Two modified Standard Missile 2 (SM-2) Block IV interceptors are launched from the guided-missile cruiser USS Lake Erie (CG 70) during a Missile Defense Agency (MDA) test to intercept a short-range ballistic-missile target, conducted on the Pacific Missile Range Facility, west of Hawaii, in 2008. The SM-2 forms part of the Aegis ballistic-missile defense (BMD) program. In "A Double-Edged Sword: Ballistic-Missile Defense and U.S. Alliances," Robert C. Watts IV explores the impact of BMD on America’s relationship with NATO, Japan, and South Korea, finding that the forward-deployed BMD capability that the Navy’s Aegis destroyers provide has served as an important cement to these beneficial alliance relationships.

Source: U.S. Navy photo, by the MDA
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study of military history and his half century of service equipped him admirably to provide Navy leadership with sound foundations for further planning efforts. Yarnell’s strategic vision profoundly influenced the interwar Navy and the force that entered the Cold War era.

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The tendency of professional military discourse in the United States to embrace buzzwords and jargon is remarked often; less so is the negative impact this phenomenon can have on the way American civilian and military elites actually wage war. Occasionally a senior officer sufficiently loses patience with the use of a certain term or concept to denounce it publicly, but in general the problem seems to be shrugged off. But in “Blurred Lines: Gray-Zone Conflict and Hybrid War—Two Failures of American Strategic Thinking,” Donald Stoker and Craig Whiteside make a vigorous case for expunging the pervasive terms gray zone and hybrid war from the vocabulary of contemporary military analysis. They argue, first, that the supposedly novel phenomena in question are not new at all; and second, that the failure to distinguish in the traditional way between war and peace creates unnecessary confusion and could have very undesirable consequences in practice. Donald Stoker was formerly, and Craig Whiteside is currently, a professor at the Naval War College’s program at the Naval Postgraduate School in Monterey, California.

It is not widely appreciated that ballistic-missile defense (BMD) has been for some years a key mission of the U.S. Navy. Since the 1960s, BMD also has been an unusual focus of political controversy, both domestically and in terms of the concerns of some allied governments that it would undermine the deterrent effect of offensive nuclear forces. In “A Double-Edged Sword: Ballistic-Missile Defense and U.S. Alliances,” Robert C. Watts IV explores the impact of BMD on America’s relationship with NATO, Japan, and South Korea in the light of the evolving character of BMD as a collaborative alliance project, as opposed to an essentially unilateral American enterprise. He finds that in recent years, in spite of some complications in both Europe and Northeast Asia, the forward-deployed BMD capability that the Navy’s Aegis destroyers provide has served as an important cement to these important alliance relationships. Commander Watts is a surface warfare officer in the U.S. Navy.

Alliance-management issues are also at the center of Jihoon Yu and Erik French’s article, “Should the United States Support a Republic of Korea Nuclear Submarine Program?” While the authors admit that there are serious cons
associated with this idea—particularly the extraordinary expense of constructing nuclear attack submarines, as well as technology-transfer and proliferation issues—they make a strong case for U.S. support for such a program, particularly in terms of strengthening American ties with the Republic of Korea (ROK) at a time when ROK-Japan tensions have had a destabilizing impact on America’s alliance relationships in the region. Lieutenant Commander Yu is a submarine officer in the ROK Navy; Erik French is a professor at the College at Brockport, State University of New York.

Finally, it is well to be reminded that there is more to the history of the U.S. Navy than big battles and war-fighting admirals. In “Neptune’s Oracle: Admiral Harry E. Yarnell’s Wartime Planning, 1918–20 and 1943–44,” Frank A. Blazich Jr. traces the long and eventful career of an exemplary American admiral whose name is hardly known beyond the confines of the Naval War College, which he attended in its early years and where he absorbed a methodology of naval planning that would serve him well in the future. His involvement in postwar planning during World War II reveals an acute grasp of emerging strategic realities, although he surprisingly failed to anticipate a possible revolution in China and the threat of global Communism. Frank Blazich is a military historian at the Smithsonian’s National Museum of American History.

IF YOU VISIT US
Our editorial offices are located in Sims Hall, in the Naval War College Coasters Harbor Island complex, on the third floor, west wing (rooms W309, 330, 333, 334, 335). For building-security reasons, it would be necessary to meet you at the main entrance and escort you to our suite—give us a call ahead of time (401-841-2236).

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Robert Ayer, Managing Editor
Rear Admiral Shoshana Chatfield is the fifty-seventh President of the U.S. Naval War College and a career naval helicopter pilot. A native of Garden Grove, California, she graduated from Boston University in 1987 with a bachelor of arts in international relations and French language and literature. She received her commission through the Naval Reserve Officers Training Corps in 1988 and earned her wings of gold in 1989. Chatfield was awarded the Navy’s Political/Military Scholarship and attended the Kennedy School of Government, receiving a master in public administration from Harvard University in 1997. In 2009, the University of San Diego conferred on her a doctorate of education in leadership studies.
BY ANY MEASURE, the U.S. Naval War College (NWC) is an absolutely remarkable place. It is remarkable because of the highly talented and dedicated professionals who form the NWC family: our faculty, staff, student body, and their families. Our extended family includes our friends and supporters from the NWC Foundation; the patriotic citizens of Rhode Island, who are so welcoming and encouraging of everything we do; and our sister services' professional military education colleges and organizations, which share our commitment and passion for preparing the nation's leaders to serve with integrity, creativity, and a sharply focused sense of purpose. In the months since my husband, David, and I joined this multifaceted (and multinational) family, we have been incredibly impressed by the contagious spirit of excellence we have seen at every turn.

My first several months as the fifty-seventh President of the Naval War College have been incredibly busy. Both our external engagements and our on-campus visitor roster have revealed the degree to which our great College is held in high esteem and increasingly is seen as a place for innovative research and scholarship.

Among my first duties as President was to officiate at the Academic Convocation, which took place on August 5, 2019. This time-honored ceremonial event served to open the 2019–20 academic year for the 530 resident students from all the military services, a host of government agencies, and seventy-five partner nations. Studies also commenced for over 1,900 students in our worldwide College of Distance Education programs.

In late August 2019, our International Programs and Alumni Programs offices combined forces to organize the College’s Eighteenth Regional Alumni Symposium in Buenos Aires, Argentina. This highly anticipated event, cohosted by
the Argentine Navy, enabled participants to discuss a wide range of topics. The symposium had three primary objectives:

1. To listen to one another with respect and open minds
2. To learn from each other, since learning is not just a discrete, one-time event but instead is a continuous practice
3. To renew and refresh friendships with other alumni and to commit to maintaining these relationships into the future

During the three-day event, more than a hundred international officers, including the heads of eight navies from the region, participated in briefings and engaged with panelists on a number of important regional issues. Some of the topics discussed were maritime control, maritime surveillance, information sharing and interoperability, and the use of the sea’s resources to achieve sustainable development. Rear Admiral Donald D. Gabrielson, USN, Commander, U.S. Fourth Fleet / U.S. Naval Forces Southern Command, provided keynote remarks. Then–Secretary of the Navy the Honorable Richard V. Spencer served as a special guest speaker. He emphasized the importance of teamwork, noting that “[e]very day, our allies and joint partners join us in defending freedom, deterring war, and maintaining the rules which underwrite a free and open international order. We are each other’s force multiplier, and serving together, studying together, and completing exercises together increases our joint operational readiness and helps secure a safer world.”

Our host, Admiral José Luis Villán, Chief of the General Staff of the Argentine Navy, added, “This academic conference gives us an excellent opportunity to strengthen the relationship amongst our navies, and we learn from each. The symposium’s main purpose is to exchange ideas on how regional nations can overcome problems together.”

At the same time that our team was working to promote global maritime-security cooperation in South America, Secretary of Defense (SECDEF) Dr. Mark T. Esper journeyed to Newport to speak to our students and faculty, his first address at a military academic institution since taking office. He asserted that, after eighteen years of conflict in Iraq and Afghanistan, the Department of Defense must be focused on our near-peer competitors, China and Russia. He noted, “Many of you spent most of your career fighting irregular warfare, but times have changed. We are now in an era of great-power competition. Our strategic competitors are Russia and China.” The question for the Department of Defense, Esper said, is how to address that competition. “I see the greatest challenge that I have, that the department faces, is how do we balance the present versus
the future?” Esper asked, “How do we offset near-term readiness versus future modernization?” He told the Naval War College audience that, as senior military leaders of the future, they must keep this context in mind. “It will affect nearly all aspects of the U.S. armed forces, including training, equipment, and placement of troops around the world.” SECDEF noted that the world is only getting more complex, and the challenge before the U.S. armed forces is to be ready.

During his visit, SECDEF also had the opportunity to observe the GLOBAL-11 Joint Operations war game. McCarty Little Hall was operating at full capacity hosting over six hundred participants, including more than eighty flag and general officers and members of the Senior Executive Service. GLOBAL-11 was designed to assess the Navy’s roles and responsibilities in leading a joint task force (JTF) and employing joint war-fighting capabilities. Admiral John C. Aquilino, USN, Commander, U.S. Pacific Fleet, was the game’s sponsor. Fundamental to his ability to exercise his role as lead was the presence and participation of high-level representatives of all JTF components: General Charles Brown, USAF, Commander, Pacific Air Forces; Major General John Johnson, USA, representing U.S. Army Pacific; and Lieutenant General Lewis Craparotta, USMC, Commanding General, U.S. Marine Forces, Pacific. The war game sought to identify challenges associated with integrating new technologies and joint war-fighting concepts across the entire spectrum of warfare. In a shift from previous war games, Deputy Chiefs of Naval Operations attended, many for the entire week. Among the senior leaders participating in the distinguished visitors’ plenary session were then–Secretary of the Navy Richard Spencer; Chief of Naval Operations Admiral Michael M. Gilday, USN; Commandant of the Marine Corps General David H. Berger, USMC; and Vice Chief of Staff of the Air Force General Stephen W. Wilson, USAF.

Rounding out a busy fall, we also celebrated the College’s 135th anniversary with a packed ceremony in Spruance Lobby. It was an honor to share the event with four previous NWC Presidents who were on campus participating in the Past Presidents’ Colloquium and Strategy Review. Returning “home” for the anniversary were Vice Admiral P. Gardner Howe III, USN, our fifty-fifth President, who served from July 2014 to July 2016; Vice Admiral John N. Christenson, USN (Ret.), our fifty-third President, who served from March 2011 to July 2013; Vice Admiral Rodney P. Rempt, USN (Ret.), our forty-ninth President, who served from August 2001 to July 2003; and Rear Admiral James R. Stark, USN (Ret.), our forty-seventh President, who served from June 1995 to July 1998. The colloquium provided the unparalleled opportunity to receive input and suggestions about the College’s future from a group uniquely qualified to render such advice.

As our College embarks on its 136th year of service to our Navy and the nation, I continue to be impressed by the entire U.S. Naval War College family’s
contributions to our students, to our academic excellence, and to our Navy and joint force war-fighting readiness in support of our National Defense Strategy. And welcome home to Admiral Howe and his wife, Erin, as they join another part of our NWC extended family: our retired military community here in Newport. Our sincerest congratulations on a remarkable career!

SHOSHANA S. CHATFIELD

Rear Admiral, U.S. Navy
President, U.S. Naval War College
Dr. Donald Stoker is a senior fellow with Atlas Organization in Washington, DC. From 1999 to 2017, he was professor of strategy and policy for the Naval War College at the Naval Postgraduate School in Monterey, California. He is the author or editor of eleven books. Clausewitz: His Life and Work (Oxford Univ. Press, 2014), is on the British army professional reading list. The Grand Design: Strategy and the U.S. Civil War (Oxford Univ. Press, 2010) won the prestigious Fletcher Pratt Award for the best nonfiction Civil War book of 2010, was a Main Selection of the History Book Club, is on the U.S. Army Chief of Staff’s reading list, and is a common text in history and strategic studies courses. He is currently writing American Grand Strategy, 1775–2020 for Basic Books. His most recent work is Why America Loses Wars: Limited War and US Strategy from the Korean War to the Present (Cambridge Univ. Press, 2019).

Craig Whiteside is an associate professor at the Naval War College at the Naval Postgraduate School in Monterey, California, where he teaches national security affairs to military officers as part of their professional military education. He is a senior associate with the Center on Irregular Warfare and Armed Groups at the Naval War College in Newport, Rhode Island, and a fellow at the International Centre for Counter-Terrorism – The Hague. He has a PhD in political science from Washington State University and is a former U.S. Army officer with combat experience.
Among today’s great ironies is that, despite the fact that the United States has been at war for the better part of two decades, rare is the American policy maker who speaks adeptly about our use of military power in a coherent manner. On the one hand, political leaders attempt to avoid categorizing our air strikes and raids targeting al-Qaeda and the Islamic State in countries around the world as war, while on the other hand they conflate hostile Russian acts with some form of hyphenated war. This article argues that the adoption of two prominent and fashionable theoretical terms and their various iterations—the gray zone or gray-zone conflict (usually described as the space between peace and war) and hybrid war (often described as Russia’s new form of mixed-methods warfare birthed by General Valery Gerasimov)—is an example of an American failure to think clearly about political, military, and strategic issues and their vitally important connections.

These terms, as well as the concepts arising from them, should be eliminated from the strategic lexicon. They cause more harm than good and contribute to an increasingly dangerous distortion of the concepts of war, peace, and geopolitical competition, with a resultant negative impact on the crafting of security strategy for the United States and its allies and partners around the world.

If an effort to eliminate two such commonly accepted terms and the theoretical approaches arising from them seems a fruitless effort to corral the contents of Pandora’s box, then examine the most recent U.S. National Security Strategy and National Defense Strategy.¹ You will not find either term in these documents even though, as we will see, both have appeared regularly in U.S. political and strategy documents for years. This demonstrates that it is possible to discuss security
challenges without reliance on problematic terms that confuse strategic issues rather than clarify them. This is what we hope to achieve in this article.

There are four key problems with gray-zone conflict and hybrid war and the related variations of each.

1. They are examples of poorly constructed new theories that more often than not cloud rather than clarify.
2. They distort or ignore history, sometimes by claiming to be new when we have seen similar confusion in the past.
3. They feed a dangerous tendency to confuse war and peace.
4. They undermine U.S. strategic thinking via the construction of critical political and strategic documents on the basis of flawed ideas, even sometimes resulting in strategic guidance derived from a focus on tactical matters.

After almost two decades of war, we should heed the lessons that writers such as Emile Simpson learned firsthand in Afghanistan: “What liberal powers do by blurring the conceptual boundaries between war and peace is often to militarise in a polarised manner pre-established patterns of political activity, which might otherwise not be part of the wider conflict.” As we will see, part of the cure for a poor understanding of some of our geopolitical problems is not to confuse geopolitics, competition among adversaries, or ham-handed influence efforts with war. The United States (and its allies) survived the Cold War (what some have termed more accurately the Cold Peace) without confusing whether it was at war or at peace with the Soviet Union—when such confusion could have produced nuclear Armageddon. We need to relearn how to make this distinction.

A FRAMEWORK FOR ANALYSIS

To support these claims, we must do something of fundamental importance: establish the basis for our discussion. This will give us a firm foundation for analysis, because without a secure base one cannot evaluate terms and concepts consistently and rationally. This is important because what some advocates of hybrid and gray-zone ideas are doing is elevating the importance of these concepts to being a new theory of war. Proposing supposedly new tools or methods for analysis is to present new theory. How do we judge whether this theory is valid, rigorous, and testable?

Carl von Clausewitz gave us the first steps. “The primary purpose of any theory is to clarify concepts and ideas that have become, as it were, confused and entangled.” Theory, as Sir Julian Corbett tells us, “can assist a capable man to acquire a broad outlook.” Theory should teach us to think critically, to analyze,
to bring a questioning but informed eye to the problem at hand, and to consider both its depth and breadth. It provides conceptual tools and grounds us by defining our terms and providing us a firm foundation for analysis, while teaching us to distinguish between what is important and what is not.

The results of theory, Clausewitz insists, “must have been derived from military history, or at least checked against it,” thus ensuring “that theory will have to remain realistic. It cannot allow itself to get lost in futile speculation, hair-splitting, and flights of fancy.” Most importantly, particularly in any theory addressing warfare, it “is meant to educate the mind of the future commander.” Historian Peter Paret has made similar points. “A theory that is logically and historically defensible, and that reflects present reality, has the pedagogic function of helping the student organize and develop his ideas on war, which he draws from experience, study, and from history—the exploration of the past extends the reality that any one individual can experience.”

A way to conceptualize the relationship between the political objective and how a state uses its power to obtain that objective is to view these elements as distinct but interrelated realms. The graphic below is presented as an analytical tool. We start with the political objective, or the political aim. As Clausewitz, Corbett, and other theorists make clear, nations and peoples go to war for political

![Diagram](image-url)

**FIGURE 1**
THE RELATIONSHIP BETWEEN THE POLITICAL OBJECTIVE AND THE USE OF POWER

The Political Objective

Grand Strategy

Strategy

Operations

Tactics
reasons; there is something they want to achieve, or they want to protect what they have. Some (e.g., the Islamic State) might mask these objectives in religious terms or various euphemisms, but in the end when states go to war they are using violence to get something they want—violence that is inherently political in nature. To ignore this is to ignore the very essence of every war, and to forget that bloodshed is involved is to refuse to accept war’s nature. It certainly is true that states also pursue political objectives without resorting to war; one wishes this were the preferred method, but the sweep of history demonstrates a human predilection for war. Elaboration of the political objective also should include a vision of what victory looks like and what it means; this vision almost always is lacking.

When nations pursue their political objectives—whether defensive or offensive, and whether at peace or at war—they use various elements of national power to try to achieve them. This is the realm of grand strategy. Here we find the tools of the state beyond merely military power. Sometimes this is represented by the acronym DIME (diplomatic, informational, military, economic). This is not a bad way to think about grand strategy, but one should not forget internal political influence on national decision-making as well. This method grants analytical breadth and firmness and applies to the pursuit of political objectives in both peace and war.

The term strategy too often is used without bothering to define it. Military strategy generally is discussed in the context of warfare, but strategy certainly applies to peacetime as well. For our purposes, strategy is defined as the larger use of military power in the pursuit of a political objective. It is how a nation uses military power to get what it wants—whether at peace or at war—and is the military element of grand strategy. Some examples of a state’s use of military power include deterrence, reassurance, and coercive acts of force using strategies of annihilation, attrition, exhaustion, or protraction.

When military power is used in war, operations are the campaigns one conducts to implement a strategy. Operational art is the way one conducts these campaigns and is defined by the U.S. Army as “the pursuit of strategic objectives, in whole or in part, through the arrangement of tactical actions in time, space, and purpose.” Operations should support the implementation of strategy. They also should affect the enemy’s will or material ability to wage war. It is better if they do both. If your operations are doing neither of these, then you must question their efficacy and whether you understand the use of force, and realize that you are wasting time, resources, and, more importantly, lives.
Tactics, or the tactical realm, deal with how military forces directly fight the enemy. Weapons technologies and methods for using them drive tactics more than any other factor, and the constant roiling of technology means tactics never stand still.

Also relevant to this discussion is the so-called spectrum of conflict. This is a commonly used term that seeks to classify the interaction among nations (at war or not), often (but not always) by the scale and type of means being used. Soldier-scholar Harry Summers pointed out that this notion entered the U.S. military lexicon as the “spectrum of war” via the U.S. Army’s 1962 Field Service Regulations. Then the spectrum stretched from cold war to limited war. Summers correctly identified a “serious flaw”: the spectrum fails to delineate between war and peace.

This type of defective thinking continues to feed current American misconceptions as we continue to confuse war and peace, something manifest in the discussions of hybrid war, gray-zone war, and so-called cyber war. In a 2016 article, Lieutenant General James Dubik, USA (Ret.), made an argument similar to that of Summers, observing that U.S. leaders are fuzzy about just what war is, a problem fed by the 1994 adoption (really, readoption) of a spectrum-of-conflict approach to strategic analysis.

Objecting to using this inaccurate analytical tool does not, as some argue, merely “perpetuate the binary peace/war distinction.” It is in reality an insistence on clear analysis and an embrace of the notion that peace and war are not the same. Their relationship is not binary; it is dialectical. War and peace are best defined in opposition to one another, as one is the antithesis of the other. If a state is engaged in armed conflict, it is at war. The armed conflict can be with another state or not. Clausewitz famously defines war as “an act of force,” one intended to achieve a political object. Lukas Milevski cogently observes that Clausewitz’s definition “elegantly encapsulates the three most important elements of war: violence, instrumentality,” and its adversarial nature. If the state is not in an armed conflict, it is at peace. Thomas Hobbes tells us that peace is the absence of war. War should not be confused with warfare, which usually is defined as the undertaking of the military actions themselves.

Understanding this is critical because we begin our analysis with the question whether the nation is at war. One must remember, though, that nations can be in competition with one another and not be at war and involved in killing the soldiers (and usually civilians) of the other state. Competition among all states, friendly or not, is a norm—and to be preferred. But allowing our analysis of wars or competition among states to rest on intellectual constructs that fail to honor the critical distinction between war and peace means we have lost the logical foundation for critical analysis.
Having established a solid analytical foundation, why do we say what we do about gray-zone conflict and hybrid war? Our analysis will start with a deconstruction of the more expansive term: gray-zone conflict.

GRAY-ZONE CONFLICT—CONFUSION IN BLACK AND WHITE
Commentators frequently use the gray zone phrase to describe the war Vladimir Putin launched against Ukraine in 2014, implying that the actions were opaque enough to cloud perceptions about whether war had erupted in the Donbas. Commentators also use gray zone and its variations to describe China’s moves to cement its extralegal territorial claims in the South China Sea against weaker opponents, as well as Iranian moves in Syria and the Persian Gulf.

The popularization of the term gray zone appears to have been inspired by its incorporation into military documents and speeches. The 2010 Quadrennial Defense Review references challenges that occur in an “ambiguous gray area that is neither fully war nor fully peace.” But it took the remarks delivered five years later by General Joseph L. Votel, USA, the then head of Special Operations Command, to bring the term into the public eye. He incorporated the concept into his briefing to Congress on the unique challenges posed by Russia and the Islamic State, noting that “our success in this environment will be determined by our ability to adequately navigate conflicts that fall outside of the traditional peace-or-war construct.”

An article discussing “a ‘gray zone’ between traditional notions of war and peace” appeared soon after. More publications quickly followed; they seem to be an elaboration of General Votel’s remarks and to discuss conflicts “that fall between the traditional war and peace duality.” Collectively, this work gave us a generally accepted definition of the term. Other publications arrived before the end of 2015. After these instances, use of the term exploded. One article arguing for a place between peace and war did appear in August 2014, but it does not mention a gray zone specifically. The earliest example of this delineation (which does not appear to underpin the key relevant literature) appeared in a 1995 international law article that mentions “the gray zone between war and peace.” Japan’s 2010 and 2013 National Defense Program Guidelines took a slightly different tack, pointing out that “there are a growing number of so-called ‘gray-zone’ disputes—confrontations over territory, sovereignty, and economic interests that do not escalate into wars.” There is also a related October 2014 Stars and Stripes article.

The key academic text seems to be Michael J. Mazarr’s Mastering the Gray Zone, which does not provide a sufficiently clear definition of the gray zone. The best that can be derived from it is that a “new standard form of conflict” is emerging from “revisionist states” that are “competing below the threshold of major
Moreover, *gray-zone war* is defined in relation to an undefinable term: *major war*. A commonly accepted definition of this in certain academic circles is as follows: “Major war means an operation where the United States deployed over fifty thousand troops and there were at least one thousand battle deaths.”

This definition is arbitrary and means based, and thus unusable.

Mazarr derived the term—at least in part—from the work of the special operations community. But our inquiries have failed to determine any inspiration for other recent American users of the term. It could derive from a 2005 book by Michael Hardt and Antonio Negri, American and Italian Marxist scholars, respectively (Negri is a devotee and former student of Michel Foucault). Hardt and Negri related the gray-zone concept to the post-Saddam Iraqi insurgency and wrote that “most of the current military engagements of the United States are unconventional conflicts or low-intensity conflicts that fall in the gray zone between peace and war.”

Ironically, here *gray zone* is used by critics of America to describe what is seen as deliberate efforts to blur recognition of what is clearly a military action: the occupation of a sovereign nation. Even more ironically, Russian officials frequently depict *hybrid war* as something “the Americans do” with “their advocacy of color revolutions”—which demonstrates the crossover contagion effects of the use of both terms.

**GRAY-ZONE CONFLICT AND THE CONSTRUCTION OF THEORY**

There are several fundamental problems with use of the term *gray zone*. The first has to do with theoretical considerations. Again, the advocates of the concept—whether or not they realize it, and whether or not they insist they are doing so—are creating new theory about what is and is not war. The advocates of the gray-zone conflict terminology fail this test because, as we will see, they are not clarifying concepts but instead creating confusion.

As with some discussions of hybrid war, gray-zone publications haphazardly swirl and mingle the levels of war. Mazarr mixes strategy and tactics when he calls Chinese actions in the South China Sea the “use of gradual, multi-instrument strategies,” then in the next sentence states that Russia’s moves against Ukraine “also constitute a variety of the tactic,” and in the next sentence avers that Iran’s search for regional power and nuclear weapons is “a variety of gray zone strategy.” He also writes that “gray zone conflict involves the holistic application of a mosaic of civilization and military tools, short of combat operations, to achieve gradual progress toward political objectives.” Here, as in other places, the author is partly writing about grand strategy, because he is examining the various tools of power a nation can employ in pursuit of its political objective.

All this produces a critical problem in logic. If you do not define your terms and stick to a valid use of them, you have not presented a basis for rational
discussion. Failing to differentiate among grand strategy, strategy, operations, and tactics compounds this problem. A challenge on the tactical level must be addressed in ways starkly different from those applicable to a strategic threat.

Mazarr also argues that revisionist powers “are creating a new approach to the pursuit of aggressive aims, a new standard form of conflict” by undermining foes gradually on their periphery.35 The reality is that there is nothing new here. The Nazis used subversion to undermine Austria and Czechoslovakia before World War II. This was a standard Soviet practice against NATO countries. Mazarr himself writes that the ancient Greeks behaved in the manner now associated with gray-zone conflict. Revisionist or aggressive powers certainly are a problem today, but they always have been a problem and always will be.

None of this, of course, counters the fact that Mazarr and others indeed are correct about the danger from revisionist states. But we must parse the problem in a clearer manner to develop proper responses. If one identifies the problem incorrectly, one very likely will deliver the wrong answer. The most important and useful part of Mazarr’s text provides superb analysis of the threat to the international order from several aggressive, revisionist powers. The challenges from China and Russia today resemble those of the 1950s. Both the Soviet empire and China had, on their respective borders, weak states that were not tied to any alliance system. Both also had revolutionary, and thus revisionist, regimes, as does Iran. Today, Russia, China, and Iran all have weak, often unaffiliated states on their borders, or ungoverned or disputed areas, such as parts of the South China Sea. The methods one uses to go about obtaining control of these areas fall under the realms of grand strategy, strategy, operations, and tactics. It is also here where the ideas of the original gray-zone writers, as we will see shortly, are very applicable.

The gray zone, as Adam Elkus observes, is “just another example of the strategic studies community needlessly confusing itself by generating new terminology to replace what is not broken.”36

THE GRAY ZONE’S FORGOTTEN HISTORICAL ANTECEDENTS
What will come as a surprise to most is that the term gray areas in relation to conflict, particularly when dealing with Russia, has been around since at least 1954, though in a different form from that generally used today. Thomas K. Finletter, a World War I veteran, career U.S. government official, and the second Secretary of the Air Force (1950–53), first discussed competition in the gray areas in his 1954 book Power and Policy in a section titled “The Struggle against Communism in the Gray Areas.” Finletter defined the gray areas in a geographical sense, identifying “the countries outside of NATO which are in contact or nearly so with Russia and China, the long frontier between Freedom and Communism starting from
Turkey on the west, and leading eastward through Iran, Afghanistan, Pakistan, India, Burma, Thailand, Malaya, Indonesia, Formosa, Korea, and Japan to the western limit of NATO in the Aleutian chain. Today, Finletter’s description of the strategic situation across this belt of the world is far more right than wrong. Obviously, the periphery has changed a bit with the collapse of the Soviet Union, so one should add the new states that have emerged in Central Asia and Eastern Europe, but the situation still is easily recognizable.

Finletter goes on to note the vulnerability of the gray areas and their importance, but also insists that the United States cannot build a defense system here along the lines of NATO, because the arena is so different. This makes it harder to develop ways of blocking “Communist [Russian] Imperialism in the Gray Areas.” Finletter’s remarks immediately bring to mind the current situations in Central Asia and Eastern Europe, particularly in Georgia but in Ukraine, Moldova, and Belarus as well. The vulnerable gray areas lack the political and cultural similarities and economic ties linking post–Second World War Western Europe, but just as in the 1940s and 1950s they face threats from a revisionist Russia and growing China.

In his discussion Finletter asks a question particularly applicable to today. “What are the guiding principles of the United States foreign policy for the Gray Areas?” He poses a number of rhetorical questions to try to answer the concern he raises, but then properly says that the political leadership must decide what policy will be before one can determine military strategy for the gray areas. In other words, how the United States seeks to handle these areas must be subsumed under the nation’s larger political aims. The country’s grand strategy then should be aligned with this.

There are certainly reasons to treat many of Finletter’s comments with a skeptical eye. He often gives too much credit to Soviet influence in China and to the general reach of the Soviets and Chinese into what in the mid-1950s was called the emerging Third World, but it is interesting that his fears are not unlike those of current policy makers. For example, he frets about Iran’s tilt toward Russia, something that is part of current policy discussion. He also notes that “the Russians have therefore moved their military pressures—actual and threatened—to the Gray Areas.” The Russians are providing the equipment and training while the Chinese, “acting as junior partners and the middlemen,” are (in regions such as Southeast Asia) “threatening to move the barrier forward by force at many
“Again, the picture he paints is in many ways familiar: Russia is pushing using proxies, but China also is on the move.

Other authors quickly followed Finletter into the gray areas. Henry Kissinger, in his 1955 *Foreign Affairs* article “Military Policy and Defense of the ‘Grey Areas,’” credits Finletter’s work. Kissinger takes on the problems of Russian and Chinese aggression in the same areas, particularly regarding the problems of deterrence and the threat that military action here could lead to war between a Communist aggressor and the United States. He urges that the “immediate task” of the United States in this area “must be to shore up the indigenous will to resist” via political and economic aid. He also argues for the creation of military forces in the most vulnerable states that do not possess significant defensive power, and the necessity of the United States and others having the capability to come to their aid.  

For today’s audience a perhaps more useful take on the gray-areas issue is found in political scientist Robert E. Osgood’s well-known 1957 book *Limited War: The Challenge to American Strategy*. Osgood credits Finletter with developing the concept and includes in his work a section titled (not too surprisingly) “Limited War in the Gray Areas”; he also tackles the subject on other pages. Osgood defines the gray areas as being “all around the Eurasian rimlands [sic] from Iran to Korea,” calling it “a vast region contiguous to the Communist sphere of power that was ripe for Communist expansion.” He fears “Communist pressure” against the “gray areas,” but is more concerned that events there would work to separate the United States from its allies, as well as to siphon U.S. strength away from more-important regions. He also worries that these areas lack the strength to defend themselves against “determined Communist attack.” The substitution of “Russian and Chinese” for “Communist” would align his statements with the concerns of many in today’s U.S. strategic community.

