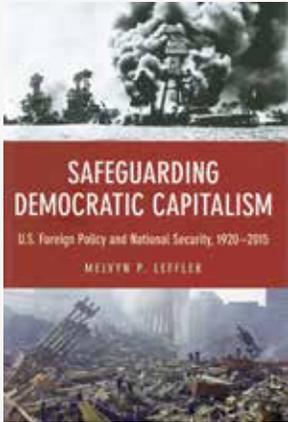
The 2017 Sea Power Conference, held in Sydney in October, 2017, explored the concerns of the navies of Australia and its allies, focusing on maritime strategy, the significance of maritime economics, and use of the oceans—as well as the critical importance of the defense industry to developing and maintaining naval capability. Navies are an expression of government resolve in managing and protecting the oceans as well as a national enterprise drawing heavily upon civil infrastructure and society. The intent of the 2017 Sea Power Conference was to consider these issues in greater detail to inform future thinking and planning as various policies come to fruition. CSBA's delegation provided insights regarding emerging defense and security strategies, explored the implications of emerging technologies for naval forces, and examined how Australian and allied fleet design should change to implement new concepts and capabilities. CSBA discussed their fleet architecture study for the U.S. Navy and also presented the results of two new studies: *Securing the Frontier: Challenges and Solutions for U.S. Polar Operations* and *Winning in the Gray Zone: Using Electromagnetic Warfare to Regain Escalation Dominance*. CSBA's presentations at the Sea Power Conference were attended by several hundred Australian and allied naval officers, government officials, and industry leaders, and CSBA was the only think tank outside of Australia to present at the conference.



Dr. Thomas Mahnken gave a presentation on “Linking Strategy to Capabilities for the U.S. and its Allies” at the Royal Australian Navy’s Sea Power Conference in October, 2017.



Bryan Clark presented CSBA's Alternative Fleet Architecture for the U.S. Navy in Sydney for the Royal Australian Navy's Sea Power Conference.



Book Talk

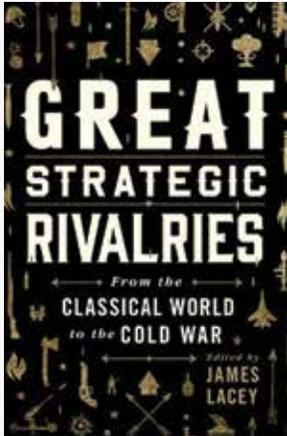
Safeguarding Democratic Capitalism: U.S. Foreign Policy and National Security, 1920–2015

Safeguarding Democratic Capitalism gathers together decades of writing by Dr. Melvyn Leffler, one of the most respected historians of American foreign policy, to address important questions about U.S. national security policy from the end of World War I to the global war on terror. Why did the United States withdraw strategically from Europe after World War I and not after World War II? How did World War II reshape Americans' understanding of their vital interests? What caused the United States to achieve victory in the long Cold War? To what extent did 9/11 transform U.S. national security policy? Is budgetary austerity a fundamental threat to U.S. national interests?

Dr. Leffler's wide-ranging essays explain how foreign policy evolved into national security policy. He stresses the competing priorities that forced policymakers to make agonizing trade-offs and illuminates the travails of the policymaking process itself. While assessing the course of U.S. national security policy, he also interrogates the evolution of his own scholarship. Over time, slowly and almost unconsciously, Dr. Leffler's work has married elements of revisionism with realism to form a unique synthesis that uses threat perception as a lens to understand how and why policymakers reconcile the pressures emanating from external dangers and internal priorities.



On October 10, CSBA hosted a book talk on Dr. Melvyn P. Leffler's *Safeguarding Democratic Capitalism: U.S. Foreign Policy and National Security, 1920-2015*; CSBA's Thomas Mahnken, Eric Edelman, and Hal Brands discussed the themes of the book with the author and Northrop Grumman's Director of Strategic Planning, Dr. Erin Simpson.



Book Talk

Great Strategic Rivalries: Rome Versus Carthage

The Center for Strategic and Budgetary Assessments (CSBA) and the FPI Center for Military and Diplomatic History hosted a discussion of Barry Strauss's most recent publication, on the rivalry between Rome versus Carthage.

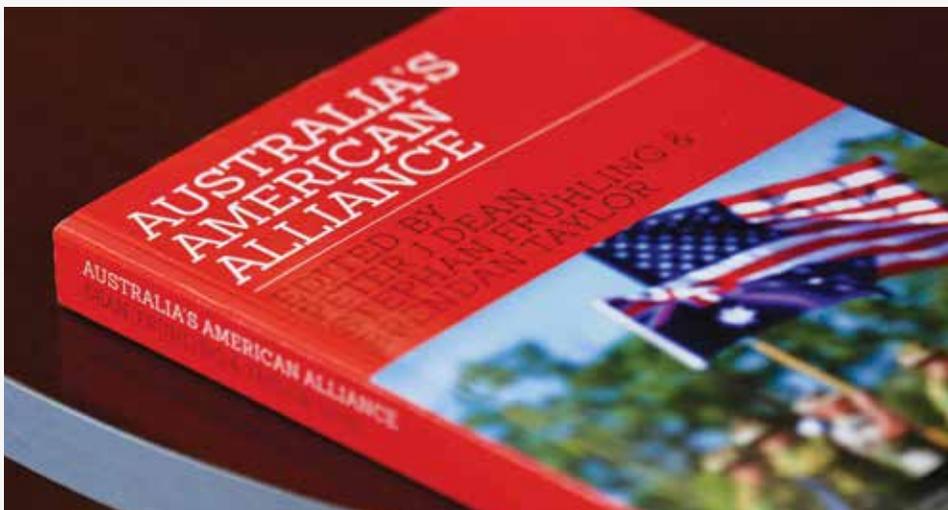
Strauss writes, "This is the story of two countries that had long enjoyed peaceable and sometimes friendly relations, then turned on each other and fought the most destructive series of wars of the ancient world (the Punic Wars, 264-146 BCE). The end saw such a complete victory that the losing state was wiped out as a political unit. In fact, the Roman destruction of Carthage was the closest to genocide that antiquity got. Before that, however, Carthage inflicted the most humiliating battlefield defeat the Roman republic ever endured (Cannae, 216 BCE), and it gave the ancient world one of its most glamorous and tactically brilliant commanders — Hannibal." Barry's chapter from *Great Strategic Rivalries* answers, "How and why did this roller-coaster of a conflict end as it did? Why did it happen in the first place?"

