



2018

ANNUAL REPORT

CSBA

Center for Strategic and Budgetary Assessments

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, 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, discussions on the strategic choices necessary for the transformation and modernization of the U.S. military in the face of limited resources, and the defense strategy and operational concepts needed for an era marked by great-power competition and the possibility of great-power war.

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 is to develop innovative, resource-informed defense concepts, promote public debate, and spur action to advance U.S. and allied interests. Our vision is to set the terms of debate for the future of national defense and drive change in concept development, force structure, and resources to prepare the US and its allies to compete and win in an era characterized by great power competition and conflict.

CSBA enjoys a reputation that is cemented in its values of Independence, Objectivity, Integrity, Innovation, Expertise, and Quality.

MESSAGE FROM THE CHAIRMAN OF THE BOARD



For nearly three decades, the Center for Strategic and Budgetary Assessments has been a reliable source of high quality, independent, and innovative research and analysis on the future of defense. The CSBA team of exceptional experts is a key national resource: they inform the nation's most critical defense policy debates, lead critical strategy simulations and force structure planning and budgeting exercises, and help frame the strategic choices facing governments in the allocation of defense budgets.

In 2018, CSBA's work focused on several crucial issues facing America and its allies to include nuclear modernization, innovative concepts for defending military assets and the future of the carrier air wing. CSBA was well represented on the bipartisan National Defense Strategy Commission with Ambassador Eric Edelman, CSBA's Counselor, serving as co-Chair with Admiral Gary Roughead.

In 2019, CSBA will continue to focus on critical strategic choices facing decision makers in the United States and our allies in an era of great-power competition and growing prospects for great-power conflict. We will also continue to educate the public, from academics and congressional staffers to members of interested public, in our top-tier conference facilities and to develop the next generation of strategic thinkers.

For many years, our role in the national security arena has been under the radar. Recently we've made our efforts more accessible to a wider audience because we believe that a better-informed public helps strengthen our national security. So, please join us on our social media sites, sign up for our newsletter, and consider making a financial contribution to support CSBA's research and public education and outreach. Thank you for your continued interest and support.

Sincerely,

NELSON FORD
Chairman

MESSAGE FROM THE PRESIDENT AND CEO

2018 was an important year for CSBA. Our analysis and expertise influenced the National Defense Strategy, Nuclear Posture Review, and Missile Defense Review. We were well represented on the Congressionally-mandated Commission on the National Defense Strategy, chaired by AMB Eric Edelman, whose commissioners included Dr. Thomas G. Mahnken and GEN Jack Keane and staff included Dr. Hal Brands. Our research and expertise also shaped policy debates on defense and national security more broadly, both in the United States and abroad.

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

Among the highlights of our work in 2018 are:

- Deeply researched monographs on innovative concepts for countering authoritarian political warfare, defending America's military bases, transforming the carrier air wing, sustaining the U.S. nuclear deterrent, strengthening deterrence, and human-machine teaming.
- Books on long-term competition with China, the Chinese navy, U.S. strategy toward Iran, and American grand strategy.
- Congressional testimony on defense strategy and preparing for great-power conflict.
- The Secretary of Defense Executive Fellow Program and co-sponsorship of a highly regarded course on "Strategy in the Asia-Pacific Region" and the Directed Energy Summit.

In 2018 we welcomed several new members to our team. Maureen Fitzgerald joined us as Director of External Affairs. Captain Budd Bergloff came to CSBA as our newest Navy Federal Executive Fellow, replacing Captain Sharif Calfee. Jennifer McCardle joined us as a Non-Resident Fellow focusing on cyber issues. We also welcomed Research Fellows Billy Fabian, who is focused on land warfare, and Travis Sharp, who leads our budgetary studies program. Further strengthening our research team are Lukas Autenried, Pete Kouretsos, Grace Kim, and Kyle Libby.

We look forward to driving the debate on critical national security issues in 2019.

Sincerely,

THOMAS G. MAHNKEN
President and Chief Executive Officer





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ANALYTIC CRITERIA FOR JUDGMENTS,
DECISIONS, AND ASSESSMENTS

BARRY WATTS

CSBA
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CRITICAL ASSUMPTIONS AND
AMERICAN GRAND STRATEGY

HAL BRANDS, PETER FEAYER,
WILLIAM INBODEN, AND PAUL D. MILLER

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WINNING IN THE GRAY ZONE

HOW ELECTRONETIC WARFARE
TECHNOLOGY CAN CHANGE

SPINGLAR
MARK SHENKER
JOE SLANE

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MORE MONEY
ON THE HORIZON?

ANALYSIS OF THE FY 2018
DEFENSE BUDGET REQUEST

CSBA
Center for Strategic and Budgetary Assessments

RESTORING AMERICAN
SEAPOWERS

A NEW FLEET ARCHITECTURE FOR THE
UNITED STATES NAVY

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DOING

Research Methodology

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.

OPERATIONAL CONCEPT DEVELOPMENT

CSBA's operational concepts link strategies and capabilities to achieve strategic objectives and inform requisite future capability investments. 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.

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. 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.

STRATEGIC CHOICES EXERCISES

CSBA examines the defense capability tradespace within multiple possible budget scenarios to identify the relationship between strategy and investments, including areas of over- and under-investment. The Strategic Choices Exercise is used for both futures games and to educate the public as to the contents of the Defense Program of Record.

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.



COMPETITION AND CONFLICT IN THE 21st CENTURY

In 2018, CSBA's research focused on the following areas:

UNDERSTANDING COMPETITION AND CONFLICT IN THE 21ST CENTURY

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.

STRATEGIC CHOICES

Identifies key operating concepts, capabilities, and capacity choices for the U.S. military and its key allies and stresses opportunities for innovation and change.

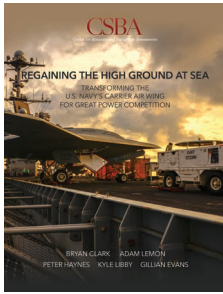
PUBLIC AND PROFESSIONAL EDUCATION

Includes outreach campaigns on emerging strategies, new concepts and military technologies, and budget analyses to educate, train and inform national security decision-makers.



Government and industry stakeholders attend the 2018 Directed Energy Summit, discussing the development and deployment of directed energy systems, cohosted by CSBA, Washington DC.

Report: December 2018



Regaining the High Ground At Sea: Transforming The U.S. Navy's Carrier Air Wing For Great Power Competition

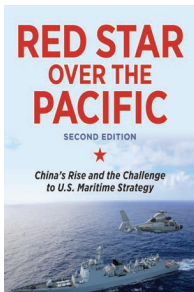
Bryan Clark, Adam Lemon, Peter Haynes, Kyle Libby, and Gillian Evans

Started as an experiment in scouting for battleships and cruisers, naval aviation has grown during the last century into the primary offensive arm of the U.S. Navy and the centerpiece of the American fleet. As arguably the ultimate modular military platform, aircraft carriers exploited the diversity of naval aircraft to address emerging threats and opportunities by changing the size and mix of aircraft in their carrier air wings (CVW). Without the ability to evolve and support new missions, carriers and their aircraft would likely have gone the way of the battleship and left the fleet decades ago.