Osgood built on Finletter’s concept and linked the threat to the gray areas to the challenges of the containment strategy during the Cold War. He wrote that containment in the gray areas would rest on the areas’ inhabitants and their respective abilities to defend their own states against the very threats that Ukraine faces today: foreign subversion, infiltration, insurrection, and conventional military attacks. Osgood also wisely observed that many of the states of the gray areas lacked the internal structures and solidity to build the power to resist, even with American military and economic help. To address this challenge, Osgood offered “three general requirements” for containing Russia and China in the gray areas. First, the “indigenous regimes” had to possess the “minimum internal cohesion and stability,” as well as “a minimum ability to satisfy social and economic demands to prevent Communist ideological and political penetration.” Second, these local states needed to have military forces that could deal with insurrections and guerrillas. Third, these same local military forces, when supported by
U.S. military and economic aid as well as military units, provided the “nuclei” for defeating “larger military incursions on a local basis.”\(^{44}\) In other words, the states should demonstrate the desire and ability to govern and defend themselves, but the United States should help those manifesting a core seriousness of purpose.

What is particularly interesting about Osgood’s statements is that over sixty years later not only are the concerns the same but so are the actions the United States is taking to address them. Moreover, this is exactly what the United States has been doing for the past sixty-plus years, in some form or other—sometimes with success, sometimes not.

There undoubtedly are many additional older sources discussing the gray areas that remain forgotten.\(^{45}\) For inspiration on how to deal with Vladimir Putin’s Russia, as well as China and Iran, Cold War literature is something that current security studies authors would be wise to examine.

There are other, later works depicting the gray zone in a geographical manner, not unlike Finletter’s approach, that predate our core examples of Votel’s testimony and *Mastering the Gray Zone*. These include works from 1986, 1987, 1995, and 1998, as well as a 1999 book chapter on NATO expansion that mentions a “gray zone’ of insecurity.”\(^{46}\) A 2007 work uses the term in relation to electoral reform.\(^{47}\) One 2004 source defines the *gray zone* as a type of threat.\(^{48}\) Others are addressed below.

But what is most important to draw from this is that Finletter and his intellectual successors are describing a geographical and geopolitical challenge similar to that which the United States faces today—without making the error of confusing peace with war. They understood the difference—and they understood that the costs of such a misunderstanding could be fatal.

**THE GRAY ZONE INJURES OUR ABILITY TO DISTINGUISH BETWEEN PEACE AND WAR**

All this brings us back to a key argument made by gray-zone enthusiasts. “A fundamental implication of gray zone campaigns is to blur the dividing line between peace and war, and between civilian and military endeavors. They are, in a sense, the use of civilian instruments to achieve objectives sometimes reserved for military capabilities.”\(^ {49}\) We will ignore the obvious confusing of a campaign and a war to address the larger issue raised.

The problem is not that there is a blurring of the line between peace and war in the behavior of aggressive actors. The problem is in the failure of analysts and policy makers to understand the differences between war and peace and the frequent conflation of acts of subversion, harassment, and espionage among countries nominally and legally at peace with war. As discussed previously, war is a distinct state in which violence is used to achieve political ends.
While new domains or new fronts of competition frequently open in an age of rapid technological proliferation, the division between war and peace remains fixed despite the efforts of some to elide the difference. Thomas Rid brilliantly addresses this issue in relation to so-called cyber war in an article appropriately titled “Cyber War Will Not Take Place.” He argues, convincingly, that cyber attacks are acts of sabotage, espionage, or subversion lacking the violence necessary to make them acts of war.\(^5\)

Recalling the relationship between the pursuit of the political objective and the elements of grand strategy presented earlier—grand strategy, again, meaning how we use all the elements of national power in pursuit of a political aim—clarifies this issue. For example, what Russia has done in Ukraine since 2014 is to conduct successfully a war for limited political aims, using both active violent and subversive means. The failure of many political leaders to brand this war a war does not alter the facts on the ground or prevent honest analysis.

But one must remember that the above-mentioned analytical tools apply to both peace and war. Just because a state is not at war with a rival state, it does not mean that the first state is not attempting to subvert the second. The Cold War epitomized this. Currently, neither Russia nor China is at war with the United States, despite many insistences to the contrary, but both constantly practice forms of subversion against the United States, such as meddling in political campaigns and all forms of hacking.\(^5\) All nations compete with one another, and with regard to Russia and China one could brand them unfriendly U.S. competitors, or perhaps more accurately adversaries. But states compete with other states even if they are not at war with them (i.e., actually involved in fighting them). In the end, the problem is that analysts writing about the so-called gray zone are confusing war with subversion (in the case of the U.S. relationship with Russia) while forgetting (in the case of Russia’s war against Ukraine) that subversion and its tools are used both in peace and in war. Russian expert Michael Kofman noted in a Texas National Security Review roundtable on the U.S. National Defense Strategy that Russia’s “annexation of Crimea in 2014 and the almost entirely conventional fighting continuing in Ukraine are hardly the product of emerging technologies to subvert democratic processes, unless this is new jargon for tanks and artillery.”\(^5\)

If the most important role of political leaders is to get the political aims right so that all else follows logically, an important consideration is the need for political and military leaders to communicate them clearly to friend and foe alike. Identifying key national interests and drawing sharp redlines around them while providing for their credible enforcement is key to avoiding situations that evoke the label “gray-zone confrontation.”\(^5\) But this requires political leaders to understand what they want and to be clear and specific in their pronouncements.
In March 2017, General Votel, then head of U.S. Central Command, briefed the Senate Armed Services Committee. His command posture statement used both “hybrid war” and “gray zone” in the official text. In addressing the danger from the Islamic State, Votel described it as an “evolving hybrid threat (conventional and irregular warfare).” Switching gears, Votel detailed Iran’s bevy of conventional and irregular threats and described Iran’s implementation of its strategy for gaining regional hegemony as being “primarily within the ‘gray zone,’ the space short of conventional conflict where miscalculation can easily occur.”

The continued use of these terms insists on the existence of a nonexistent space between war and peace and risks the dangerous possibility that these acts that take place beyond established redlines for action will generate a cause or push for war. More likely, the angst over shadowy activities short of war by malevolent actors could push policy makers to counter minor threats to U.S. interests rashly, in ways that backfire or perhaps erode U.S. legitimacy as a global or regional influencer of stability and prosperity. Not understanding the difference between peace and war can cause miscalculations that land us in the latter.

THE SO-CALLED GRAY ZONE UNDERMINES U.S. STRATEGIC THINKING

The flawed gray-zone concept undermines U.S. strategic thinking in two manners. First, U.S. government political and strategic planners and analysts are assessing adversaries and writing official U.S. government policy and strategy documents—as well as influential reports and policy papers—on the basis of a dangerously flawed idea. Second, gray-zone thinking provides America’s adversaries with a means of undermining the liberal international order.

The penetration of gray-zone thinking into the policy and strategy debates of the United States has been immense. It is nearly impossible to attend a defense-related presentation in Washington, DC, without hearing “gray zone” references. More dangerous is the gray zone’s infiltration into official U.S. political and defense documents. We noted above its first official appearance in the 2010 Quadrennial Defense Review. This was only the start, as the concept began finding its way into all manner of official U.S. civilian and military publications. It reached the Army’s Unified Land Operations manual in 2011 and the Army Training and Doctrine Command’s Operational Environments to 2028 in 2012. The key source is General Votel’s aforementioned 2015 congressional testimony. A 2017 National Intelligence Council report discusses the gray zone. The official, unclassified 2018 National Defense Strategy summary does not contain the term, but the congressionally mandated analysis of the document includes voluminous references to hybrid war and the gray zone; indeed, one could argue
that the gray zone is key to its intellectual foundation. Moreover, an extensive (152-page) assessment project released in May 2019 is underpinned completely by the gray-zone concept, as well as hybrid war. The report has twenty-four different contributors from numerous U.S. military commands and influential think tanks, and includes prefaces by the head of the U.S. Army Training and Doctrine Command, a Navy rear admiral on the Joint Staff, and a European Command civilian expert on Russia.

The term gray zone also commonly appears in defense-related congressional briefings, often in conjunction with hybrid war. In March 2017, a RAND employee testified before Congress in what was generally a discussion of Russian actions against other states. His remarks clearly illustrate the problem.

Experts use the term “hybrid warfare” in different ways, including several related terms such as “gray zone strategies,” “competition short of conflict,” “active measures,” and “new generation warfare.” Despite subtle differences, all these terms point to the same thing: Russia is using multiple instruments of power and influence, sometimes with an emphasis on nonmilitary tools, to pursue its national interests outside its borders—often at the expense of US interests and those of US allies.

He went on to add—correctly—that these actions are not new; the Soviet Union acted similarly during the Cold War. If there is nothing new here, then why needlessly complicate matters with a new concept or a new theory? Simply call things as they are. The same witness then brands what the Russians are doing “tactics” and suggests “strategies” for dealing with them, then refers to “hybrid war tactics” and “hybrid warfare strategies.” Is it hybrid or gray? And should we not develop tactics to counter tactics and strategies to counter strategies?

Why does this matter? Because U.S. leaders are analyzing potential threats to the United States and constructing elements of American strategy on the basis of an intellectual construct that has no analytical utility and confuses war with peace. With this, we have resurrected part of our previous point. Moreover, the danger in doing this is that one will construct and then try to implement strategies that are inappropriate for the situation at hand. The United States might commit an act of war—attacking a special operations unit or blockading a newly constructed island—under the assumption that one is “fighting in the gray zone,” when in reality the nations actually are at peace. The United States might think of itself as being in the gray zone—the area between peace and war—but to the other nation the situation could be crystal clear: it is now at war with the United States. Shoddy thinking could produce horrific consequences.

Additionally, America’s adversaries find the gray zone useful for their purposes. The propagators of the gray zone seem unaware that some Russian writers
find our addiction to a variation of this concept particularly useful. How much is not clear, but the problem must be considered. Russian political scientist Dmitry Baluev argues that the acceptance of political gray zones allows the Russians to introduce national security concepts “that differ from the traditional international system and depart from western dominated international relations theory.” This “will be most useful for analysis of political and economic developments in south-east Asia” because these societies are different and face different threats. He also argues that the West needs to accept the diversity of the different governing principles of this region.65

Baluev’s reasoning is in many respects very broken, and it is difficult to see how one translates his ideas into action. What is particularly interesting is that Baluev (with a coauthor) has been writing about this since at least 2010—five years before Votel and Mazarr—and says that his gray-zone ideas are derived from those advanced by Americans.66 But the more dangerous and important issue is this: one Russian thinker sees in confused Western analysis a means of delegitimizing democracy and undermining the international order. While this is not indicative of all Russian thought, by any means, it is an approach dangerous to the United States and its interests.

Having discussed thoroughly our issues with the concept of the gray zone, we move on to the other half of our discussion: hybrid war.

HYBRID WAR—A NEW TERM FOR NEW WARS?
We can distinguish hybrid war from the gray zone by the fact that instead of describing a shadowy space where an alleged pseudowar is taking place, hybrid war pretends to describe the character of activities during what is clearly war among two or more entities. These activities take place at the tactical level of war, and analysts detail them so they can categorize the tools as a mix of conventional and irregular in the same space. The continual expansion of diverse tools and examples is considered evidence of the existence of hybrid war, a term now used to describe nearly every form of interstate competition and conflict from the tactical to the political. The result has been to confuse rather than clarify our understanding of war.

The urtext of hybrid war is Frank G. Hoffman’s 2007 Conflict in the 21st Century, although he first broached the issue in an article coauthored in 2005 with now-former Secretary of Defense James Mattis.67 Moreover, it would be patently unfair to blame Hoffman for the proliferation of this term, as more than a decade’s worth of writers have exploited the existence of hybrid war and its variants in a dizzying number of articles and policy papers.68 Professor Robert Johnson, the director of the University of Oxford’s Changing Character
of War Centre, noted at a 2017 conference that he had surveyed more than one hundred articles on the topic. Some of the authors seem to have carried things much further than originally intended. Surprisingly, given what is noted above, the term does not make it into Mattis’s own summary of the National Defense Strategy in 2018.

Some authors credit the first use of the term to a master’s thesis written in 1998 by Lieutenant Robert G. Walker, USN. Walker defined hybrid warfare (not hybrid war) as that “which lies in the interstices between special and conventional warfare. This type of warfare possesses characteristics of both the special and conventional realms and requires an extreme amount of flexibility in order to transition operationally and tactically between the special and conventional arenas.” Walker’s text makes clear he is using hybrid as an adjective and not seeking to establish an entirely new form or type of war. To quote from his thesis: “[T]hroughout its history, the United States Marine Corps has demonstrated itself to be a hybrid force, capable of conducting operations within both the conventional and unconventional realms of warfare.”

The term reappeared in another Naval Postgraduate School (NPS) thesis four years later. In this text, hybrid war is defined as guerrilla warfare circa 2002, and the Chechen wars are held up as the historical examples. Here the term was inspired by works on so-called fourth-generation warfare and the “New Wars” thesis of Mary Kaldor. These consider hybrid war to be made up of conventional and unconventional means, crime, terrorism, subversion, and technological innovation. But this means-based foundation is too subjective and inexact to provide a basis for analysis. The claim is also ahistorical, in the sense that the authors purport to identify something new. The 2002 NPS work does not cite Walker’s 1998 thesis, carrying the first known appearance of the term, and Conflict in the 21st Century does not reference it.

Further uses of the term, as well as many variations, soon followed. It appeared in a pair of articles in 2006, again used as an adjective to describe tactical matters. Hoffman penned a quartet of hybrid-related texts in 2006 and 2007 that largely set the foundations for increased use of the concept. A 2007 work used the term to describe threats to the United States and to critique the 2005 National Defense Strategy. John Arquilla, the director of the Walker thesis mentioned above and who also chaired the department under whose umbrella the two NPS theses mentioned above were written, used the term as an adjective to describe warfare in 2007. The same year also saw the term’s first appearance in

[By confusing competition among adversaries with things called hybrid or gray-zone war, we risk conflating everything with war—a dangerous proposition.]
an official U.S. government publication, *A Cooperative Strategy for 21st Century Seapower*, which probably was influenced by the 2005 Mattis and Hoffman text and Hoffman’s work at the Marine Corps’s Center for Emerging Threats and Opportunities. Here, *hybrid* is an adjective describing tactical matters. Hybrid war also appeared in British doctrine and an Australian writing the same year, as an adjective related to irregular warfare.

After the publication of the 2007 Hoffman text, use of the term *hybrid war* rapidly accelerated. For example, in a 2008 article, Army Chief of Staff General George C. Casey wrote about *hybrid threats*, which betrayed “diverse, dynamic combinations of conventional, irregular, terrorist, and criminal capabilities.” This, he said, would “make pursuit of singular approaches difficult, necessitating innovative, hybrid solutions involving new combinations of all elements of national power.” Yet the idea of using and combining all the aspects of national power to achieve political objectives is an ancient one, and the failure of the former service chief’s declaration to acknowledge that is surprising.

Others have noted this 2009 remark by Secretary of Defense Robert M. Gates: “One can expect to see more tools and tactics of destruction—from the sophisticated to the simple—being employed simultaneously in hybrid and more complex forms of warfare.” Here, Secretary Gates used “hybrid” as a simple adjectival descriptor for tactical issues. This, though, changed by the time of Gates’s 2010 *Quadrennial Defense Review*. Here, hybrid first appears in a section titled “The Shifting Operational Landscape.” But it appears as *hybrid threats*, which are defined as “diverse, dynamic combinations of conventional, irregular, terrorist, and criminal capabilities.”

But what does *hybrid war* mean? In 2007, Hoffman provided the following definition—the foundation for the hybrid war texts that followed it: “*Hybrid Wars incorporate a range of different modes of warfare, including conventional capabilities, irregular tactics and formations, terrorist acts including indiscriminate violence and coercion, and criminal disorder*. These multi-modal activities can be conducted by separate units, or even by the same unit, but are generally operationally and tactically directed and coordinated within the main battlespace to achieve synergistic effects” (italics in the original).

At first glance, this definition seems entirely workable, and an accurate description of a growing number of battlefields and hot spots around the world. But it is hard to think of a single characteristic of war, particularly at the tactical level, that does not fit within it. If this is true, *hybrid war* becomes a redundant term; it simply constitutes war as we always have known it. Moreover, as we will see, the term introduces nothing different from what the United States and other Western countries have encountered from adversaries historically, or even what they have done to others in the conduct of war.
HYBRID WAR AND THE CONSTRUCTION OF MILITARY THEORY
Theory clarifies concepts while serving as a basis for analysis. When one first encounters a newly constructed military term, it should be tested immediately against the foundational concepts of political-military analysis and checked against history. This will establish its validity. Using this methodology, what is hybrid war? And how useful is it as theory?

Hybrid war is at best simply a neologism for tactical innovation. Moreover, the theoretical problem is compounded when one digs deeper into the key texts. It is unclear whether hybrid war is supposed to refer to war, warfare, or a threat. For example, hybrid threats may be “competitors who will employ *all* forms of war and tactics, perhaps simultaneously,” as well as “criminal activity.” This explanation is followed by the following: “[H]ybrid threats incorporate a full range of different modes of warfare.” The same paragraph adds that “Hybrid Wars can be conducted by both states and a variety of non-state actors.” In a 2009 article we find the following: “It appears that CW [compound war] is the more frequent type, and that hybrid threats are simply a subcomponent of CW in which the degree of coordination or fusion occurs at lower levels.” This describes hybrid war as a subtype of compound war, which is simply an expression of the reality that nations use a variety of military means to fight wars.

One can boil down the core discussion of hybrid war to the usage of tactical means, something revealed in the fact that sometimes the works focus on infantry weapons. When one is discussing the use of antitank weaponry, you are in the tactical realm. This is fine in and of itself, but it hardly reveals a new form of war, or even a new threat. This also can be seen in an elaboration on the original hybrid war entry: “I define a hybrid threat as: Any adversary that simultaneously and adaptively employs a fused mix of conventional weapons, irregular tactics, terrorism, and criminal behavior in the battle space to obtain their political objectives.” This is simply a depiction of tactical means and methods that creates an arbitrary distinction with little explanatory value beyond what is useful for tactical-level commanders fighting in multiple directions.

Additionally, some hybrid war works insist on having identified a new type of war. This is simply not the case, as even most hybrid enthusiasts would agree. As we have seen, all wars—as both Clausewitz and Corbett tell us—are fought for regime change (an unlimited political objective), or something less than this (a limited political objective). All wars can be lumped under this rubric. Hybridists work from a means- or methods-based foundation, one that is too subjective to provide a definable, firm, universally applicable basis for analysis—thus failing a key test for building theory.
Finally, hybridists are partly imitating an earlier intellectual infatuation. Conceptually, U.S. defense officials advanced something similar to hybrid war before, although under a different name, when faced with new and heated geopolitical competition after 1945. In 1951, U.S. Navy captain Harvey B. Seim wrote about what he called fringe war. This, he noted in the context of the Cold War, “is localized, yet global; it consists primarily of a series of minor engagements for limited objectives; it is carried out by relatively small forces; it utilizes puppet or satellite groups as a smokescreen to mask the single coordinated communist effort; it is waged in many different manners, both military and non-military.” This reads like a description of many modern conflicts from some hybrid and gray-zone enthusiasts, who often conflate the distinct definitions of the two concepts and focus on the small forces, deception, and military and nonmilitary “modes,” without any focus on the political nature of the dispute or conflict.

So, where does this leave us? Discussions of hybrid war invariably mix the realms and tools of conflict, with a focus on the tactical level of war. Calling something new and revolutionary just because part of it takes place in the cyber domain (which merely constitutes the next evolution in signals-based elements of war fighting that began with the telegraph) does not make it a new form of war. As stated above, it is at best merely a form of tactical innovation. Theory is supposed to clarify issues and improve our analysis, but the hybridists have only sown confusion by trying to create a new type of war to describe the constantly shifting character of war.

HYBRID WAR: DISTORTED HISTORY
Arguments for the uniqueness of hybrid war as a concept and for an increase in its occurrence in practice often are supported by a selective reading of history. In Hoffman’s original work that helped define the term hybrid war, the Vietnam, Napoleonic, and American Revolutionary Wars are given as examples of conflicts that cannot be classified as hybrid wars, because the different “modes” of warfare do not merge at the tactical level. This assertion is disputable, particularly when we rely on his popular definition of hybrid war.

The very nature of North Vietnam’s effort to unify the country forcibly under Communist rule constituted the blending and use, simultaneously, of every type of military and nonmilitary element that one possibly could imagine. Indeed, the essence of North Vietnamese grand strategy was the integration of all elements of national power working toward the political objective at every level of war. The entire state—military and civilian—was mobilized to achieve the political aim. “Vietnamese Communist Revolutionary Warfare” combined armed dau tranh
It is important to distinguish the term *grand strategy*—meaning the use of all elements of national power to achieve political objectives—from the use of a variety of means at the tactical level. Terrorism and criminality in the forms of kidnapping and assassination were tactics integral to the Communist effort to topple South Vietnam’s government and drive out its foreign sponsor. The Communist North also practiced constant subversion against South Vietnam. The memoir of a North Vietnamese Communist agent working in South Vietnam provides only one example of this.

Figure 2 illustrates this.

(struggle) with political *dau tranh*. All effort was to act upon the enemy. Figure 2 illustrates this.
Vietcong (VC) units habitually fought alongside North Vietnamese regular units in South Vietnam. Moreover, the VC itself was hardly monolithic, possessing Main Force formations made up of light infantry units fighting beside full-time and part-time VC guerrillas. North Vietnamese army forces also regularly fought as guerrillas in South Vietnam. After the near evisceration of the VC during the 1968 Tet Offensive and its subsidiary offensive operations in 1969, inclusion of North Vietnamese army forces was common in decimated VC units fighting the guerrilla war in South Vietnam.

The blending of the regular and irregular during the Napoleonic Wars was also habitual. After Napoléon’s 1812 invasion of Russia, Russian militia continuously fought alongside Russian regular army forces. After Prussia broke with Napoléon in early 1813, Prussian militia (Landwehr) commonly filled out Prussian units until Napoléon’s second abdication, in 1815. Carl von Clausewitz helped raise these units in 1813. Indeed, the plans for doing so were ones he originally authored.

The blending of modes of warfare was prevalent during the American Revolutionary War. After the debacle of his defeat in New York in 1776, George Washington habitually used regular and irregular forces simultaneously. This is made very clear in numerous books, as well as in Washington’s correspondence. In June 1777, he wrote from his camp in New Jersey as follows: “My design is to collect all the force that can possibly be drawn from other quarters to this post, so as to reduce the security of this army to the greatest certainty possible, and to be in a condition of embracing any fair opportunity, that may offer, to make an attack on advantageous terms. In the mean time I intend by light Bodies of militia, seconded and encouraged by a few Continental Troops, to harass and diminish their number by continual Skirmishes.”

American general Nathanael Greene wrote something similar in 1781 when he commanded the American forces opposing the British invasion of the southern states.

The Salvation of this country don’t [sic] depend upon little strokes, nor should the great business of establishing a permanent army be neglected to pursue them. Partizan strokes in war are like the garnish of a table. . . . They are most necessary and should not be neglected, and yet, they should not be pursued to the prejudice of more important concerns. You may strike a hundred strokes and reap little benefit from them, unless you have a good Army to take advantage of your success. . . . It is not a war of posts but a contest for states.

The Americans used regular and irregular methods and forces throughout the struggle, often in the same battle, famously deploying Daniel Morgan’s riflemen as a dispersed sharpshooting unit in the otherwise conventional Battle of
Moreover, if one was feeling particularly ungenerous to our founding father, one could define Washington's requisitions of supplies after 1780 as crime because the Americans were so broke that Washington took what he needed without making payment.\(^{107}\)

The hybrid conversation perhaps has been linked most heavily to the war Russia launched against Ukraine in 2014, but the infection quickly spread to discussions of the Islamic State's war. In the case of the Islamic State, just as in every other example held up as hybrid, there is nothing new here. Just like its insurrectionist predecessors, the Islamist group took pages from the “Revolutionary Warfare” and protracted war playbooks of the Vietnamese Communists and China's Mao Zedong.\(^{108}\) The Islamic State moved through Mao's three phases, from weak insurgency to conventional war, using all military and political means—from terrorism and drones to recruiting former Baathists, in the manner of the Bolsheviks building the Red Army—and then wrapping it all in an effective information-operations campaign, using social media instead of just a printing press.\(^{109}\) While many current insurgency scholars argue for a divorce from the Maoist concepts, as supposedly being outdated in our globalized age, they fail to credit the Islamic State's ability to garner large amounts of local and global popular support in its campaign to create a political entity called a caliphate.\(^{110}\) The reality is that the group uses small, conventional units in conjunction with irregular forces to apply coercion and violence to achieve political aims using a variety of tactics. Again, there is nothing new here. Despite this, in article after article commentators debate the means and methods of the Islamic State way of war as if it heralded the first case of a nonstate actor adopting so-called hybrid formations and tactics.\(^{111}\)

The strongest argument that hybridists could make is that all wars are hybrid, but to varying degrees. Retired U.S. Army officer and historian Antulio Echevarria writes, “It is worth asking whether history can provide examples of wars that were not hybrid in some way.”\(^{112}\) All wars are—in the sense that they mix conventional and unconventional fighting modes and methods and include criminality and subversion—hybrid (as an adjective), but this does not create a new creature. But if all wars are hybrid wars, the term is redundant, similar to saying violent wars.

**HYBRID WAR DANGEROUSLY CONFUSES PEACE AND WAR**

Despite its creator's intention to use the term hybrid war to describe acts that are clearly warfare, it instead has become popular to use it in the opposite sense, as a way to describe a supposed new way of war that deliberately blurs the lines between peace and war. A factor in the accelerated use of the term hybrid war was the publication of a 2013 article by the chief of the Russian General Staff, General Valery Gerasimov. Mark Galeotti drew attention to this article in his
initial writings on what he called the Gerasimov Doctrine—something he walked back later in a subsequent article titled “I’m Sorry for Creating the ‘Gerasimov Doctrine.’”

In many Western eyes, the general authored a blueprint for a unique campaign style that accurately describes Russian aggression against Ukraine. Yet there is no such thing as a Gerasimov Doctrine. Among other things, Gerasimov was simply giving his view of the operational environment and what a future war might look like; he was not attempting to construct anything else.

What makes this particularly interesting is that Gerasimov’s work is itself a misreading of events. He deems the Arab Spring a military event, which it was not. He insists that “the very ‘rules of war’ have changed.” They have not (one could make an excellent argument that there are no rules). He also says that nonmilitary means “in many cases . . . have exceeded the power of force and weapons in their effectiveness,” but gives no example of this.

Gerasimov then says that “the focus of applied methods of conflict has altered in the direction of the broad use of political, economic, informational, humanitarian, and other nonmilitary measures—applied in coordination with the protest potential of the population.” He then adds, “All of this is supplemented by military means of a concealed character, including carrying out actions of informational conflict and the actions of special-operations forces. The open use of forces—often under the guise of peacekeeping and crisis regulation—is resorted to only at a certain state, primarily for the achievement of final success in the conflict.” (As an aside, Gerasimov apparently delivered a speech in Moscow in early November 2017 in which he insisted that the United States and other Western forces were using hybrid war against Russia.) At its core, all this is a rendition of grand strategy, meaning the use of various elements of national power in the pursuit of political objectives. The concealment of the military means is covered by Sun Tzu’s approximately 2,500-year-old insistence that “[a]ll warfare is based upon deception.”

We also could classify this under Clausewitz’s examination of cunning, which, it is important to point out, he says is a tool of the weak.

The confusion of peace and war on our part arises from our manner of interpreting Gerasimov’s highlighting of the tactical use of subversion against other states, something stressed in some hybridist works. American analysts are forgetting that subversion is a tool both of peacetime state interaction and of war. Believing that subversion is restricted to wartime activities, and classifying it as an act of war, clouds our thinking. Historically, subversion has always been a part of both Russian foreign policy and military action. Moreover, the

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[P]art of the cure for a poor understanding of some of our geopolitical problems is not to confuse geopolitics, competition among adversaries, or . . . influence efforts with war.
above-mentioned use of disguised military forces prior to open hostilities is an act of war regardless of whether the power using them admits it or other nations fail to properly brand it such. Putin’s Russia fought—and is still fighting, as of 2019—a war against Ukraine.

THE HYBRID WAR CONCEPT UNDERMINES U.S. STRATEGIC THINKING

The unfortunate result of this intellectual confusion is the construction of elements of U.S. strategy on myth and misunderstanding and the militarization of grand strategy, producing what the late strategic analyst Michael Handel referred to as the tacticization of strategy. U.S. leaders have taken a badly formed tactical concept and used it as one of the pillars for the creation of strategy. Tactics and strategy are in the same arena, but they are different animals.

We see this in the fact that the notion of hybrid war made its way into the 2015 U.S. National Military Strategy, where it sat on an unusable “Continuum of Conflict” consisting of “State Conflict,” “Hybrid Conflict,” and “Non-state Conflict.” This document insists that hybrid conflict “blends conventional and irregular forces to create ambiguity, seize the initiative, and paralyze the adversary. May include use of both traditional military and asymmetric systems.”

The first problem with this definition—and this criticism fits the document’s descriptions for state and nonstate conflict—is that this is an expression of the means and methods used to wage war—two very subjective creations—and therefore presents no foundation for constructive analysis. This critical weakness is compounded by the fact that the definition given for hybrid war—which one could construe as the official U.S. military and government line, because of its source—is tactical in nature. All warfare blends conventional and irregular forces and traditional and “asymmetric systems.” War’s very nature creates ambiguity, and seizing the initiative is part of the job when waging a war, as is paralyzing the enemy. There is nothing here that has not been practiced since ancient times. Thucydides would have defined this as simply war.

The 2017 U.S. European Command posture statement contains no mention of either term, but this did not prevent the chair of the U.S. House Armed Services Committee from starting the question-and-answer period of the command’s annual briefing to Congress with his concerns about the “hybrid warfare” occurring in Europe, from “little green men in Ukraine to political assassinations . . . to buying influence and political parties, snap exercises to intimidate neighbors, and of course cyber-attacks of various kinds.” Linking together a wide range of acts in multiple domains, in and out of conflict zones, serves to confuse more than clarify—which is certainly the result here.
Unfortunately, terms such as hybrid war have gained enough currency not only to pollute U.S. policy and strategy documents but also to corrupt the non-U.S. military lexicon. A German writer appropriated the idea to examine Iranian actions, institutions such as the Austrian National Defence Academy have hosted conferences partly dedicated to examining it, and a Dutch library published a bibliography on the topic.\textsuperscript{125} One also easily can find Spanish articles on the topic.\textsuperscript{126} Fortunately, not everyone is buying what is being sold. A French author branded hybrid war nothing more than a revival of the indirect approach discussed by B. H. Liddell Hart and French theorist André Beaufre.\textsuperscript{127} The statement is incorrect, because Liddell Hart was discussing strategy, not tactics, but this demonstrates the chain of intellectual devastation that has been wrought.