Book Talk

Australia's American Alliance

CSBA hosted a book talk featuring *Great Strategic Rivalries from the Classical War to the Cold War*, by Peter Dean, Stephan Fruhling, and Brendan Taylor, edited by James Lacey. The discussion focused on Australia's American Alliance, the U.S. - Australian relationship under President Trump, and the United States' Asia policy.

The Australia-United States Alliance has been critical to Australian foreign and defense policy since the ANZUS Treaty was signed in 1951. For 63 years, it has been an enduring feature of Australian defense planning, yet the contemporary alliance is, arguably, in one of the more important phases of reinterpretation in its long history. While the Alliance by its very nature is a bi-lateral relationship, this book will therefore specifically focus on Australian perspectives and policy choices, while providing context on the role of the United States in the Asia-Pacific and its position as a global power.





“CSBA’s participation made a strong contribution to the high level of debate and brought an important insight into the complex issues of security and defence of the region.”

– Zbigniew Pisarski, President of the Board, Casimir Pulaski Foundation



Thomas Mahnken

PRESIDENT AND CEO

Dr. Thomas G. Mahnken is President and Chief Executive Officer of the Center for Strategic and Budgetary Assessments. He is a Senior Research Professor at the Philip Merrill Center for Strategic Studies at The Johns Hopkins University's Paul H. Nitze School of Advanced International Studies (SAIS) and has served for over 20 years as an officer in the U.S. Navy Reserve, to include tours in Iraq and Kosovo.

His government career includes service as Deputy Assistant Secretary of Defense for Policy Planning from 2006–2009, where he helped craft the 2006 Quadrennial Defense Review and 2008 National Defense Strategy. He served on the staff of the 2014 National Defense Panel, 2010 Quadrennial Defense Review Independent Panel, and the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction. He served in the Defense Department's Office of Net Assessment and as a member of the Gulf War Air Power Survey. In 2009 he was awarded the Secretary of Defense Medal for Outstanding Public Service.

Dr. Mahnken earned his M.A. and Ph.D. in international affairs from SAIS and was a National Security Fellow at the John M. Olin Institute for Strategic Studies at Harvard University. He was a *summa cum laude* graduate of the University of Southern California with bachelor's degrees in history and international relations (with highest honors) and a certificate in defense and strategic studies.



Eric Edelman

COUNSELOR

Ambassador Eric S. Edelman is Counselor at the Center for Strategic and Budgetary Assessments. He retired as a career minister from the U.S. Foreign Service on May 1, 2009. As Undersecretary of Defense for Policy (2005–2009), he was DoD's senior policy official. He served as U.S. ambassador to Finland in the Clinton administration and Turkey in the Bush administration and was Vice President Cheney's principal deputy assistant for national security affairs. He was chief of staff to Deputy Secretary of State Strobe Talbott, special assistant to Undersecretary of State for Political Affairs Robert Kimmitt, and special assistant to Secretary of State George Shultz.

Ambassador Edelman has been awarded the Department of Defense Medal for Distinguished Public Service, the Chairman of the Joint Chiefs of Staff Joint Distinguished Civilian Service Award, the Presidential Distinguished Service Award, and several Department of State Superior Honor Awards. In 2010, he was named a knight of the French National Order of the Legion of Honor.

Ambassador Edelman received a B.A. in history and government from Cornell University and a Ph.D. in U.S. diplomatic history from Yale University. He is a Roger Hertog Distinguished Practitioner-in-Residence at the Philip Merrill Center for Strategic Studies at Johns Hopkins University and a senior associate of the international security program at the Belfer Center for Science and International Affairs at Harvard University.



Ilana Esterrich

CHIEF ADMINISTRATIVE OFFICER

Ilana Esterrich is the Chief Administrative Officer at the Center for Strategic and Budgetary Assessments. As part of CSBA's management team, she oversees CSBA's finance, administration, operations, external relations, publications, IT and HR functions. She also serves as Secretary/Treasurer on CSBA's Board of Directors.

Prior to joining CSBA, Ms. Esterrich worked in a variety of executive finance, management, and operations roles for Thomson Reuters; General Mills, Inc.; T.E. Systems, Inc.; and The Pillsbury Company and as a senior management consultant for Computer Sciences Corporation and Coopers & Lybrand, LLC.

Ms. Esterrich earned a B.S. in Economics with concentrations in Multinational Management and Political Science from the Wharton School at the University of Pennsylvania and an M.B.A. with concentrations in Corporate Strategy and Strategic Marketing from the Booth School of Business at the University of Chicago.



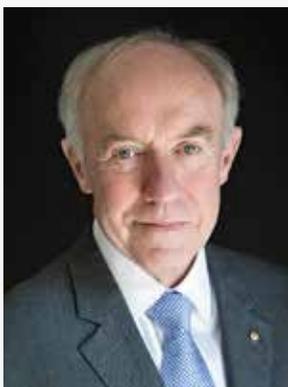
Jamie Graybeal

DIRECTOR OF EXTERNAL RELATIONS

Jamie Graybeal is the Center for Strategic and Budgetary Assessments' Director of External Relations. Prior to joining CSBA in 2015, Jamie Graybeal served as the Associate Director for Public Affairs on the Presidential Military Compensation and Retirement Modernization Commission.

Mr. Graybeal is a retired U.S. Navy public affairs officer who has led the communication efforts of the U.S. European Command, the U.S. Strategic Command, the U.S. Central Command, and NORAD and U.S. Northern Command. His most recent civilian postings include serving as the Deputy Public Affairs Officer for the International Security Assistance Force in Afghanistan and as the U.S. Navy's Assistant Chief of Information for Communication Strategy, Integration and Assessment. Early in Mr. Graybeal's naval tenure, he had the opportunity to serve as an executive assistant to the Department of Defense's top spokesperson and directly supported the Principal Deputy Assistant Secretary of Defense for Public Affairs.

Mr. Graybeal holds a Master's degree in National Security and Strategic Studies from the Naval War College and a Bachelor's in Business Administration.