Today the Navy needs to transform its CVWs to counter the challenges posed by great powers like China and Russia and implement new defense and military strategies. During the quarter century since the end of the Cold War, carrier aviation emphasized cost-effectiveness and versatility because the United States did not face a peer adversary. Today's carrier aircraft, however, lack the range, endurance, survivability, and specialization to carry out the operational concepts needed to defeat great power militaries. If the Navy is unable to transform its carrier air wings, Navy leaders should reconsider whether to continue investing in carrier aviation or shift the fleet's resources to more relevant capabilities.

This report examines trends in U.S. strategy, capabilities, and threats between now and 2040 to describe the operational concepts CVWs will likely need to use in the future, as well as the implications for how CVWs should evolve during the next 20 years. The 2040 timeframe was chosen because new capabilities developed now could be fielded in operationally-relevant numbers by that year. 2040 is also approximately when the F/A-18 variants that comprise all the tactical aircraft in current CVWs will have retired, requiring the Navy to consider today what will replace them.

Book: December 2018



Red Star Over the Pacific: China's Rise and the Challenge to U.S. Maritime Strategy

Toshi Yoshihara and James R. Holmes

Combining a close knowledge of Asia and an ability to tap Chinese-language sources with naval combat experience and expertise in sea-power theory, the authors assess how the rise of Chinese sea power will affect U.S. maritime strategy in Asia. They argue that China has laid the groundwork for a sustained challenge to American primacy in maritime Asia, and to defend this hypothesis they look back to Alfred Thayer Mahan's sea-power theories, now popular with the Chinese.

The book considers how strategic thought about the sea shapes Beijing's deliberations and compares China's geostrategic predicament to that of the Kaiser's Germany a century ago. It examines the Chinese navy's operational concepts, tactics, and capabilities and appraises China's missile force. The authors conclude that China now presents a challenge to America's strategic position of such magnitude that Washington must compete in earnest.



Testimony: November 2018

Statement before the Senate Armed Services Committee: Findings and Recommendations of the Commission on the National Defense Strategy

Eric Edelman and Gary Roughhead

The co-chairs of the National Defense Strategy Commission testified before the Senate Armed Services Committee. The two witnesses discussed the findings and recommendations of their commission’s congressionally mandated final report. Mr. Edelman told members that the U.S. is “on the cusp of a national security emergency” due to declining military advantages and current global threats.

“The U.S. military could suffer unacceptably high casualties and loss of major capital assets in its next conflict,” reads the report, issued Wednesday by the National Defense Strategy Commission. “It might struggle to win, or perhaps lose, a war against China or Russia. The United States is particularly at risk of being overwhelmed should its military be forced to fight on two or more fronts simultaneously.

“Additionally, it would be unwise and irresponsible not to expect adversaries to attempt debilitating kinetic, cyber, or other types of attacks against Americans at home while they seek to defeat our military abroad,” the authors add. “U.S. military superiority is no longer assured and the implications for American interests and American security are severe.”

The commission is a congressionally empowered, bi-partisan committee, put together in July 2017. Three individuals each were assigned by the House and Senate Arms Services Committee leadership at the time—the late Sen. John McCain, R-Ariz., SASC ranking member Jack Reed, D-R.I.; HASC chairman Rep. Mac Thornberry, R-Texas, and ranking member Rep. Adam Smith, D-Wash.

While reports warning of potential doom for the U.S. military are not unknown in Washington, the nature of this report—a requirement from Congress, with hand-picked experts—means that it will inevitably get attention on the Hill, just as a new Congress, with Democrats now running the House, settles in for the FY20 budget fight.

Report: November 2018



Air and Missile Defense At A Crossroads: New Concepts And Technologies To Defend America's Overseas Bases

Mark Gunzinger and Carl Rehberg

The Department of Defense has invested billions of dollars over the last 30 years to defend against ballistic missile attacks on the United States and its bases and forces overseas.

Despite these investments, the U.S. military still lacks the ability to defeat large numbers of ballistic missiles, cruise missiles, unmanned aircraft, and other emerging guided weapons threats. Indeed, to date tangible progress toward fielding high capacity air and missile defenses has been minimal. This report addresses how DoD can take advantage of mature and emerging technologies to develop higher capacity and more cost-effective air and missile defenses for its overseas bases. It assesses the potential for a layered, distributed defense that integrates multiple new non-kinetic and kinetic systems to defeat salvo attacks.

Future layered defenses with these capabilities could greatly increase the level of effort an adversary would need to undertake to attack America’s overseas bases successfully. They could be forward deployed with

a footprint that would allow them to move quickly between bases located in contested areas, which would help the U.S. military to transition its overseas posture “from large, centralized, unhardened infrastructure to smaller, dispersed, resilient, adaptive basing that include active and passive defenses,” as highlighted in the 2018 National Defense Strategy.



CSBA workshop participants explore innovative ways to solve the Navy's near- and long-term challenges.

Testimony: September 2018

Statement before the House Armed Services Committee: The Impact of National Defense on the Economy, Diplomacy, and International Order

Hal Brands

Chairman Thornberry, Ranking Member Smith, and distinguished members of the Committee receive a statement on the impact of national defense on the economy, diplomacy, and international order.

Brands offered six analytical points about the subject at hand, and then three broad recommendations for Congress.

- First, the comparatively peaceful, prosperous, and democratic international order we enjoy today rests on a foundation of American leadership.
- Second, if international order rests on American leadership, American leadership rests on a foundation of unmatched military power
- Third, robust U.S. military power produces positive spillovers in other areas of statecraft.
- Fourth, the United States needs a vast military superiority, not a marginal military superiority, to preserve its interests and sustain the international order.
- Fifth, U.S. military superiority is being eroded by developments at home and abroad.
- Sixth, as U.S. military advantages erode, the international order will also erode.

And provided three recommendations for Congress which included to scrutinize closely the National Defense Strategy and National Military Strategy, both of which were completed earlier in the year; to prioritize long-term growth and stability in the defense budget; and to remember that a well-funded military is necessary but not sufficient to protect U.S. interests.



Book: July 2018



The Gathering Pacific Storm: Emerging U.S.-China Strategic Competition in Defense Technological and Industrial Development

Tai Ming Cheung and Thomas G. Mahnken

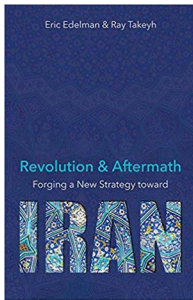
Thomas G. Mahnken and Tai Meng Cheung present how the United States has enjoyed overwhelming military technological superiority in the post-Cold War era, but China has begun to chip away at this dominance. As distrust and strategic rivalry becomes more prominent in US-China relations, this is helping to turn what had previously been parallel but separate military research and development efforts by both countries into a directly connected competition. This contest for leadership in defense technology and innovation promises to be a long-term and highly expensive endeavor for the United States and China.

While there are some similarities between this emerging US–China defense strategic competition and the twentieth-century Cold War, there are also significant differences. The US–Soviet confrontation was primarily an ideological, geostrategic, and militarized rivalry between two countries and supporting alliances that were largely sealed from each other. This twenty-first century rivalry takes place against a backdrop of globalized interdependence, the blurring of military and civilian boundaries, and the growing prominence of geo-economic determinants.