Historian Hew Strachan provides a particularly cogent skewering of “the current jargon,” noting that “asymmetry and hybridisation have become catchalls applied to any war in which the two sides have not been made up of armies organised and equipped on similar lines.”\textsuperscript{128} Theorist Colin Gray writes that “the trouble with the hybrid war concept is that it encourages the innovative theorist to venture without limit into the swamp of inclusivity, indeed of a form of encyclopedism.”\textsuperscript{129} Hybrid war becomes everything; thus it is nothing.

Discussions of hybrid war are simply discussions of the means and methods of waging war. This is nothing new, it is nothing exotic, it is nothing original. Studying the means and methods of warfare is critically important, but trying to make it something other than what it is by creating an illogical, imaginary category of war is an example of cloudy and potentially dangerous reasoning. If we focus laser-like on the means and methods, we forget what the war is about. Hybrid war as a term injures rather than aids our ability to do practical strategic analysis and leads to the construction of strategy on the basis of tactics. It also encourages the militarization of other elements of grand strategy while driving us to view every geopolitical act through a warlike lens. This should encourage us further to move away from use of this term. Thus far, if Russian maskirovka (deception) has succeeded, it is only because we have fooled ourselves.

\textbf{BUT WHY DO WE THINK THIS WAY?}
American leaders since the end of the Second World War too often have chased buzzwords and their related intellectual debris. They also have minimized the immense problems related to waging war by using euphemisms for it; “signaling” and “modernization” in relation to the Vietnam War come instantly to mind. Such terms almost invariably manifest as an expression of means. The result of this is analysis of wars bereft of any political context (something Clausewitz railed
against as early as 1815), and sometimes the launching of wars without calling them wars or having any idea of what victory means. Moreover, by confusing competition among adversaries with things called hybrid or gray-zone war, we risk conflating everything with war—a dangerous proposition. If we are at war with another country, our citizens rightly can ask what exactly we are doing about it. If it is merely heated competition and international politics, meaning who gets what, when, and where, then elements of national power other than force or threats to use force will have to be relied on to a larger degree—and this seems to be the root of American leaders’ problem. For too long unchallenged by states with near-peer levels of economic or military might, the United States needs to relearn how to compete with other states in the international arena. Even better, it should relish the competition in the hopes of inspiring innovation and internal improvements—something quite natural to the American character when the polity is vigorous and healthy. Since no one is anywhere close to describing the United States as such at present, the confusion over what is competition and what is war is likely a symptom of an ailing U.S. political elite.

Another reason for the proliferation of new jargon on war is an ever-decreasing level of knowledge of military history, a point addressed in an article by Lukas Milevski. It is easy to insist that one has created something new or even developed a new concept or theory in the military realm if one’s knowledge of military history and history in general is insufficient. A second and related problem is a poor knowledge of military theory, particularly of the standard works such as Clausewitz’s On War and Sun Tzu’s Art of War, as well as past doctrinal practices. The related misuse of these works is perhaps a greater factor than an ignorance of them, particularly of Clausewitz’s On War. A third issue is the not-always-beneficial drive to develop something new in academic circles. This is particularly true in the international affairs and political science realms, where too often there is professional pressure to develop another microtheory to explain an element of political or military behavior or practice, and then to fit history into it rather than to analyze the past to see what patterns develop and what we can learn.

Worse is that war, for many in the West, has become an exercise in risk management, which means that leaders are no longer concerned with the war’s political aims. If we are not worried about the aims, or perhaps do not even know what they are because we have lost our ability to think clearly about war, we forget how important it is to win wars, and thus to end them with agreement on or the imposition of a better peace.

In his critique of the concept of “fourth-generation warfare,” soldier-scholar Antulio Echevarria gives some advice applicable to discussion of so-called hybrid and gray-zone wars as well as other flawed notions. Pushing these ideas is “an
activity that only saps intellectual energy badly needed elsewhere,” and their proponents should stop spending their time “advancing or reinventing a bankrupt theory.”133 And the U.S. government and think tanks should stop funding research projects supporting work that is injurious to American strategic thinking (although our adversaries will be very happy to see this wastage continue). The problem is that too many of the people writing about these subjects, as well as those publishing them, either lack the tools to evaluate systematically what they are publishing or simply do not care.

The solution to this problem is simple: a return to the core principles of strategic analysis recounted above. No matter the conflict or adversary, the analysis must begin with an honest identification of the political objectives of all the actors involved. We must differentiate between war and peace, and properly identify the arenas of power within which we are operating. Moreover, when new terms appear—and they will—they must be tested immediately against history and existing theory. Most new so-called classifications of war would be instantly killed if properly examined through these lenses.

We need to relearn how to think about war and peace and remember the obvious fact that competition occurs in both arenas. The end of the Cold War brought new actors willing to challenge American hegemony and the resultant international order. As historian and strategic analyst Brad Lee put it, “We are now in an era when the United States can no longer expect to overcome its problems with sheer material superiority or overwhelming military force.”134 While America’s strategic reality has changed, the worldview of U.S. policy makers seemingly has not. Inheriting an international order that is based on “cooperative security among states that shared [America’s] domestic political principles,” these politicians and their advisers are surprised continually by actors who buck the principles of cooperation and instead demonstrate hostile intent toward significant U.S. interests.135 The pushback from nonrogue states creates an uncomfortable disconnect between political aims and reality, driving the reflexive use of vague terms such as hybrid warfare and the gray zone among frustrated (and often unaware) practitioners and policy makers.

The U.S. pattern of misjudging its adversaries has grown since 1990; from surprise at the rise of nonstate actors declaring war on the United States to multiple failed resets with a former superpower determined to right perceived past wrongs, multiple American administrations have continued to look past or attempt to wish away determined opponents.136 More recently, U.S. leaders misjudged, if not resisted acknowledging, the Islamic State’s rise and its ability to achieve its political goal of establishing a caliphate in the aftermath of a trillion-dollar nation-building project, while simultaneously assuming that a rising regional power in the Pacific would be a responsible stakeholder and partner in the
international order. China’s recent land-reclamation projects in the South China Sea—blatantly situated in the exclusive economic zones of its neighbors and contrary to international law—expose the flawed and hopeful assessments that have fueled American foreign policy and grand strategy. What we need are concepts that clarify and inform our thinking, not muddy our intellectual waters and make it more difficult to pursue our political aims peacefully as well as to wage our wars. The 2017 U.S. National Security Strategy seems to be a belated recognition by some policy elites that the United States has been caught in an extended period of wishful thinking, of hoping that its competitors would see the advantage of an American-led world order and refrain from challenging it when and where they could. The new strategy clearly labels countries that are challenging U.S. power and interests and ones that are destabilizing their respective regions.¹³⁷

At a late-2017 conference at the Austrian National Defence Academy, in Vienna, which focused heavily on hybrid war and included dozens of speakers from the United States and Europe, the Austrian general who delivered the closing remarks said that Austria should not pay too much attention to things coming out of American think tanks. Americans should consider taking his advice, especially if the documents are larded with terms that unhelpfully confuse and distort already-complex human endeavors.¹³⁸ Before the attacks on September 11, 2001, the buzzwords were transformation, net-centric warfare, and the revolution in military affairs. Hybrid war and the gray zone soon will follow them into oblivion, perhaps helped by the new grand strategy documents that identify malignant actors and actions threatening to U.S. national interests.

To summarize, policy makers and their advisers, when analyzing threats to U.S. national interests, apply variations of the unclear and poorly defined terms hybrid war and gray zone to describe the intents as well as the actions of global, regional, and nonstate actors, whether we are at war with them or not, and regardless of whether the discussion focuses on political or criminal acts, and regardless of whether military action is occurring in the tactical, operational, strategic, or grand strategic realms. This is not merely unhelpful, it is dangerous; worse, it communicates that American strategic analysis is like castles made of sand, soon to disappear, then only to be remade frantically again and again.

NOTES

The authors thank Nicolas Stockhammer, Stephen Tankel, and three anonymous reviewers.


5. Clausewitz, On War, pp. 141, 144.


Special Warfare (October–December 2015), pp. 18–25.


27. For analysis of such fuzzy terms as major war, see Donald Stoker, “What’s in a Name II: ‘Total War’ and Other Terms That Mean Nothing,” Infinity Journal 5, no. 3 (Fall 2016), pp. 21–23.

28. Dominic Tierney, The Right Way to Lose a War: America in an Age of Unwinnable Conflicts (New York: Little, Brown, 2015), p. 7. In footnote 12 on page 317, the author notes that the term major war is problematic because it could be major for one side but not the other. But the real reason is that major war, like total war, has no concrete meaning.

29. Mazarr, Mastering the Gray Zone, p. 4.


34. Mazarr, Mastering the Gray Zone, pp. 2, 64, 90.

35. Ibid., p. 4.

36. Elkus, “Abandon All Hope, Ye Who Enter Here.”

38. Ibid., p. 85.

39. Ibid., pp. 85–86.

40. Ibid., pp. 88, 105–106.


43. Ibid., p. 161; see also pp. 267–68.

44. Ibid., pp. 198, 269.

45. Additionally, in 1959 Swedish admiral E. Biörklund published an article in which he defined the “grey areas” as being the region from Northern Europe to the Far East.” See E. Biörklund, “Can War Be Limited? (In General or Local Wars),” *Air Power* 6 (Summer 1959), pp. 290–91.


53. Van Jackson, “Tactics of Strategic Competition: Gray Zones, Redlines, and Conflicts before War,” *Naval War College Review* 70, no. 3 (Summer 2017), p. 46.


64. Ibid., pp. 8, 10.


66. Д. Г. Балуев, А. А. Новосёлов [Dmitry Baluev and Alexander Novoselov], “Серые зоны мировой политики” [The “gray zones” of world politics], Очерки текущей политики выпуск [essays on current politics], no. 3 (2010), pp. 3–6. Baluev’s focus on the insurgency in Iraq in his 2010 piece leads one to speculate that his source for the term was the above-mentioned work by Hardt and Negri, Multitude: War and Democracy in the Age of Empire. We are indebted to Jonathan Ward for help with this source.


74. For the destruction of the concept of fourth-generation warfare, see Antulio J. Echevarria II, Fourth-Generation War and Other Myths


86. Hoffman, Conflict, p. 14. In a later piece Hoffman writes, “Hybrid wars are not new, but they are different. In this kind of warfare, forces become blurred into the same force or are applied in the same battle space. The combination of irregular and conventional force capabilities, either operationally or tactically integrated, is quite challenging, but historically it is not necessarily a unique phenomenon;” See Frank G. Hoffman, “Hybrid War and Challenges,” Joint Force Quarterly, no. 52 (1st Quarter 2009), p. 36.


88. Ibid., p. 8.


92. An example of this is the Iraq War (2003–11, 2014–present), where U.S. ground commanders fought both small guerrilla and even conventional units and terrorist organizations in the same battle space. A focus on this complex environment might have inspired the use of hybrid war as a term but does not assist in understanding the political nature of the struggle by Sunni and Shia groups, nor did it clearly identify the political objectives of the nascent Islamic State at the time. The establishment of a caliphate, with much more popular political support than most of us are willing to credit, is an indication of how a focus on tactical-level noise can disrupt a better understanding of the politics involved—something vastly more important to write about.


95. Hoffman, Conflict, pp. 20–22; Hoffman, “Hybrid vs. Compound War.”


120. Hall, “Assessing Military Thought in Post-Soviet Russia.”


123. Ibid.


A DOUBLE-EDGED SWORD
Ballistic-Missile Defense and U.S. Alliances

Robert C. Watts IV

Alliances and ballistic-missile defense (BMD) are both significant elements of U.S. security policy, but the emphasis on each may be changing. Since the end of World War II, the global network of allies of the United States has been a strategic cornerstone.¹ The Trump administration’s National Security Strategy reaffirms the vital role of alliances in U.S. security, but President Trump’s interactions with traditional U.S. partners suggest a new degree of fluidity in these longstanding relationships.² BMD’s importance surged in the first half of the Trump administration, particularly after North Korea tested ballistic missiles that could threaten the U.S. homeland. In response, the U.S. Congress increased the Missile Defense Agency’s funding by over one-third, from $8.2 billion in 2017 to $11.5 billion in 2018.³ How might an increased emphasis on BMD affect U.S. alliance relationships?

U.S. defense policy contends that BMD strengthens alliances. The historical record, however, is mixed. While BMD has bolstered alliances at times, at other times it has exacerbated allies’ doubts about U.S. commitment. Why have allies responded so differently to BMD and what are the implications for contemporary U.S. policy? Variations in threat perceptions, relative dependence and vulnerability, and expectations of U.S. commitment could cause an ally to perceive that U.S. BMD increases the risk of abandonment or entrapment—meaning that the United States might either shirk an alliance obligation or drag an
ally into a war, respectively.\textsuperscript{4} When determining BMD policy and investments, U.S. leaders should consider not only expected defensive benefits but also how their decisions might affect allies' perceptions of alliance cohesion and credibility.

After providing theoretical background on alliances and the concepts of abandonment and entrapment, this article will review how U.S. policy expects BMD to benefit alliances. It then tests this policy framework against two sets of case studies. The first set examines the earliest U.S. BMD system—Sentinel—in the late 1960s and its impact on alliance relationships with Japan and European NATO allies. The second set considers BMD since the end of the Cold War and again evaluates its effect on the Japanese and NATO alliances, and adds South Korea. The article lastly recommends how these lessons from the past and the present can better inform contemporary U.S. BMD policy.

ALLIANCE THEORY: ABANDONMENT AND ENTRAPMENT

States form alliances to increase their security efficiently. In an anarchic world, states must provide for their own security but often try to minimize costly defense spending.\textsuperscript{5} A country typically seeks security by self-strengthening (i.e., building up its own military) and by allying with other nations. Alliances have several potential benefits, such as distributing risk among multiple partners and improving security more quickly and cheaply than self-strengthening.\textsuperscript{6} That being said, allies may share the fiscal burden unevenly and alliances often involve other, less tangible costs.\textsuperscript{7} For example, a state may sacrifice some political autonomy to gain security in an alliance.\textsuperscript{8} A cohesive alliance—one in which its members share common interests and agree on how to achieve them—is more likely to be effective and valuable to its members than one that is not.\textsuperscript{9}

The credibility of one ally’s commitment to fight for the other or to restrain itself from undesirable adventurism is an essential element of alliance cohesion and effectiveness. An ally that doubts its partner’s credibility could fear either abandonment or entrapment.\textsuperscript{10} One ally could abandon another by ending the alliance, defecting to a different alliance, or abrogating an alliance commitment. Entrapment, on the other hand, means that one country could drag an ally into a war even if the conflict were contrary to the ally’s interests. Some analysts contend that states rarely are entrapped, but more often are subject to entanglement, meaning that a state supports its ally in an undesirable undertaking to uphold alliance cohesion.\textsuperscript{11} Whether entrapment or entanglement, these related concepts involve one country’s fear that sacrificing autonomy to an alliance will expose it to more risk.

If an ally fears that it could be abandoned or entrapped, it might try to mitigate this risk, which then could undermine alliance cohesion, effectiveness, and
efficiency. To counter the risk of abandonment, an ally could discount the alliance’s value and offset that loss by self-strengthening or finding new allies. Alternatively, it could increase its own level of commitment to the alliance—or threaten to abandon the alliance—to spur the wavering ally to reaffirm its allegiance. Lastly, it could reduce the need for an alliance by reconciling with its opponent. Similarly, an ally fearing entrapment could preemptively quit the alliance, appease the potential adversary to reduce the risk of an entrapping conflict, or take other steps—such as reducing its own commitment to the alliance—to restrain the ally before it starts an alliance-triggering conflict.12 If an ally perceives that its partner might abandon or entrap it, alliance cohesion likely would weaken and the pact would become less valuable and credible in the eyes of both members and adversaries.

The late Glenn Snyder, a political scientist at the University of North Carolina, proposed the theory of the “alliance security dilemma” to explain why an alliance member might fear abandonment or entrapment.13 The security dilemma, on which his theory is based, suggests that actions taken by a state to increase its power and improve its security in turn will make other countries feel less secure, causing them to strengthen their power as well. After this action and reaction, the original state again feels insecure and further increases its power, and so on in a vicious cycle.14 Snyder proposed that a similar dilemma exists within an alliance. An alliance member likely assesses the cost and risk of being abandoned or entrapped by an ally. Actions to reduce the risk of one outcome are apt to make the other more likely. Doubling down on an alliance commitment may mitigate the risk of abandonment but increase the risk of entrapment. Conversely, loosening alliance ties may avoid entrapment but raise the specter of abandonment.15 The alliance security dilemma makes it difficult for an alliance to achieve and maintain cohesion, which lies between the two extremes of abandonment and entrapment.

Snyder offered several variables that can determine whether a hypothetical alliance will be cohesive or a member will fear abandonment or entrapment. These factors include the extent of shared interests, one ally’s dependence on the other, and the explicitness and credibility of the alliance commitment. First, Snyder defined interests as whether allies share common objectives and a common opponent. Overlapping interests minimize the risk of abandonment or entrapment. Second, relative dependence measures how much one ally needs the other’s support—and how each partner perceives this dependency. A country is more likely to fear abandonment if it perceives itself as being highly dependent on its ally, while that ally is less dependent on it. Third, commitment combines both the degree of promised support stipulated in an alliance agreement and also the credibility of that on the basis of the ally’s past behavior and reputation, as well as...
one country’s judgment about its ally’s expected future behavior. Snyder’s model of interests, dependency, and commitment may help assess how allies perceive U.S. BMD capabilities.

Arguably, missile defense affects how allies view the credibility of U.S. alliance commitments. To gauge how and why U.S. BMD capabilities might influence allied fears of abandonment or entrapment, this article adapts Snyder’s variables to the BMD context. First, discussions of allies’ shared interests should incorporate their threat perceptions. For instance, if allies do not agree on the importance or imminence of a missile threat, this divergent perception likely would reduce perceived mutual dependence and commitment, spurring fears of abandonment. Second, calculations of relative dependence should consider whether BMD technology and its ostensible benefits are restricted from, available to, or even networked with an ally. An ally’s access to BMD’s defensive benefits not only affects its dependence on the United States but may change the relative vulnerability between the United States and its ally. Just as Snyder predicts that a high variation in dependence contributes to fears of abandonment, these differences in how BMD technology is employed and shared could affect an ally’s assessment of its dependence and relative vulnerability, thereby bolstering or weakening perceptions of the likelihood of abandonment. Modern BMD systems, some of which depend on cross-border sensor networks and forward-deployed weapons, could reduce perceived differences in dependence and vulnerability, thereby lessening abandonment fears but possibly raising entrapment risks. Lastly, U.S. allies could regard U.S. BMD policy and deployment decisions as indicators of U.S. alliance commitment. For example, basing U.S. BMD systems in an allied country might send a signal of strong U.S. commitment, while enlarging BMD systems in the continental United States and also reducing overseas troop deployments might send the opposite signal.

After reviewing the theoretical foundation of alliances, this article next examines the expected benefits of BMD to U.S. alliance relationships.

POLICY PERSPECTIVE:
BMD IMPROVES ALLIANCE RELATIONSHIPS

Contemporary U.S. policy identifies three reasons why U.S. BMD capabilities should improve alliance relationships. First, BMD protects U.S. military capabilities at home and abroad, which should reassure allies that the United States will be able to fulfill its commitments. Second, BMD directly benefits allies by defending their forces, people, and territories. Third, BMD opens up new avenues for military integration and industrial cooperation with allies. Official policy documents across recent presidential administrations highlight these three benefits.
Similarly, the academic and policy analysis communities also widely, but not universally, describe a constructive relationship between BMD and U.S. alliances.

The 2002 *National Policy on Ballistic Missile Defense*, issued by the George W. Bush administration, argued that BMD capabilities would reassure allies, defend them, and encourage international defense cooperation. First, fielding BMD capabilities would “devalue missiles as tools of extortion and aggression,” preventing a ballistic-missile-armed state from using those weapons to forestall U.S. intervention on behalf of an ally, thus enhancing the credibility of U.S. deterrence and alliance commitments. Second, BMD would protect “not only the United States and deployed forces, but also friends and allies” against the widely proliferated missile threat. Finally, the United States should encourage allies to help develop BMD technologies. This three-pronged perspective on how BMD should benefit alliances continued into the Obama and Trump administrations.

The Obama administration’s 2009–10 Ballistic Missile Defense Review again emphasized that BMD could improve U.S. alliance relationships. It asserted that BMD is “integral” to pursuing “collaborative approaches with allies and partners” and again highlighted three benefits of BMD to U.S. alliances. First, BMD would reassure allies that the United States will uphold its alliance commitments despite the increased ballistic-missile threat. Second, BMD would protect allied population centers and essential military capabilities. Finally, the United States would both share and codevelop BMD technology with U.S. allies. The Bush and Obama BMD policies demonstrate a consensus about BMD’s potential to benefit alliance relationships that has extended across U.S. presidential administrations and political parties and has continued into the Trump administration.

Trump administration policy has affirmed the importance of BMD to national security and shared the view that missile defense benefits U.S. alliances. The 2017 *National Security Strategy* describes the threat that advanced missiles pose to the United States and its allies and advocates improving U.S. and allied missile-defense capabilities. The 2019 *Missile Defense Review (MDR)* notes that “missile defense plays an increasingly important role in . . . reinforcing the indivisibility of U.S. and allied security” by protecting allies, assuring them of U.S. commitment, deterring attacks, and creating opportunities for cooperation and burden sharing. Consistent with these policy documents, the Trump administration has continued to cooperate closely with allies on missile defense. Examples include deploying Terminal High Altitude Area Defense (THAAD) missile-defense batteries to South Korea, successfully testing the SM-3 Block IIA missile codeveloped with Japan, and improving missile-defense capabilities in Europe.

Some scholars and policy analysts agree with this political consensus but also suggest other ways BMD should strengthen U.S. alliances. Brad Roberts (of
Lawrence Livermore National Laboratory and a former Obama administration official responsible for missile defense) argues that BMD benefits alliance ties by demonstrating U.S. resolve, reducing the political pressure to escalate a conflict prematurely, and constraining an opponent's ability to use ballistic missiles as a coercive tool. Stephan Frühling of the Australian National University points out that because of BMD’s defensive nature, the United States can employ it to demonstrate alliance commitment in a “generally non-threatening manner.” Roberts and Frühling also both assert that BMD bolsters the credibility of U.S. extended deterrence, referring to the commitment to use nuclear weapons in defense of certain allies. Amy Woolf of the Congressional Research Service adds that BMD capabilities can protect critical infrastructure abroad, can ensure that the United States can deploy forces in defense of an ally, and can help form or maintain coalitions. As an example, during the 1991 Persian Gulf War, deployed Patriot batteries both defended key installations in Saudi Arabia and helped restrain Israeli retaliation against Iraqi missile attacks. However, Ted Postol, a physicist at the Massachusetts Institute of Technology and a BMD skeptic, asserts that some of the political benefits of BMD to U.S. allies during the Gulf War were merely “serendipitous” rather than a repeatable outcome. Yet despite some such dissenting views, there appears to be broad agreement that BMD contributes to alliance cohesion.

U.S. BMD policy across recent administrations has argued consistently that BMD benefits U.S. alliances. Although U.S. strategists intend for BMD employment at home or abroad to benefit U.S. alliances, this article next will analyze allies’ perspectives on U.S. BMD to see whether their perceptions match with or differ from U.S. policy expectations.

HISTORICAL PERSPECTIVE:
ALLIES’ MIXED RESPONSES TO U.S. BMD
Case studies from two different eras of U.S. missile defense offer the opportunity to test the theory that BMD strengthens alliance relationships, and they reveal that BMD has not always improved these ties. The first period begins with deliberations about deploying the Sentinel antiballistic missile (ABM) system in 1965 and ends with the 1972 ABM Treaty. Although BMD technology and the international security environment of the 1960s do not compare cleanly with contemporary circumstances, U.S. government documents from this period shed light on internal debates and decisions. The second period begins with U.S. withdrawal from the ABM Treaty in 2001 and continues to the present, permitting analysis of modern missile defenses in a contemporary technological and strategic setting.

This article assesses the bilateral U.S.-Japan alliance and the multilateral NATO alliance in both time frames and adds the U.S.–South Korea alliance in
the second period. Cold War scholar Michael Mandelbaum has described the U.S.-Japan alliance and NATO as the world’s only “nuclear alliances”—alliances in which the United States has committed to employing nuclear arms in their defense. That these alliances depend on nuclear deterrence makes BMD particularly relevant to alliance cohesion, either by providing some protection from a nuclear attack or by defending U.S. nuclear retaliatory capabilities. The second period adds South Korea because U.S. nuclear deterrence also pertains to this alliance and the 2017 deployment of THAAD to South Korea provides insight into modern entrapment risks.

Pre-ABM Treaty (1965–72)
On 18 September 1967, Secretary of Defense Robert S. McNamara announced President Lyndon B. Johnson’s decision to field Sentinel, an ABM system intended to defend U.S. territory against the anticipated threat of a small number of Chinese nuclear-armed intercontinental ballistic missiles (ICBMs). The Johnson administration described Sentinel as a “thin” defense, meaning it would protect large areas of the United States against a small number of missiles. Sentinel would have employed nuclear-armed interceptors. Existing guidance technology was not accurate enough to use either a conventional high-explosive or kinetic (“hit-to-kill”) warhead like the one that modern BMD interceptors use.

While the debate within the Johnson administration about Sentinel largely weighed its limited military use against domestic political considerations, U.S. policy makers also evaluated its likely impact on alliance relationships. U.S. government documents exhibit how U.S. officials expected allies to respond to ABM deployment. The limited scope of the ballistic-missile threat, Sentinel’s U.S.-exclusive nature, and how this decision interacted with other signals of alliance cohesion complicated U.S. efforts to assure allies that this new capability did not signal a change in Washington’s security commitments. Sentinel generally benefited relations with Japan but sparked fears of abandonment among many NATO allies.

In the 1960s, nuclear arms and ICBMs were new technologies that had not proliferated widely yet; only one major nuclear power, the Soviet Union (USSR), and one emerging nuclear state, the People’s Republic of China, concerned the United States. By 1965, U.S. observers believed that the USSR had over two hundred ICBMs, so the Soviet arsenal already was too big to defend against cost-effectively. McNamara noted that “any ABM system can rather obviously be defeated by an enemy simply sending more offensive warheads or dummy warheads than there are defensive missiles capable of disposing of them.” He projected that developing a Soviet-oriented ABM system would lead to each side spending more on defenses, only “to be relatively at the same point of balance on
the security scale that we are now.” According to his analysis, the limited security gained by a “heavy,” or high-capacity, anti-Soviet ABM system would not be worth the expense.

Mindful of the limitations of ABM capabilities, U.S. policy makers instead designed Sentinel as a “thin,” or relatively low-capacity, defense against the anticipated Chinese threat. U.S. government analysts believed that China was not yet developing ICBMs but was likely to have a small number of them by 1975. Because of America’s overwhelming nuclear superiority, McNamara asserted that it would be “insane and suicidal” for China to attack the United States, but by deploying a “Chinese-oriented ABM . . . we wish to reduce such possibilities to a minimum.” He further argued that Sentinel would “indicate to Asians that we intend to deter China from nuclear blackmail,” hinting at potential benefits to U.S. credibility.

Sentinel was exclusive to the United States. Allies gained neither protection from ballistic missiles nor opportunities for industrial cooperation. Washington considered Sentinel to be too costly and complex for allies and infeasible to deploy overseas. Allies were geographically too close to the threats, meaning that a forward-deployed ABM system would not have enough reaction time to work effectively. Furthermore, the interceptors’ nuclear warheads raised significant command-and-control challenges and introduced risk that an ally could modify ABM interceptors into nuclear-armed ballistic missiles. Mindful of how allies might recoil against ABM restrictions, a State Department official said in a 1967 meeting with the Chairman of the Joint Chiefs of Staff that U.S. policy was “to discourage decisions by friendly countries in favor of an ABM defense—but to do so in a manner that would avoid damage to our relations with those countries.” This approach essentially sought to limit the political impact of restricting missile defense from allies by dodging the topic rather than meaningfully consulting with valued partners.

In this period, U.S. policy makers could not determine whether ABM defense improved or undermined allies’ perceptions of U.S. commitment. A 1965 State Department study on the “possible political and psychological effects” of such a system suggested that NATO allies could view it either as “underwriting U.S. willingness to fulfill its commitments” or as “lending credence to the Gaullist view that the U.S. is not really fully committed to Europe.” This analysis was also of two minds about Asian responses. Creation of defenses against a Chinese nuclear attack, in the form of an ABM system, might cause Asian countries to “conclude that the U.S. would stand by its commitments.” Conversely, “it might appear that the U.S. did not place a sufficiently high value on its commitments to warrant risking even a limited nuclear attack,” and ABM deployment might inflate perceptions of China’s threat in Asia unnecessarily.
The Department of Defense also studied likely allied responses to Sentinel. In May 1967 the Joint Chiefs of Staff assessed that allies would view the ABM decision in the context of U.S. efforts to increase allied defense participation and reduce “US involvement abroad (particularly in Asia).” If allies perceived that the United States was “beginning to look more inward than outward,” they might view ballistic-missile defenses negatively. “To European and Japanese thinking only in terms of their own protection, a project to ‘defend the United States’ may have little realistic appeal, unless they can be convinced that a system which protects the strategic war making capability of the United States also helps deter a strike against their own countries.” The report concluded that Japan, whose “strategic views . . . are less fixed than those of the Europeans,” would be interested in ABM technology and would appreciate that “such a system might make the United States less susceptible to Soviet or Communist Chinese nuclear blackmail.” In Europe, however, a decision to deploy an ABM system “would unnerve NATO,” and “further undermine European confidence in US intentions to fulfill its nuclear commitments to the Alliance.” The upcoming sections demonstrate that this analysis proved prescient: Japanese leaders felt that ABM deployment would benefit alliance cohesion, while ABM heightened abandonment fears among many European NATO allies.

**Japan: BMD and U.S. Credibility.** Japanese policy makers believed the U.S. ABM program would strengthen alliance cohesion and responded favorably to American plans. Their reaction stemmed from shared threat perceptions, the limited effect of any ABM deployment on the already-high mutual dependence between the two countries, and other signs of Washington's commitment that Tokyo valued more highly.

Bilateral ABM discussions and Japan’s reactions to China’s nascent nuclear capability indicate that in the mid-1960s Japan and the United States assessed the Chinese threat similarly. Starting as early as November 1965, U.S. and Japanese diplomats and military officers routinely discussed the future Chinese nuclear threat, ABM defense, and its implications for the alliance. Reflecting their concern about the Chinese threat, senior Japanese defense officials asked whether ABMs could be used against shorter-range Chinese missiles that could strike Japan, and asked for “data for use in planning anti-missile defenses,” even though “they would require deployment of nuclear weapons on Japanese soil.” Because of the warheads involved, U.S. participants discouraged such planning. In 1966, the U.S. Central Intelligence Agency reported that China’s successful nuclear weapons tests had made the “Chinese Communist threat to Japan credible,” and Japan’s “leading papers . . . for the first time unanimously [warned] of the possible Chinese menace to Japan’s security.” Furthermore, in an internal Japanese
government report (referred to as the 1968/70 Report) leading nuclear experts warned that future Chinese nuclear capabilities could both threaten Japan and weaken the credibility of U.S. extended deterrence.⁵⁰ These analyses suggest that both Japan's political leaders and the public likely viewed China's nuclear capability as threatening, which aligned with the U.S. perspective.