Ross Babbage

NON-RESIDENT SENIOR FELLOW

Dr. Ross Babbage is a non-resident Senior Fellow at the Center for Strategic and Budgetary Assessments. He served for 16 years in the Australian Public Service holding several senior positions, including Head of Strategic Analysis in the Office of National Assessments, and leading the branches in the Department of Defence responsible for ANZUS Policy and Force Development. He also worked as a special advisor to the Minister for Defence during the preparation of the 2009 Australian defense white paper. Through the 1990s, Ross Babbage was a member of the team that reformed the Office of Defense Production with its loss-making, government-owned defense factories. What emerged was a modern, profitable corporation known as ADI Limited that grew to become Australia's largest defense company. Dr. Babbage has served on the Council of the International Institute for Strategic Studies in London, and during 2003–2004 was Head of the Strategic and Defence Studies Centre at the Australian National University.

Dr. Babbage received a B.A. and an M.A. in Economics from the University of Sydney. He received his Ph.D. in International Relations from Australian National University.



David R. Berke

NON-RESIDENT SENIOR FELLOW

Mr. Berke is a non-resident Senior Fellow at the Center for Strategic and Budgetary Assessments. He has over 23 years of experience as an active duty U.S. Marine specializing in 5th generation aviation, personnel and manpower, international affairs, and innovation as a tool to respond to new and emerging international security threats and challenges. Mr. Berke is the founder of BVR Consulting, specializing in 5th generation air warfare and the integration of modern air assets into highly contested three-dimensional battle space. His professional highlights include two combat carrier deployments in the F/A-18 to Iraq and Afghanistan, a tour as a TOPGUN Instructor and F-16 pilot, experience as a combat Forward Air Controller, an academic fellowship at the Johns Hopkins University's SAIS, and a tour as a division chief in the Joint Staff J-8 directorate and member of the Vice-Chairman's Joint Staff Innovation Group.

Mr. Berke received a Master's Degree in International Public Policy from SAIS and a B.A. in Political Science from California State University at Fullerton.



Jack Bianchi

SENIOR ANALYST

Jack Bianchi focuses on national security strategy and defense issues in the Asia-Pacific region. Mr. Bianchi was previously a Research Analyst at Defense Group Inc., where he performed bilingual (Chinese and English) open source research and analysis for U.S. government clients on Chinese cybersecurity issues and China's defense-related science and technology development.

Mr. Bianchi has working proficiency in Mandarin Chinese and studied in both Beijing and Taipei. Mr. Bianchi's prior experience also includes work at the Department of Justice and in the Office of Investment Security at the Department of the Treasury.

Jack has an M.A. in China Studies and International Economics from SAIS and a B.A. in International Studies from Boston College. He also completed the International Chinese Language Program at National Taiwan University as well as language courses at the Beijing Center for Chinese Studies at the University of International Business and Economics.



Katherine Blakeley

RESEARCH FELLOW

As a Research Fellow at the Center for Strategic and Budgetary Assessments, Ms. Blakeley directs the budget program and works to educate and inform policy makers, senior leaders, and the general public about the defense budget and issues pertaining to resourcing national security. Ms. Blakeley has authored publications on trends in the defense budget, defense acquisitions, military personnel, nuclear weapons, and other issues. She frequently contributes to print and broadcast media, and her writing has appeared in *Politico*, *The Hill*, *Newsweek*, and other publications.

Prior to joining CSBA, Ms. Blakeley worked as a defense policy analyst at the Congressional Research Service and the Center for American Progress.

Ms. Blakeley received her Ph.D. and M.A. in Political Science from the University of California, Santa Cruz. Her academic research examines Congressional defense policymaking. She received a B.A. from Vassar College, with honors.

CSBA STAFF



Ryan Boone

ANALYST

Ryan Boone is an Analyst at the Center for Strategic and Budgetary Assessments. In addition to research, he assists in the design and analysis of CSBA's operational level wargames and concept development workshops. His work examines competitive strategies, operational planning, trends in U.S. and foreign military force structure and capabilities, and operations research. Prior to joining CSBA, Mr. Boone interned in the office of the Chairman of the House Armed Services Committee's Subcommittee on Seapower and Projection Forces.

Mr. Boone was a Robertson Scholar at Duke University and graduated with a B.A. in International Relations and Middle Eastern and East Asian history. He also studied at the American University in Cairo in 2012.



Hal Brands

SENIOR FELLOW

Dr. Hal Brands is a Senior Fellow at the Center for Strategic and Budgetary Assessments and a Henry A. Kissinger Distinguished Professor of Global Affairs at Johns Hopkins University's SAIS. In 2015–2016, he was a Council on Foreign Relations International Affairs Fellow. In that capacity, he served as an adviser to the Secretary of Defense, working on a range of strategic planning and policy issues. He has also consulted with a range of government offices and agencies in the intelligence and national security communities, as well as the RAND Corporation, and provided research and analysis for the Office of Net Assessment in the Department of Defense.

He received his B.A. from Stanford University (2005) and his Ph.D. from Yale University (2009). He previously worked as an Assistant and Associate Professor at Duke University's Sanford School of Public Policy and as a researcher at the Institute for Defense Analyses.



Sharif H. Calfee

FEDERAL EXECUTIVE FELLOW

CAPT Calfee currently serves as the U.S. Navy Federal Executive Fellow at CSBA. CAPT Calfee previously served as the Executive Assistant to the Commander, Naval Surface Forces from 2014 to 2017. He served as the Executive Officer, then Commanding Officer in USS McCAMPBELL from 2012 to 2014. He served from 2009 to 2011 as a Political-Military Action Officer for counterterrorism security assistance issues on The Joint Staff, J-5 Strategic Plans and Policy Directorate. From 2007 to 2009, he served as the Surface Warfare Junior Officer Sea & Shore Assignments Coordinator at the Navy Personnel Command (PERS-41). From 2004 to 2006, he served as Combat Systems Officer & Weapons Officer in USS BUNKER HILL (CG 52). From 1999 to 2000, he was assigned to USS GETTYSBURG (CG 64) as the Fire Control Officer. He served in USS ELROD (FFG 55) from 1997 to 1999 as the Communications Officer and Main Propulsion Assistant.

CAPT Sharif H. Calfee graduated from the United States Naval Academy in May 1996 with a B.S. in Computer Science. In 2002, he completed the U.S. Naval War College Joint Professional Military Education program, graduating with distinction. He graduated from the Naval Postgraduate School with a M.S. in Computer Science in 2003, receiving the George Philips Academic Excellence Award. He is also a graduate of the Joint & Combined Warfighting School at the Joint Forces Staff College (JFSC).