US-China military technological competition lies at the heart of the growing strategic contest between the United States and China. This is largely because this technological rivalry straddles the geostrategic and geo-economic domains covering drivers ranging from industrial policy and foreign direct investment to weapons development programs and threat assessments. Examining the nature of the US-China defense technological competition requires a more comprehensive and nuanced understanding of the complex military, economic, innovation, and other drivers at play.

This is a pioneering examination of the burgeoning US-China defense technological competition and provides perspectives not only from US analysts but also from China and Russia. One of the major contributions of the book is the use of a competitive strategies framework that outlines some of the key considerations in the assessment of US–China military technological competition. A rich and expansive discussion of this competition across a diverse range of domains, including air, sea, space, and emerging technologies, provides a comprehensive understanding of how complex and varied this contest is becoming, as well as its strategic and global implications.

Book: July 2018



Revolution and Aftermath: Forging a New Strategy toward Iran

Eric Edelman and Ray Takeyh

In *Revolution and Aftermath: Forging a New Strategy toward Iran*, Eric Edelman and Ray Takeyh examine one of the most underappreciated forces that has shaped modern US foreign policy: American-Iranian relations.

They argue that America’s flawed reading of Iran’s domestic politics has hamstrung decades of US diplomacy, resulting in humiliations and setbacks ranging from the 1979–81 hostage crisis to Barack Obama’s concession-laden nuclear weapons deal.

What presidents and diplomats have repeatedly failed to grasp, they write, is that “the Islamic Republic is a revolutionary state whose entire identity is invested in its hostility toward the West.” To illuminate a path forward for American-Iranian relations, the authors address some of the most persistent myths about Iran, its ruling elite, and its people.

Finally, they highlight lessons leaders can learn from America’s many missteps since the 1979 Islamic Revolution.

Report: May 2018



Countering Comprehensive Coercion: Competitive Strategies Against Authoritarian Political Warfare

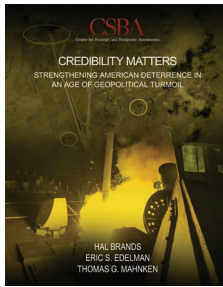
Thomas G. Mahnken, Ross Babbage, and Toshi Yoshihara

The Chinese and Russian governments are currently waging political warfare against the United States and its allies. Although efforts to manipulate public opinion and political debate often receive less attention than armed interventions or military modernization programs, Beijing and Moscow are embarked upon campaigns to suppress dissent, discourage foreign narratives they oppose, generate support for policies they favor, keep their rivals distracted, and mitigate pushback against overt acts of aggression. To date, these efforts appear to be having success.

Countering Comprehensive Coercion offers policymakers, scholars, and the public a better understanding of the threat we face. It argues that Chinese and Russian malign activities should be viewed part of a unique form of authoritarian political warfare: comprehensive coercion. Unlike most Western nations, China and Russia have long histories of engaging in political warfare, deep insecurities that have driven them to embrace a particularly aggressive brand of political warfare, and highly centralized governments that enable them to integrate and coordinate the diverse elements of political warfare campaigns.

Meanwhile, democratic nations are particularly vulnerable to comprehensive coercion because the open nature of their societies provides many pathways for rivals to shape and influence, while gaps and seams across government agencies can make an effective response difficult to mount. Nevertheless, *Countering Comprehensive Coercion* also highlights how the targets of authoritarian political warfare campaigns can better position themselves to compete, not only by reducing their vulnerability but also by adopting more forward-leaning measures of their own.

Report: May 2018



Credibility Matters: Strengthening American Deterrence in an Age of Geopolitical Turmoil

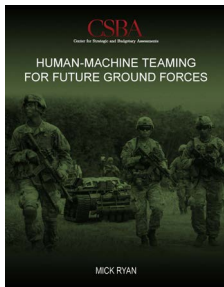
Hal Brands, Eric Edelman, and Thomas G. Mahnken

Credibility – the degree to which an actor’s threats and promises are believed by other actors in the international system—is an inherently intangible concept. Yet American credibility is nonetheless crucial to the stability of an international system that ultimately rests on U.S. alliance commitments and security guarantees.

If American credibility is strong, then adversaries will be deterred, allies will be reassured, and relative geopolitical stability will prevail. If American credibility is weak, then adversaries will be emboldened, allies will be unnerved, and geopolitical revisionism and aggression will proliferate.

Today, America confronts a deepening crisis of credibility in global affairs, due to the military buildups and revisionist strategies being pursued by U.S. adversaries—and no less to the missteps of the United States itself. This report outlines a multi-pronged agenda for shoring up the credibility on which so much of U.S. foreign policy and the international order depends.

Report: April 2018



Human-Machine Teaming for Future Ground Forces

Mick Ryan

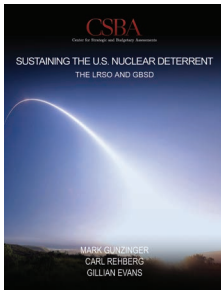
By the middle of the 21st century, ground forces will employ tens of thousands of robots, and the decisions of human commanders will be shaped by artificial intelligence; trends in technology and warfare make this a near certainty. The military organizations of the United States and its allies and partners must plan now for this new era of warfare.

This study by Major General Mick Ryan (Australian Army) examines the key drivers, opportunities, and challenges for ground forces in developing future human-machine teams. It provides an intellectual foundation for the detailed analysis of the personnel, equipment, training, education, doctrine, sustainment, and infrastructure required by allied forces in the next five years and out to 2030 to build a future human-machine force. Ultimately, these efforts should be considered in order to explore the future potential of exploiting this as-yet-underdeveloped capability.

At an event hosted at CSBA on 25 April 2018, Dr. Thomas G. Mahnken led the discussion on human-machine teaming and trends in technology and warfare.



Report: April 2018



Sustaining the U.S. Nuclear Deterrent: The LRSO and GBSD

Mark Gunzinger, Carl Rehberg, and Gillian Evans

The threat of nuclear attack by a great power or a rogue state is a major reason why every U.S. administration since the end of the Cold War has validated the need to maintain a safe, secure, and credible nuclear triad. Russia maintains a large stockpile of nuclear warheads and continues to adhere to military doctrine that indicates it might be willing to use nuclear weapons to coerce the United States and its allies in a crisis. Both Russia and China are funding multiple programs to modernize their nuclear arsenals, and the proliferation of advanced military technologies has allowed

North Korea to fast-track its nuclear weapons development program.

Given this context, CSBA's new report assesses arguments that have been made for and against replacing DoD's nuclear Air-Launched Cruise Missile (ALCM) with the Long-Range Standoff (LRSO) weapon, and modernizing its Minuteman III ICBM force with the Ground-Based Strategic Deterrent (GBSD). DoD has invested hundreds of millions of dollars to extend ALCMs and Minuteman IIIs far past their original planned service lives. Today, it is increasingly apparent that these Cold War-era weapon systems will not meet future requirements, and further delaying their replacements could result in ALCM and Minuteman III inventories falling below the level needed to sustain the U.S. strategic deterrent posture.