Japan highly depended on U.S. security guarantees, and plans to field Sentinel did not change this circumstance dramatically, especially at a time when many other issues played a more important role in the relationship. The 1960 mutual defense treaty between the two countries included extended deterrence under the so-called U.S. nuclear umbrella. Even if Japanese leaders doubted U.S. credibility, the authors of the 1968/70 Report concluded, they had no better alternative than to rely on U.S. extended deterrence.⁵¹ Furthermore, Japan's rehabilitating economy and peace-oriented constitution limited its options for military modernization and prohibited it from pursuing nuclear weapons.⁵² Several other significant events in the late 1960s encouraged close communication and cooperation between Tokyo and Washington rather than one-sided dependence. These catalyzing events included Japan's efforts to recover Okinawa, the increasing involvement of the United States in the Vietnam War, the renegotiation of the 1960 treaty, and the U.S. desire for Japan to assume a larger role in East Asian security.⁵³

From an alliance-management perspective, the ABM question created opportunities to consult with Japan and treat it as a valued security partner, not just a client. Although the United States would not share ABM technology with Japan, the United States provided detailed information about ABM capabilities and U.S. intentions. In May 1967, the U.S. ambassador to Japan met with the vice-ministers of Japan's foreign ministry and its defense agency to discuss technical details concerning ABMs and to explain the rationale for U.S. deployment decisions. One U.S. military participant was surprised by the frank conversations and the technological details that U.S. participants provided. “I was impressed (amazed) at the amount of substantive material and discussion given by our side at this meeting.”⁵⁴ Open communication with an ally, particularly on sensitive subjects, can buttress alliance cohesion, and may have had that effect on the Japanese in this case.⁵⁵

In these meetings, Japanese policy makers explicitly stated their belief that ABM deployment would strengthen the credibility of U.S. commitments, but also noted that it was not a very important factor. In May 1967, Vice-Minister Nobuhiko Ushiba of the foreign ministry said that Japan “believed that a U.S. ABM deployment would enhance the credibility of the U.S. deterrent.”⁵⁶ In August 1967, only weeks before McNamara's Sentinel announcement, Vice-Minister Yoshio Miwa of the Japan Defense Agency reaffirmed to U.S. ambassador U. Alexis Johnson that Sentinel “would increase U.S. credibility,” but reminded
him that Japan still considered the “deterrent power of the U.S.” to be the “most effective method to protect Asian countries.” Johnson then asked Miwa and his foreign ministry counterpart, Vice-Minister Ushiba, what the United States could do “to maintain its deterrent capability.” Ushiba replied that “repeated assurances on suitable occasions” were more important than an ABM system itself, and emphasized the point by saying, “We believe your words.”

Public pronouncements that the United States would defend Japan bolstered its confidence in U.S. defense commitments. Japan had full faith in U.S. alliance commitments. An ABM system might have strengthened Japan’s perception of U.S. credibility, but it was not the most important factor.

Shared threat perceptions, high-but-constant mutual dependence, and faith in U.S. security commitments all contributed to Japan’s acceptance of U.S. Sentinel ABM plans and to some degree bolstered Japan’s assessment of the U.S. commitment. This outcome roughly matches what modern U.S. BMD policy expects. NATO allies, on the other hand, reacted negatively to Sentinel.

**NATO: Fear of “Fortress America.”** Western European NATO allies, particularly the nuclear-armed United Kingdom, believed that U.S. ABM plans increased the risk of U.S. abandonment in the face of a Soviet attack. Allied concerns stemmed from differing threat perceptions, expected changes in mutual vulnerability, and broader concerns about the credibility of U.S. commitments.

Many Western European NATO members—including both of the nuclear-armed allies (the United Kingdom and France) and West Germany—were concerned that the United States might prefer to defend itself from a Soviet strategic strike rather than deter an attack on European allies with a credible guarantee of U.S. nuclear retaliation. U.S. BMD by itself may have increased allied perceptions of U.S. credibility, but NATO allies expected that U.S. deployment of an ABM system coincident with countervailing Soviet defenses would have the opposite effect.

Western European governments and policy analysts were leery of Sentinel’s expected deployment. As early as July 1965, the U.K. Foreign Office assessed that ABM deployment would not upend the “balance of deterrence” between NATO and the Soviet Union but might “tilt it and thus increase tension and instability.” It warned that the “disparity between Europe and the two super-powers would be increased to the disadvantage of Europe” and that U.S. ABM deployment would “strengthen the hand of Gaullists and would be unhealthy for the Atlantic Alliance.” A month after this analysis, Britain’s ambassador to the United States warned Secretary of State Dean Rusk that the ABM decision was “likely to have important consequences” for “the position of Europe within the Western Alliance.”

Summarizing European worries, Johan Holst, a Norwegian defense...
analyst who was later Norway’s minister of defense and minister of foreign affairs, wrote that ABM deployment “might look like an expression of American neo-isolationism, a return to Fortress America based on self-defense without entanglements.” Holst acknowledged that if the United States alone had BMD that might “strengthen the alliance by adding potency to the U.S. guarantee,” but the dual fielding of U.S. and Soviet BMD systems, he argued, “might on balance also be perceived as reducing the validity of the [U.S.] guarantee.” Holst acknowledged that if the United States alone had BMD that might “strengthen the alliance by adding potency to the U.S. guarantee,” but the dual fielding of U.S. and Soviet BMD systems, he argued, “might on balance also be perceived as reducing the validity of the [U.S.] guarantee.”

These concerns about U.S. ABM plans likely were rooted in divergent perceptions of the ballistic-missile threat.

NATO allies disagreed with the U.S. assessment of the Chinese strategic nuclear threat. Britain’s Foreign Office concluded that a nuclear war with China was “not at present on the cards [sic].” Some European analysts, such as Britain’s Laurence W. Martin, then believed that American fears of “China’s embryonic nuclear force” were “hysterical and dangerous” and “exaggerated.” Others suspected that the U.S. focus on the Chinese threat was a pretext to field an ABM system that would grow from a thin system into a larger, heavy one that could defend the United States against the Soviet ICBM threat. Even if the Chinese threat was not a duplicitous justification, some European observers thought that, as ABM technology improved, U.S. political leaders would not be able to resist future U.S. domestic pressures to build a heavy system that would affect European security more negatively. Additionally, because the United States withheld ABM technologies from NATO allies, the system offered them no security from Soviet nuclear and conventional forces arrayed against Western Europe.

Although the Soviet Union posed different threats to the United States and Europe, without missile defenses the United States and Europe faced similar levels of risk. Sentinel changed this perception of shared vulnerability. A 1967 report on European views of Sentinel by the State Department’s Bureau of Intelligence and Research (INR) noted that “many in Europe believe . . . that the advent of this new military technology . . . will result in greater difference in the degree of security enjoyed by countries on the two sides of the Atlantic, to the disadvantage of Western Europe.” Parallel ABM deployments in the Soviet Union could exacerbate this change in relative vulnerability. Helmut Schmidt, then a parliamentary leader of West Germany’s Social Democratic Party and later West Germany’s chancellor, opposed any ABM deployment for this reason. According to the 1967 INR report, he thought that such a course “would lead to a rapid erosion of both the NATO and Warsaw Pacts” because the superpower in each alliance might become more comfortable with the idea of defending itself rather than keeping its deterrence commitments. He also thought that this gap between the United States and the Soviet Union, as ABM-capable states, and the other countries in Europe “would
cause a crisis of confidence on the part of the [Western European countries] about the [U.S.] nuclear guarantee.\textsuperscript{67}

This concern that BMD might change the relative vulnerability between the United States and its European allies was not limited to European political leaders but likely was shared by some members of the public. European newspapers exhibited similar anxiety about the advent of U.S. and Soviet BMD. An editorial in Hamburg’s Die Welt opined that “[a] Europe sandwiched between the two ABM-equipped world powers is confronted with the alternatives of continued nuclear protection by the respective superpowers—a protection that implies increased dependence—or of withdrawing this protection.” A writer in the Frankfurter Allgemeine claimed that the expected deployment of ABM systems would “accentuate the differences between the haves and have-nots and increase fears among the latter.”\textsuperscript{68} An article in France’s Le Monde identified the challenge the ABM concept posed to France’s and Britain’s small nuclear deterrents: “The advent of the ABMs has every chance of limiting the strategic [nuclear] game to the very big powers.”\textsuperscript{69} According to these perspectives, the advent of an ABM system would improve U.S. defenses while simultaneously undercutting Western Europe’s, thus significantly changing Western European perceptions of the relative vulnerability between the United States and Europe.

Broader fears of a “decoupling” between European and American interests, combined with sparse consultation with NATO allies about ABM policy, worsened Western European worries of U.S. abandonment. In the early years of the Cold War, the U.S. promise of extended deterrence was credible partly because the United States based nuclear weapons in Europe, from which they could better reach Soviet targets.\textsuperscript{70} The development of U.S. strategic weapons, such as the Minuteman ICBM and the Polaris submarine-launched ballistic missile—which could be launched from U.S. territory or the open ocean, respectively—meant that the United States could remove some of its weapons from Europe. The United States still pledged to use nuclear weapons in response to a Soviet attack on Europe, but the shrinking U.S. nuclear presence in Europe heightened allied doubts.\textsuperscript{71} The decision to deploy an ABM system exacerbated the sense that the United States was weakening its nuclear commitment to Europe’s defense.\textsuperscript{72} Additionally, despite some ABM discussions with the United Kingdom in 1966, the United States consulted with other NATO allies only days before McNamara announced Sentinel.\textsuperscript{73} This approach effectively forced a controversial issue on the alliance as a fait accompli and—in contrast to the approach taken with Japan—appeared to European observers to be a deliberate snub of alliance consultative processes, which European allies valued as a symbol of transatlantic solidarity.\textsuperscript{74}
Divergent threat assessments, changing perceptions of relative vulnerability, and wariness about U.S. security commitments all contributed to European allies’ fears that the United States might abandon its nuclear commitments. This outcome does not align with what modern U.S. BMD policy expects, and contemporary analysts should appreciate that allies could again perceive U.S. BMD investments as increasing the risk of abandonment, particularly if threat assessments differ, relative vulnerability changes inequitably, or other factors compound allied doubts about U.S. commitment. Noting but skipping over the era of the ABM Treaty (1972–2001), this article next will examine several modern case studies.

**Modern BMD (2001–Present)**

Sentinel and follow-on U.S. ABM systems affected U.S. alliances less than first expected because the 1972 ABM Treaty between the United States and the Soviet Union curtailed ABM efforts. The treaty limited the size and scope of ABM systems and imposed constraints on future research and development. It also distinguished between strategic and theater ballistic-missile defenses, restricting the former more tightly. By defending the United States against a long-range ICBM threat, Sentinel would have been considered a strategic system, while a shorter-range system such as the modern Patriot missile would have been classified as a theater defense. By limiting the United States and the Soviet Union to no more than one hundred strategic ABM weapons, the treaty emphasized the importance of nuclear deterrence rather than missile defense. Within a few years, the United States abandoned its ABM program and did not field strategic BMD systems again until after President George W. Bush withdrew from the ABM Treaty in December 2001.

The Bush administration withdrew from the treaty partly because of the changing ballistic-missile threat. Unlike in the 1960s, contemporary ballistic-missile threats were diversifying and proliferating. Modern conventionally armed ballistic missiles were increasingly attractive alternatives to manned strike aircraft because they were cheaper to produce or purchase, required less expertise to employ, and were difficult to defend against. No longer simply a weapon in the nuclear superpower standoff, in the post–Cold War environment ballistic missiles posed a worldwide challenge to the United States and its allies. Today, over thirty countries have ballistic missiles with ranges greater than 150 kilometers.

Over recent decades, BMD has broadened to include not only defending the continental United States from ICBMs (homeland defense) but also protecting deployed U.S. forces and allies from ballistic missiles with shorter ranges (regional defense). U.S. homeland defense—like strategic defense before it—focuses on defending against countries such as North Korea and Iran that have, or might in the future have, small numbers of ICBMs, rather than against countries with
larger nuclear arsenals, such as China or Russia. A network of land-, sea-, and space-based sensors support this mission. The ground-based interceptor (GBI) would be used to defend against ICBMs, but only forty-four are fielded, and they have had mixed success in live-fire tests. To borrow terms from the Johnson administration, one could best describe U.S. homeland defense as a thin rather than a heavy system.

*Regional defense* employs a range of sensors and weapons to defend deployed forces and allies against shorter-range threats in the midcourse and terminal phases of flight. *Midcourse defense* involves intercepting missiles while they are outside the atmosphere. *Terminal defense* means intercepting a ballistic missile as it descends toward its target. Some USN ships with the Aegis combat system and AN/SPY-1 radar are BMD capable and can employ SM-3 and SM-6 interceptors against targets in the midcourse and terminal phases, respectively. The U.S. Army has BMD sensors such as the AN/TPY-2 radar and weapons such as the THAAD and Patriot missile systems for terminal defense. These Navy and Army weapons use either conventional explosive or kinetic—so-called hit-to-kill—warheads. Notably, some of the regional BMD sensors, such as the shipborne AN/SPY-1 or the land-based AN/TPY-2, also can provide U.S. homeland defenses with earlier detection and tracking of an incoming missile.

BMD no longer is an exclusive U.S. capability. It is now accessible to and even networked with U.S. allies, many of whom face ballistic-missile threats and have acquired or developed missile defenses. The United States encourages allies to participate in BMD efforts and advocates interoperability across national systems. Nineteen individual nations and the NATO alliance cooperate with the United States on BMD. This cooperation has included pooling research-and-development efforts, acquiring interoperable BMD systems, hosting U.S. BMD systems, and coordinating operational employment. The 2019 *MDR* emphasizes the importance of “interoperability among various [U.S. and allied] missile defense capabilities, to include command and control networks, sensors, and [integrated air and missile defense] systems.” A ballistic missile’s speed, altitude, and range limit the time available for detection, tracking, and interception. The United States tackles this challenge by sharing information among different sensors and interceptors to improve engagement opportunities and by conducting deliberate planning and decentralizing decision-making to shorten engagement timelines. Cooperation with interoperable allies could improve both U.S. and allied defenses further by broadening sensor coverage, increasing the number of available interceptors, and planning and executing combined defenses better.

Similarly to the pre–ABM Treaty period, modern BMD’s effect on U.S. alliance relationships appears closely related to shared threat perceptions, relative dependence and vulnerability, and other signs of U.S. commitment. In Japan,
these factors arguably have enabled BMD to overcome Tokyo’s fear of entrapment and strengthen the U.S.-Japan alliance. In South Korea, cross-border BMD integration has raised fears of entrapment. In Europe, as the United States began fielding modern BMD systems there, some NATO allies initially were wary of abandonment, but as the threat evolved and U.S. deployment plans changed these fears subsided.

**Japan: Overcoming Entrapment Fears and Embracing BMD Cooperation.** U.S. policy suggests that BMD demonstrates America’s commitment to work with and defend allies around the world. Recent experience with Japan supports this argument. Japan and the United States similarly perceive the ballistic-missile threat, BMD increases the overall dependence between the two countries while also evenly reducing vulnerability, and forward-deployed BMD forces tangibly demonstrate U.S. commitment to Japan’s defense. As a result, U.S. BMD capabilities appear to have improved the U.S.-Japan alliance.

Japan has worked closely with the United States on BMD since the late 1990s, but its policy makers initially worried about entrapment risks. China’s 1996 missile exercises near Taiwan and North Korea’s missile testing in 1998 demonstrated Japan’s vulnerability to ballistic missiles. By 2001, Japan’s Defense Agency identified BMD as “an important issue for Japan’s defense policy” but underscored the importance of “[tackling] the issue independently.” Because modern BMD systems typically are networked, Japan feared that closer BMD cooperation with the United States might cause Japan to become embroiled in other regional conflicts—such as in South Korea or Taiwan—even if it was not attacked directly. Defending another country also would have been inconsistent with Japan’s constitutional prohibitions against collective self-defense. The government of Japan announced its intentions to introduce BMD systems in December 2003, but the announcement reflected its concern that BMD might lead to entrapment, or at least the appearance of participating in collective self-defense. Japan underscored that the BMD system would defend only Japan (not so-called third countries) and would “be operated on Japan’s independent judgement, . . . based on the information . . . acquired by Japan’s own sensors.” This emphasis on BMD independence waned, however, as the ballistic-missile threat to Japan increased.

More recently, shared threat perceptions drove Japan to cooperate closely with the United States on missile defense. Regional ballistic-missile capabilities, primarily in North Korea and China, have improved steadily, and the United States and Japan both consider these weapons to be threats. As a result, Japan no longer hesitates to integrate with U.S. systems. According to Japan’s 2016 defense white paper, “Further cooperation with the U.S. government including the U.S. Forces in Japan is necessary for efficient and effective operation of the BMD
system,” to include “real-time sharing of BMD operational . . . information.”99 A strong, shared threat perception likely stimulated the alliance relationship.

The United States and Japan have robust joint BMD capabilities, which improve the security of both countries to a similar degree and increase their dependence on each other.100 BMD-capable USN ships are based in Yokosuka, Japan, and regularly exercise with Japan’s own BMD-capable destroyers.101 The United States and Japan collaboratively developed the SM-3 Block IIA, an advanced, midcourse, regional defense interceptor that both navies use.102 The United States has placed two AN/TPY-2 radars in Japan that provide information to U.S. regional and homeland-defense systems and also share data with Japanese defenses.103 Japan also employs U.S.-designed Patriot PAC-3 missiles and plans to purchase two Aegis Ashore systems, a land-based adaptation of a naval BMD capability.104 Furthermore, Japan has taken steps to coordinate BMD operations better with the United States, such as establishing a Japan-U.S. Bilateral Joint Operation Coordination Center (BJOCC) at Yokota Air Base, near Tokyo.105 Within the limits of Japan’s defense budget and political will, this close technical and operational BMD cooperation enables it to benefit from BMD to a similar extent to the United States.

Forward-deploying U.S. BMD forces to Japan also strongly signals U.S. commitment. According to the late political scientist Thomas Schelling, stationing U.S. forces abroad communicates U.S. commitment beyond even their military utility. Forward-deployed forces, particularly in a geographically constrained and isolated area such as Japan, may act as a “trip wire.” If another country attacked Japan, these U.S. forces would come under attack as well, which would make it politically difficult for the United States to fail to intervene. Furthermore, defensive forces such as missile defenses place the onus on an opponent to take the initiative and go on the offensive—likely ceding the moral high ground to the United States and its allies.106 The presence of U.S. forces that include BMD capabilities should deter an opponent from attacking and reassure Japan that the United States is likely to follow through on its alliance commitments.

South Korea: Mitigating Entrapment Risks. As in Japan in the early years of last decade, U.S. BMD capabilities have elicited fears of entrapment in South Korea. South Korea and the United States long have viewed North Korea’s ballistic missiles as a threat, but North Korea’s numerous successful missile tests in 2017 increased South Korea’s concern to such an extent that it permitted the United States to complete its politically controversial THAAD deployment.107 Despite this shared threat perception, concern about dependence on the United States, the risk of unintended cooperation with Japan, and expectations of U.S. behavior all likely added to South Korea’s worry that U.S. BMD could result in entrapment.
Entrapment and entanglement concerns have shaped South Korean leaders’ perceptions of BMD since at least 1999, when Seoul declined to participate in nascent U.S. BMD efforts, partly because the effort might have damaged relations with Beijing.108 The recent U.S. deployment of the THAAD system to South Korea revived this concern.109 China argues that THAAD’s AN/TPY-2 radar is part of America’s homeland-defense sensor network and thus threatens China’s limited nuclear deterrent, thereby leaving China vulnerable to U.S. nuclear coercion.110 Beijing retaliated against Seoul for agreeing to host THAAD by imposing unofficial economic sanctions, including boycotts of popular Korean bands and reduced Chinese tourism.111

The structure of U.S. alliances in East Asia also likely affects Seoul’s fear of BMD-enabled entrapment. BMD integration could expose South Korea to entanglement with Japan, the other major ally of the United States in Northeast Asia. Victor Cha, a Korea expert at the Center for Strategic and International Studies, describes South Korea and Japan as quasi allies because they share the United States as a common ally but are not allied themselves.112 Although the United States encourages closer defense cooperation between the two countries, animosity rooted in Japan’s decades-long occupation of Korea in the early twentieth century inhibits closer alignment.113 Because U.S. and Japanese BMD systems are integrated with each other already, adding South Korean BMD sensors and weapons into this network could support the defense of Japan directly, or alternatively could cause South Korea to depend on Japanese systems to defend itself. Either outcome likely would be unwelcome in South Korea, which is loath to cooperate with Japan.114

To mitigate these risks of entrapment or entanglement, in 2006 Seoul began developing the Korean Air and Missile Defense (KAMD) as an alternative to U.S. BMD systems.115 Referring to KAMD, South Korea’s defense minister said in 2013 that “we will not join the U.S. missile defense system, but take our own path.” KAMD includes a mix of domestic and international components, such as an Israeli-made early warning radar, the U.S. Aegis BMD-capable naval weapon system, and South Korean and U.S. interceptors.116 Economic motivations also shaped KAMD. South Korea purchased some secondhand weapons to reduce costs and bought some domestic equipment to spur its defense industry.117 Despite these efforts at independent BMD, some South Korean analysts remain skeptical about the distinction between KAMD and U.S. BMD systems, positing that “it is only a matter of time” before KAMD is “integrated into the U.S.-led efforts to create ballistic missile defense in the Asian-Pacific region.”118

Despite these concerns, South Korea recognizes the importance to its defense of interoperability with U.S. systems. Despite Seoul’s efforts to minimize the risks of entrapment or entanglement, South Korea continues to cooperate with
the United States on other BMD efforts, such as participating in multinational (United States, Japan, and South Korea) naval BMD exercises and building three BMD-capable warships incorporating the U.S. Aegis combat system. In the future Seoul could determine that the security benefits of closer BMD integration with the United States may outweigh the entrapment risks. Furthermore, KAMD maintains optional interoperability with the United States. According to South Korea’s 2016 defense white paper, Seoul desires to strengthen “both ROK-U.S. combined capabilities and independent capabilities . . . to effectively deter and respond to mounting nuclear and missile threats from North Korea.” South Korea’s actions and words suggest that, despite a desire for BMD independence, it does not reject cooperation with the United States completely.

South Korea’s perceptions of U.S. commitment and expected behavior also likely color Seoul’s perceived risk of entrapment or abandonment. Some scholars have observed that during the Cold War South Korea primarily feared abandonment, but since the end of the Cold War it more often has feared entrapment, partly because of the sometimes aggressive U.S. military stance toward North Korea. President Trump’s bellicose rhetoric toward North Korea and reports in 2017 of planning for a limited strike on North Korea might have raised further South Korea’s fear of entrapment. On the other hand, Trump’s call for renegotiating the U.S.-ROK Free Trade Agreement or suspending combined military exercises after the 2018 Singapore summit with Pyongyang’s Kim Jong-un could send confusing messages about Washington’s commitment to Seoul. Whether U.S. BMD causes an ally to fear abandonment or entrapment does not occur in a political vacuum, and an ally such as South Korea instead probably assesses BMD as one piece of evidence about the overall commitment of the United States to their mutual alliance.

**NATO: From Fear of Abandonment to Alliance BMD.** NATO’s initial encounter with modern U.S. BMD, which focused on homeland defense during the George W. Bush administration, fanned familiar fears of abandonment, but this anxiety waned as U.S. missile-defense policy in Europe evolved to favor regional defense. In the years around Washington’s withdrawal from the ABM Treaty, the European NATO allies did not consider ballistic missiles a threat, they expected BMD to change mutual dependence and vulnerability, and they had broader doubts about U.S. commitment. Not surprisingly, these factors stoked European fears of abandonment. The shift to regional defense during the Obama administration helped assuage these earlier fears and contributed to the alliance benefits that U.S. policy predicts.

Even before the Bush administration withdrew from the ABM Treaty in 2001, the United States and its NATO allies disagreed on the relevance of BMD in the
post–Cold War environment. The United States advocated national missile defense (NMD) to counter the threat that “rogue states” such as North Korea might pose in the future. Europeans, however, did not think these missile threats were imminent or compelling, particularly when compared with more-immediate and proximate challenges such as terrorism or conflict in the Balkans. French policy makers not only believed that the existing missile threat did not justify BMD but worried further about how a missile-defense revival might threaten its independent nuclear deterrent. For Europeans who already were concerned about diminished U.S. interest in European security, NMD and the likely U.S. withdrawal from the ABM Treaty—which some Europeans viewed as the foundation of nuclear stability—provided further evidence to complement anxieties about U.S. reliability in the seemingly unipolar post–Cold War environment.

Against this backdrop, the Bush administration’s 2006 proposal to put ten GBI missiles in Poland and a supporting radar in the Czech Republic to defend the United States and some of Western Europe against future Iranian ICBMs resurrected European abandonment worries. The United States referred to the proposal as the “third site,” because it would have been the third GBI base after Fort Greely in Alaska and Vandenberg Air Force Base in California. Both host countries supported this initiative, which would have been a visible sign of U.S. commitment to them and, like the presence of any other forward-deployed U.S. forces, would have provided trip-wire benefits. However, the benefits were not as evident to the rest of NATO, which still disagreed with the United States about the relevance and likelihood of an ICBM threat from Iran. Furthermore, the third site would have contributed only to the defense of some NATO members, as well as the United States. Forward-deployed GBIs could not protect those NATO members closest to Iran, in southeastern Europe. The decision also negatively signaled U.S. commitment to multilateral alliance processes because the United States negotiated the basing arrangements directly with the host countries, bypassing NATO channels (which might have been slower and more contentious). As with Sentinel, the United States seemed to have dodged the difficult work of meaningfully consulting with most NATO allies about its BMD plans.

Upon taking office in 2009, the Obama administration reassessed the missile threat from Iran and U.S. BMD capabilities. American policy makers determined that Iran was more likely to threaten Europe with shorter-range missiles than to hold the United States at risk with ICBMs. Additionally, U.S. regional-defense systems, particularly the Navy’s SM-3 interceptor, had proved themselves better in testing than GBIs. So the Obama administration scrapped the not-yet-fielded homeland defense–oriented third site and replaced it with the European Phased Adaptive Approach (EPAA), a regional-defense plan that included
deploying BMD-capable USN ships to Europe and building Aegis Ashore sites in Romania and Poland.\textsuperscript{134}

Russian opposition to missile defense also influenced European attitudes and Obama administration decisions. Russia suspected that the third site and EPAA were in opposition to Russian strategic nuclear capabilities and opposed both initiatives. Russia argued that the third site’s GBIs and the SM-3 Block IIB interceptor proposed for EPAA (but later canceled) would have had some capability of defending the United States against Russian ICBMs and that Aegis Ashore’s missile launchers could launch Tomahawk cruise missiles in violation of the Intermediate-Range Nuclear Forces (INF) Treaty.\textsuperscript{135} The United States and NATO disagreed with Russia’s positions.\textsuperscript{136} Russia’s opposition to the third site and to the SM-3 Block IIB in EPAA likely influenced allied opinions about these weapons and U.S. decisions to cancel each program, particularly at a time when both Western Europe and the United States sought to improve relations with Russia.\textsuperscript{137}

Despite Russia’s unmistakable imprint on these BMD decisions, it remains valuable to assess them from the intra-alliance perspective. Unlike the third site, NATO allies favorably received EPAA in part because U.S. and NATO threat perceptions more closely aligned, EPAA provided tangible defensive benefits to European allies, and EPAA’s deployment has indicated U.S. commitment to Europe across administrations. Whereas European allies did not believe an Iranian ICBM threat was imminent, they felt Tehran more plausibly could develop and field missiles capable of reaching parts of Europe. Reflecting this common threat assessment and new alliance-wide support for BMD, leaders of NATO countries declared in 2010 that they should develop a “NATO missile defense capability” that would include both EPAA and indigenous capabilities to defend all NATO’s population and territory from ballistic-missile attack.\textsuperscript{138} This change in European defense policy demonstrated that European NATO members recognized ballistic missiles as a threat and believed that U.S. BMD would benefit, rather than exclude, them.

Under EPAA, relative dependence and vulnerability between the United States and its allies did not change dramatically. Instead, the shift toward regional defense enabled European allies to reduce their vulnerability by hosting and integrating with U.S. BMD systems. EPAA serves as a component within a broader multilateral effort by NATO members toward an “alliance-commanded” BMD system, which will incorporate a variety of interoperable national systems.\textsuperscript{139} While it may be difficult to integrate multinational capabilities seamlessly, NATO’s approach instead flexibly expands opportunities for participation and burden sharing among alliance members, particularly ones that may not be able to afford expensive U.S. equipment or may want to support domestic defense industries.
U.S. BMD systems deployed to Europe as part of EPAA have provided tangible evidence of U.S. commitment to European defense across administrations. Gustav Lindstrom, director of the European Union Institute for Security Studies, describes EPAA as “now a core project for Europe and NATO, effectively strengthening the relationship between NATO and the United States.” Therefore, he argues, it also has become a “weather vane for gauging the state and ‘temperature’ of transatlantic relations.” Similarly, Catherine McArdle Kelleher at the University of Maryland has described EPAA as a “barometer of U.S. support” for NATO. That being the case, NATO allies closely watch EPAA for evidence of continuity or change in the climate of U.S.-NATO relations. President Trump’s continued support of EPAA has reassured many NATO allies. As described earlier with regard to South Korea, while BMD cooperation constitutes just one portion of a complex alliance relationship, for allies it may be a particularly useful indicator of U.S. commitment because the amount of U.S. investment—in terms of money, military systems, and people—is readily apparent.

Many factors influence whether and how NATO attitudes toward EPAA will evolve in the future. Threat assessments may change or diverge. Some in Europe expected the Iranian ballistic-missile threat to diminish following the 2015 Joint Comprehensive Plan of Action (JCPOA). The Trump administration, however, has disagreed with that benign threat assessment. Burden-sharing expectations may shift. EPAA imposes few fiscal costs on the NATO alliance, but the Trump administration seeks more financial contributions by allies. As missile-defense capabilities improve, Russia likely will continue to pressure the NATO alliance to curtail or abandon missile-defense efforts. These factors could upend the existing alignment among NATO members about missile defense.

POLICY IMPLICATIONS
BMD has become a fundamental element of the modern security environment and it is appropriate for the United States to increase BMD investment, particularly in light of North Korea’s improving strategic arsenal and other countries’ quickly maturing advanced conventional threats, such as antiship ballistic missiles and hypersonic weapons. Missile defenses are, however, more than just weapon systems with defensive capabilities and fiscal costs; they also have political benefits and drawbacks. Despite the policy consensus that BMD benefits U.S. allies, the historical record shows that BMD has not had this positive effect consistently, and at times has caused allies to worry that the United States might abandon or entrap them. Increasing U.S. BMD capabilities could pose these risks again to U.S. allies, even if U.S. policy makers do not intend that outcome. The United States can manage these risks by sharing information to align U.S. and allied perceptions of missile threats and BMD capabilities, promoting BMD
cooperation in a manner that reduces both U.S. and allied vulnerability, and leveraging BMD policy and capabilities to maximize its value as a symbol of U.S. alliance commitment.