Bryan Clark

SENIOR FELLOW

As a Senior Fellow at the Center for Strategic and Budgetary Assessments, Bryan Clark directs studies and analyses on the future of warfare, the implications of new technologies, and naval strategy and operations. Prior to joining CSBA in 2013, Bryan Clark was Special Assistant to the Chief of Naval Operations and Director of his Commander's Action Group, where he led development of Navy strategy and implemented new initiatives in electromagnetic spectrum operations, undersea warfare, expeditionary operations and personnel and readiness management.

Mr. Clark served in the Navy headquarters staff from 2004 to 2011, leading studies in the Assessment Division and participating in the 2006 and 2010 Quadrennial Defense Reviews. Prior to retiring from the Navy in 2007, Mr. Clark was an enlisted and officer submariner, serving in afloat and ashore submarine operational and training assignments including tours as Chief Engineer and Operations Officer at the Navy's nuclear power training unit. He is the recipient of the Department of the Navy Superior Service Medal and the Legion of Merit.

Mr. Clark holds an M.S. in National Security Studies from the National War College and a B.S. in Chemistry and Philosophy from the University of Idaho.



Jacob Cohn

RESEARCH FELLOW

Jacob Cohn is a Research Fellow at the Center for Strategic and Budgetary Assessments, where he manages the Strategic Choices Tool and conducts research and analysis for both the Strategic Studies and the Budgetary Studies programs. His primary areas of interest concern trends in the overall defense budget and in particular the linkages between resources and strategy. His research also focuses on the utilization of scenarios and war-games to facilitate long-range strategic planning and operational concept development. He contributes to print and broadcast media and is also an adjunct lecturer at the Johns Hopkins SAIS.

Prior to joining CSBA in 2014, Mr. Cohn served as a Peace Corps Volunteer in West Africa, worked in the Special Operations/Low Intensity Conflict office at the Pentagon, and was a grants and budget manager for CARE USA.

Mr. Cohn holds a B.A. in Economics and Math with Highest Honors from Emory University and an M.A. in Strategic Studies and International Economics from Johns Hopkins University's SAIS.



Christopher Dougherty

RESEARCH FELLOW

Christopher Dougherty researches, writes, and conducts wargames in support of the Strategic Studies program at the Center for Strategic and Budgetary Assessments. He has supported numerous CSBA wargames with a particular focus on developing operational concepts and capabilities for countering anti-access/area-denial threats.

Prior to joining CSBA, Mr. Dougherty served as an airborne infantryman with the 2nd Battalion, 75th Ranger Regiment from 1997 to 2000.

Mr. Dougherty graduated summa cum laude with a B.A. in Security Studies from the Henry M. Jackson School of International Studies at the University of Washington and received an M.A. in Strategic Studies with distinction from Johns Hopkins University's SAIS.

CSBA STAFF



Gillian Evans

ANALYST

Gillian Evans is an analyst at the Center for Strategic and Budgetary Assessments. At CSBA her work focuses on U.S. national security strategy, nuclear strategy and nonproliferation, and trends in future warfare. Prior to joining CSBA, Gillian worked as a Consultant Analyst in PA Consulting Group's Federal Defense Strategy practice, supporting projects for the Office of Naval Research and the Office of the Secretary of Defense. Her prior experience also includes work for the Afghanistan Policy team at the Office of the Secretary of Defense, and from 2014 to 2015 she served as a fellow at the Lahore University of Management Sciences. She is currently a 2017 Women in Security (WiSe) Fellow at the American Security Project and a member of the Johns Hopkins University Alumni Council.

Ms. Evans holds an M.A. in Strategic Studies and International Economics from SAIS and a B.S.F.S. in International Politics from Georgetown University's Walsh School of Foreign Service, where she graduated *magna cum laude*.



Kamilla Gunzinger

PRODUCTION MANAGER

Ms. Kamilla Gunzinger is the Production Manager at the Center for Strategic and Budgetary Assessments. She oversees the Center's publication and editorial processes, provides logistical and administrative assistance for events and wargames, and contributes to research, editing, and graphic design.

Prior to joining CSBA, Ms. Gunzinger took graduate courses and held an internship with Scholastic, Asia in Beijing, China (2008–2010). Previously, she studied at Keio University in Tokyo, Japan (2005–2006). She is proficient in Japanese and Mandarin Chinese, and her areas of interest include East Asian security affairs and international business.

Ms. Gunzinger received a B.A. from The College of William and Mary in 2007 and an M.A. in International Studies from Concordia University, Irvine in 2010.



Mark Gunzinger

SENIOR FELLOW

Mark Gunzinger is a Senior Fellow at the Center for Strategic and Budgetary Assessments. Mr. Mark Gunzinger previously served as the Deputy Assistant Secretary of Defense for Forces Transformation and Resources. He is the principal author or co-author of multiple Defense Planning Guidance directives, key strategic planning documents that shape DoD force planning. A retired Air Force Colonel and Command Pilot, he joined the Office of the Secretary of Defense in 2004. He was appointed to the Senior Executive Service and served as Principal Director of the Department's central staff for the 2005–2006 QDR. He was then appointed Director for Defense Transformation, Force Planning and Resources on the National Security Council staff.

Mr. Gunzinger is the recipient of the Department of Defense Distinguished Civilian Service Medal, the Secretary of Defense Medal for Outstanding Public Service, the Defense Superior Service Medal, and the Legion of Merit Medal.

Mr. Gunzinger holds an M.S. in National Security Strategy from the National War College, a Master of Airpower Art and Science degree from the School of Advanced Air and Space Studies, an M.P.A. from Central Michigan University, and a B.S. in Chemistry from the United States Air Force Academy (Class of 1977).



Robert Haffa

NON-RESIDENT SENIOR FELLOW

Bob Haffa is a non-resident Senior Fellow at the Center for Strategic and Budgetary Assessments. Prior to joining CSBA in 2011, Dr. Haffa directed the Northrop Grumman Analysis Center after retiring from the U.S. Air Force as a colonel. His Air Force career included a combat tour in Vietnam in RF-4C aircraft, F-4D/E squadron and wing assignments in England and Korea, teaching political science at the U.S. Air Force Academy, and a tour with the Air Staff in the Pentagon as Chief of the Long Range Planning Division and Director of the Operations Group supporting the Air Force Chief of Staff. At Northrop Grumman, Dr. Haffa's work included analyses of U.S. military strategy, force planning, programming, and wargaming for the business sectors of the company, as well as the development of corporate strategic planning scenarios. Dr. Haffa is an adjunct professor at Johns Hopkins University.