Testimony: January 2018

Statement Before the House Armed Services Committee on Readying the U.S. Military for Future War

Thomas G. Mahnken

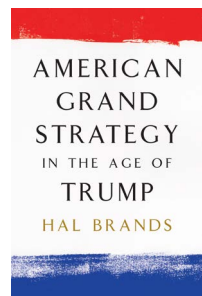
Chairman Thornberry, Ranking Member Smith, and distinguished members of the Committee receive a statement on the need to prepare the U.S. military for the challenges of future war.

In recent years it has become apparent that we are living in a world characterized by peacetime competition between the United States, China, and Russia. Both the National Security Strategy and the National Defense Strategy have rightfully emphasized this. Of course, competition is not the same thing as conflict. Nor does competition necessarily lead to conflict. It must be admitted, however, that in addition to the reality of great power competition, we face an increasing possibility of great power war. The possibility is remote, but not inconceivable, and it is growing. What was once a hypothetical future contingency is now a real, and present, danger.



Dr. Thomas G. Mahnken participates in a discussion on the National Defense Strategy Commission Report, at Johns Hopkins School of Advanced International Studies on 28 November.

Book: January 2018



American Grand Strategy in the Age of Trump

Hal Brands

American foreign policy is in a state of upheaval. The rise of Donald Trump and his “America First” platform have created more uncertainty about America’s role in the world than at any time in recent decades. From the South China Sea, to the Middle East, to the Baltics and Eastern Europe, the geopolitical challenges to U.S. power and influence seem increasingly severe-and America’s responses to those challenges seem increasingly unsure. Questions that once had widely accepted answers are now up for debate. What role should the United States play in the world? Can, and should, America continue to pursue an engaged and assertive strategy in global affairs?

In this book, a leading scholar of grand strategy helps to make sense of the headlines and the upheaval by providing sharp yet nuanced assessments of the most critical issues in American grand strategy today. Hal Brands asks, and answers, such questions as: Has America really blundered aimlessly in the world since the end of the Cold War, or has its grand strategy actually been mostly sensible and effective? Is America in terminal decline, or can it maintain its edge in a harsher and more competitive environment? Did the Obama administration pursue a policy of disastrous retrenchment, or did it execute a shrewd grand strategy focused on maximizing U.S. power for the long term? Does Donald Trump’s presidency mean that American internationalism is dead? What type of grand strategy might America pursue in the age of Trump and after? What would happen if the United States radically pulled back from the world, as many leading academics-and, at certain moments, the current president-have advocated? How much military power does America need in the current international environment?

Grappling with these kinds of issues is essential to understanding the state of America’s foreign relations today and what path the country might take in the years ahead. At a time when American grand strategy often seems consumed by crisis, this collection of essays provides an invaluable guide to thinking about both the recent past and the future of America’s role in the world.



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.

Strategic Choices Exercises

CSBA's Strategic Choices Tool (SCT) has been 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 alternative 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 Future Year Defense Programs. 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.

During the last two years, CSBA further refined and incorporated the SCT into its wargame methodology for a variety of organizations. This included directing exercises supporting U.S. government funded wargames, with foreign partners, undergraduate and graduate students, the U.S. Army War College, the Secretary of Defense's Corporate Fellows program, and for the Asia-Pacific Strategy course at Johns Hopkins University, organized by CSBA senior staff.

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.

Secretary of Defense Executive Fellows Program

The Secretary of Defense Executive Fellows (SDEFP) 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 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, Booze 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.



CSBA hosts the Strategy and Security Curriculum for the Secretary of Defense Executive Fellows Program, which focuses on strategy, global security challenges, defense economics, and innovation with lectures, seminar discussions, and a resourcing exercise.

Course: Strategy in the Asia-Pacific Region

In partnership with The Johns Hopkins School of Advanced International Studies (SAIS), this annual course, run by 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.



Workshop: Comparing Defense Innovation in Advanced and Catch-up Countries

Organized by the University of California Institute on Global Conflict and Cooperation (IGCC), Johns Hopkins SAIS, and CSBA, this one-day workshop examined how countries have become, or are seeking to become, advanced defense technological and industrial powers.

The goal of the workshop was to identify essential political, economic, strategic, and institutional conditions and factors required for states to successfully embark upon significant programs of military technological and industrial development that could lead them to make major advances or for states that are already advanced to remain at the cutting edge.

Directed Energy Summit 2018

The 2018 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.

Highlights included:

- Opening keynote from the Honorable Michael D. Griffin, Under Secretary of Defense for Research and Engineering
- National security and defense strategy keynotes on the implications for Directed Energy by Dr. Nadia Schadlow, Deputy National Security for Strategy, and Elbridge Colby, DASD for Strategy and Force Development
- Congressional staff panel on prioritization of Directed Energy from Representative Tim Ryan, Senators Martin Heinrich and Mazie Hirono, and from Representatives Jim Langevin and Doug Lamborn
- Army initiatives on delivering warfighter capabilities
- Pacific theater challenges and the role of Directed Energy in addressing these challenges
- Impact of Directed Energy in protecting the homeland and diplomatic installations featuring Lieutenant General R. Scott Williams, Commander, 1 AF (Air Forces Northern), USAF
- Closing keynote from General Robin Rand, Commander, Air Force Global Strike Command, USAF



On 21 and 22 March 2018, Mark Gunzinger led the Directed Energy Summit, which featured discussions of innovative capabilities and concepts and speakers from across government, the research community, and industry.



CSBA STAFF



Thomas G. Mahnken
PRESIDENT AND CEO

Dr. Thomas G. Mahnken 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.

He currently serves as a member of the Congressionally-mandated National Defense Strategy Commission and as a member of the Board of Visitors of Marine Corps University. His previous 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 and in 2016 the Department of the Navy Superior Civilian Service Medal.

Dr. Mahnken is the author of *Strategy in Asia: The Past, Present and Future of Regional Security* (Stanford University Press, 2014), *Competitive Strategies for the 21st Century: Theory, History, and Practice* (Stanford University Press, 2012), *Technology and the American Way of War Since 1945* (Columbia University Press, 2008), and *Uncovering Ways of War: U.S. Intelligence and Foreign Military Innovation, 1918–1941* (Cornell University Press, 2002), among other works.



Eric Edelman
COUNSELOR

Ambassador Eric S. Edelman retired as a career minister from the U.S. Foreign Service on May 1, 2009. He has served in senior positions at the Departments of State and Defense as well as the White House, where he led organizations providing analysis, strategy, policy development, security services, trade advocacy, public outreach, citizen services, and congressional relations. As undersecretary of defense for policy (August 2005-January 2009), he was DoD's senior policy official, overseeing strategy development with global responsibility for bilateral defense relations, war

plans, special operations forces, homeland defense, missile defense, nuclear weapons and arms control policies, counterproliferation, counternarcotics, counterterrorism, arms sales, and defense trade controls. 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.

His other assignments included the State Department Operations Center, Prague, Moscow, and Tel Aviv, where he was a member of the U.S. Middle East delegation to the West Bank/Gaza autonomy talks. 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 serves as the Chair of the National Defense Strategy Commission and on the bipartisan board of directors of the United States Institute of Peace.