Before an examination of the policy prescriptions, it is useful first to consider several ways in which modern BMD might sow doubt in our allies’ perceptions of alliance cohesion. First, increased U.S. spending on homeland-defense capabilities, such as improved sensors or larger numbers of interceptors, could make it appear that the United States seeks to defend itself rather than allies and might spark allied fears of abandonment.145 At what point in building BMD capability and capacity might U.S. allies fear abandonment, and how can Washington limit this effect? Second, the United States likely will continue to advocate interoperability across U.S. and allied BMD systems, which could cause some allies to worry about entrapment risks. How can the United States assuage these concerns while still benefiting from BMD interoperability? Lastly, President Trump’s combative rhetoric toward traditional allies could cause them to question U.S. commitment and view U.S. BMD investments through a clouded lens.

The factors that may influence an ally’s perception of U.S. BMD and the risks of abandonment and entrapment—shared threat perceptions, relative dependence and vulnerability, and evidence of commitment—provide useful guideposts for understanding BMD’s effects on alliances and for designing policies that could reinforce rather than undermine alliance cohesion. U.S. missile-defense policy initiatives—such as increasing homeland-defense capability and capacity, fielding more space-based sensors, and encouraging more BMD burden sharing with allies—should be evaluated from an ally’s perspective, using this framework.

Divergent threat perceptions lie at the heart of each historical case in which an ally worried about BMD’s effect on alliance cohesion, such as European NATO members in the late 1960s, while closely aligned threat perceptions generally have caused allies to view U.S. BMD capabilities favorably, such as Japan in the 2010s. The United States should, or should continue to, share information about missile threats with its allies to the greatest extent possible through diplomatic, intelligence, and even public affairs channels. This information will help allied leaders and their people understand U.S. intent for deploying new BMD capabilities, but also may help allies more fully appreciate the nature of the threat they face.

Just as BMD is more likely to improve alliance cohesion if both the United States and its allies share a common threat perception, they also should understand the capabilities and limitations of U.S. BMD to counter these threats. For example, the MDR proposes placing more emphasis on homeland defense and advocates increasing the number of homeland-defense GBI missiles from forty-four to at least sixty-four, improving the GBI’s warhead, and even employing the Navy’s SM-3 Block IIA interceptor as an “underlay” to supplement GBIs.146
An ally could perceive this new attention to homeland defense as a sign of U.S. retrenchment and perhaps increased risk of abandonment.

An ally might try to understand whether and how these changes will affect U.S. capabilities. The 45 percent increase in GBIs likely would not result in a significant improvement in performance. With a shot doctrine—referring to the number of defensive missiles launched against every incoming ICBM—of two or four GBIs per target, the current U.S. homeland-defense system probably can engage only about ten to twenty threat missiles. An informed observer could determine that adding twenty GBIs would enable the United States to defend against only five to ten more missiles, at best. Improvements to U.S. homeland defenses that are harder for an ally to quantify may be more likely to raise concerns of abandonment. Employing the SM-3 Block IIA as a homeland-defense weapon, for example, would blur the previously clear lines between homeland defense and regional weapon systems, and it would be difficult for an observer to determine the quantity and types of weapons in the vertical launchers of a BMD-capable ship or an Aegis Ashore site.

Despite these potential challenges, an open dialogue with allies should express that BMD alone is not likely to provide sufficient protection for the United States but will instead remain a thin defense against a relatively small-scale attack, and therefore only one part of U.S. security strategy. Put another way, capacity and capability constraints might reassure U.S. allies about the extent and intent of U.S. BMD systems, and thus limit concerns about alliance cohesion. Speaking about how an adversary could view U.S. BMD, Frank Rose, then Assistant Secretary of State for Arms Control, Verification, and Compliance, said in 2016 that he did not think BMD was destabilizing, because the United States has “limited numbers, limited capabilities, and we have been very, very transparent about our missile defenses.” Transparency with allies—particularly about missile-defense budgets, procurement, testing, and deployment plans—may similarly stabilize their perceptions of U.S. commitment. At least among democratic allies, transparency also may help voters in allied countries make better-informed decisions about missile defense. Private and public transparency with U.S. allies about missile threats and defenses should continue.

Not surprisingly, allies have responded favorably to BMD initiatives that do not negatively affect the balance of relative dependence or vulnerability in the alliance; they prefer BMD efforts that either directly improve their defenses or at least do not subtract from their own security. The Western European experience with Sentinel in the 1960s is a useful negative example; the United States would not share Sentinel with NATO allies, and the parallel growth of Soviet ABM capabilities could have reduced the value of some members’ nuclear deterrents. This dual shift in relative vulnerability—the United States seemingly reducing its
vulnerability while European NATO members’ vulnerability increased—likely contributed to their fear of abandonment.

The United States should recognize when U.S. BMD capability improvements might cause an ally to perceive a relative shift in their dependence or vulnerability. One way to achieve this result while improving U.S. homeland and regional defenses would be to continue a U.S. policy of encouraging allies to acquire or develop BMD systems and advocating interoperability with U.S. and other allied BMD systems to the greatest extent possible. Not only will close cooperation avoid an imbalance in relative vulnerability but it also likely increases mutual dependence. BMD systems interoperability and information sharing could improve allied perceptions of BMD’s effect on an alliance. Consider two possible outcomes if the United States expands its BMD sensor network in space, as the 2019 MDR proposes. If the United States withholds these sensor data from allies, they could feel that U.S. battlespace awareness is improving while theirs falls behind, perhaps leading to questions about alliance cohesion. If, however, the United States shares data with allies using interoperable systems, they likely would recognize the mutual benefits of this technology and view it as bolstering their alliance.

U.S.-Japan BMD cooperation best exemplifies relative dependence and vulnerability moving in tandem. The close industrial and technological collaboration on the SM-3 Block IIA likely sends a clear message to Tokyo that Washington could not field this advanced interceptor easily without its support. Similarly, the role that Japan-based sensors such as the AN/TPY-2 radar play in defending both Japanese and U.S. interests emphasizes the alliance’s mutually dependent and beneficial character. The interoperability of U.S. and Japanese BMD-capable destroyers also well demonstrates that U.S. and Japanese vulnerability against shared missile threats rises or falls together rather than separately. The United States should continue to grow and improve the BMD relationship with Japan and foster similar industrial and operational bonds with other allies.

South Korea’s concern about THAAD creating risks of entrapment, or at least entanglement, demonstrates a possible downside of efforts to share information and integrate capabilities across national borders. The 2019 MDR prioritizes cooperative BMD efforts that deepen integration across regions and between homeland- and regional-defense systems, which may increase allied concerns about entrapment further. Some analysts advocate separate information-sharing architectures to segregate different allies from each other and reduce the apparent entanglement. This approach would impose additional costs on the United States to develop, test, and upgrade parallel systems. Instead, if an ally hesitates to join an integrated BMD network, the United States should still encourage it to deploy defenses that retain the option of later joining the U.S.-led
architecture. This encouragement could include urging an ally to buy already interoperable U.S.-made systems or develop indigenous ones compatible with U.S. networks. If an ally perceives an increased missile threat, it could join an allied BMD architecture more quickly if it already has interoperable systems.

BMD’s relationship to allied perceptions of U.S. commitment is more complex. Unlike the case with perceptions of threats and vulnerability, the broader cross-currents of an alliance relationship shape perceptions of commitment. Nevertheless, BMD policy still shapes these views and should be explicit and credible. The Trump administration’s policy values BMD as a positive factor in U.S. alliance relationships, but presidential rhetoric, which is often critical of U.S. allies, risks undermining the policy’s credibility. When President Trump unveiled the 2019 MDR, he emphasized homeland defense and took a transactional approach to U.S. allies. He asserted that U.S. BMD “will prioritize the defense of the American people above all else,” which could revive an ally’s concerns of a “Fortress America” approach. As for allies, he said “we will insist on fair burden sharing with our allies. I’ve made it clear we are protecting many, many wealthy, wealthy, wealthy countries. . . . We protect all of these wealthy countries, which I’m very honored to do, but many of them are so wealthy they can easily pay us the cost of this protection.” While burden sharing is a fundamental reason why states ally with each other, trying to account for the costs and benefits of missile defense misses the wider view of an alliance’s value to the United States and could foster an ally’s fears of abandonment.

To counter the mismatch between policy and presidential pronouncements, the United States should continue to leverage BMD investment and employment to signal credibly our support for our allies. Forward-deployed BMD systems, such as Aegis Ashore, and BMD-capable ships based abroad amplify this signal by embedding U.S. personnel in an ally’s territory and provide more-durable indications of U.S. commitment than mobile or rotationally deployed systems, which also signal U.S. commitment but could be removed more quickly. Regardless of a forward-deployed or deployable BMD system’s capability (how well or poorly it performs) or capacity (how many missiles it can engage), it still tangibly signals U.S. commitment. Increasing the number of forward-deployed BMD systems also might free up limited deployable U.S. and allied BMD-capable systems, such as ships or Patriot batteries, to be used more efficiently and flexibly. The United States should continue fielding and operating Aegis Ashore in Europe, support Japan’s efforts to purchase its own Aegis Ashore systems, and identify other opportunities to deploy U.S. BMD capabilities forward.

Missile defense is a double-edged sword that can strengthen U.S. alliances, but also could weaken them by causing an ally to fear abandonment or entrapment.
Missile defense will remain an important component of U.S. security strategy, but missile-defense policy, rhetoric, and actions should reinforce, rather than undermine, U.S. alliances. To best leverage missile defense’s potential benefits to alliances, the United States should continue to inform allies about missile threats and U.S. defenses; share or integrate missile-defense capabilities with allies; and use BMD deployments, cooperation, and consultation to demonstrate U.S. alliance commitment concretely. U.S. security strategy relies on both alliances and missile defense, but U.S. policy makers should not take allies for granted while pursuing technological solutions to geopolitical challenges.

NOTES

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9. Liska, Nations in Alliance, pp. 61–115; Patricia A. Weitsman, “Alliance Cohesion

10. Mandelbaum, *The Nuclear Revolution*, p. 151, notes that “every member of an alliance has two fears. One is that the alliance will not work, that he will be abandoned in his hour of need. The other is that the alliance will work too well, that he will be entrapped in a war he does not wish to fight”; see also Snyder, “The Security Dilemma in Alliance Politics,” pp. 466–67.


33. Although described as “thin,” the proposed system would have placed interceptor missiles and radars at sixteen sites across the continental United States and cost over five billion dollars. Herbert F. York, “Military Technology and National Security,” Scientific American 221, no. 2 (August 1969), pp. 17, 21–23.


40. The Ballistic Missile Early Warning System (BMEWS) provided one avenue for limited cooperation with certain NATO allies. BMEWS included radars in Britain and Greenland. The United States shared warning indications with allies, such as the United Kingdom, which enabled American and British bombers or nuclear missiles to launch in response to a warning and avoid destruction in a first strike. See Jeremy Stocker, Britain and Ballistic Missile Defence 1942–2002 (London: Frank Cass, 2004), p. 96. As described to Japan, BMEWS would not be connected to the radars that would support Sentinel and only provided warning of an attack. See U.S. State Dept., Memorandum of Conversation between U.S. Ambassador to Japan and Senior Officials from Japan’s Ministry of Foreign Affairs and Defense Agency, 23 January 1968, PDNSA (1679045872).


42. U.S. State Dept., Record of Discussion, 28th Meeting of the Senior Interdepartmental Group, 21 December 1967, pp. 4–6, PDNSA (1679117824).

43. Consultation should contribute to alliance cohesion if it “affirms the intended constitution of the alliance as one of equality and solidarity among allies,” Liska, Nations in Alliance, p. 69.


45. Ibid. For Chinese threat perceptions, see Memorandum from the President’s Assistant for National Security Affairs, Walt Rostow, to the President, 2 August 1967, PDNSA (1679150849).

47. For one of the earliest records of these discussions, see U.S. Embassy Tokyo, telegram to U.S. State Department, “Third Japan-U.S. Policy Planning Consultations,” 5 November 1965, PDNSA (1679105900).

48. For Japanese interest in short-range defenses, see ibid. For questions about missile-defense planning, see U.S. Embassy Tokyo, telegram to U.S. State Department, Planning of Anti-missile Defenses in Japan, 2 December 1966, PDNSA (1679104768).


51. Ibid., p. 62.


55. For the impact of consultation on alliance cohesion, see Liska, Nations in Alliance, p. 69.


61. U.S. State Dept., Memorandum from the Special Assistant to the Secretary of State, 13 August 1965, PDNSA (1679150407).


64. Laurence W. Martin, Ballistic Missile Defence and the Alliance (Boulogne-sur-Seine, Fr.: Atlantic Institute, 1969), p. 31.


67. Ibid., pp. i, 8.


70. Liska, Nations in Alliance, pp. 8–9.
74. Martin, Ballistic Missile Defence and the Alliance, pp. 29–30. Contemporaneous accounts, including Martin’s, describe McNamara publicly announcing Sentinel on 18 September 1967, and then briefing NATO allies about it ten days later at a 28 September 1967, Nuclear Planning Group meeting. For a U.S. description of this meeting, see U.S. Embassy Ankara, telegram to State Department, “ABM—UK Views,” 29 September 1967, PDNSA (1679156990). Archival records indicate, however, that U.S. officials first briefed NATO allies at a special North Atlantic Council (NAC) meeting on 14 September 1967, four days before McNamara’s public ABM announcement. U.S. Embassy Paris, telegram to State Department, “ABM Statement to NAC,” 14 September 1967, PDNSA (1679150775). Although these records indicate earlier consultation than was known publicly at the time, the NAC meeting did not afford NATO allies much opportunity to offer their views on U.S. ABM plans.
83. Karako and Williams, Missile Defense 2020, p. xvi.
91. Ibid.
92. For deliberate planning and decentralized engagement authority, see U.S. Defense Dept., Countering Air and Missile Threats, JP 3-01 (Washington, DC: 21 April 2017), pp. III-24 to III-26; for information sharing and the theoretical goal of improving BMD by linking “any sensor, any shooter, at any phase of missile flight in any region, against any size and type of attack,” see Henry S. Kenyon, “Missile


133. Obama, “Remarks by the President on Strengthening Missile Defense.” In his 17 September 2009 remarks, President Obama noted that “we have made specific and proven advances in our missile defense technology, particularly with regard to long- and sea-based interceptors and the sensors that support them. Our new approach will, therefore, deploy technologies that are proven and cost-effective and that counter the current threat, and do so sooner than the previous program.” See also Andrew Futter, Ballistic Missile Defence and US National Security Policy: Normalisation and Acceptance after the Cold War (London: Routledge, 2013), p. 138.


143. For one perspective on these factors, see Marcel Dickow et al., “Germany and NATO Missile Defence: Between Adaptation and...


148. The U.S. Navy launches BMD weapons from the Mk 41 Vertical Launching System (VLS), both on BMD-capable ships and at Aegis Ashore sites. VLS can launch a variety of weapons, including the antiaircraft SM-2 and SM-6 missiles, the antisubmarine ASROC, the land-attack Tomahawk cruise missile, and the BMD-capable SM-3 and SM-6 missiles. It would be difficult for an outside observer to discern what weapons a VLS contains. In the 1980s, this aspect of VLS made it difficult to know whether a ship was carrying nuclear or conventional Tomahawks. See Henry C. Mustin, “The Sea Launched Cruise Missile: More Than a Bargaining Chip,” *International Security* 13, no. 3 (Winter 1988–89), pp. 184–90, and Rose E. Gottemoeller, “Finding Solutions to SLCM Arms Control Problems,” *International Security* 13, no. 3 (Winter 1988–89), pp. 175–83. More recently, Russia points to VLS’s diverse potential armament to argue that Aegis Ashore sites could launch Tomahawks in violation of the INF Treaty. See U.S. State Dept., “Refuting Russian Allegations of U.S. Noncompliance with the INF Treaty.”

149. Frank A. Rose, Assistant Secretary of State for Arms Control, Verification, and Compliance, press briefing, 13 January 2016, available at photos.state.gov/.


SHOULD THE UNITED STATES SUPPORT A REPUBLIC OF KOREA NUCLEAR SUBMARINE PROGRAM?

Jihoon Yu and Erik French

In response to the progress of North Korea toward a functional submarine-launched ballistic missile (SLBM) and the growing maritime assertiveness of China, South Korea has expressed a strong interest in acquiring a fleet of nuclear-powered attack submarines (SSNs). The United States now faces a difficult debate: it must choose whether it will oppose or support the Republic of Korea’s emerging SSN program. This article contributes to this debate, discussing how a Republic of Korea (ROK) SSN program could result in strategic risks or benefits, or both, for the United States. The risks of such a policy are readily apparent. First, the project might undermine already-fragile Sino-allied and ROK-Japan relations, damaging regional stability. Second, it might create nonproliferation concerns by expanding the ROK’s latent nuclear capabilities. Third, an ROK SSN program would involve major opportunity costs; the resources necessary to fund it inevitably would siphon ROK resources away from investments in other crucial capabilities.

Despite these significant risks, however, this article argues that the United States should support and assist its ally if South Korea pursues acquisition of SSNs. First, if the United States works with South Korea, it will have a greater ability to ameliorate the aforementioned risks that the program poses. Second, U.S. assistance would bolster intra-alliance cohesion by reinforcing U.S. commitment and allowing South Korea to bear more of
the burden for allied security. Third, support for ROK SSNs would improve the coercive diplomacy of the United States toward North Korea by enhancing allied capabilities and signaling allied resolve. Fourth, an SSN fleet would strengthen the ROK’s power-projection capabilities, improving the allies’ ability to cooperate on security contingencies beyond the peninsula.

ALLIED REGIONAL INTERESTS
Any discussion of the strategic implications of ROK SSNs for the United States must begin with an overview of the allies’ shared interests in the Indo-Pacific. First, the United States and South Korea have an interest in preserving their national security against military aggression. The allies seek to maintain a strong deterrent and defense against potential aggressors—most notably North Korea. They aim to dissuade challengers from direct attacks, as well as less-conventional aggression such as hybrid warfare and state-sponsored terrorism. They also endeavor to remain prepared to defeat aggression should deterrence fail.

Second, the allies are committed to preserving the economic growth and prosperity that has allowed their respective nations to flourish. Both recognize that this prosperity is dependent on the peace and stability of the Korean Peninsula, which in turn depends on the alliance’s ability to deter North Korea. The allies also appreciate that their continued economic vitality hinges on regional stability more broadly; instability in the Indo-Pacific undoubtedly would undercut the economic interests of both allies. In particular, the ROK economy depends on sea lines of communication (SLOCs) that run through the South and East China Seas. If these SLOCs were threatened or interdicted the prosperity of South Korea would suffer significantly. Regional security and stability are undergirded by the existing rules-based international order, which provides for freedom of the seas and the peaceful resolution of international disputes. This order, in turn, is underpinned by the U.S.-hub-and-spoke alliances in the Indo-Pacific, including the vital U.S.-ROK alliance.

Third, the allies share common values. Both understand the importance of democratic governance and human rights. Similarly, the allies are committed to the rule of law, both domestically and internationally. This provides both allies with an additional incentive to resist the aggressive designs of the Democratic People’s Republic of Korea (DPRK) on the Korean Peninsula, defending the ROK’s successful democracy against the authoritarian regime in the north.

These allied interests face significant challenges in the Indo-Pacific. First, the DPRK’s accelerating nuclear weapons, intercontinental ballistic-missile (ICBM), and SLBM programs pose a major threat. These capabilities greatly increase the destructive potential of a peninsular war for both South Korea and the United States. If North Korea is able to use these capabilities to establish a secure nuclear
deterrent, it also might become emboldened, undercutting the allied ability to deter DPRK aggression short of war. These capabilities also make it far more difficult for the allies to defend against North Korea, should deterrence fail.

Although the allies have taken steps to offset the DPRK’s ICBM threat, such as strengthening the ROK’s Korea Air and Missile Defense systems and deploying terminal high-altitude area-defense (THAAD) batteries, the DPRK’s development of diesel-electric ballistic-missile submarines (SSBs) and SLBMs threatens to circumvent these measures. North Korea already has tested a Pukkuksong-I SLBM fired from a Sinpo-B-class SSB successfully and is developing new, more-capable versions of both the Pukkuksong and Sinpo. Estimates suggest that North Korea will be able to field the Pukkuksong by 2020. Once deployed, these systems will complicate significantly the allies’ ability to prosecute their “4D” operational concept: detecting, disrupting, destroying, and defending against the DPRK’s nuclear and missile capabilities.

The growing maritime assertiveness of the People’s Republic of China (PRC) poses an additional, major obstacle to both allies’ security and economic interests. China claims special privileges outside its territorial seas, both in its exclusive economic zone and within its nine-dash line in the South China Sea. These claims contradict the principle of freedom of the seas. China has become increasingly forceful and provocative in asserting these claims, harassing USS Decatur in the midst of its freedom-of-navigation exercise near the Spratly Islands on 30 September 2018. Furthermore, China steadily has militarized the South China Sea, developing a host of new military facilities throughout this important waterway. Simultaneously, China has expanded its regional antiaccess/area-denial (A2/AD) capabilities, strengthening its ability to hold maritime traffic at risk. These developments could threaten regional stability, the security of key SLOCs, and the rules-based international order.

Furthermore, the integrity of the U.S.-ROK alliance itself faces challenges rooted in uncertainty and ROK fears of abandonment. The rhetoric that candidate Donald J. Trump used on the campaign trail in 2016 subsequently created significant concern in South Korea over whether President Trump and the United States would maintain a strong commitment to the alliance. Subsequent questions over host-nation support, the funding of THAAD, and U.S. trade pressure only have compounded these concerns. Finally, the unilateral decision to cancel major U.S.-ROK military exercises as part of Washington’s efforts to negotiate denuclearization with Pyongyang has caused substantial alarm in Seoul.

SUBMARINE PROPULSION: AN OVERVIEW
Modern conventional attack submarines (SSKs) rely on diesel-electric propulsion systems rather than nuclear power. SSK propellers are driven via an electric
battery, which in turn is connected to and charged by a diesel engine. These propulsion systems depend on regular refueling for the diesel generator, which limits SSKs' range. The system also prevents SSKs from remaining submerged for extended periods; SSKs must “snorkel” regularly at periscope depth to run their diesel engines to recharge their batteries. This feature limits their endurance and renders them vulnerable and easy to detect.\textsuperscript{15} The recent introduction of air-independent propulsion (AIP) systems to augment the diesel-electric system has improved the undersea endurance of SSKs, but even the most advanced SSKs must snorkel to recharge at least once every few weeks.\textsuperscript{16}

Nuclear submarines, in contrast, are propelled by onboard nuclear reactors. These reactors use enriched uranium to provide the power needed to drive the submarines’ propellers. This system gives SSNs and nuclear-powered ballistic-missile submarines (SSBNs) virtually unlimited range and endurance, allowing them to remain at sea or underwater almost indefinitely; neither diesel fuel nor air are required to propel these boats. The only limitation on the range and endurance of an SSN is food for the crew.\textsuperscript{17} Nuclear reactors also generate more power, supporting a faster and larger boat capable of carrying more extensive weaponry and sensors.\textsuperscript{18} This added endurance, range, speed, and equipment comes at a price, however. SSNs are noisier and less maneuverable than many modern SSKs. The reactors also require enriched uranium as fuel, creating proliferation concerns. Indeed, many SSNs use highly enriched uranium (HEU), which is over 20 percent uranium-235 (U-235) and can be used to provide the fissile material for a nuclear weapon.

Development and subsequent operation of the SSN are technologically challenging and financially costly endeavors that only a few maritime powers have mastered. Presently, the United States, Russia, China, France, the United Kingdom, and India are the only states that operate SSNs. Brazil also is developing its own SSN, with assistance from France.\textsuperscript{19} The significant technological and financial hurdles to acquiring an SSN suggest that the club of states operating these boats will remain relatively small for the foreseeable future.

The United States fields a sizable fleet of SSNs; indeed, the U.S. submarine fleet is exclusively nuclear powered. The Submarine Force Pacific under U.S. Pacific Fleet operates thirty-one SSNs.\textsuperscript{20} As highlighted in table 1, these comprise twenty-four of the older but formidable Los Angeles–class SSNs and seven of the newer and more powerful Virginia- and Seawolf-class SSNs. They are based in Guam, in Hawaii, and along the West Coast.

North Korea possesses a range of diesel-powered submarines (see table 1). While many of these SSKs are antiquated and small, they can be used to lethal effect, as was demonstrated in 2010 with the sinking of the ROK ship Cheonan. While North Korea has taken steps to develop diesel-powered SSBs capable of
launching nuclear missiles, it has not made any noticeable progress toward a nuclear-powered submarine.

During the Cold War, South Korea primarily fielded “midget submarines”; the Korean attack submarine (KSS) program began the process of modernizing the submarine fleet in 1989.\textsuperscript{21} As displayed in table 1, South Korea currently possesses only conventional diesel-electric SSKs. It operates nine Type 209 (Chang Bogo–class, KSS-1) and nine Type 214 (Son Won-il–class, KSS-2) SSKs. It also is developing nine new three-thousand-ton SSX indigenous (Jangbogo III–class, KSS-3) diesel-electric submarines, the first of which deployed in 2018.

ROK president Moon Jae-in repeatedly has expressed an interest in developing SSNs.\textsuperscript{22} Many current and former ROK government and military officials claim that ROK SSNs would dramatically improve the ROK’s ability to both deter and defeat the DPRK’s emerging SLBM capability and to secure the maritime commons. In the past the United States has been unwilling to transfer the sensitive technology necessary for nuclear naval propulsion to South Korea, but the Moon administration’s renewed interest in this technology should spark a new debate in the United States on the merits of assisting South Korea in developing its own SSNs.\textsuperscript{23}

THE RISKS POSED BY AN ROK SSN PROGRAM

\textit{Sino-Allied Relations}

An ROK SSN program could create a number of significant strategic challenges for the United States. First and foremost, it might damage already fragile Sino-allied relations. The logic of the security dilemma suggests that if South Korea...
strengthens its military capabilities, even for defensive purposes, nearby states such as China may see these improvements as designed to undermine their security. Furthermore, China increasingly views the U.S. alliance system in the Indo-Pacific in adversarial terms and has responded poorly to previous advances in allied military capabilities. China likely would see an ROK SSN fleet as part of a broader effort by the United States and its allies to contain growing Chinese power. Worse still, it might interpret this program as a deliberate attempt to degrade the PRC’s second-strike nuclear capability. China fields a relatively small—and therefore vulnerable—nuclear arsenal and its SSBNs are not particularly capable or stealthy. In theory, new ROK SSNs in the region could be used in conjunction with U.S. capabilities to hold PRC SSBNs at risk.

Tensions between the allies and China are mounting already. In 2018, the United States disinvited China from the annual Rim of the Pacific naval exercises, employed sanctions against the PRC’s agency for military procurement for purchasing Russian weaponry, and imposed several significant tariffs on PRC exports. China, meanwhile, refused to allow a USN vessel to dock in Hong Kong, canceled several high-level military talks with U.S. officials, and amplified its challenges to U.S. freedom-of-navigation operations in the South China Sea. ROK-PRC ties also have been on the decline following a significant diplomatic spat over the ROK’s purchase of THAAD batteries in 2016 and 2017. An ROK SSN program might only compound further the growing hostility between the allies and China.

Growing Sino-allied tensions could create several challenges. First, it could lead China to expand and enhance its undersea arsenal further. This could trigger an unnecessary arms competition and spiraling tensions that would destabilize the region and leave all parties worse off. The character of SSNs may make them particularly apt to provoke arms races. A number of strategic theorists have pointed out that offensive capabilities—those assets that are uniquely well suited for offensive operations—are the most likely to create insecurity among neighboring states. SSNs’ virtually unlimited range greatly enhances the deploying states’ ability to project power, and their stealth and endurance make them difficult to defend against; this makes SSNs particularly effective for offensive naval operations.

History is replete with examples of problematic naval arms races. The German decision to acquire a large fleet in the early twentieth century triggered a major naval arms race with the United Kingdom in the lead-up to World War I. The U.K. decision to develop a dreadnought—a large, advanced warship with only heavy guns—acted as a critical catalyst for the escalation of this arms race; not long after Britain introduced this platform, the Anglo-German arms race intensified further, with both sides acquiring many new capital ships. Around the same
time, Brazil’s purchase of several British dreadnoughts touched off a local arms race with the Argentine and Chilean navies.

The Indo-Pacific itself already may be in the midst of a nascent submarine arms race, with various regional countries acquiring new attack submarines. In the aftermath of the 1995–96 Taiwan Strait crisis, China rapidly began acquiring a larger fleet of SSNs as part of an A2/AD approach to challenge U.S. ability to operate in the region. These acquisitions and fear of Chinese intentions in turn provoked a broader regional undersea race, with a number of states enhancing their undersea capabilities qualitatively, quantitatively, or both. These steps raised tensions further, and inspired additional states to seek their own SSKs, often from China. As table 2 demonstrates, states across the region are acquiring more-powerful undersea fleets. Singapore’s defense ministry recently highlighted that the number of submarines in the western Pacific may rise from 200 to 250 by 2025.

Setbacks in Sino-allied relations could create other challenges. Rather than developing new antisubmarine warfare (ASW) or subsurface capabilities, China might retaliate with economic coercion against South Korea. The PRC’s recent reaction to U.S.-ROK cooperation on THAAD is illustrative of this risk. China accused the allies of developing capabilities that would threaten strategic stability by undermining the PRC’s second-strike capability. Following the ROK’s decision to acquire the system, China issued a formal diplomatic protest and suspended high-level security dialogues. It also deployed its own long-range radar systems to Inner Mongolia in a thinly veiled tit-for-tat maneuver. Just as problematically, China initiated a campaign of economic coercion targeting South Korea. Korean pop music events in China were canceled, several Korean television shows were taken off the air, and PRC regulators cut off Korean video game manufacturers from the Chinese market. China also prohibited travel agencies from offering package tours to South Korea, which cut Chinese tourism to South Korea by 20 percent. The Korean firm Lotte was targeted by PRC government investigations, and the bulk of its stores in China were shut down “for safety violations.” Given the potential for China to see ROK SSNs as a threat to its SSBNs, it is possible that China might respond in a similar fashion should South Korea develop this capability.

| Planned and Recently Completed SSK Acquisitions in the Indo-Pacific |
|-----------------------------|---|
| India                       | 24 |
| Taiwan                      | 8  |
| Australia                   | 6  |
| Vietnam                     | 6  |
| Indonesia                   | 5  |
| Thailand                    | 3  |
| Singapore                   | 2  |
| Bangladesh                  | 2  |
| Philippines                 | 2  |

Note: SSK = conventional attack submarine.

China also might respond to this system by threatening key U.S. interests across the Indo-Pacific. For instance, it could relax further its implementation of sanctions against North Korea. This would undercut U.S. (and ROK) attempts to compel North Korea to denuclearize. Alternatively, China might intensify its militarization of the South China Sea. It could ramp up its interference with U.S. freedom-of-navigation operations and surveillance flights and deploy new capabilities to its expanding network of military facilities throughout the disputed waterway. This would undercut the allies’ efforts to maintain free and open access to the South China Sea.