Dr. Haffa received a B.S. in International Affairs from the U.S. Air Force Academy, an M.A. in Political Science from Georgetown University, an M.S. in Management from the University of Arkansas, and a Ph.D. in Political Science from the Massachusetts Institute of Technology.



David W. Hamon

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Mr. Hamon is a non-resident Senior Fellow at the Center for Strategic and Budgetary Assessments. His experience and research focus on solutions to policy and strategy problems for the benefit of government and society by developing future-oriented, strategic research initiatives and teams as well as creating dialogue and engagement opportunities with diverse groups of experts. Mr. Hamon currently serves as Vice President for the Economic Warfare Institute and Director of Strategic Initiatives at Soft Power Solutions Inc. Previously, he was a Distinguished Analyst & Founding Director of Banyan Analytics Institute, Analytic Services Inc.; Director of Strategic Research and Dialogues as well as Deputy Director of Research and Studies of the Defense Threat Reduction Agency, Office of Advanced Systems and Concepts; and Regional Director for Policy and Programs, African Affairs for the Office of the Secretary of Defense. He additionally served with the United Nations Department of Peacekeeping Operations. He is an adjunct faculty member for the University of Montana, the University of Mary Washington, and Webster University. He is a retired U.S. Army Logistician.

Mr. Hamon received his M.A. in Political Science/International Affairs from Northeastern University.

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Peter Haynes

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Dr. Peter Haynes is a Senior Fellow at the Center for Strategic and Budgetary Assessments. Prior to retiring from the U.S. Navy in 2016 as a captain, he served as the Deputy Director, Strategy, Plans, and Policy (J5) at U.S. Special Operations Command. He also served as Director, Strategy and Plans (J5) for Combined Joint Task Force; Branch Chief, Advanced Concepts, (N511), OPNAV; Branch Chief, Strategy and Concepts (N513), OPNAV; and Desk Officer, Russia and Ukraine, Joint Staff J5. Operationally, he flew the E-2C Hawkeye carrier-based command and control aircraft with VAW 116 and VAW-112 as the commanding officer and executive officer to the Western Pacific, as well as to the Persian Gulf in support of Operation Iraqi Freedom. He is the recipient of the Defense Superior Service Medal, the Legion of Merit, the Air Medal with Combat “V” and the Navy/Marine Corps Commendation Medal with Combat “V”. He received the 2009–2010 Naval History and Heritage Command’s Samuel Eliot Morison Naval History Scholarship.

Dr. Haynes received B.A.s in History and the Arts and Letters Program for Administrators from the University of Notre Dame. He also earned an M.A. in National Security Affairs (with distinction) and a Ph.D. in Security Studies from the Naval Postgraduate School.



Benjamin Lambeth

NON-RESIDENT SENIOR FELLOW

Dr. Benjamin S. Lambeth is a non-resident Senior Fellow at the Center for Strategic and Budgetary Assessments. He assumed this position in July 2011 after a 37-year career as a Senior Research Associate at the RAND Corporation, where he remains an adjunct associate. Before joining RAND, he served in the Office of National Estimates at the Central Intelligence Agency and worked for both the Center for Strategic and International Studies and the Institute for Defense Analyses. In 2002, he was elected an honorary member of the Order of Daedalians, the national fraternity of U.S. military pilots. In 2008, Dr. Lambeth was appointed by the Secretary of Defense to serve an eight-year term as a member of the Board of Visitors of Air University. He is a member of the Council on Foreign Relations, the Air Force Association, the U.S. Naval Institute, the Association of Naval Aviation, the Red River Valley Fighter Pilots Association, and the Editorial Advisory Boards of *Air and Space Power Journal* and *Strategic Studies Quarterly*.

Dr. Lambeth received a B.S. in Political Science from the University of North Carolina at Chapel Hill, an M.A. in Government from Georgetown University, and a Ph.D. in Political Science from Harvard University.



Adam Lemon

RESEARCH ASSISTANT

Adam Lemon is a Research Assistant at the Center for Strategic and Budgetary Assessments. At CSBA, his work focuses on U.S. defense policy and strategy, Russian military strategy, and Arctic security issues. Prior to joining CSBA, Adam was a research intern in the Center for National Defense at the Heritage Foundation, where he worked with defense budgeting, military force structure, NATO, and Arctic security issues. He also served as an intern in the office of Congresswoman Cathy McMorris-Rodgers (WA-05).

Mr. Lemon graduated from Duke University with B.A.s in Political Science (cum laude) and History and a minor in Russian Language and Culture. He also studied Russian language and culture at Saint Petersburg State University.



Whitney M. McNamara

ANALYST

Whitney Morgan McNamara is an Analyst at the Center for Strategic and Budgetary Assessments. Ms. McNamara was a National Security Fellow at the Woodrow Wilson Center and worked in the Political-Military Bureau at the Department of State and in the Office of the Secretary of Defense for Middle East Policy. Prior to that, she spent four years working in the Middle East as a project manager and consultant.

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Evan B. Montgomery

SENIOR FELLOW

Evan Montgomery is a Senior Fellow at the Center for Strategic and Budgetary Assessments. His principal research areas include long-term competitions, trends in future warfare, alliance management, and East Asia security issues. He also focuses on U.S. nuclear strategy and force structure, as well as the causes and consequences of nuclear proliferation.

While at CSBA, Dr. Montgomery has authored or coauthored nearly two-dozen monographs on a wide range of defense policy topics, lectured before a variety of audiences, and provided expert testimony to the U.S.–China Economic and Security Review Commission. His commentary and analysis have appeared in *Foreign Affairs*,

The Wall Street Journal, *The National Interest*, *The Diplomat*, *Defense News*, and *Real Clear Defense*. He has also published articles in academic journals such as *International Security*, *Security Studies*, and the *Journal of Strategic Studies*.

Dr. Montgomery graduated summa cum laude from Villanova University with a B.A. in Political Science and Sociology and received his M.A. and Ph.D. in Foreign Affairs from the University of Virginia.