Ilana Esterrich
CHIEF ADMINISTRATIVE OFFICER

Ilana Esterrich oversees CSBA's finance, administration, operations, publications, IT and HR functions. She also serves as Secretary/Treasurer on CSBA's Board of Directors. Prior to joining CSBA, Esterrich worked in a variety of executive finance, management and operations roles for Thomson Reuters, General Mills, Inc., T.E. Systems, Inc., The Pillsbury Company and as a senior management consultant for Computer Sciences Corporation and Coopers & Lybrand, LLC.

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.



Maureen P. Fitzgerald
DIRECTOR OF EXTERNAL AFFAIRS

Maureen Fitzgerald joined CSBA as Director of External Affairs with over 20 years in the federal and corporate sectors. She has demonstrated exceptional skills in strategic communications, media relations, brand and reputation management, marketing, public & corporate affairs, and crisis and internal communications.

Previously, Moe was the Senior Director of Corporate Communications & Public Relations at IAP Worldwide Services where she led the development of a cohesive communication strategy encompassing all external communications and public affairs for 110 locations in 27 countries, including marketing, global public & media relations, cyber security communications and brand management.

In the Department of Defense, she served as Director of Strategic Initiatives at the U.S. Military Academy at West Point and as Executive Outreach Officer to three Secretaries of the U.S. Army. At West Point she directed all strategic communication and stakeholder engagements, and developed innovative plans, policies, and programs for the command. At the Pentagon, Moe produced integrated, multi-dimensional communication and outreach strategies to achieve Army leadership goals and objectives.

Fitzgerald has a broad-based global perspective with extensive international work experience and is a native German speaker. She is the recipient of the Department of Defense Meritorious Civilian Service Award, multiple Superior Civilian Service Awards, the 2013 National Telly Award for West Point's promotional video and was a 2016 nominee for the PR News Top Women in PR Award.

Her University of Maryland degree is a Bachelor of Art degree in Graphic Design and Computer Art, cum laude.



Evan B. Montgomery
DIRECTOR OF RESEARCH AND STUDIES, AND SENIOR FELLOW

Evan Montgomery is a Senior Fellow and the Director of Research and Studies at the Center for Strategic and Budgetary Assessments. During more than a decade at CSBA, Dr. Montgomery has written dozens of monographs, reports, journal articles, and book chapters on a wide range of topics, including great power competition, alliance management, East Asia security challenges, and nuclear issues. In 2016-2017 he served as Special Advisor to the Vice Chairman of the Joint Chiefs of Staff, where he worked primarily on defense innovation and nuclear modernization.

Dr. Montgomery is the author of numerous CSBA reports, most recently *Reinforcing the Front Line: U.S. Defense Strategy and the Rise of China* and *Extended Deterrence in the Second Nuclear Age: Geopolitics, Proliferation, and the Future of U.S. Security Commitments*. His commentary and analysis have also appeared in *The Wall Street Journal*, *Foreign Affairs*, *International Security*, *Security Studies*, and the *Journal of Strategic Studies*, among other outlets. His book, *In the Hegemon's Shadow: Leading States and the Rise of Regional Powers*, was published by Cornell University Press.

Dr. Montgomery graduated summa cum laude from Villanova University and received his M.A. and Ph.D. from the University of Virginia. He is a past recipient of the Smith Richardson Foundation Strategy and Policy Fellowship, the Council on Foreign Relations International Affairs Fellowship, and the Department of Defense Joint Civilian Service Commendation Award.



Lukas Autenried
ANALYST

Lukas Autenried is an analyst at the Center for Strategic and Budgetary Assessments. At CSBA his work focuses on long-term military competitions, trends in future warfare, and defense budgeting and resourcing. He came to CSBA after working as a Research Assistant in the Finance and Private Sector Development team at the World Bank, supporting research to improve financial access for households and firms. His previous experience also includes work in the Bureau of Political-Military Affairs at the Department of State and the Woodrow Wilson Center.

Autenried earned a M.A., Strategic Studies & International Economics from Johns Hopkins School of Advanced International Studies (SAIS) and B.A., Government & History, magna cum laude; minor in French from Georgetown University



Ross Babbage
NON-RESIDENT SENIOR FELLOW

Dr. Ross Babbage 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 defence white paper.

Through the 1990s, Ross Babbage was a member of the team that reformed the Office of Defence Production with its loss-making, government-owned defence factories. What emerged

was a modern, profitable corporation known as ADI Limited that grew to become Australia's largest defence 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. His publications include *A Coast Too Long: Defending Australia Beyond the 1990s* (Allen & Unwin, Sydney, 1990), *Australia's Strategic Edge in 2030* (Kokoda Foundation, Canberra, February 2011), *Game Plan: The Case for a New Australian Grand Strategy* (Menzies Research Centre, Canberra, 2015) and *Countering China's Adventurism in the South China Sea: Strategy Options for the Trump Administration* (CSBA, 2016). Dr. Babbage was appointed a Member of the Order of Australia in 2011.



Captain Budd Bergloff
FEDERAL EXECUTIVE FELLOW

Captain Budd Bergloff currently serves as a visiting fellow under the Federal Executive Fellowship program at the Center for Strategic and Budgetary Assessments in Washington, D.C. Bergloff received his commission from Aviation Officer Candidate School (AOCS) in 1992, earned his Naval Flight Officer wings in 1994, and deployed in the F-14D in 1995.

Bergloff previously commanded U.S. Navy Support Facility Diego Garcia (June 2016 – June 2017), Navy Recruiting District-Richmond (May 2011 – July 2012) and served as Navigator onboard USS HARRY S TRUMAN (CVN 75) (Sep 2012 – Oct 2014).

Prior to command, his afloat tours included service as a Radar Intercept Officer (RIO) in several squadrons and aboard various aircraft carriers on both the east and west coasts. He was recognized as RIO of the Year by Fighter Wing Atlantic, 1997. He also served as a force protection action officer, Sixth Fleet staff in Gaeta, Italy. Ashore, Bergloff served as an instructor in the F-14 Fleet Replacement Squadron and as a program manager at the National Reconnaissance Office (NRO). While assigned to the NRO, Bergloff served as an interagency representative stationed at Bagram Air Base, Afghanistan from Feb-June 2009. He also served as Assistant Chief of Staff for Littoral Combat Ship (LCS) testing on the staff of Commander, Operational Test and Evaluation Force, and most recently as the Fleet Inspector General at U.S. Fleet Forces Command in Norfolk, VA. He earned a Master of Military Operational Art and Science degree from the USAF Air Command and Staff College in 2004.

Bergloff qualified in the F-14A/B/D and F/A-18F aircraft and has flown more than 2200 hours and 450 arrested landings aboard aircraft carriers on both coasts. And he is the recipient of various personal and campaign awards including the Legion of Merit, Defense Meritorious Service Medal, Meritorious Service Medal (three) and the Strike/Flight Air Medal (two).



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. His experience lies at the intersection of operational expertise and strategy development.

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, the only Marine to fly the F-22 Raptor while serving as the Division Commander in a USAF operational test squadron, the first operational pilot to fly the F-35B serving as the squadron commander, an academic fellowship at the Johns Hopkins University School of Advanced International Studies, 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.