**U.S.-ROK-Japan Trilateral Cooperation**

An ROK SSN program also might threaten delicate ROK-Japan ties, undercutting recent U.S.-led trilateral cooperation. Relations between Japan and South Korea have been beset by numerous challenges, including a territorial dispute over the Liancourt Rocks (known as Dokdo in Korea and Takeshima in Japan) and contention related to Japan’s imperial history. Given these tensions, Japan might see an ROK SSN program as a threat to its own maritime security. In particular, Japan could grow concerned that South Korea might deploy its SSNs to assert control more actively over the Liancourt Rocks.

ROK-Japan relations already are relatively poor. Despite a recent bilateral agreement between Japan and South Korea over compensations for former “comfort women” in Korea—women who were forced into sexual slavery for the Imperial Japanese Army during the Second World War—this issue has continued to disrupt positive relations between the two states. Similarly, South Korea and Japan have become locked in a dispute over whether Japanese firms should be compelled to provide compensation for forced labor during the country’s colonial rule over Korea. Overall, the publics in both countries have largely negative perceptions of one another; a Genron-NPO survey found that 48.6 percent of Japanese and 56.1 percent of South Koreans had negative impressions of the other state in 2017. Japanese fears over an ROK SSN program might serve to exacerbate bilateral tensions further.

Damaged relations between South Korea and Japan could undercut the significant U.S. interest in stronger U.S.-ROK-Japan trilateral cooperation. The United States long has sought to strengthen coordination between its two most important allies in the Indo-Pacific despite their historical animosity. Trilateral coordination improves the allies’ ability to pursue key common objectives, including protecting shared SLOCs and the maritime commons, confronting the DPRK’s growing nuclear capabilities, and maintaining a stable regional balance of power. The 2016 General Security of Military Information Agreement, which improved intelligence and information sharing among the three militaries, represented a major improvement in trilateral cooperation. Nevertheless, progress toward
trilateral cooperation remains tenuous at best and could be disrupted by an ROK SSN program.

Nuclear Proliferation Concerns

A nuclear propulsion system could improve the ROK’s latent nuclear capabilities, undermining U.S. nonproliferation objectives. Joseph Pilat defines nuclear latency as “the possession of many or all of the technologies, facilities, materials, expertise (including tacit knowledge), resources and other capabilities necessary for the development of nuclear weapons, without full operational weaponization.”46 If South Korea were to fuel SSNs independently, its latent nuclear capabilities would be enhanced in several ways. SSN reactors require enriched uranium. Uranium enrichment, currently restricted under the U.S. Atomic Energy Act, section 123 (also known as the 123 agreement), is a key prerequisite for a functional nuclear program. Still more problematically, the most powerful SSN reactors use HEU containing over 20 percent U-235. As table 3 emphasizes, many of the leading global navies rely on SSNs fueled by HEU. HEU is fissile material—often 90 percent or more U-235—that can be used to develop a nuclear weapon. That being the case, ROK production of HEU would strengthen substantially the country’s latent ability to produce nuclear weaponry and would pose serious nonproliferation challenges.

SSN reactors also would produce uranium waste that would need a disposal plan. Some in South Korea have argued that reprocessing (including pyro-processing) is required to manage the ROK’s dwindling storage space for spent fuel. As with uranium enrichment, reprocessing—a process that can be used to produce plutonium—can serve as the basis for a nuclear weapons program. Overall, fueling and operating SSN naval reactors would bring South Korea closer to mastering the full nuclear fuel cycle, which would advance its latent nuclear capabilities.

Other states have used naval reactor programs for this purpose. In the 1970s, for instance, Brazil used work on its naval reactor as part of a broader push to conquer the nuclear fuel cycle and potentially develop a nuclear weapon.47 Iran similarly has threatened to use work on a naval reactor to advance its latent nuclear capability. In 2012, during negotiations over the Iranian nuclear accord,

### TABLE 3
SSN FUEL ENRICHMENT LEVELS BY COUNTRY

<table>
<thead>
<tr>
<th>Country</th>
<th>SSN Fuel: Level of Enrichment (% U-235)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>HEU (93–97.5)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>HEU (93)</td>
</tr>
<tr>
<td>Russia*</td>
<td>HEU (40)</td>
</tr>
<tr>
<td>India</td>
<td>HEU (40)</td>
</tr>
<tr>
<td>Brazil*</td>
<td>LEU (18–19)</td>
</tr>
<tr>
<td>France</td>
<td>LEU (5–7.5)</td>
</tr>
<tr>
<td>PRC</td>
<td>LEU (3–5)</td>
</tr>
</tbody>
</table>

Notes:
HEU = highly enriched uranium; LEU = low-enriched uranium; PRC = People’s Republic of China; SSN = nuclear-powered attack submarine.
* Third- and fourth-generation SSNs.
* Experimental reactor.

Iran announced it would be developing an SSN; this constituted an attempt to strengthen its bargaining position by threatening to advance its latent nuclear potential. Similarly, in 2017, Iran resumed its work on this naval reactor to put pressure on the new U.S. administration.

**Opportunity Costs**

An ROK SSN program also would bring with it sizable opportunity costs. The ROK’s planned budget for 2019 was roughly $415 billion and included around forty-two billion dollars in defense spending—an 8.2 percent increase year over year. Yet although ROK military expenditure is increasing, it is far from unlimited. While an SSN fleet would provide a dramatic and powerful new capability for the ROK Navy, the funds required for the project would have to be diverted away from other programs that could advance allied interests. More specifically, this qualitative improvement could come at the expense of quantitative increases to the ROK naval arsenal. Alternatively, this funding could be used for missile defenses, air forces, or ground forces, or it could be invested in the ROK economy.

A simple comparison illustrates the opportunity costs of an ROK SSN. Table 4 highlights some of the potential alternative systems and equipment in which South Korea could invest to strengthen its ability to deter and defeat North Korea and better secure the maritime commons. If we assume that an ROK SSN would have a per-unit cost similar to that of Virginia-class SSNs—around $2.5 billion each—this would mean that for the price of a single SSN South Korea almost could acquire three of its most advanced guided-missile destroyers (of the Sejong the Great, KDX-III class) to augment its growing blue-water capabilities.

### Table 4
**The Comparative Cost of SSNs**

<table>
<thead>
<tr>
<th>Name of Equipment/Platform</th>
<th>Type of Equipment/Platform</th>
<th>Cost per Unit (U.S.$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia class</td>
<td>Nuclear attack submarine</td>
<td>$2.5 billion</td>
</tr>
<tr>
<td>Sejong the Great class</td>
<td>Guided-missile destroyer</td>
<td>$923 million</td>
</tr>
<tr>
<td>Jangbogo III class</td>
<td>Diesel-electric attack submarine</td>
<td>$900 million</td>
</tr>
<tr>
<td>THAAD battery</td>
<td>Ballistic-missile defense system</td>
<td>$800 million</td>
</tr>
<tr>
<td>Son Won-il class</td>
<td>Diesel-electric attack submarine</td>
<td>$300 million</td>
</tr>
<tr>
<td>Dokdo class</td>
<td>Amphibious assault ship</td>
<td>$288 million</td>
</tr>
<tr>
<td>P-8 Poseidon</td>
<td>Antisubmarine warfare aircraft</td>
<td>$256.5 million</td>
</tr>
</tbody>
</table>

Note: THAAD = terminal high-altitude area defense.

Alternatively, to improve its ASW capabilities, South Korea could use this money to increase the quantity of its undersea assets vastly. For the price of a single SSN it almost could acquire three new advanced Jangbogo III–class SSKs or as many as eight smaller Son Won-’il–class SSKs. South Korea also could upgrade its missile-defense capabilities significantly, adding three new THAAD missile defense batteries for around the same price. The allies could benefit significantly from the addition of any of these other capabilities.

The preceding section emphasizes that an ROK SSN program may create some significant challenges for key U.S. interests in the Indo-Pacific. Several of these hazards might make the United States think twice about supporting an ROK SSN program. Nonetheless, U.S. coordination with South Korea can help offset some of those risks. More importantly, as will be highlighted below, U.S. assistance with an ROK SSN program could benefit both countries’ interests in several important ways.

THE CASE FOR U.S. SUPPORT

Managing Risks
If the United States provides support and assistance to South Korea in developing an SSN fleet, it is likely to have greater influence over how South Korea pursues the program. In particular, the United States would be better positioned to dampen potential ROK-Japan tensions and address nonproliferation challenges. In contrast, if the United States refrains from supporting an ROK SSN program it sacrifices any leverage it might be able to exercise over how South Korea designs or uses its SSN fleet.

U.S. participation in an ROK SSN program could improve America’s ability to prevent unnecessary tensions between Japan and South Korea. First, as Japan’s closest ally, the United States is well positioned to reassure Japan that U.S.-ROK cooperation on an SSN program is not intended to threaten Japan’s maritime security. Indeed, given the substantial overlap between Japanese and ROK interests in deterring North Korea and preserving a secure, stable Indo-Pacific, Washington could work to convince Tokyo that Japan stands to gain from enhanced ROK naval capabilities. Second, the United States could leverage its support for the ROK’s SSN program to encourage South Korea to amplify its maritime cooperation with Japan. This could include expanding existing trilateral naval exchanges, maritime exercises, and intelligence-sharing arrangements. If the United States chooses to remain uninvolved in the ROK’s SSN development, however, Japan likely will see the program as more threatening and South Korea may be less willing to work more closely with Japan on maritime security.
U.S. leverage also should improve Washington’s ability to mitigate nonproliferation concerns created by an ROK SSN program. In particular, the United States could work to convince South Korea to use low-enriched uranium (LEU) rather than HEU. LEU is not fissile and would be more difficult to convert into a nuclear weapon, so it would pose far fewer proliferation concerns. The United States also could offer to provide South Korea with the fuel necessary for an LEU SSN, removing the need for South Korea to enrich its own fuel. This would dampen further the effect of an SSN program on the ROK’s latent nuclear capabilities. However, if the United States withholds support for the ROK’s SSN development it may find it more difficult to persuade South Korea to address U.S. nonproliferation concerns.

Alliance Cohesion
A U.S.-assisted ROK SSN program would have substantial ramifications for the strength of the U.S.-ROK alliance relationship. First, support would serve as a clear and credible signal of U.S. commitment to the alliance, reducing the ROK’s fear of abandonment. Public affirmations of alliance commitment are relatively “cheap” and therefore not particularly credible unless accompanied by costly signals that uncommitted states would be unwilling to issue. Since U.S. support for an ROK SSN program would involve transferring sensitive technology and expertise, it would serve as a credible signal of U.S. commitment to its alliance with the ROK. Second, the transfer of sensitive technology and expertise would help highlight the enduring benefits of the alliance for South Korea. By reducing the ROK’s fears of abandonment and increasing the direct benefits of its partnership with the United States, assistance would shore up the strength of this critical alliance.

Conversely, a U.S. decision to oppose an ROK SSN program likely would cause significant damage to the U.S.-ROK alliance. Several ongoing trends have weakened this important alliance already. President Donald Trump’s transactional perspective on U.S. alliance relationships, expressed both on the campaign trail and while in office, has caused some concern in South Korea over the strength of the U.S. commitment to ROK security. The recent decision to cancel ULCHI FREEDOM GUARDIAN and other major military exercises with South Korea to accommodate DPRK demands has contributed further to the ROK’s fears of abandonment. Alarmingly, polling data indicate that ROK citizens increasingly believe that the United States does not take the ROK’s national interests into consideration when determining policy. Were U.S. policy makers to oppose the ROK’s SSN program actively, this likely would reinforce these growing fears of abandonment in South Korea. This in turn might lead South Korea to hedge against abandonment by jumping on the PRC bandwagon, appeasing North
Korea, or balancing against these threats by initiating a nuclear-weapons program. None of these possible courses would advance U.S. national interests.

The United States has used the transfer of military technology to reinforce its alliances and security partnerships successfully in the past. U.S.-U.K. cooperation on naval nuclear propulsion in the late 1950s provides a telling example. The U.S.-U.K. dispute during the divisive Suez crisis in 1956 left President Dwight D. Eisenhower looking for a way to reinforce the shaken alliance with the United Kingdom. At the same time, Eisenhower hoped to build up British military capabilities so that the United Kingdom, and NATO more broadly, could assume more responsibility for the growing burden of deterring an increasingly powerful Soviet Union. To accomplish these objectives, Eisenhower sought to transfer naval nuclear technology to assist the United Kingdom in developing its own SSN. Under the leadership of Admiral Hyman Rickover, USN, and Admiral Louis Mountbatten, RN, the allies began sharing technological knowledge about naval nuclear propulsion to strengthen their alliance and reinforce the United Kingdom’s independent capabilities.

Although U.S. domestic politics complicated this process, in 1958 the allies succeeded in creating the U.S.-U.K. Mutual Defense Agreement, which authorized the transfer of nuclear propulsion technology between the allies. This included the sale of an American-made Westinghouse S5W naval nuclear reactor to the United Kingdom and the training of British submariners in the United States. This allowed the United Kingdom to develop its first SSN—HMS Dreadnought—powered by the S5W. It also facilitated the development of the United Kingdom’s first fully indigenous SSNs, the Valiant class, powered by the “son of S5W,” a Rolls-Royce pressurized-water reactor. This cooperation had a major impact on the strength and cohesion of the U.S.-U.K. alliance. On completion of HMS Dreadnought, U.K. leaders praised the U.S. contribution to British naval capabilities. Two leading RN officers later remarked that the “UK’s debt to the U.S. Navy, and to Admiral Rickover in particular, is incalculable.”

Just as importantly, U.S. decisions to withhold capabilities from allies have undermined alliance cohesion in the past. In the 1970s, for instance, President Jimmy Carter’s decision to block the sale of the F-16 fighter jet to South Korea further compounded the ROK’s concerns about abandonment amid an intra-allied dispute over the ROK’s human rights practices. Similarly, Japan’s attempt to acquire the F-22 fighter jet from the United States late in the first decade of the twenty-first century came to be seen as a litmus test of U.S. commitment to the alliance. The reluctance to transfer the F-22, because of the sensitive technology involved, was framed in Japan as a sign that the United States was less than fully committed to Japan’s defense. This contributed to Japan’s emerging concerns
about abandonment amid the American financial crisis and its decision to delist North Korea as a state sponsor of terrorism.

**Coercive Diplomacy with North Korea**

An SSN program also could strengthen the allies’ coercive diplomacy toward North Korea. *Coercive diplomacy* here refers to the allies’ efforts to convince North Korea to comply with their will through threats to use force.\(^6^2\) The United States and South Korea use coercive diplomacy to deter DPRK aggression and compel an end to the DPRK’s advancing nuclear and missile programs, including its SLBM program. An ROK SSN program could assist with this task by serving as a signal of resolve, strengthening deterrence by denial, and providing a useful asset for gunboat diplomacy.

An SSN program could be employed as a powerful signal to North Korea of the allies’ resolve to secure the Korean littoral and prevent the continued advancement of the DPRK’s nuclear and missile capabilities. SSNs are expensive, controversial, and technically challenging platforms, given the nuclear technology required for their development and operation. The ROK’s willingness to bear the costs of acquiring and operating this platform would serve as a credible signal reinforcing the ROK’s unwillingness to tolerate the DPRK’s illicit weapons programs. Furthermore, as mentioned above, support by the United States would serve as a credible signal of its resolve to defend South Korea against emerging challenges. By sinking funds into their defenses that irresolute states would be unwilling to commit, the allies would reduce the chances that North Korea will underestimate their commitment to their defense.\(^6^3\)

ROK SSNs also could help dissuade North Korea from developing, deploying, or using SLBMs and SSBs through the threat of denial.\(^6^4\) Current ROK ASW capabilities are relatively limited, despite the recent acquisition of new ASW helicopters.\(^6^5\) An SSN fleet would provide a strengthened ASW capability, improving the ability of the ROK fleet to track and eliminate DPRK submarines. In peacetime, SSNs could rely on their exceptional endurance (see table 5) to loiter for extended periods concealed beneath the surface at a safe distance from DPRK submarine bases such as Mayang Do to monitor SSB activity using passive sonar. In contrast, SSKs would struggle with this task, as they are required to surface periodically; even with AIP technology, the ROK’s most advanced submarines can transit for only two weeks or so without snorkeling. If a DPRK SSB were to deploy, the ROK SSN also could tail and monitor the SSB indefinitely, with or without the assistance of allied destroyers and U.S. P-3 Orion aircraft.

Just as importantly, in the event of a conflict ROK SSNs could eliminate preemptively the threat that DPRK SLBMs posed. As highlighted in table 5, SSNs’ superior speed would give them an edge over the ROK’s current SSKs in finding and eliminating the DPRK’s SSBs at sea before they could surface to deploy
SLBMs—“killing the arrow.” Alternatively, if the SSNs were equipped with vertical-launch systems and cruise missiles, they could target DPRK ports directly before DPRK submarines put to sea—“killing the archer.”66

SSNs would amplify the ROK’s ASW capabilities significantly and thereby reduce the DPRK’s incentives to continue pursuing an SLBM capability or to deploy any SSBs that it develops.67 If North Korea appreciates that SSBs will be unable to provide it a secure second-strike capability, given the allies’ ability to destroy this capability preemptively, it may be less willing to bear the significant cost of further developing this challenging technology. Furthermore, if North Korea understands that any SSB it does develop is likely to be tracked and could be eliminated if it puts to sea, it may be less likely to deploy these assets. If South Korea can deny North Korea the ability to use its SSBs, North Korea also will be less emboldened by any SLBM capability it acquires. Without the secure second-strike capability offered by an SSB, North Korea will find it riskier to engage in “salami-slicing tactics” or other steps short of war designed to undermine allied security.68

Finally, ROK SSNs could be particularly useful as a tool for gunboat diplomacy. Gunboat diplomacy refers to states’ deployment and maneuvering of naval assets to signal capabilities and resolve to an adversary during a dispute. SSNs, able to move stealthily and remain concealed for extended periods, can be surfaced in sensitive areas as implicit threats.69 This gunboat diplomacy would highlight the ROK’s ability to strike key DPRK maritime capabilities, serving as a useful reminder of the costs of conflict with the allies.

States frequently have relied on naval capabilities to bolster coercive diplomacy. President Ronald W. Reagan used a major naval buildup coupled with the publicly released 1986 Maritime Strategy (work on this began in 1982 with a classified briefing) to signal U.S. resolve to resist Soviet revisionism and maintain maritime supremacy.70 As one of the strategy’s key architects, Secretary of the Navy John Lehman, argued, “a key element of the 1982 Strategy was signaling America’s renewed commitment to naval power to both our adversaries

### TABLE 5
THE ADVANTAGES OF NUCLEAR PROPULSION FOR ASW

<table>
<thead>
<tr>
<th>Platform</th>
<th>ROK Jangbogo III Class</th>
<th>USN Virginia Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propulsion</td>
<td>Diesel-electric with AIP</td>
<td>Nuclear: S9G reactor</td>
</tr>
<tr>
<td>Endurance</td>
<td>2 weeks</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Top speed (submerged)</td>
<td>20 kt</td>
<td>35 kt</td>
</tr>
</tbody>
</table>

Notes: AIP = air-independent propulsion; kt = knots; ROK = Republic of Korea.

and allies.” The *Maritime Strategy* also bolstered deterrence by denial through strengthening naval war-fighting capabilities, allowing the United States to deny to the Soviets the ability to interdict U.S. supply lines to Europe. Furthermore, it augmented U.S. ability to hold Soviet SSBNs at risk, raising the cost to the Soviet Union should it engage in conventional escalation in Europe.72

British military operations around the Falkland Islands provide particularly useful insights into the utility of SSNs for deterrence. In 1977, Operation JOURNEYMAN saw British SSNs deployed to the waters surrounding the contested islands successfully deter Argentine encroachment.73 Again, in 1982, during the Falklands War, the presence of several British SSNs helped deter Argentina from operating in the British-delineated military exclusion zone. Furthermore, after a U.K. SSN, HMS Conqueror, sank an Argentine light cruiser, ARA General Belgrano, the entire Argentine navy remained consigned to port, unable to put to sea for fear of being destroyed by British SSNs. Subsequently, Britain was able to secure control of the sea and cut off Argentine ground forces on the Falklands from sea supply.74

Russia’s frequent use of SSNs for gunboat diplomacy during the Cold War similarly highlights the platform’s usefulness for coercive signaling. As Brent Ditzler argues in a 1989 thesis, “In what has become a standard pattern, a portion of the Soviet submarines involved in exercises and other diplomatic shows of force, routinely surface for prolonged periods and/or subsequently make highly visible port calls to friendly nations in the vicinity. This exposure is tactically unnecessary, and can therefore be assumed to have some diplomatic meaning.”75 Reinforcing this argument, a retired Russian admiral argues that during the 1971 Indo-Pakistani War, the Soviet navy used SSNs for the express purpose of gunboat diplomacy: “The Chief Commander’s order was that our submarines should surface when the Americans appear. It was done to demonstrate to them that we had nuclear submarines in the Indian Ocean. So when our subs surfaced, they recognized us. In the way of the American Navy stood the Soviet cruisers, destroyers, and atomic submarines equipped with anti-ship missiles.”76

**Allied Blue-Water Collaboration**

SSNs also would offer South Korea the ability to bolster its emerging blue-water naval capabilities, strengthening the U.S.-ROK alliance’s global maritime potential. Presently, South Korea is limited largely to green-water capabilities; it prioritizes the defense of Korean littoral waters rather than operations on the high seas or in foreign littoral waters.77 Its primary existing blue-water assets are the advanced *Chungmugong Yi Sun-shin* (KDX-II) and *Sejong the Great*-class (KDX-III) destroyers, as well as the *Dokdo*-class amphibious assault ship, which was designed as the centerpiece of a future rapid-response fleet.78 Currently, the underwater support for *Dokdo* and the KDX destroyers
is limited to the Son Won-il– and Jangbogo III–class SSKs, which would limit the range and speed of the rapid-response fleet.\(^7\) As highlighted by table 6, an SSN could provide better support for this blue-water fleet, allowing it to move faster and farther from friendly ports. Just as importantly, the SSN fleet could operate independently in blue-water environments, given SSNs’ speed and virtually unlimited range and endurance. Overall, an ROK SSN program would constitute a key step toward a more effective rapid-response fleet and a stronger blue-water capability.

The greater blue-water capabilities conferred by an ROK SSN fleet could allow the U.S.-ROK alliance to contribute more actively to regional and global security beyond the Korean Peninsula. South Korea could employ these assets to assist the United States in patrolling and protecting SLOCs throughout the Indo-Pacific. Indeed, South Korea already has demonstrated its interest in assuming a broader role in global sea-lane security alongside the United States, contributing forces to protecting shipping lanes against piracy in the distant Gulf of Aden.\(^8\) South Korea also could use its strengthened blue-water capabilities to track and interdict illegal shipments bound for North Korea, in line with the Proliferation Security Initiative. Furthermore, rapid-response fleets escorted by SSNs could contribute more quickly and effectively to peacekeeping, humanitarian, and counterpiracy operations abroad. ROK SSNs also could support USN operations throughout the Indo-Pacific by escorting and assisting carrier strike groups.\(^9\)

These contributions would serve to strengthen the allies’ expanding “global partnership.”\(^10\) As Presidents Moon and Trump highlighted in their joint statement in June 2017, “United States–ROK cooperation on global issues is an indispensable and expanding aspect of the Alliance.”\(^11\) A U.S.-ROK partnership with a greater blue-water capability and focus would represent a significant step toward the collaborative approach to maintaining global maritime security envisioned by A Cooperative Strategy for 21st Century Seapower, first published in 2007, updated in 2015. The USN strategy emphasizes “the potential for a global network of navies that brings together the contributions of like-minded nations and organizations around the world to address mutual maritime security challenges and respond to natural disasters.”\(^12\) To help move toward this network, the strategy document states that the United States will “support our allies and partners through training, exercises, and the provision of capabilities, via foreign military sales and financing, to increase their capacity to address maritime security challenges.” The rationale behind the Cooperative Strategy’s “global network,” which builds on the “1,000-ship navy” coalition concept advocated by Admiral Mike Mullen, USN (Ret.), is sound.\(^13\) The United States needs stronger partnerships with more-capable regional navies to help defend against the emerging threats to the maritime commons. The PRC’s growing assertiveness throughout the
Indo-Pacific maritime commons is of particular concern. Friendly navies willing to assume greater responsibility and acquire more-robust capabilities are a welcome prospect; while the United States will continue to bear much of the burden for maritime security throughout the world, it cannot carry the load alone. South Korea is uniquely well positioned to form a key part of this partnership in the Indo-Pacific, strengthening and broadening the U.S.-ROK alliance.

The role of SSNs in enhancing a maritime power’s blue-water and power-projection capabilities is recognized widely. The Soviet Union relied on SSNs as the basis for its blue-water fleet, rather than a large surface fleet or naval aviation. Brazil’s fledgling SSN program is viewed similarly as the centerpiece of a new blue-water navy. The United States also regularly uses SSNs as part of its forward-deployed naval presence—both independently and as support for its carrier battle groups—far from its shores.

U.S.-U.K. cooperation on the U.K. SSN program in the 1950s helped the United Kingdom assume a bigger role in allied blue-water operations to counter the Soviet Union at sea. The United Kingdom was able to contribute more to allied intelligence, surveillance, and reconnaissance on the Soviet navy farther from U.K. shores because of the added endurance and sensor capabilities of its SSNs. As Anthony Wells highlights, the two countries used their advanced capabilities to great effect: “[T]he United States and United Kingdom together built a data base on every Soviet submarine class and every hull within each class. . . . Speed, depth, operating characteristics, and crew performance could all be observed and recorded. . . . The superior stealth of well-handled U.S. and U.K. submarines permitted penetration of the most sensitive and dangerous areas to observe and record weapons trials.” The U.K.’s SSNs not only strengthened the country’s contribution to its own defense; they also contributed directly to the defense of the United States by guarding the Iceland-Greenland gap. Similarly, the United

### TABLE 6
THE ADVANTAGES OF NUCLEAR PROPULSION FOR POWER PROJECTION

<table>
<thead>
<tr>
<th>Boat</th>
<th>ROK Son Won-il Class</th>
<th>USN Virginia Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propulsion</td>
<td>Diesel-electric with AIP</td>
<td>Nuclear: S9G reactor</td>
</tr>
<tr>
<td>Top speed (submerged)</td>
<td>20 kt</td>
<td>35 kt</td>
</tr>
<tr>
<td>Range (submerged)</td>
<td>420 nm at 8 kt</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Top speed (surfaced)</td>
<td>12 kt</td>
<td>25 kt</td>
</tr>
<tr>
<td>Range (surfaced)</td>
<td>12,000 nm at 6 kt</td>
<td>Unlimited</td>
</tr>
</tbody>
</table>

Notes: AIP = air-independent propulsion; kt = knots; nm = nautical miles; ROK = Republic of Korea.

Kingdom was able to use its SSNs to project power across the Atlantic Ocean during the Falklands War.

Overall, an ROK SSN program presents a host of potential benefits and risks for the U.S.-ROK alliance. As this article argues, such an SSN program could undercut Sino-allied and ROK-Japan relations, lead to fears about ROK latent nuclear capabilities, and incur sizable opportunity costs. These costs merit serious consideration. Nonetheless, the United States would stand to gain significantly by assisting its ally in acquiring this capability. Such a policy would strengthen the U.S.-ROK alliance’s cohesion, coercive bargaining position, and blue-water capabilities. Playing an active role in the development of the ROK’s SSN program also would give the United States more leverage over the way in which this capability is developed, helping it better offset some of the program’s risks.

The underlying question—whether South Korea itself should pursue this program—is still up for debate. There is little doubt that such a project would be a truly herculean undertaking. Its advisability depends on the ROK’s strategic vision for itself. If South Korea is content with securing only its immediate territory using a powerful land force and a green-water navy well suited for littoral operations, then an SSN fleet may be superfluous. If, however, South Korea wishes to become a blue-water power, capable of projecting power and contributing to the security of far-flung SLOCs, SSNs may be indispensable.

NOTES

1. The Moon administration has emphasized repeatedly that South Korea “needs nuclear submarines in this era.” South Korea has mentioned its desire for this asset several times in high-level talks with the United States, has commissioned a civilian study of the feasibility and desirability of the project, and has developed a military task force to consider the development of an ROK SSN. Jun Ji-hy, “South Korea Moving to Build Nuclear-Powered Submarines,” Korea Times, 20 September 2017, www.koreatimes.co.kr/.

2. The authors are grateful to an anonymous reviewer for highlighting this point.


4. Ibid.


35. Groll and De Luce, “China Is Fueling a Submarine Arms Race.”


40. Swaine, “China’s Views on South Korea’s Deployment of THAAD.”


57. Ibid.


67. Snyder, Deterrence and Defense.

68. Schelling, Arms and Influence.


75. Ibid.


79. Arthur Dominic J. Villasanta, “Another of South Korea’s Largest Warships Set to Launch
81. Sukjoon Yoon, “Expanding the ROKN’s ASW Capabilities to Deal with North Korean SLBMs,” PacNet, no. 31 (28 May 2015).
88. Sanchez, “The Status of Brazil’s Ambitious PROSUB Program.”
In the development of military professionals, the historical record is an invaluable resource for those who choose to study and reflect on the infinite variables that affect strategic planning. On January 28, 1944, Admiral Harry E. Yarnell addressed a meeting of the American Military Institute. In a speech entitled “The Utility of Military History” the admiral expressed how “[t]he value of military history to the student lies in the fact that when he is in possession of all the information regarding a certain operation, he can evaluate the good and bad points of a campaign or operation, and, through the lessons learned, be more qualified as a leader to carry out actual operations in time of war.”

Yarnell spoke from experience as a planner in two world wars and from the perspective of a career that uniquely equipped him to examine naval planning following those wars. Although forgotten and unheralded as a strategist and planner, Yarnell left writings that contain numerous lessons learned, or truisms, to which he adhered during his naval career. Several of these lessons revealed themselves during his planning experiences from 1918 to 1920, molded in part by the academic training and intellectual refinement he received from studying at the Naval War College (NWC). Yarnell’s lessons, reinforced during the interwar period, guided his thoughts on planning and in his postretirement work for the Office of the Chief of Naval Operations (OPNAV) during World War II.
Yarnell’s naval career prior to World War I provided him with extensive Far East experience. After graduation from the U.S. Naval Academy in 1897, he served on board the battleship USS *Oregon* (BB 3) and participated in its cruise from San Francisco around South America to Cuba during the Spanish-American War. After completing his final examinations and receiving his commission as an ensign, he returned to the Pacific and served on board a gunboat during the Philippine-American War in 1899 and with the China Relief Expedition during the Boxer Rebellion in 1900. In his next assignment, as an aide to Asiatic Fleet commander Rear Admiral George Remey, Yarnell worked alongside Fleet Intelligence Officer and Inspector of Target Practice Lieutenant William S. Sims—forming a relationship with the young maverick that would blossom in the years to come.