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Amber Oar is an Analyst at the Center for Strategic and Budgetary Assessments, where she conducts research and analysis for both the Strategic Studies and the Budget Studies programs. Prior to joining CSBA, Ms. Oar served as an acquisitions officer in the U.S. Air Force specializing in data analytics and information technology program management.

Ms. Oar received her B.S. in Political Science and Legal Studies (with Academic Distinction) from the U.S. Air Force Academy. She also earned a Master of Public Policy degree, specializing in International Security and Economic Policy, from the University of Maryland, College Park.

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OFFICE MANAGER

Julie Pulley manages CSBA's administrative functions as the Office Manager at the Center for Strategic and Budgetary Assessments. Prior to CSBA, Ms. Pulley worked at Discovery Communications, Inc., where she managed a variety of special projects.

Ms. Pulley earned a B.S. at Howard University.



Carl Rehberg

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Dr. Carl Rehberg is a non-resident Senior Fellow at the Center for Strategic and Budgetary Assessments. Carl was founder and director of the Headquarters Air Force Asia-Pacific Cell, which played a pivotal role in the development of Air Force strategy, force development, planning, analysis and warfighting concepts supporting initiatives related to Asia-Pacific and the DoD Third Offset Strategy. Carl spearheaded the establishment of the China Aerospace Studies Institute (CASI) and led the development of innovative concepts and capability proposals to improve DoD's joint resiliency and integrated air and missile defenses. Prior to this assignment, he was the Assistant Associate Director for AF Strategic Planning and Director, Analysis Division in the AF QDR organization, leading multiple assessments of future capabilities and force structure.

Dr. Rehberg holds B.S. in Industrial Technology [Aviation Administration] with honors from California State University, Los Angeles; an M.A. in Political Science from the University of South Dakota; and a Ph.D. in Public Administration from the University of Colorado at Denver. HE was also a National Security Fellow at Harvard University.



Rick Russo

SENIOR ANALYST

Rick Russo is a senior analyst focusing on urban warfare, special operations, and intelligence activities. He came to CSBA following a 24-year active duty career in the U.S. Army, where he served as a military intelligence analyst in the Continental United States and abroad in direct support of combat operations with joint special operations forces. Mr. Russo was selected twice as a Military Fellow for the Chief of Staff of the Army Strategic Studies Group where he conducted and led research efforts on the future of urban combat. He retired as a Sergeant Major in 2016.

Mr. Russo completed the Sergeants Major Course at the U.S. Army Sergeants Major Academy and is Certified Project Management Professional by the Project Management Institute. He earned a B.S. in Criminal Justice at Excelsior College. He is pursuing an M.S. in Intelligence Analysis from Johns Hopkins University.



Harrison Schramm

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Harrison Schramm has been a leader in the Operations Research community for the past decade. Prior to joining CSBA in 2017, he had a successful career in the U.S. Navy, where he served as a Helicopter Pilot, Military Assistant Professor at the Naval Postgraduate School, and as a lead Operations Research Analyst in the Pentagon. His areas of emphasis were large-scale simulation models, statistics, optimization, and applied probability. His current research interests are the intersection of data, mathematical models, and policy.

Mr. Schramm enjoys professional accreditation from the Institute for Operations Research and Management Sciences (CAP, INFORMS), the American Statistical Association (PStat, ASA) and the Royal (UK) Statistical Society (CStat, RSS). He is a past Vice President of the Military Operations Research Society (MORS) and is active in several Committees of INFORMS. He is also a Principal Operations Research Analyst at CANA Advisors. He is a recipient of the Richard H. Barchi Prize, Steinmetz Prize, Meritorious Service Medal, Air Medal, and the Naval Helicopter Association's Aircrew of the Year.



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RESEARCH ASSISTANT

Michelle Shevin-Coetzee is a Research Assistant at the Center for Strategic and Budgetary Assessments. Prior to joining CSBA, Michelle was a researcher with the Center for a New American Security, where she worked with both the Defense Strategies and Assessments and Strategy and Statecraft programs on transatlantic security, NATO, the European Union, and the Baltic and Nordic regions. Previously, she served as a policy intern in the Office of the Secretary of Defense for four years. While at the Pentagon, Michelle worked on issues related to Countering Weapons of Mass Destruction, East Asia, Strategy and Force Development, and Europe and NATO. She serves as the Vice President of the Women in International Security, DC Chapter.

Ms. Shevin-Coetzee received a B.A. in International Affairs (summa cum laude) and a minor in Arabic from George Washington University's Elliott School of International Affairs.



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Jesse Sloman is an Analyst at the Center for Strategic and Budgetary Assessments. Prior to joining CSBA, Mr. Sloman worked for the Council on Foreign Relations. He served as an intelligence officer in the Marine Corps from 2009 to 2013 and a civil affairs officer in the Marine Corps Reserve from 2013 to 2016.

He is the recipient of the 2012 Major General Michael E. Ennis Award for Literary Excellence and a winner of the 2016 U.S. Naval Institute Emerging & Disruptive Technologies Essay Contest.

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Julian Snelder is a non-Resident Senior Fellow at the Center for Strategic and Budgetary Assessments. He worked for the management consultancy McKinsey & Company for eight years, then for Morgan Stanley for eight years, the latter role as head of technology investment banking for Asia. Since 2005 he has been director and partner in an emerging market investment fund. Mr. Snelder has worked extensively in China, India, Japan, Korea, and Taiwan. He has advised corporate and government clients on mergers and acquisitions, fundraising and capital investment, business planning and budget planning, privatization, and industrial policy. His particular interest is the broad application of commercial information and manufacturing technologies to matters of national security.

Mr. Snelder received a Bachelors in Economics from Trinity College Cambridge as well as a Bachelors in Mechanical Engineering from the University of Canterbury.



John Stillion

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John Stillion is a Senior Fellow at the Center for Strategic and Budgetary Assessments. Dr. Stillion is a former U.S. Air Force officer, instructor navigator, and tactical aviator. He is a Distinguished Graduate of Air Force ROTC, USAF Navigator Training, and RF-4C Tactical Aircrew Training. He previously worked at the RAND Corporation where he led multi-disciplinary study teams and analyzed a wide range of issues related to airpower and future warfare. Dr. Stillion was also a Senior Analyst in the aerospace industry where he analyzed the cost-effectiveness of existing and possible future products as well as the emerging demand for advanced capabilities and production techniques. Before that, he led a multi-disciplinary team of analysts and engineers in exploring advanced applications of stealthy unmanned aircraft in future conflicts.