Bianchi has working proficiency in Mandarin Chinese and has studied the language at academic programs in both Beijing and Taipei. He co-authored "Warfare Drivers:

Mission Needs and the Impact on Ship Design," a chapter in *Chinese Naval Shipbuilding: An Ambitious and Uncertain Course*. His prior experience also includes work at the Department of Justice and in the Office of Investment Security at the Department of the Treasury.

Bianchi 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.



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, Boone interned in the office of the Chairman of the House Armed Services Committee's Subcommittee on Seapower and Projection Forces.

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 earned an M.A. in Strategic Studies & Economics.



Hal Brands
SENIOR FELLOW

Dr. Hal Brands is a Senior Fellow at CSBA and the Henry A. Kissinger Distinguished Professor of Global Affairs at Johns Hopkins University's School of Advanced International Studies (SAIS).

He is the author or editor of several books, including *American Grand Strategy in the Age of Trump* (2018), *Making the Unipolar Moment: U.S. Foreign Policy and the Rise of the Post-Cold War Order* (2016), *What Good is Grand Strategy? Power and Purpose in American Statecraft from Harry S. Truman to George W. Bush* (2014), *Latin America's Cold War* (2010), *From Berlin to Baghdad: America's Search for Purpose in the Post-Cold War World* (2008), and *The Power of the Past: History and Statecraft* (co-edited with Jeremi Suri, 2015).

In 2015-16, Brands served as special assistant to the Secretary of Defense for strategic planning. He has also consulted with a range of government offices and agencies in the intelligence and national security communities. He received his BA from Stanford University and his PhD from Yale University.



Sharif H. Calfee
FEDERAL EXECUTIVE FELLOW

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 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

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. 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. His areas of emphasis were modeling and simulation, strategic planning and institutional reform and governance. Prior to retiring from the Navy in 2007, 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. 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 conducts research on future warfare and long-term military competitions. He also manages CSBA's Strategic Choices Tool, which focuses on future challenges facing the United States and its allies as well as the linkages between the strategy and resources necessary to confront those challenges. Cohn has authored several publications on trends in the defense budget and defense acquisitions and exploring nuclear deterrence and the return of great-power competition. He is also an adjunct lecturer at the Johns Hopkins School of Advanced International Studies.

Cohn began his career at CARE USA, an international development agency managing multi-million dollar grants for the Policy and Advocacy team. After leaving CARE USA in 2009, Mr. Cohn served as a Peace Corps Volunteer in The Gambia from 2009 - 2011. He led projects extending access to safe water and developing IT best practices for small businesses, local government, and public health institutions. 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.



Gillian Evans
ANALYST

Gillian Evans's work focuses on U.S. national security strategy, nuclear strategy and modernization, and trends in future warfare.

Prior to joining CSBA, Evans 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 in Lahore, Pakistan.

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.



Billy Fabian
RESEARCH FELLOW

Billy Fabian's research focuses on military strategy and operations, future warfighting concepts, and land warfare. Prior to joining CSBA, Billy worked as Senior Strategic Analyst in the Office of the Deputy Assistant Secretary of Defense for Strategy and Force Development, where he assisted in the development of the 2018 National Defense Strategy. He has also served as Strategic Planner in the U.S. Army's Office of Strategy, Plans, and Policy in the Pentagon, and as a Presidential Management Fellow at the Center for Army Analysis on Fort Belvoir, Virginia.

Fabian served as an Infantry officer in the U.S. Army from 2003-2009. He also earned a B.A. in History and Classical Studies from Tulane University and a M.P.A. in International Security Policy from Columbia University School of International and Public Affairs (SIPA).



Kamilla Gunzinger
PRODUCTION MANAGER

Kamilla Gunzinger oversees the Center's publication and production processes, provides logistical and administrative assistance for events and wargames, and contributes to research, editing, and graphic design.

She has extensive international experience, including an internship with Scholastic, Asia in Beijing, China (2008–2010) and studies at Keio University in Tokyo, Japan (2005–2006). She speaks Japanese and Mandarin Chinese, and her areas of interest include East Asian security affairs and international business.

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 served as the Deputy Assistant Secretary of Defense for Forces Transformation and Resources, and has led the development of multiple strategic planning documents that have shaped DoD's future force structure and capability priorities. During his Air Force career, Gunzinger served as a B-52 senior instructor/evaluator pilot and helped lead multiple assessments of future capability requirements as a member of the Air Force Headquarters Staff. He joined the Office of the Secretary of Defense in 2004 and was appointed as the Principal Director of the 2006 Quadrennial Defense

Review (QDR) staff. Following the QDR, he served as the Director for Defense Transformation, Force Planning and Resources on the National Security Council Staff, The White House.

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.

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, having joined Northrop 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 where he served as professor and acting department head, 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
NON-RESIDENT SENIOR FELLOW

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. 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.

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



Peter Haynes
SENIOR FELLOW

Dr. Peter Haynes specializes in grand strategy, maritime and naval strategy, the development of strategy and operational concepts, naval and air warfare, the future of conflict, special operations, and irregular warfare. 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 served in other strategy-related positions, which include: the Director, Strategy and Plans (J5) for Combined Joint Task Force—Horn of Africa (2012); Branch Chief, Advanced Concepts, (N511), OPNAV (2010-11); Branch Chief, Strategy and Concepts (N513), OPNAV (2006); and Desk Officer, Russia and Ukraine, Joint Staff J5 (2001–2002). Operationally, he flew the E-2C Hawkeye carrier-based command and control aircraft with Carrier Airborne Early Warning Squadron (VAW) 116, including deployments to the Western Pacific/Indian Ocean (1989) and to the Persian Gulf in support of Operations Desert Storm (1991) and Southern Watch (1999), and with VAW-112 as the commanding officer and executive officer, which included deployments to the Western Pacific (2003) and the Persian Gulf in support of Operation Iraqi Freedom (2005). 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”, as well as the 2009–2010 Naval History and Heritage Command’s Samuel Eliot Morison Naval History Scholarship. Haynes is the author of *Toward a New Maritime Strategy: American Naval Thinking in the Post-Cold War Era* (U.S. Naval Institute Press, 2015).



Grace B. Kim
ANALYST

Grace B. Kim focuses on trends in future warfare, long-term military competition, and U.S. security policy in East Asia and the Middle East. Prior to CSBA, Kim worked in the Office of the Secretary of Defense for Countering Weapons of Mass Destruction Policy and the Treasury Department’s East Asia Office. She also served as a Turkish Linguist on the Syria Team for the Institute for the Study of War and Research Assistant focusing on the Middle East and European security policy at the Centre for Economics and Foreign Policy Studies in Istanbul, Turkey. From 2013 to 2014, she was a Fulbright research fellow at Bogazici University in Istanbul, Turkey. Kim holds a M.A., Strategic Studies & International Economics from Johns Hopkins School of Advanced International Studies (SAIS) and B.A., Politics; minor in Near Eastern Studies from Princeton University.