Returning stateside in 1902, Yarnell served in and commanded torpedo boats and destroyers, with time aboard USS *Biddle* (TB 26), USS *Dale* (DD 4), USS *Stockton* (TB 32), and USS *Barry* (DD 2). During his time aboard *Barry*, Yarnell returned to the Asiatic Fleet via the Suez Canal, at which point he took command of *Dale* in April 1904. Yarnell returned to the United States in April 1905 for over a year of shore duty at the Naval Proving Ground, Indian Head, Maryland, before joining the battleship USS *Connecticut* (BB 18) in September 1906 for its commissioning and around-the-world voyage with the Great White Fleet.

Prior to the grand cruise, however, the Navy tried Yarnell before a general court-martial for “culpable inefficiency in the performance of duty” and “neglect of duty” as officer of the deck when *Connecticut* ran aground near entering the harbor at Culebra, off Puerto Rico, on January 13, 1907. The court acquitted Yarnell of all charges.

Upon the battleship’s return to the United States, Yarnell served a tour at the Naval Torpedo Station, Newport, Rhode Island, from 1909 to 1911, with follow-on assignments first as fleet engineer for the Atlantic Fleet and then as navigator in the battleship USS *New Jersey* (BB 16), during which the ship participated in the 1914 Veracruz occupation.

In July 1914, then–lieutenant commander Yarnell received orders to attend the NWC long course. He presumably was pleased with this appointment, as he recently had published an article in the U.S. Naval Institute *Proceedings* emphasizing how practical experience at sea, together with applying fundamental principles of strategy and tactics, enabled greater efficiency within the fleet.

Although he was already familiar with the writings of Rear Admiral Alfred Thayer Mahan and Carl von Clausewitz, the sixteen-month course introduced Yarnell to the “applicatory system” of instruction, which taught strategy and
command via war games. Adopted from the Army War College in 1911–12, this three-part system revolved around preparing an “estimate of the situation,” writing orders, and evaluating these orders via war games or staff rides. The “estimate of the situation” provided a logical approach that could be applied consistently to evaluate a military or naval problem and ascertain a course of action through a series of steps and decisions. A student needed to derive a clear mission statement; consider probable enemy strength and intentions; assess one’s own forces’ strength, capabilities, and disposition; evaluate the effectiveness of possible courses of action; and reach decisions regarding a final course of action. A student then would use his individual estimates as the foundation for drafting standardized-format orders that could be wargamed for evaluation.\(^6\)

Yarnell benefited from his NWC experience. The College provided an officer with an environment “where ideas, facts, and logic were of greater importance than rank and name,” argues historian Gerald E. Wheeler.\(^7\) Studies of tactics, strategy, policy, and logistics prepared Yarnell to produce strong, analytically sound estimates and to game his solutions, all while being guided to further derive and strengthen general principles from his studies and discussions among peers.\(^8\) Use of Clausewitz in the curriculum and the discussions most likely reinforced for Yarnell particular principles when developing strategic plans—namely, the coordination between military leadership and civilian policy makers, drawing from the Prussian general’s maxim: “War is merely the continuation of policy by other means.”\(^9\) After graduation, Yarnell stayed on the NWC staff under the presidency of Rear Admiral Austin M. Knight, a reformer akin to Sims in many respects, and one whose views, notably on a unified military department, Yarnell shared.\(^10\)

For his follow-on assignment, Yarnell returned to sea as commanding officer of the gunboat USS Nashville (PG 7). Following American entry into World War I in April 1917, Nashville in August received orders to steam to Gibraltar to join other Allied warships patrolling the waters for enemy submarines. That October, Yarnell went ashore after receiving orders assigning him as temporary American base commander at Gibraltar, and on November 25, 1917, he assumed additional duties as chief of staff to Rear Admiral Albert P. Niblack, Commander, Squadron 2, Patrol Force, Atlantic Fleet.\(^11\)

Concurrently in London, now–vice admiral Sims, in his role as Commander, U.S. Naval Forces Operating in European Waters, was steadily building up his forces to support the Allied war effort. For several months, Sims maintained a robust correspondence with Chief of Naval Operations (CNO) Admiral William S. Benson requesting additional personnel for his headquarters to develop a planning section to coordinate with the British Admiralty. Collectively, the Allied planners would develop plans for aggressive operations against the Imperial German Navy, such as the April 1918 British raid on the Belgian port of
Sims suggested a staff composed of War College–educated, up-and-coming younger officers—and the list included Yarnell. In November 1917, Sims at last received Benson’s approval to establish a planning section composed of three War College graduates: Commander Dudley W. Knox, Captain Frank H. Schofield, and a third man to be named later—Yarnell. A fourth section member, Colonel Robert H. Dunlap, USMC, arrived in March 1918.

In December 1917, Knox, Schofield, and Yarnell established the American Naval Planning Section London. Free of administrative duties, the officers devoted all their time to surveying operations, discovering mistakes, suggesting improvements, and preparing plans for future operations. Essentially they were delivering to the force commander a “continuous Estimate of the Situation”—a method that Admiral Chester W. Nimitz employed decades later, albeit labeled a “Running Summary of [the] Situation.” The memorandums they produced mirrored the War College methodology. Yarnell participated in the drafting of forty-seven of the seventy-one London Planning Section memorandums, all developed in close consultation with Knox and Schofield.

Working under Sims and with his fellow planners, Yarnell refined some of his own ideas and advanced an understanding of the need for harmonization among
instruments of power. Principally, this meant coordination between political and military leaderships in developing both national and Allied strategy, as well as plans touching on information.\textsuperscript{17} Combined with his work at the Naval War College, Yarnell’s Planning Section experience “solidified his unification thinking,” writes historian Jeffery M. Dorwart. Yarnell believed that a merger of the Navy and War Departments would result in greater cooperation and better coordination among forces, in the interest of efficiency and economy of effort.\textsuperscript{18} Yarnell drew on the intellectual and informational resources of the Admiralty and from Italian and French naval planners to help guide his thinking.

Although the Planning Section work produced intellectually rigorous results, these did not always translate into success at sea, notably in the Adriatic.\textsuperscript{19} The planners’ work, however, did provide Sims and OPNAV with various courses of action when considering how to prosecute the war effort better.\textsuperscript{20}

The London Planning Section caught Washington’s attention, and by summer 1918 OPNAV increasingly depended on the London team for its own planning.\textsuperscript{21} In mid-July 1918, Benson cabled Sims of his desire to continue this work in Washington and ordered Sims to transfer Yarnell to OPNAV, sending Captain Luke McNamee to London in exchange.\textsuperscript{22} The CNO also requested that the London Planning Section prepare an outline of a plans organization based on recommendations from the war experience, the resulting memorandum for which accompanied Yarnell to Washington.\textsuperscript{23} Reporting to OPNAV in September, Yarnell served in the Planning Section under Rear Admiral James H. Oliver. Yarnell also received verbal instructions from Benson to sit on the Joint Army and Navy Planning Committee, which had been organized to “investigate, study, and report upon questions relative to the national defense and involving joint action of the Army and Navy.”\textsuperscript{24} Almost a full year later, in August 1919, two more officers, Captain William S. Pye and Lieutenant Commander Holloway H. Frost, joined the Planning Section. Together with the existing section, these men formed the OPNAV Planning (or Plans) Division; Yarnell described them as “capable youngsters with War College training and full of vim and vigor.”\textsuperscript{25} By 1922, the group became the War Plans Division, exclusively focused on planning for a range of war scenarios.\textsuperscript{26}

Yarnell’s work within the division from September 1918 to September 1920 drew heavily
from his experience in London. Rather than drafting memorandums concerning estimates of situations, Yarnell now focused on plans. For his first year, the planning was “usually administrative planning” on “comparatively minor subjects,” such as liaison work with the State Department, the study of international law, South and Central American policies and operations, and insular policy.  

But the time in London for Yarnell and his fellow Planning Section alumni, in the words of historian David F. Trask, “enlarged the horizons of naval expansionist thought,” notably through recognition of the increasing naval and diplomatic power and influence of the United States. Planning for future conflicts would center on the two most able naval powers, Great Britain and Japan.

Regarding those two powers, Yarnell gravitated toward a focus on the Pacific. His initial work with the division raised fundamental questions that were used to guide the overall planning process. With Germany defeated and with the United States lacking a stated enemy or a plan to confront one, Yarnell deemed the situation “like trying to design a machine tool without knowing whether the operator is going to manufacture hair pins or locomotives.” Two potent navies—those of Great Britain and Japan—challenged that of the United States, and in the immediate postwar period both countries were considered likely enemies owing to their alliance. But in a March 29, 1919, memorandum to acting CNO Rear Admiral Josiah S. McKean, Yarnell concluded, “It is apparent that our most probable enemy at the present time is Japan.” On August 12, 1919—the CNO’s last working day in office and the day after the Planning Division stood up—Admiral Benson approved Yarnell’s “Basic Plan of Procedure for the Pacific.” Yarnell refined his thinking later in September with his paper entitled “Strategy in the Pacific,” which the General Staff College and the Naval War College reprinted.

When the Joint Board met in October to discuss War Plan ORANGE, the U.S. strategic plan to defeat Japan, Yarnell raised additional questions about the basics of planning—notably, what the interests and policy of the nation were for the Far East. These and other queries, Yarnell concluded, required State Department input. This marked Yarnell’s growing conviction of the necessity for increased liaison among the different elements of national power, in this instance State Department diplomats and officers of the Navy and War Departments. Considering the emphasis today on coordinating instruments of power—diplomatic, information, military, economic, financial, intelligence, and law enforcement—Yarnell in 1920 demonstrated a perceptive grasp of the ways and means involved in deriving and carrying out a strategy.

Upon his detachment from the division, Yarnell drafted a memorandum of his own ideas, based on his planning experiences. He emphasized that Navy activities must rest on basic war plans, and that from these should flow a series
of plans for building programs, base projects, fleet organization, and personnel. For the War Plans Division itself, Yarnell stressed that it should be staffed with high-quality, War College–educated members, low in number but with good internal communication. Addressing the division’s current efforts, he emphasized consideration of economic efficiency in planning: “It is probably a safe statement to make that our naval efficiency would be doubled if every dollar was spent with that end in view, and only after the purpose for which spent had been referred to the war plans.” He concluded that the Plans Division’s future, “by hard steady work, all based on sound principles, and sound general plans,” was assured.34

Yarnell’s World War I planning experience produced an array of ideas and potential policy actions because it occurred within an intellectual environment of gifted NWC graduates. He benefited from ample opportunities to garner feedback from his work, from both uniformed American counterparts and Allied military personnel. Through his thinking on the virtues of unification, whether of forces or toward strategic alignment, Yarnell always sought to understand national policy and interests as the basis for planning a military strategy. A core tenet of efficiency underlined Yarnell’s planning, aiming to save resources, regardless of whom or what they represented.

INTERWAR EXPERIENCES AND RENEWED CONFLICT
The period stretching from Yarnell’s work in OPNAV to his retirement in the fall of 1939 found him prominently engaged in the growing naval aviation community. He commanded Naval Air Station Hampton Roads and the Aircraft Squadrons, Scouting Fleet from 1924 to 1926, followed by another staff assignment to the Naval War College in 1926–27. In July 1927, he reported to Naval Air Station Pensacola for flight instruction and received a naval aviation observer designation. In September 1927, Yarnell arrived in Camden, New Jersey, to oversee the fitting out and commissioning of the carrier USS Saratoga (CV 3) and served briefly as its first commanding officer.35

In September 1928, Yarnell achieved flag rank when he became chief of the Bureau of Engineering as a rear admiral. During his tenure he obtained German diesel engine technology to accelerate research and development in submarine engine propulsion.36 In the first quarter of 1930, he served additional duty as a naval adviser at the London Naval Conference, where his planning experience and technical knowledge supported Secretary of the Navy Charles F. Adams during the negotiations.37

Throughout the 1930s, Yarnell’s most prominent roles involved naval aviation exercises and senior command in the Far East. As Commander, Aircraft Squadrons, Battle Force from 1931 to 1933, Yarnell’s carrier force of USS Lexington
(CV 2) and Saratoga participated in Grand Joint Army-Navy Exercise No. 4 and achieved notable distinction by conducting a surprise carrier raid on Army installations on Oahu—providing a foretaste of Japanese actions nine years later. In the follow-on, Navy-only Fleet Problem XIII, which examined challenges posed in conducting offensive operations against central Pacific Japanese League of Nations mandates, Yarnell concluded that the Navy needed additional carriers to ensure success in a future Pacific war.  

As Commander in Chief, Asiatic Fleet from 1936 to 1939, Yarnell garnered international praise for his deft handling of challenges to American interests amid the outbreak of war between Japan and China. Having observed the fighting in and around Shanghai, Yarnell merged his ideas on naval aviation and Japanese interests with his old planning emphasis on unification and economy of force. In a letter of October 15, 1937, to CNO Admiral William D. Leahy, Yarnell sought to avoid the waste of World War I by advocating an economic and economical war, in particular a war “of strangulation, in short, an almost purely naval war in the Pacific as far as we are concerned.” A naval war of strangulation would entail using submarines, aircraft, and light forces with cruising endurance, economically employed, executing plans prepared in cooperation with the State, War,
and Navy Departments.\(^{39}\) Leahy shared Yarnell’s letter with President Franklin D. Roosevelt, who liked Yarnell’s approach, since it aligned with Roosevelt’s own thinking on confronting Japanese aggression.\(^{40}\)

These ideas were not new. Back on February 13, 1919, Yarnell had submitted a memorandum to CNO Benson about a campaign against Japan. It detailed American actions that would be essential in the event of a war against Japan, including moving the fleet to Honolulu, building ships capable of fighting across the Pacific, and attacking Japanese commerce. “The war on commerce will be a preponderating feature,” Yarnell wrote, “the one method by which we can defeat Japan[,] as she depends on food imports.”\(^{41}\) In a November 25, 1938, letter, Yarnell suggested to Leahy that the United States halt financial loans and shipments of war materials to Japan, while increasing American submarine, aviation, and cruiser forces to threaten Japanese supply lines.\(^{42}\) This letter included a study entitled “Situation in the Pacific.” Historian Michael Vlahos notes the near-verbatim similarity of Yarnell’s perspective regarding the Japanese in both the 1938 study and the May 1918 Memorandum No. 21, “U.S. Naval Building Policy,” which Yarnell had helped to write for Sims’s London Planning Section.\(^{43}\) Yarnell’s recommendations—-together with the Report of the Board to Investigate and
Report upon the Need, for Purposes of National Defense, and for the Establishment of Additional Submarine, Destroyer, Mine, and Naval Air Bases on the Coasts of the United States, Its Territories and Possessions, led by Rear Admiral Arthur J. Hepburn—historian Jeffery Underwood contends, merged with Roosevelt’s to shape the president’s Far Eastern foreign policy of deterrence toward Japan.44

In July 1939, Admiral Thomas C. Hart relieved Yarnell as commander of the Asiatic Fleet and Yarnell returned to the United States to be retired from active naval service.45 Upon arrival in Washington in late August, he met with a variety of senior State, Navy, and War Department officials to discuss matters in the Far East.46 In a memorandum to CNO Admiral Harold R. Stark, written on September 2, Yarnell reiterated his 1938 positions on planning for a Pacific war. Specific points included engaging in a naval war of “cruisers, submarines, and aircraft operating against lines of communication” and avoiding fighting the Japanese alone (i.e., without Allied support).47 In early October 1940, following the Japanese occupation of French Indochina, Yarnell met with Secretary of the Navy Frank Knox and recommended strengthening the Asiatic Fleet with aircraft, submarines, and cruisers.48 Writing to Stark after meeting with Knox, Yarnell offered his services to the Navy as a commander of escort or auxiliary vessels, recalling similar services that retired British admirals had performed during the First World War—an offer Stark politely declined.49

Yet while the Navy may not have been interested in Yarnell serving at sea, it was interested in his intellectual insights. On January 3, 1941, Yarnell reported for duty to Secretary Knox, who had decided to make use of his services as a general adviser, among other duties, until April, with follow-on assignments pertaining to industrial incentives, shipyard inspections, and awards boards. None of these leveraged Yarnell’s planning expertise or Far East experience but rather his Bureau of Engineering experience and analytic abilities.50 In his advising capabilities, Yarnell quickly drafted several brief memos to Knox, including one harping on the subject of wasted defense spending owing to the lack of a basic plan for national defense.51

On January 15, 1941, Yarnell submitted to Knox a memorandum entitled “Far Eastern Situation.” The memorandum arrived at an interesting moment: on the eve of the first “ABC” conference among U.S., British, and Canadian military staffs. Yarnell articulated to Knox Japan’s desire to avoid war with the United States if it could achieve its goals without conflict, for “[t]he cooler heads of Japan realize that war with the United States is almost tantamount to national suicide.” Since this dynamic shifted the strategic initiative to the United States, Yarnell endorsed coordinating and strengthening American and Allied air and naval forces in the Far East to blunt any Japanese movement farther south. Regarding
the Philippines, he advocated for strengthening air, antiair, and submarine forces in the Philippines as soon as possible—by taking these forces “at the expense of Panama and Hawaii, which are in no danger of attack until the situation in Europe is radically changed for the worse.” Yarnell presumably knew of discussions among the Americans, British, Dutch, Australians, and New Zealanders to form an alliance to blunt Japanese aggression, and may have drafted this memo to bolster the argument and efforts of Hart and the Asiatic Fleet to funnel increased aid to the Pacific rather than Europe. In either case, a week after Yarnell submitted his memo to Knox, Hart received word that no reinforcements would be going to the Asiatic Fleet.

In mid-January 1942, following American entry into World War II, Yarnell received orders assigning him as adviser to the Chinese military mission. In his own words, the mission was “interesting, but doesn’t do much to win the war”; he added, “I dislike a desk job, and I dislike Washington.” In August 1942, orders were cut to assign Yarnell to the General Board, but he spoke about the move to Knox, who promptly had these orders canceled. Instead, Yarnell requested sea duty at month’s end—“preferably in the Pacific”—but received from Knox a noncommittal response, stating that he would be ordered to sea duty “when and if a suitable billet is available.” So when the Chinese delegation was recalled in January 1943, Yarnell requested to be returned to the retired list. But he would make one last request for a sea assignment; on May 15, 1943, to Rear Admiral Randall Jacobs, chief of the Bureau of Personnel, Yarnell reiterated his October 1940 appeal to Stark, seeking active duty as a convoy commodore. Jacobs politely declined on the basis of Yarnell’s age of almost sixty-eight.

No sooner had the aged admiral returned to Newport in early 1943 than he received a request to go back to Washington to assist the Navy once again. In mid-February, Captain William D. Puleston—who himself had been retired but was serving in the Office of Economic Warfare Analysis—wrote to Yarnell and mentioned how Assistant Secretary of the Navy for Aviation Artemus L. Gates had expressed a desire for Yarnell to advise him on the future of naval aviation. Appealing to Yarnell, Puleston wrote, “If we get the correct plan for naval aviation settled, it will point the way to the naval-military policy for the post-war.” Yarnell evidently liked what he heard, writing to Gates within days to offer his services as an adviser.

Days later, Yarnell submitted a proposed plan of naval and military organization that cribbed from a similar plan he had submitted to the Chinese military mission. Among other points, the plan advocated a unified military command structure under a single civilian authority, again demonstrating his belief in the benefit of unification. Meeting with Gates in May and June, Yarnell discussed matters of naval aviation, which most likely included how to address public
efforts urging creation of an independent air force.\textsuperscript{62} Perhaps spurred by Gates, Yarnell wrote to Vice Chief of Naval Operations (VCNO) Vice Admiral Frederick J. Horne about the independent air force movement. With CNO Admiral Ernest J. King’s concurrence, the VCNO asked whether Yarnell would be interested in heading a board to study the matter; Yarnell agreed.\textsuperscript{63} King wrote Yarnell a follow-up letter about his acceptance, in which he thanked him for his willingness to serve, and added, “[Y]ou can expect to be asked for advice on a large variety of air—and other—matters.”\textsuperscript{64}

Mere days prior to receiving the invitation from Horne, Yarnell had drafted an article that articulated his views on unification and aviation independence that he had developed over his interwar career.\textsuperscript{65} Historian Clark Reynolds describes Yarnell’s unification article and forthcoming June 1943 investigation into naval aviation as having “stirred up several hornet’s nests in about three months” before the retired admiral “passed into obscurity.”\textsuperscript{66} Titled “A Department of War” and published in the August 1943 Proceedings, Yarnell’s article declares demobilization to be one of the major domestic problems confronting the nation. He asks “whether or not a thorough reorganization of our military departments is essential in the interest of efficiency and economy.”\textsuperscript{67} Having witnessed America’s costs in blood, time, and treasure in building forces for World War I, and then inefficiencies both nationally and with Allies in waging the war, Yarnell concludes that organizational independence had resulted in waste.

Yarnell proposes a new U.S. Department of War for the post–World War II era. He avers that the current organizational construct had disadvantaged American military aviation and he disparages the British model of three independent armed services—a thinly veiled swipe at American advocates of air force independence. Yarnell outlines a new organization that a civilian secretary would lead, overseeing a uniformed chief of staff who would oversee an Operations Division and a Material Division. The former would handle personnel procurement, training, and operations in war for the three service branches—army, navy, and air. The Operations Division chief also would act as commander in chief of all forces in time of war. The Material Division’s responsibilities would include design and procurement of all matériel for the armed forces. Under this proposal, all officers would attend a single military academy and all would receive aviation training. Upon graduation, officers would be assigned to one of the three uniformed branches. Officers for the Material Division would be drawn from leading technical colleges.

Yarnell believed his proposal would provide greater flexibility for the exchange of officers among branches; increase unity of command and mutual understanding among branches; and commit officers in the respective divisions to a career
of both designing and building the weapons of war, or training for the most efficient use of said weapons in time of war. The proposal, Yarnell argued, “would meet the requirements of modern war through a more logical force structure,” thereby assuring “the most efficient use of the sums appropriated by Congress for our national security.”68 The article bore the hallmarks of Yarnell’s planning philosophy refined over the decades, perhaps most of all regarding efficiency, both in economic matters and in the sharing of knowledge among personnel.

In late June 1943, Yarnell reported for duty in Washington to investigate aviation matters. Using a survey of active naval aviators, Yarnell’s effort examined both aviation issues and overall national defense organization. By coincidence, his survey arrived in aviators’ mailboxes at the same time that his Proceedings article reached wardroom tables. When summarized, the data from Yarnell’s survey reflected a belief that there had been a misuse of naval airpower in the war. The survey also revealed support for unification of the services under a single military secretary rather than an independent air force in direct competition with the Navy and War Departments.69

Admiral King did not implement all of Yarnell’s recommendations. However, some elements—notably the appointment of aviators to Admiral Nimitz’s staff—proved useful in the fast-carrier task force campaigns of 1944.70

DEMOBILIZATION PLANNING

Soon after receiving the aviation assignment, Yarnell received a second tasking: to prepare a plan for demobilizing the Navy and reducing the size of the postwar force. The matter had emerged in late July when Acting Secretary of War Robert P. Patterson Sr. informed Knox of the War Department’s recently established Special Planning Division to study postwar planning.71 A week later, on August 4, 1943, Yarnell wrote to Joseph W. Powell, special assistant to Secretary Knox. The letter stated that the Navy had ongoing war projects that were unnecessary, and by acting immediately to reduce those projects the service could save billions of dollars and avoid numerous postwar labor issues.72 In a testament to his analytic ability, Yarnell recognized that the equilibrium in the war had shifted sufficiently in favor of the Allies to warrant a reduction in war projects. With direct reference to defensive bases in the Atlantic and Alaska, Yarnell recommended an intelligent reduction in demands for military manpower and war matériel both to save money and to ease postwar transfer of labor from the military to the civilian economy. Yarnell’s letter to Powell, writes historian Jeffrey G. Barlow, probably persuaded Horne to draft an order for a demobilization board.73 The letter arguably reinforced a memo from Horne to King of August 2 in which the VNCO stated as follows:
While it is not considered necessary to set up a planning board or planning division as such at the present time, it is considered advisable to consider seriously the detail of an officer of rank and experience who should give his entire thought as to what planning will be necessary and how it should be carried out, and for this purpose it is suggested that Vice Admiral [Roland M.] Brainard might be ordered to duty under the Vice Chief of Naval Operations as soon as he is placed on the retired list.  

Horne tapped Yarnell to draft a proposed order for a demobilization board, which he submitted on August 13 for finalization within OPNAV over the coming week.  

On August 26, 1943, Knox ordered Yarnell to serve under the VCNO and head a Navy Special Planning Section tasked with planning for postwar demobilization. Yarnell would “prepare maximum and minimum estimates of the Post-war requirements for the Navy and naval establishment,” and after VNCO approval these would serve “as a basis for post-war demobilization planning.” Horne issued a follow-on memo to Yarnell the next day to define the scope of the work. The VCNO requested the preliminary study by November 1, to include retention target figures for naval units (types and sizes, surface and air), the shore establishment, and personnel. Horne included some of his own ideas for Yarnell’s consideration, which historian Vincent Davis summarizes as wanting the biggest possible active and reserve fleets, with Horne requesting that Yarnell give consideration to organizing task forces that “spread around[, which] appears more desirable than a concentrated fleet organization. Naval officers and men should know the world and its seas.”  

Yarnell adroitly composed his preliminary draft and submitted it to Horne within two weeks. In it he acknowledged some enduring policy assumptions—maintenance of the Monroe Doctrine, avoidance of European disputes, ongoing interests in the Far East—then recognized that the defeat of Germany and Japan would leave the United States with an overabundance of military power that would necessitate a swift demobilization of personnel and disposal of matériel. Yarnell stressed maintaining a building program of certain ship types to sustain research and development in case of emergency; this inclusion, one presumes, resulted from his experiences as chief engineer of the Navy. After incorporating some initial feedback, Yarnell reviewed Army demobilization plans and consulted with senior Navy civilian and uniformed officials to refine his thinking further. Unlike in his previous planning experiences, Yarnell produced the report independently.  

Horne received Yarnell’s refined Navy demobilization plan draft on September 22, 1943. Yarnell framed the postwar force within national policy and the mission of the armed forces. He concluded that both American military services (writ large—the Army and the Navy) had failed to fulfill their prewar missions, which
were as follows: to understand foreign policies and commitments; to recognize
the increasing power of the nations disputing those policies; to recognize that
policy and its supporting force are interdependent; and to inform the govern-
ment of their inability to support national policies, owing “to the inadequacy of
the armed forces.” The last-listed charge stemmed from Yarnell’s own evaluation
of the nation’s (lack of) prewar military preparedness—and arguably it was only
his seniority and his reputation that permitted him to lay such a serious charge
against the prewar military leadership. Yarnell listed eleven policy assumptions
that should guide postwar Navy planning for demobilizing the wartime force. While identifying factors relevant to the strength of the postwar Navy, he noted
that the United States and Great Britain, as the only two great naval powers in
the world, might both be confronted with a long postwar period of unrest and
instability requiring global policing by military forces.80

The plan reflected Horne’s desire to maintain a large postwar Navy. Yarnell
included as one of his relevant factors that “the first estimate of the naval forces to
be kept in commission should be too large rather than too small.” In his analysis
of the plan, historian Vincent Davis observes how Yarnell “tacitly assumed that
the American people would be willing to support a large peacetime military es-

tablishment” and alluded to compulsory military training and a unified military
establishment.81 Drawing additional cues from Horne’s August 27 memo, Yarnell
recommended assigning naval forces to eight geographic stations, with a post-
war surface navy organized into three task forces, each composed of three large
aircraft carriers and two battleships, with supporting cruisers, destroyers, and
auxiliaries. Three reserve task forces mirroring the “fully manned” task forces
would train reservists, while each of the six geographic stations (not including
the East or West Coast of the United States) would sustain a squadron of four
cruisers, twelve destroyers or destroyer escorts, two carriers, and supporting aux-
iliaries. Plans for actual demobilization would be drafted by OPNAV to address
the postwar surface forces, the disposition of Navy shore facilities, and the status
of naval aviation. The Marine Corps, Navy bureaus, and assorted offices would
draft their own demobilization plans.82 The geographic scope of Yarnell’s plan
vastly expanded the historical stationing of USN forces abroad. This plan would
pair perfectly with future plans for the United Nations and President Roosevelt’s
vision of the United States as one of the world’s “Four Policemen.”83

Yarnell’s preliminary plan provided the framework for Navy Basic Demobi-
lization Plan No. 1. Yarnell submitted a revised plan to Horne on October 28.
The revision incorporated feedback from colleagues and affirmation from King
that the plan was “based on acceptable assumptions and that sound conclusions
are reached.”84 Yarnell added a new postwar policy assumption of “support of
an adequate Merchant Marine and commercial aviation as factors in our future
security.” Regarding postwar armed strength, Yarnell included a new statement for expeditionary warfare in future American conflicts, whereby “the armed forces should be designed and trained to carry on a war of aggression in enemy territory.” He added a lengthy paragraph recommending an immediate study on the elimination of certain types of vessels not needed for the Pacific War and to eliminate all construction unessential for the successful prosecution of the war. Reassessing the target strength of the postwar Navy, Yarnell included a statement that Great Britain “will be a strong commercial rival with the remote possibility of becoming a future enemy”—perhaps an optimistic appraisal derived from his World War I experience. He also altered his assumption on the future of Russia, to include a growth in its naval forces. Yarnell delineated the number of aircraft squadrons for the previously listed geographic stations and changed the designation from “task forces” to “numbered fleets.” Lastly, he added an additional amphibious force composed of a reinforced regiment of Marines and required transports. Although still only a draft, Yarnell’s plan outlined a substantial postwar role for the Navy, matching a large force to domestic and international commitments that were unprecedented in the service’s history.

Formally released on November 17, 1943, Navy Basic Demobilization Plan No. 1 retained most of Yarnell’s refined draft. Horne and his staff made some changes to Yarnell’s work, with slight numerical edits to the size and scope of the problem and rewording of assumptions about Great Britain and Russia as potential adversaries. Horne’s staff dropped Yarnell’s national policy commitment for compulsory military training. Instead, Navy Basic Demobilization Plan No. 1 stated that “[d]efense of our national interests must envisage the desirability of being able to commence offensive operations without waiting for an initial assault and setback by any future enemy. A well trained Navy composed of vessels, aircraft, and amphibious units, ready for immediate use will be essential to that end.” The three numbered fleets each received an additional battleship and two repair ships, but otherwise the proposed postwar Navy size tracked with Yarnell’s draft. Issued under Horne’s signature, Plan No. 1 was, according to Vincent Davis, ultimately less a plan for demobilization than “a statement of assumptions and principles intended to guide the various offices of the Navy Department in their participation in the planning of the postwar Navy.”

A week after Horne released Plan No. 1, Yarnell shared his reflections on the existing planning process in a letter to the VCNO. To ease the task at hand, Yarnell recommended that Horne acquire a “small able ‘Plans Division’ to give you considered opinions on many of the problems that come across your desk.” Making a brief reference to his experience with OPNAV in September 1918, Yarnell suggested that the associated personnel include “a Rear Admiral (Active
List) in charge and not more than three or four younger officers, Captains or Commanders. They should be high grade officers who have served their time at sea and are due for 2 or 3 years shore duty. They should have no administrative duty.” Creating such a plans division would provide the VNCO with “reasoned opinions quickly on many questions which you now have to work out yourself.”