Dr. Stillion holds a Ph.D. and M.Phil. in Public Policy Analysis from the Pardee RAND Graduate School, an M.A. in Political Science from Stanford University, and a B.A. in Political Science from North Carolina State University.



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Sherril Stone serves as the executive assistant to CSBA's President and CEO, Dr. Thomas Mahnken. Additionally, Ms. Stone provides general administrative assistance to CSBA's entire staff. Prior to CSBA, Ms. Stone worked at the Consumer Financial Protection Bureau as an Administrative Operations Assistant.

Ms. Stone received an education in business from Strayer University.



Jan van Tol

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Jan van Tol is a Senior Fellow at the Center for Strategic and Budgetary Assessments. His analytic work has focused mainly on long-range strategic planning, naval warfare, military innovation, and wargaming. Prior to his retirement from the Navy in 2007, Captain van Tol served as special adviser in the Office of the Vice President. He was a military assistant to Andrew W. Marshall, the Secretary of Defense's Principal Advisor for Net Assessment, from 1993–1996 and again from 2001–2003. At sea, he commanded three warships, two of which, the USS O'Brien (DD-975) and the USS Essex (LHD-2), were part of the U.S. Navy's Forward Deployed Naval Forces based in Japan.

Captain van Tol holds degrees in Philosophy and Logic from the University of Massachusetts, in Operations Research from the Naval Postgraduate School, and he graduated with distinction from the Naval War College.



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SENIOR ANALYST

Timothy A. Walton is a Senior Analyst at the Center for Strategic and Budgetary Assessments. His research and analysis focus on trends in future warfare and Asia-Pacific security dynamics. Prior to joining CSBA, Mr. Walton was a Principal of Alios Consulting Group and an Associate of Delex Consulting, Studies, and Analysis.

Mr. Walton received his Bachelor of Science in International Politics (Security Studies) and Master of Arts in Security Studies from Georgetown University. He also completed a study abroad program for which he received a CIEE Intensive Chinese Language and Culture Certificate for Chinese Studies from Nanjing University.



Toshi Yoshihara

SENIOR FELLOW

Before joining CSBA, Toshi Yoshihara held the John A. van Beuren Chair of Asia-Pacific Studies and was an affiliate member of the China Maritime Studies Institute at the U.S. Naval War College, where he taught strategy. Dr. Yoshihara has been a visiting professor of international politics at the Fletcher School of Law and Diplomacy, Tufts University since 2012. He has also taught as a visiting professor at the School of Global Policy and Strategy, University of California, San Diego and in the Strategy Department at the U.S. Air War College. He has served as a research analyst at the Institute for Foreign Policy Analysis, RAND, and the American Enterprise Institute. The Naval War College Review awarded him the Hugh G. Nott Prize for best article of 2010, and he is the recipient of the Navy Meritorious Civilian Service Award.

He holds a Ph.D. from the Fletcher School of Law and Diplomacy, Tufts University, an M.A. from the School of Advanced International Studies, Johns Hopkins University, and a B.S.F.S. from the School of Foreign Service, Georgetown University.

CSBA BOARD MEMBERS



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Nelson M. Ford is President and CEO of LMI, a government consulting firm. Prior to joining LMI in 2009, Mr. Ford was Under Secretary of the Army. Previous to this position, he held a number of positions in the Department of Defense, including Assistant Secretary of the Army for Financial Management and Comptroller. From 1997 to 2000, he was President and CEO of Clinipad, a manufacturer of disposable medical products. During the 1990s, he was Chief Operating Officer of Georgetown University Medical Center. During the 1980s, Mr. Ford was a partner with Coopers & Lybrand, providing strategic and financial consulting services to a wide range of healthcare clients. During the 1970s, he was the Executive Secretary of the Health Care Financing Administration and worked on health policy matters in the Office of Management and Budget. Mr. Ford holds a bachelor's degree in history from Duke University and a master's in education from the University of Delaware.

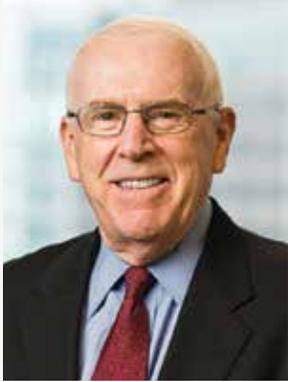


Devon Gaffney Cross

PRESIDENT

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Devon Cross is Director of The Policy Forum on International Affairs and has extensive experience in funding research on foreign policy issues having served as Director of Research at Smith Richardson Foundation, President of The Donner Canadian Foundation, and Director of The Gilder Foundation. Ms. Cross serves on the boards of The Peter Munk Charitable Foundation, Intelligence Squared/U.S., and the Advisory Board for Johns Hopkins SAIS National Security Studies Program, and she served on the Pentagon's Defense Policy Board from 2001–2009. Her Washington experience included stints at The Center for Strategic and International Studies, Carnegie Endowment, and the International Security Studies Program at the Woodrow Wilson Center. She studied at Johns Hopkins School of Advanced International Studies and received her B.A. from Bryn Mawr College. She is a member of the Council on Foreign Relations.

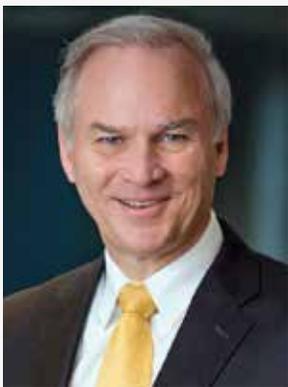


Vic Fazio

SENIOR ADVISOR

AKIN GUMP STRAUSS HAUER & FELD LLP

Vic H. Fazio is Senior Advisor at Akin Gump Strauss Hauer & Feld, LLP. Mr. Fazio represented California's 3rd District in the U.S. Congress for twenty years, where he served on the House Appropriations Committee as a subcommittee chairman or ranking member for eighteen years. He was also a member of the Armed Services, Budget, Ethics and House Administration committees. Mr. Fazio was active in the Democratic leadership, serving as vice chair and, later, chair of the Democratic Caucus, chairman of the Democratic Congressional Campaign Committee, majority whip-at-large and regional representative on the Democratic Steering and Policy Committee. Before his election to Congress, Mr. Fazio served in the California State Assembly. After his retirement from Congress in 1998, Mr. Fazio joined strategic communications consulting firm Clark & Weinstock. Mr. Fazio is a graduate of Union College in Schenectady (NY). He is a co-founder of the California Journal, a periodical covering state government and politics. Mr. Fazio serves on boards of the UC Davis Foundation, California Institute, the U.S. Capitol Historical Society, the Campaign Finance Institute, Northrop Grumman Corporation, Ice Energy Corporation, and the National Parks Second Century Commission and Committee for a Responsible Budget.