Peter Kouretsos
ANALYST

Peter Kouretsos focuses on U.S. defense policy and strategy, long term competition, future warfare, and Western Hemisphere security. Prior to CSBA, Pete was the Research Assistant at the Philip Merrill Center for Strategic Studies, and served in the Office of the Undersecretary of Defense for Policy’s Office of Strategy & Force Development. He has written for *Defense One*, *Small Wars Journal*, and *Strategy Bridge*. Kouretsos earned a M.A. in Strategic Studies & International Economics from Johns Hopkins School of Advanced International Studies (SAIS) and B.A. in History, cum laude from Loyola University Maryland.



Benjamin Lambeth
NON-RESIDENT SENIOR FELLOW

Dr. Benjamin S. Lambeth 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 focuses on U.S. defense policy and strategy, Russian military strategy, and Arctic security issues.

Prior to joining CSBA, Lemon studied grand strategy, civil-military relations, and Eurasian geopolitics. He has served as 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 has also served as an intern in the office of Congresswoman Cathy McMorris-Rodgers (WA-05).

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.



Kyle Libby
RESEARCH ASSISTANT

Kyle Libby focuses on U.S. defense policy and strategy, aerospace policy, and emerging technologies.

Prior to joining CSBA, Libby was a research intern with the Aerospace Security Project at the Center for Strategic and International Studies where he worked on aerospace systems analysis and visualizations, space security issues, budget analysis, and disaster relief technologies.

While at Cal Poly San Luis Obispo, Libby was a Senior Student Fellow with the Institute for Advanced Technology and Public Policy. And, he has conducted in-flight support of UAS testing operations for General Atomics and the California National Guard. He has earned a B.A. in Political Science (Global Politics) from California Polytechnic State University, San Luis Obispo.



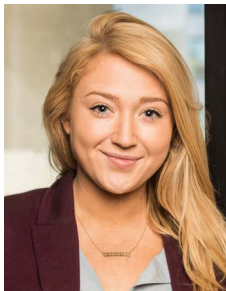
Jennifer McArdle
NON-RESIDENT FELLOW

Jennifer McArdle is a Non-Resident Fellow and an Assistant Professor of Cyber Defense at Salve Regina University.

McArdle currently leads a research project exploring simulating computer network operations in the military's synthetic training environment. Her research interests include cyber power, military training and readiness, and military innovation. Her work has been featured in *Real Clear World*, *The Cyber Defense Review*, *National Defense Magazine*, and *War on the Rocks*, among others. She currently serves on Congressman James

Langevin's Cyber Rhode Island Advisory Committee.

McArdle previously worked at the Potomac Institute for Policy Studies, where she served as a contractor for the Department of Defense, Defense Microelectronics Activity on cyber hardware and supply chain security. She has also held positions at the American Association for the Advancement of Science and the U.S. National Defense University, in addition to working in New Delhi, India at two defense research institutions. McArdle is currently a PhD candidate in War Studies at King's College London and the recipient of the RADM Fred Lewis (I/ITSEC) doctoral scholarship in modeling and simulation. She earned M.Phil. in Politics from University of Cambridge and B.A. in Political Science and Justice Studies, summa cum laude, phi beta kappa from University of New Hampshire.



Whitney M. McNamara
ANALYST

Whitney 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.

She received her M.A. in Strategic Studies and International Economics from the Johns Hopkins School of Advanced International Studies where she was a Bradley Fellow and a Presidential Management Fellowship Finalist. Prior to that, Whitney spent four years working in the Middle East as a project manager and consultant. She has written for or

been quoted in *The Washington Post*, *Cipher Brief*, *Real Clear Defense*, *Breaking Defense*, *Aspen Review*, *Al Arabiya*, *Jordan Business* and *Middle East Online*.

McNamara received a B.A. in Political Science from the University of Pittsburgh and an M.A. in Strategic Studies and International Economics from SAIS at Johns Hopkins University.



Daniel Patt
NON-RESIDENT SENIOR FELLOW

Dr. Daniel Patt joined in January 2018 after serving at the Defense Advanced Research Projects Agency (DARPA) as the Deputy Director for the Strategic Technologies Office. At DARPA, he led development of a strategy for renewed conventional military advantage focused on achieving decision superiority and risk distribution. He led investments enabling robust distributed systems architectures in a technology portfolio including battle management, command and control; communications and networking; intelligence, surveillance and reconnaissance; and electronic warfare. He has extensive

industry experience in developing products centered on cutting edge autonomy, artificial intelligence, robotics,

and unmanned systems.

In 2017, Dr. Patt supported the Deputy Secretary of Defense in leading an effort to define a new modernization initiative for the Department of Defense. In this role, he advised the 2017 National Defense Strategy drafting group. He is a Samuel J. Heyman Service to America Honoree and is the recipient of the Under Secretary of Defense for Acquisition, Technology, and Logistics Achievement Award in recognition of his work developing and fielding advanced situational awareness software and networking tools in support of combat operations. He has earned a B.S., M.S., and Ph.D. in Aerospace Engineering from University of Michigan.



Julie H. Pulley
OFFICE MANAGER

Julie Pulley manages CSBA's administrative functions as the Office Manager. 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
NON-RESIDENT SENIOR FELLOW

Dr. Carl Rehberg 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. Dr. Rehberg 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.

During his 26+ year Air Force career, Rehberg served as a command pilot with over 6200 hours flying time in 25+ different aircraft including the KC-135, B-1B, TG-7, and T-3A. He taught Military Art and Science at the USAF Academy, and was instrumental in helping form the USAF Academy Center for Character Development. In the late 1990s, he served in the Pentagon as a strategic planner, programmer and analyst, leading several studies for the Secretary of Defense on the Total Force. In 2001, Rehberg was selected as a National Security Fellow at Harvard and then spent two years at the National Defense University's Industrial College of the Armed Forces (ICAF) teaching courses in grand strategy, military mobilization, and the aircraft industrial base. As Chief, Long-Range Plans of the Air Staff, Rehberg led the development of future force structure plans and courses of action for numerous AF/defense resource and tradespace analyses.

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 focused 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.

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.

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, and a M.S. in Intelligence Analysis from Johns Hopkins University.



Robert E. Schmidle, Jr.
NON-RESIDENT SENIOR FELLOW

Lieutenant General (retired) Schmidle is the University Advisor on Cyber Capabilities and Conflict Studies at Arizona State University. Dr. Schmidle is also a Professor of Practice in the School of Politics and Global Studies. Additionally, he is a Senior Fellow in the Center on the Future of War at Arizona State University.

While on active duty he served as the first Deputy Commander of United States Cyber Command, responsible for standing up the command while concurrently executing full spectrum cyber operations. Subsequently, he was the head of Marine Aviation and his

final assignment on active duty was as the Principal Deputy Director, Cost Assessment and Program Evaluation in the Office of the Secretary of Defense.

He holds degrees from Drew University and American University and earned his doctorate from Georgetown University. His thesis, recognized with distinction, was titled “The Power of Context in Shaping Moral Choices.” He is a member of the Council on Foreign Relations and the Defense Science Board. His numerous publications are in the fields of moral philosophy, social psychology, and military history.



Harrison Schramm
NON-RESIDENT SENIOR FELLOW

Harrison Schramm has been a leader in the Operations Research community for the past decade. Prior to joining CSBA, he had a successful career in the US 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 is at the intersection of data, mathematical models, and policy.

Mr. Schramm enjoys professional accreditation from the Institute for Operations Research and Management Sciences (CA, INFORMS), the American Statistical Association (PStat, ASA) and the Royal (UK) Statistical Society (CStat, RSS). His published work has appeared in INTERFACES, J. Applied Meteorology and Climatology, SIGNIFICANCE, J. Mathematical Biosciences, Proceedings of the US Naval Institute, OR/MS Today and Military Operations Research. He is a past Vice President of the Military Operations Research Society

(MORS) and is active in several Committees of INFORMS. Notably, in 2018, he served as a Judge for the prestigious Franz Edelman Award.

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. He is the 2018 recipient of the Clayton Thomas award for distinguished service to the profession of Operations Research.



Travis Sharp
RESEARCH FELLOW

Travis Sharp 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. He also serves as an officer in the U.S. Navy Reserve while completing his Ph.D. in security studies at Princeton University's Woodrow Wilson School of Public and International Affairs.

Sharp has held positions with academic and policy organizations, including George Washington University's Institute for Security and Conflict Studies, West Point's

Modern War Institute, the Office of the Secretary of Defense, the Center for a New American Security, and the Center for Arms Control and Non-Proliferation. He has published think tank monographs, journal articles, and commentaries on defense spending and strategy, cybersecurity, and military-to-military contacts between great power rivals, the topic of his dissertation.

Sharp is a past recipient of the Sasakawa Young Leaders Fellowship, the A.B. Krongard and John Parker Compton Fellowships at Princeton, the 1LT Bacevich Fellowship at CNAS, the Harold Rosenthal Fellowship in International Relations, and the Herbert Scoville Peace Fellowship.

Sharp holds a B.A. in History and Political Science (summa cum laude) from University of San Francisco, a M.P.A. in International Relations and a M.A. in Public Affairs from Princeton University, Woodrow Wilson School of Public and International Affairs.



Michelle Shevin-Coetzee
RESEARCH ASSISTANT

Prior to joining CSBA, Michelle Shevin-Coetzee 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, Shevin-Coetzee 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. 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.



Julian Snelder
NON-RESIDENT SENIOR FELLOW

Julian Snelder is a New Zealand-Netherlands dual national, resident in Asia for more than 25 years. 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. From 2005 he served as director and partner in an emerging market investment fund.

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 interest is the application of IT and manufacturing technologies to matters of national security. He writes regularly on this topic and has contributed to publications of the United States Naval War College. Snelder received a bachelor's in economics from Trinity College Cambridge as well as a Bachelors in Mechanical Engineering from the University of Canterbury.



Sherril Stone
ADMINISTRATIVE ASSISTANT AND RECEPTIONIST

Sherril Stone serves as the executive assistant to CSBA's President and CEO, Dr. Thomas Mahnken. Additionally, Stone provides general administrative assistance to CSBA's entire staff.

Prior to CSBA, Stone worked at the Consumer Financial Protection Bureau as an Administrative Operations Assistant. She received an education in business from Strayer University.



Jan van Tol
SENIOR FELLOW

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 1993-96 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.

van Tol's analytic work has focused mainly on long-range strategic planning, naval warfare, military innovation, and wargaming. And he 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.



Timothy Walton
SENIOR ANALYST

Timothy A. Walton focuses his research and analysis on trends in future warfare and Asia-Pacific security dynamics. Prior to joining CSBA, Walton was a Principal of Alios Consulting Group and an Associate of Delex Consulting, Studies, and Analysis, both defense and business strategy firms.

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 at the U.S. Naval War College where he taught strategy for over a decade. He was also an affiliate member of the China Maritime Studies Institute.

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 as a visiting professor 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.

Dr. Yoshihara has testified before the Defense Policy Board, the House Foreign Affairs Committee, and the U.S.-China Economic and Security Review Commission. He is the recipient of the Navy Meritorious Civilian Service Award in recognition of his scholarship on maritime and strategic affairs at the Naval War College. He is co-author of *Red Star over the Pacific: China's Rise and the Challenge to U.S. Maritime Strategy* (Naval Institute Press, 2010 and 2018), which has been listed on the Chief of Naval Operation's Professional Reading Program since 2012. Translations of *Red Star over the Pacific* have been published in China, Germany, Japan, South Korea, and Taiwan.

He has also co-authored *Indian Naval Strategy in the Twenty-first Century* (Routledge, 2009) and *Chinese Naval Strategy in the Twenty-first Century: The Turn to Mahan* (Routledge, 2008). He is co-editor of *Strategy in the Second Nuclear Age: Power, Ambition, and the Ultimate Weapon* (Georgetown University Press, 2012) and *Asia Looks Seaward: Power and Maritime Strategy* (Praeger, 2008). His articles on Chinese seapower, maritime strategy, and Asian security issues have appeared in *Journal of Strategic Studies*, *Asian Security*, *Washington Quarterly*, *Orbis*, *World Affairs*, *Comparative Strategy*, *Strategic Analysis*, *Journal of the Indian Ocean Region*, and *Naval War College Review*. The *Naval War College Review* awarded him the Hugh G. Nott Prize for best article of 2010.

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.



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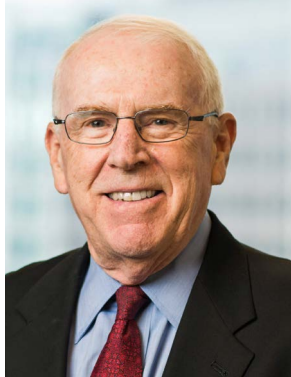
Nelson M. Ford is the former President and CEO of LMI, a government consulting firm. Prior to joining LMI in 2009, Mr. Ford was Under Secretary of the Army. Previous to this position, he held a number of positions in the Department of Defense, including Assistant Secretary of the Army for Financial Management 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, a master's in education from the University of Delaware.



Devon Gaffney Cross
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POLICY FORUM ON INTERNATIONAL SECURITY AFFAIRS

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.

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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 Corp, Ice Energy Corporation, and the National Parks Second Century Commission and Committee for a Responsible Budget.



J. Randy Forbes

SENIOR DIRECTOR

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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.

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Adam Frankel
GENERAL COUNSEL
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Adam B. Frankel is General Counsel at CBAM Partners, LLC in New York. Prior to joining CBAM, he was Evercore's Senior Managing Director and the firm's General Counsel from 2006 to 2018. 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.



Barbara Humpton
PRESIDENT & CEO
SIEMENS USA

Barbara Humpton serves as President and Chief Executive Officer of Siemens USA, using its global leadership in engineering and technology innovation to meet America's toughest challenges, delivering solutions for industry, hospitals, utilities, cities, and manufacturers: from efficient power generation, to digital factories and oil and gas fields, to medical diagnostics, to locomotives, to next-generation software used in every phase of product development. 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.

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General John M. Keane (Ret.)
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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
AMERICAN GAS ASSOCIATION

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.

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Laurence is founder and CFO of Xometry, an advanced manufacturing company. He also serves as the General Partner of ZFI Capital, a private investment partnership spun out of Granite Capital International Group in 2011. 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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