J. Randy Forbes

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Former U.S. Representative J. Randy Forbes is a Senior Distinguished Fellow at the U.S. Naval War College in Newport, Rhode Island, where he shares with students and faculty his perspective on topics such as maritime strategy, naval policy, civil-military relations, and the role of Congress in national security affairs. Previously, he represented the Hampton Roads region for 16 years in the U.S. House of Representatives. While in Congress, Forbes served as a senior member of the House Armed Services Committee. He was Chairman of the Subcommittee on Readiness from 2011–2013 and Chairman of the Subcommittee on Seapower and Projection Forces from 2013–2017. Forbes was widely recognized as the leading authority in Congress on naval issues. He also founded the Congressional China Caucus to call attention to China's growing military and economic power and raise awareness about its implications for the United States. He has been recognized with more than a dozen awards for his maritime leadership, including the Navy's Distinguished Public Service Award and the Navy League's "Outstanding Civilian Leadership" and "Teddy Roosevelt 'Big Stick'" Awards. Prior to his service in Congress, Forbes served in the Virginia Senate and House of Delegates, and was an attorney in private practice. Forbes received his B.A. in Political Science from Randolph-Macon College (graduating valedictorian) and his J.D. from the University of Virginia Law School.

CSBA BOARD MEMBERS



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**SENIOR MANAGING DIRECTOR & GENERAL COUNSEL
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Adam B. Frankel is a Senior Managing Director and the firm's General Counsel. Prior to joining Evercore in July 2006, from 2003 to 2006, Mr. Frankel was senior vice president, general counsel and corporate secretary of Genesee & Wyoming Inc., a leading owner and operator of short line and regional freight railroads in the United States, Canada, Mexico, Australia and Bolivia. Mr. Frankel was also responsible for matters related to human resources and government affairs. Mr. Frankel worked from 1999 until 2003 as a corporate and transactions attorney in the office of the general counsel at Ford Motor Company. From 1995 until 1999, Mr. Frankel was an associate at Simpson Thacher & Bartlett in London and New York. Mr. Frankel is a member of the Council on Foreign Relations, and a trustee at the Sesame Workshop. He has a B.A. from Brown University and a J.D. from Stanford Law School.



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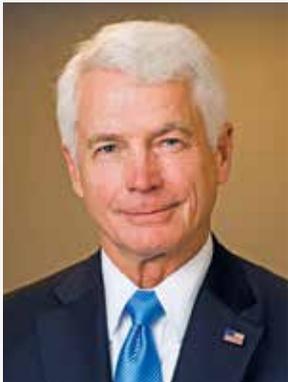
Barbara Humpton serves as President and Chief Executive Officer of Siemens Government Technologies, Inc., a federally-compliant U.S. organization and leading integrator of Siemens' innovative products, technologies and services for programs and requirements at federal government agencies and departments in the areas of energy generation, transmission, distribution and efficiency, infrastructure modernization, industrial applications and healthcare. Mrs. Humpton is also an Officer/Director member of the Board of Directors of Siemens Government Technologies, Inc. Prior to joining Siemens, Humpton served as a Vice President at Booz Allen Hamilton where she was responsible for program performance and new business development for technology consulting in the Department of Justice and Department of Homeland Security. Earlier, Humpton was a Vice President at Lockheed Martin Corporation with responsibility for Biometrics Programs, Border and Transportation Security and Critical Infrastructure Protection, including such critical programs as the FBI's Next Generation Identification and the TSA's Transportation Workers' Identification Credential. Humpton is a graduate of Wake Forest University with a degree in Mathematics. She resides in Washington, DC with her husband David.



General John M. Keane (Ret.)

**SENIOR MANAGING PARTNER
KEANE ADVISORS, LLC**

John M. Keane is Senior Managing Director and co-founder of Keane Advisors, LLC. General Keane is a retired four-star general who dedicated four decades of his life to public service, which culminated in his appointment as acting Chief of Staff and Vice Chief of Staff of the U.S. Army. General Keane is a career paratrooper, a combat veteran of Vietnam, decorated for valor. He is a member of the Secretary of Defense's Policy Board, member of the Congressional Commission on the National Guard and Reserves, a member of the Council on Foreign Relations, director of the George C. Marshall Foundation, director of the Knollwood Foundation, a member of the Executive Committee of the Pentagon Memorial Fund, chairman of the Terry Maude Foundation and chairman of Senior Executive Committee of the Army Aviation Association of America. General Keane holds a B.S. in Accounting from Fordham University and an M.A. in Philosophy from Western Kentucky University. He is a graduate of the Army War College and the Command and General Staff College.



Dave McCurdy

**PRESIDENT
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Dave McCurdy is currently President and CEO of the American Gas Association. Mr. McCurdy spent 14 years (1981–1995) in the House of Representatives as the Member from the Fourth Congressional District of Oklahoma. During that time, he served as Chairman of the House Intelligence Committee; Chairman of the Military Installations and Facilities Subcommittee of the House Armed Services Committee; and Chairman of the Transportation Aviation and Materials Subcommittee of the Science and Space Committee. He played a major role in enacting the 1988 National Superconductivity Competitiveness Act; the 1985 Goldwater-Nichols Act; the Nunn-McCurdy Amendment in 1982; and the 1993 National Service Legislation. In 2008, Secretary of Defense Robert Gates appointed Congressman McCurdy to the Defense Policy Board; he was reappointed to the Defense Policy Board in 2009 by the Obama Administration.



Laurence Zuriff

ZFI CAPITAL

Laurence Zuriff is the founder and CFO of Xometry, an advanced manufacturing company founded in 2013 and has a 20 year career managing money in the U.S. public equity markets. Mr. Zuriff currently chairs the International Economics Working Group of the John Hay Initiative and is a board member of the Alexander Hamilton Society. Mr. Zuriff holds a B.A. degree from Brown University and an M.A. from Johns Hopkins School of Advanced International Studies.

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