While the letter bore Yarnell’s signature, it easily could have been the specter of Sims guiding his protégé’s hand across the page, writing the same request to Benson. The tone of Yarnell’s letter shows awareness that he alone could not keep pace with the immensity of events, and that a younger, core team of officers would equip the VCNO better for postwar planning matters. Yet despite this awareness, Yarnell essentially remained Horne’s Special Planning Section all by himself.

Yarnell worked on Navy Basic Demobilization Plan No. 2 from November 1943 to February 1944. While Plan No. 1 assumed the Allied nations would reach no agreement to maintain peace in the postwar era, Plan No. 2 assumed the United States and Great Britain would divide control of the sea and air in accordance with present strategic areas—a reflection of the growing assumption within the Navy Department that Anglo-American naval cooperation would continue after the war was over. Plan No. 2 also assumed continuation of President Roosevelt’s Good Neighbor Policy, with air or naval actions undertaken in conjunction with the nations of Central and South America. The Soviet Union would police the waters adjacent to its territory in the northwest Pacific, China would have a navy adequate to police its rivers and coastal waters, and Japan would be permitted a coast guard capable of policing local waters and maintaining lighthouse service. In the Pacific, new assumptions included retaining the Marshall, Caroline, Marianna, Pelew, and Bonin Islands, with air and naval bases on the former three and air bases on the latter two. The plan rested on a fundamental assumption that after the war the Allied powers would cooperate in maintaining the peace and in making and abiding by agreements for commercial and military air bases, together with reciprocal agreements for the use of foreign naval and military air bases.

The drawdown of the Navy, in both uniformed personnel and civilian workers, would be conducted gradually. Economic considerations were essential in the disposal of obsolete weaponry and the retention of naval stores on the basis of sound economy in government. Yarnell included a recommendation for the Army and Navy to organize a research effort, codified in legislation, to continue developing new weapons and armaments. In other areas Plan No. 2 essentially mirrored its predecessor.

Overall, Yarnell’s plan aimed at maintaining a naval establishment capable of policing the far reaches of the globe and of expanding further efficiently, if
necessary. It would keep an eye toward developing future tactics, techniques, and technologies for naval warfare on, above, and below the oceans.

Yarnell concluded his planning work in June 1944. Horne had forwarded the revised Plan No. 1 with its subsidiary office and bureau plans to the new Secretary of the Navy, James V. Forrestal, on May 22. Following this, on June 9, Horne sent Yarnell’s Plan No. 2 to the bureaus and offices for review, and concurrently requested that Yarnell prepare Navy Basic Demobilization Plan No. 3. This third iteration incorporated the premise that peace and security would be guaranteed by an international organization under an international agreement, dominated by the United States, Great Britain, Russia, and China. Further premises included that other nations would contribute to or join the organization, with the Americans, British, Russians, and Chinese responsible for the sea and air in their respective strategic areas, and that the world organization’s total power would be capable of ensuring peace against any probable aggressor—including one of the four dominant powers.

In three days, Yarnell replied with a prescient memorandum forecasting the postwar world. He first listed three factors requiring study before a demobilization plan could be crafted: the general world conditions in the immediate postwar era; postwar armed strength among the leading Allied nations, their future policies, and the probability that one of them would become an aggressor; and the likely character of the international organization that would be agreed on. Yarnell envisioned an immediate postwar world filled with nation-state tension, unrest, and civil and minor wars. Domestically, dominant issues would be demobilizing war workers and servicemembers, disposing of war matériel, practicing economy in government expenditure, and finding a solution to racial problems. In Europe, the Middle East, and Africa, Yarnell foresaw difficulties, with conflicts among nations, probable violence between Jews and Arabs in Palestine, and differences between Russia and Turkey over the Bosporus and Dardanelles. The burden for addressing these conflicts would fall on Great Britain and Russia, with America’s participation limited to withdrawal of its combat forces, provision of humanitarian and reconstruction aid, and protection of American nationals and other interests. The Far East also faced uncertainty over the stability of the Chinese government, France and Great Britain resuming control of their colonial possessions, and the Philippines gaining independence. “Due to the growth of nationalist feeling,” Yarnell accurately predicted, “there will be unrest and disturbances in the colonial areas,” perhaps recognizing that neither the French nor British would resume control with ease. Yarnell projected the United States, emerging as the preeminent military power on the sea and with strong air and ground forces, would maintain its prewar policies of the Open Door in Asia, the Monroe Doctrine, and promotion of international trade, with the addition of a
willingness to enter into an international organization for peace, and obtaining a share of sea and air transportation.\(^94\)

Yarnell then proceeded to examine the three other dominant powers. First, with Great Britain’s power having been on the decline since the Boer War of 1899–1902, Yarnell deemed the country unlikely to become an aggressor and advocated maintaining friendly relations.

Second, Russia possessed great potential for power. Yarnell wrote that Russian leaders’ shared “realistic and nationalist” policy, developed with their own security in mind, was a policy that the United States “must be prepared for . . . in the post-war settlements.” He foretold the country’s insistence on taking Latvia, Lithuania, Estonia, Bessarabia, and parts of Poland and Finland, as well as on projecting its claims in the Pacific to southern Sakhalin Island and the Kurils. Yarnell argued that the United States should not object to these actions, nor to possible demands for neutralizing the Kiel Canal and the Dardanelles, as he considered these Russian policy initiatives to be born of understandable security imperatives. Claiming that “[t]here are no major clashes of policy between the United States and Russia,” Yarnell opined that “with realistic statesmanship on both sides, there is no danger at present or in the visible future of a major clash between nations.” As Russia had no sea power, Yarnell deemed that it could not be considered a serious threat for twenty or thirty years—a conclusion at odds with that of Forrestal and the Office of Naval Intelligence by the fall of 1944.\(^95\)

The challenge that the third power, China, continued to face was maintaining a stable government in power during and after the war. Despite his knowledge of the senior levels of the Nationalist Chinese government, Yarnell curiously wrote that, beyond the nation reverting to chaos and civil war, there was nothing to replace the current government should it collapse; astonishingly, the Communist Chinese did not elicit a mention. Even with a stable government, reconstruction of the nation would occupy its energy, and without sea power China could not be considered a threat.\(^96\)

Yarnell affirmed that an international organization would not change, to any appreciable degree, the amount of American naval strength that Plan No. 2 deemed necessary to be kept in commission, and therefore he recommended that the figures for forces and outlying bases in Plan No. 2 be accepted in relation to Horne’s June 9 memorandum.\(^97\) By essentially cutting the knees out from under his own Plan No. 3, Yarnell left Horne with a useful conceptual document, but ensured that it was Plan No. 2 that would receive further development in the future.\(^98\)

Yarnell’s memorandum to Horne is a fascinating document. His global socioeconomic-political forecast proved mostly accurate, although it was perhaps overly optimistic regarding the other dominant powers. The retired admiral
broke new ground for Navy planners in attempting to examine the post–World War II world, thanks to the intellectual template provided by his work in London and OPNAV from 1918 to 1920. Yarnell’s predictions about developing an international order centered on the four dominant powers—reflecting Roosevelt’s “Four Policemen”—and the policy issues they would confront proved rather prescient, at least when considering the United Nations Security Council.

On the other hand, Yarnell’s faith that Great Britain would maintain sufficient military strength to police Germany and address other European problems, along with Russia, proved unfounded. Yarnell completely misread the potential of the Soviet and Chinese Communists to develop into formidable adversaries by decade’s end. The omission of the Communist movement in China and the belief that the United States would limit its involvement in European affairs were extremely odd oversights for someone of Yarnell’s experience in both regions. Furthermore, while he was aware of the growing capability of aviation, as particularly evidenced by bomber operations in Europe, his overriding assumption that only sea power could threaten the United States was obsolete.99 Notably, neither Yarnell nor Horne was privy to a highly classified project that only King and a few other Navy personnel knew existed, code-named Manhattan.100

With his submission of Plan No. 3, Yarnell essentially concluded his work. He continued to provide additional memorandums and insight to senior officials over the course of the summer and into the fall; for all intents and purposes, however, responsibility for postwar planning thereafter resided with the staffs of Horne and King—Yarnell acknowledged that the demobilization problem “is not in my hands any longer.”101 On November 24, 1944, Yarnell received orders returning him to inactive duty as of January 15, 1945.102 The day after Christmas, the Navy Department announced his third retirement.103 King thanked Yarnell for having “worked with devotion and distinction in the Office of the Chief of Naval Operations. His departure carried with it my personal regret at the loss of his services and my thanks for a job well done.”104 Ironically, comments historian Jeffrey Barlow, the press release was sent out the same day that King’s planners issued their study on the postwar world.105

Yarnell returned to Newport. He told a friend that he had “a lot of painting and carpenter work to do around the house.”106
REFLECTION AND PERSPECTIVE

With his planning experiences of 1918–20 and 1943–44, Admiral Harry E. Yarnell provided the Navy with continuity, personnel-wise, between the world wars. His training at the Naval War College and his work with “the ablest men” of Admiral Sims’s Planning Section instilled and reinforced in Yarnell ideas and methodologies that he applied throughout his career, especially at critical junctures of the Navy’s evolution and force development. Most notable among these were the necessity for policy relations between and among the State, Navy, and War Departments; unification and unity of command; economy of force; and the applicatory system. While during World War II he perforce conducted his planning efforts without the contributions of a small section of talented minds working in unison, in contrast to the previous war, his half century of service and study of military history equipped him admirably for the task. He embraced emerging technologies and grasped political developments to formulate plans that provided the Navy leadership with sound foundations for further discussion and refinement. While Yarnell was—and continues to be—unheralded for his strategic vision, his fingerprints can be found all over both the interwar Navy and the force that entered the Cold War era.

If Yarnell represented one of the last beneficiaries of Sims’s leadership and legacy, he in turn provided that legacy to the Cold War U.S. Navy. In one of his final memorandums to Horne, in mid-December 1944, Yarnell wrote about the German V-1 and V-2 weapons. He explained that “the introduction of these missiles as an operational weapon marks a turning point in the methods of waging war. In the near future, even before the end of the present war, controlled missiles and high speed robot aircraft undoubtedly will become a prime factor in the success of naval warfare, and in the safety of our country.”

Like Sims, Yarnell kept an eye out for promising young minds, and found one in a young reserve lieutenant and budding strategist. In January 1945, the lieutenant wrote to the thrice-retired admiral, thanking him “for the fact that my Navy service has been as interesting and as useful as it has in fact proved.” He then added, “I am especially grateful to you for the arrangement whereby you made it possible for me to work in a section where I felt I was more useful to the war effort than that in which I had previously been.” Writing in 1946 about the implications of the atomic bomb, Yarnell’s former lieutenant grappled with military history’s role in formulating strategy. He concluded that “[h]istory is at best an imperfect guide to the future, but when imperfectly understood and interpreted it is a menace to sound judgement.” Presumably Yarnell would have agreed with this conclusion by the author, his former lieutenant: Bernard Brodie.
NOTES

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2. By legislation of July 16, 1862, midshipmen at the U.S. Naval Academy, after completion of purely academic studies, had to perform two years of shipboard duty. After four years at the academy, midshipmen would be detached temporarily and sent under orders of the Navy Department to sea, singly or in squads, to perform duties as assigned. After two years of shipboard duty, the midshipmen would return to the academy to undertake a final graduating examination before the Academic Board. Passage of this examination resulted in commissioning the midshipmen as ensigns. The two-year service-at-sea component was eliminated through new legislation passed in March 1912. U.S. Navy Dept., Laws Relating to the Navy, Annotated, comp. George Melling (Washington, DC: U.S. Government Printing Office, 1922), pp. 762–63.


8. Hattendorf, Simpson, and Wadleigh, Sailors and Scholars, p. 79.

9. Carl von Clausewitz, On War, ed. and trans. Michael Howard and Peter Paret (Princeton,


18. Dorwart, Eberstadt and Forrestal, pp. 75–76.


20. Still, Crisis at Sea, pp. 44–45.


22. William S. Benson to William S. Sims, July 17, 1918, WSS, box 24, LOC.

23. William S. Benson to William S. Sims, July 20, 1918, WSS, box 24, LOC.

25. Edward S. Miller, War Plan Orange: The U.S. Strategy to Defeat Japan, 1897–1945 (Annapolis, MD: Naval Institute Press, 1991), p. 82; Yarnell, quoted in Robert G. Albion, Makers of Naval Policy, 1798–1947 (Annapolis, MD: Naval Institute Press, 1980), p. 90; U.S. Navy Dept., Diary of Plans Division, Office of Naval Operations, beginning August 11, 1919, pp. 100–15, Subject 100—Reports (Planning Committee), Confidential Correspondence of the Navy, 1919–1927, microfilm M1140, NARA. There is some confusion about how best to label the organizations as constituted from September 1918 to August 1919 and in August 1919. The former is often referred to as a “section,” while the latter is a “division.”

26. Miller, War Plan Orange, p. 82; Albion, Makers of Naval Policy, p. 91.

27. W. Evans, J. T. Tompkins, and Harry E. Yarnell to Acting Chief of Naval Operations, memorandum, “Plans Division for the Office of Naval Operations,” April 1, 1919, Harry E. Yarnell Papers, Naval Historical Foundation (hereafter Yarnell Papers–NHF), box 2, folder 3, LOC.


30. Harry E. Yarnell to Josiah McKean, memorandum, “Types and Numbers of Naval Units,” March 29, 1919, Yarnell Papers–NHF, box 2, folder 3, LOC.

31. Albion, Makers of Naval Policy, p. 91; U.S. Navy Dept., Diary of Plans Division, Office of Naval Operations.


33. In a document dated March 28, 1944, Yarnell articulated the major factors that entered into consideration when developing adequate war plans. These factors, somewhat akin to instruments of power, included morale, army, navy, diplomacy, economics, and politics. Harry E. Yarnell, “Notes on Staff Organization and Information Necessary for Adequate War Plans,” March 28, 1944, Yarnell Papers–NHF, box 3, folder 1, LOC.

34. Harry E. Yarnell to Members of Plans Division, memorandum, September 11, 1920, pp. 100–15, Subject 100—Reports (Planning Committee), Confidential Correspondence of the Navy, 1919–1927, microfilm M1140, NARA.


41. Harry E. Yarnell to Chief of Naval Operations, memorandum, February 13, 1919, Yarnell Papers–NHF, box 2, folder 3, LOC.

42. Henry E. Yarnell to William D. Leahy, November 25, 1938, Harry E. Yarnell Papers, Manuscript Division, Personal Correspondence, box 3, folder labeled “Leahy, Admiral Wm. D.—66–76,” LOC.

44. Underwood, *The Wings of Democracy*, pp. 140–41; Statutory Bd. on Submarine, Destroyer, Mine, & Naval Air Bases, 1938, Report on Need of Additional Naval Bases to Defend the Coasts of the United States, Its Territories, and Possessions, H.R. Doc. N. 76-65 (1939). Established by a memorandum from Acting Navy Secretary Charles Edison to Rear Admiral Hepburn, the board convened to investigate and report on potential national defense needs for the establishment of additional submarine, destroyer, mine, and naval air bases along the nation’s coasts and in its territories and possessions. The board’s report of December 1938 included recommendations for establishing new bases and expanding existing bases to ensure three major air bases on each coast, plus one in the Canal Zone and another in Hawaii. Additional recommendations were to establish outlying operating bases in Alaska, the West Indies, and American possessions in the Pacific, and new submarine bases in Alaska and the mid-Pacific region. Additional strategic projects included upgrades to the Kaneohe Bay air facilities in Hawaii; submarine and air bases at Wake, Midway, and Guam; and air facilities at Johnston and Palmyra Islands.

45. Charles Edison to Harry E. Yarnell, memorandum, “Transfer to the Retired List,” September 16, 1939, Yarnell Papers–NHF, box 2, folder 4, LOC.

46. Yarnell, diary entries, August 28–September 1, 1939, OA, Yarnell Papers, box 3, folder 2, NHHC. These officials included Secretary of State Cordell Hull, Acting Secretary of the Navy Charles Edison, Chief of Naval Operations Adm. Harold R. Stark, Chief of Staff of the Army Gen. George C. Marshall, and Adm. William D. Leahy.

47. Harry E. Yarnell to the Chief of Naval Operations, memorandum, “Comments on War Plans,” September 2, 1939, OA, Yarnell Papers, box 11, folder 7, NHHC.

48. Harry E. Yarnell to Frank Knox, October 13, 1940, and Frank Knox to Harry E. Yarnell, October 16, 1940, OA, Yarnell Papers, box 11, folder 8, NHHC.

49. Harry E. Yarnell to Harold R. Stark, October 13, 1940, and Harold R. Stark to Harry E. Yarnell, October 16, 1940, OA, Yarnell Papers, box 11, folder 8, NHHC.

50. Harry E. Yarnell to Russel S. Coutant, June 22, 1942, OA, Yarnell Papers, box 12, folder 1, NHHC; “Minutes of Press Conference Held by Mr. Knox,” January 15, 1941, OA, Yarnell Papers, box 11, folder 8, NHHC. Yarnell’s diary entry for December 11, 1940, records as follows: “Went to Nav. Dept. and had interview with Under Secretary of Navy, Mr. Forrestal, & Admiral Stark. Orders written out for me to report for duty on Jan. 3, 1941.” Yarnell, diary entry, December 11, 1940, OA, Yarnell Papers, box 3, folder 4, NHHC.


52. Harry E. Yarnell to Frank Knox, memorandum, “Far Eastern Situation,” January 15, 1941, OA, Yarnell Papers, box 16, folder 21, NHHC.


54. Frank Knox to Harry E. Yarnell, memorandum, January 9, 1942, Yarnell Papers–NHF, box 2, folder 4, LOC.

55. Harry E. Yarnell to Charles Little, September 28, 1942, Yarnell Papers–NHF, box 1, folder 5, LOC.

56. Yarnell, diary entry, August 6, 1943, OA, Yarnell Papers, box 3, folder 3, NHHC.


58. Yarnell, diary entries, January 3, 13–14, 1942, OA, Yarnell Papers, box 3, folder 4, NHHC; Yarnell to Coutant, June 22, 1942; Yarnell, diary entry, January 4, 1943, OA, Yarnell Papers, box 3, folder 3, NHHC.

59. Harry E. Yarnell to Randall Jacobs, May 15, 1943, and Randall Jacobs to Harry E. Yarnell,
May 20, 1943, OA, Yarnell Papers, box 12, folder 2, NHHC. Curiously, Yarnell's letter mentions having applied for sea duty in September 1942, but no diary entry mentions this; however, there is no mention of the letter to Jacobs, either.

60. Yarnell, diary entry, February 16, 1943, OA, Yarnell Papers, box 3, folder 3, NHHC. See also William D. Puleston to Harry E. Yarnell, March 27, 1943, OA, Yarnell Papers, box 12, folder 2, NHHC.


62. Yarnell, diary entries, May 6 and June 3, 1943, OA, Yarnell Papers, box 3, folder 3, NHHC.

63. Harry E. Yarnell to Frederick J. Horne, June 7, 1943, box 12, folder 2; note from Frederick J. Horne to Ernest J. King, June 10, 1943, box 12, folder 2; Frederick J. Horne to Harry E. Yarnell, June 11, 1943, box 12, folder 2; Harry E. Yarnell to Frederick J. Horne, June 14, 1943, box 12, folder 2; Yarnell, diary entries, June 11, 14, 1943, box 3, folder 3; all OA, Yarnell Papers, NHHC.

64. Ernest J. King to Harry E. Yarnell, June 16, 1943, OA, Yarnell Papers, box 12, folder 2, NHHC.

65. Yarnell, diary entry, June 9, 1943, OA, Yarnell Papers, box 3, folder 3, NHHC; William D. Puleston to Harry E. Yarnell, July 23, 1942, Yarnell Papers–NHF, box 1, folder 4, LOC; Harry E. Yarnell to Edward Warner, September 18, 1943, Yarnell Papers–NHF, box 1, folder 6, LOC.


68. Ibid., p. 1101.


72. Harry E. Yarnell to Joseph W. Powell, August 4, 1943, Yarnell Papers–NHF, box 1, folder 6, LOC.


75. Harry E. Yarnell to Frederick J. Horne, memorandum, with enclosure of rough draft memorandum “Plans for Demobilization,” August 13, 1943, Yarnell Papers–NHF, box 2, folder 5, LOC.

76. Davis, Postwar Defense Policy, pp. 12–13; Secretary of the Navy to the Chief of Naval Operations, memorandum, “Post-war Demobilization Planning,” August 26, 1943, OA, Yarnell Papers, box 12, folder 2, NHHC.

77. Davis, Postwar Defense Policy, pp. 13–14; Vice Chief of Naval Operations to Adm. Harry E. Yarnell, memorandum, "Post-war Demobilization Planning," August 27, 1943, OA, Yarnell Papers, box 12, folder 2, NHHC.


79. Yarnell, diary entries, September 11, 13–14, 16–18, 20–22, 1943, OA, Yarnell Papers, box 3, folder 3, NHHC.
80. Special Planning Section to Vice Chief of Naval Operations, memorandum, “Post-war Demobilization Planning,” September 22, 1943, Yarnell Papers–NHF, box 2, folder 5, LOC.
81. Ibid.; Davis, Postwar Defense Policy, p. 17.
82. Special Planning Section to the Vice Chief of Naval Operations et al., memorandum, “Preliminary Draft of Plan for Demobilization,” September 22, 1943, Yarnell Papers–NHF, box 2, folder 5, LOC; Special Planning Section to Vice Chief of Naval Operations, memorandum, “Post-war Demobilization Planning,” September 22, 1943; Barlow, From Hot War to Cold, pp. 43–44; Stoler, Allies and Adversaries, pp. 156–57; Davis, Postwar Defense Policy, pp. 14–19.
84. Stoler, Allies and Adversaries, pp. 157–58; Yarnell, diary entry, October 22, 1943, OA, Yarnell Papers, box 3, folder 3, NHHC.
85. Special Planning Section to Vice Chief of Naval Operations, memorandum, “Post-war Demobilization Planning,” October 28, 1943, Yarnell Papers–NHF, box 2, folder 5, LOC.
88. Harry E. Yarnell to Frederick J. Horne, November 23, 1943, Yarnell Papers–NHF, box 1, folder 7, LOC. Emphasis in original.
89. Barlow, From Hot War to Cold, pp. 49–50; Special Planning Section to Vice Chief of Naval Operations, memorandum, “Navy Basic Demobilization Plan No. 2,” February 11, 1944, OA, Yarnell Papers, box 9, folder 3, NHHC.
90. Special Planning Section to Vice Chief of Naval Operations, memorandum, “Navy Basic Demobilization Plan No. 2.” On the cover memorandum for the plan, Yarnell listed the main differences between Plan No. 1 and Plan No. 2 as a reduction of numbered fleets in commission from three to two; reduction of task force squadrons in commission from six to three; reduction of submarine squadrons in commission from five to three; reduction of mine divisions in commission from six to three; and statement of bases necessary in the Pacific area.
91. Secretary of the Navy Frank Knox died of a heart attack on April 28, 1944.
92. Frederick J. Horne to Harry E. Yarnell, memorandum, June 9, 1944, Yarnell Papers–NHF, box 2, folder 6, LOC.
93. Yarnell drafted the memorandum in only three days. See Yarnell, diary entry, June 12, 1944, OA, Yarnell Papers, box 4, folder 1, NHHC.
94. Harry E. Yarnell to Vice Chief of Naval Operations, memorandum, “Basic Demobilization Plan No. 3,” June 14, 1944, Yarnell Papers–NHF, box 2, folder 6, LOC.
96. Yarnell, memorandum, “Basic Demobilization Plan No. 3.”
97. Ibid.
98. Davis, Postwar Defense Policy, p. 92.
101. Harry E. Yarnell to Weldon Jones, November 10, 1944, Yarnell Papers–NHF, box 2, folder 1, LOC.
102. Yarnell, diary entry, November 24, 1944, OA, Yarnell Papers, box 4, folder 1, NHHC.
103. Possibly his fourth retirement; see note 50.
105. Barlow, From Hot War to Cold, p. 53.
106. Harry E. Yarnell to Morris Sanford, December 1, 1944, OA, Yarnell Papers, box 12, folder 3, NHHC.


109. Bernard Brodie to Harry E. Yarnell, January 22, 1945, OA, Yarnell Papers, box 9, folder 5, NHHC.

The predictive power of experts, operations analysis, and the value of information are interwoven subjects that are hard to winnow down to an essence. Prediction is a big subject, so I have limited this article to what I know best: the operational and tactical domains of conventional warfare.

First you will read three examples of limitations of predictions when they are formed on the basis of information alone. Next I will demonstrate that even a modest amount of quantitative analysis, even with incomplete information, can help a decision maker execute a military campaign without making explicit predictions about the coming battles or operations. Analysts cannot eliminate wartime surprises, but they can help to avoid the worst mistakes and steer military leaders toward better decisions. I will conclude by advocating what is too rarely done: the comparison of quantitative campaign analysis done before a war with what actually transpired in the war, to show that useful—even critically important—advice can be formulated very quickly to help decision makers. On one hand, intense thinking about the war is necessary; on the other hand, expert judgment alone should be augmented with simple, transparent, timely—even if incomplete—quantitative analysis.

**PREDICTION FROM INFORMATION ONLY**

*Black Swans*

Surely the most drastic book on prediction is N. N. Taleb's *The Black Swan*, subtitled *The Impact of the Highly Improbable*. Taleb makes an entertaining
case for the occurrence of unforeseeable events and the like, but his advice is pretty trite; since, by definition, a black swan cannot be predicted, the most we can do is be ready for surprises, and then be responsive and adaptive when they occur.¹

Gray Swans

More interesting are what might be called gray swans: surprising events of great consequence for which evidence existed beforehand but was lost in a clutter of information. In the commercial sector, the recent burst of the housing bubble is the latest of many collapses brought on by “the madness of crowds” whose herd instinct overcame many clues of excesses in plain sight.² Gray swans in the military domain are exemplified by the invasion of South Korea in 1950, the collapse of Soviet control in 1989, and the invasion of Kuwait by Iraq in 1990. All three illustrate “surprises” that Monday-morning quarterbacks have decried. After the debacle at Pearl Harbor was described alternatively as resulting from a nefarious plot or the careless handling of information, Roberta Wohlstetter wrote what is, to me, the definitive interpretation in Pear Harbor: Warning and Decision.³ At the strategic intelligence level, she shows that it was easy to miss the clues of what turned into a tactical disaster amid information overload. At the emotional level, one must see the need to hedge against human shortcomings in predicting future wars, while being careful not to cry wolf too often.

Gray swans are complicated by the fact that an enemy frequently will use deception to ensure they are gray, so to speak. In part Japan was successful in its Pearl Harbor attack because it employed deception to achieve surprise. I will refer later to Barton Whaley’s masterful study of strategic deception, but here I will mention an equally valuable source: the recent book by Erik Dahl, Intelligence and Surprise Attack: Failure and Success from Pearl Harbor to 9/11 and Beyond.⁴ Dahl is particularly insightful because he goes beyond deception in big wars to include deceptions that terrorists use to attempt to achieve surprise.

Expert Political Judgment

What, then, about predictions by experts? A marvelous book by Philip E. Tetlock first describes finding 284 self-proclaimed authorities who made a living commenting on political, international, or economic trends and were willing to participate in his study. Tetlock’s questions were the kind that could be answered “better,” “worse,” or “about the same.” Over several years in the 1990s Tetlock accumulated 82,361 answers in his database. In 2003, Tetlock compared the predictions with actual results. Two years later he published his conclusions in a book entitled Expert Political Judgment.⁵

And the envelope, please. Well, it is a fat envelope, because Tetlock gives all the interested parties a nuanced hearing. To summarize his findings, I quote from a New Yorker book review: “[t]he experts performed worse than they would have if
they had simply assigned an equal probability to all three outcomes. . . . Human beings who spend their lives studying the state of the world are poorer forecasters than a dart-throwing monkey.\textsuperscript{6} Worse still, the experts tried to defend their wrong predictions with excuses such as “My timing was off” or “An unforeseeable event interfered with what should have happened.” Tetlock also shows that nonexperts who answered the same questions did better than the dart-throwing monkey. Not a lot better—but significantly more so than the experts.

**INFORMATION SUPPLEMENTED BY ANALYSIS**

These are examples of predictability on the basis of information only. Tetlock’s *Expert Political Judgment* is full of statistics measuring the performance of experts, but as far as I know the experts did not do any analysis to supplement their opinions. So, let us next make a distinction between information-based prediction alone and decision-making that is assisted by a quantitative assessment.

**Why Military Analysis Cannot Predict**

As we begin the shift to military operations analysis, I refer to an essay by the late, great Air Force analyst Clayton Thomas.\textsuperscript{7} In effect, he described model-based analysis as an if-then statement. Two things—the model and its inputs—are on the if side; model and inputs together are processed to yield a result—the then side. If the model represented reality—which in campaign analysis it cannot—and if the data were precise—and in warfare the data are always “dirty” with errors—then the result would be an accurate prediction. We military analysts make no such claims; we say no more for the results than that when they are used wisely insightful conclusions can be reached and better decisions made.

**Prediction Is Sometimes Unavoidable**

Although generally we do not claim to predict outcomes, sometimes a decision maker must do just that, and we must help him. A prominent example is the procurement of warships and aircraft that are intended to have thirty- or even forty-year service lives. To see the impossibility of getting the designs right, no matter how comprehensive the analysis may be, reflect on the state of the world in 1979 and all that has changed since then that affects the prospective wartime performance of those ships today.

Space permitting, I could write at length, first, about how our warships completed before 1979 were designed earlier to carry technologies that were earlier still; second, that expensive, multipurpose ships are a poor way to hedge against future gray swans; and third, that we have not had to fight a fleet battle since 1945. All our learning about war at sea in the missile age has been vicarious, except for the handful of embarrassing single-ship attacks we have suffered.
Analytical methods and predictive power vary with tactics, technologies, and testing and with whether the predictions concern policy, operations, logistics, procurements, or strategies. A fine book on the subject is the Military Operations Research Society's *Military Modeling for Decision Making*, because it is comprehensive in distinguishing modeling and techniques for different defense-related purposes.\(^8\)

**Strategic Planning and Force Procurement**

An accurate, recent, thirty-eight-page appraisal of predictive power when aided by extensive, even exhaustive, analysis was published in October 2011 by the distinguished statesman Richard Danzig.\(^9\) Quoting liberally from both Taleb and Tetlock, Danzig shows the limits of model-assisted planning and why the limits have been inevitable when programming weapon systems for the future. His cure is difficult to implement, however, because Danzig argues, in black swan fashion, for more-nimble Department of Defense and congressional processes and acceptance of something less than the perfection demanded by those in government who metaphorically dodge and weave in a defensive crouch.

In one respect, Danzig's advice seems implementable. He recommends that we work on simpler systems that can be designed and produced more quickly and be discarded after shorter lifetimes, when geopolitical circumstances change or new technologies serve up either threats or opportunities. Although Danzig does not say it this way, the implication is that top-down solutions are unavoidable when expensive, long-lived systems must fill capability niches that will endure for the long haul—for example, multifunction orbiting satellites, or ballistic-missile-carrying submarines armed with “failure proof” nuclear weapons for strategic deterrence. Otherwise, bottom-up, quickly deliverable, relatively inexpensive systems that fill immediate needs—sometimes by short-circuiting the procurement bureaucracy—are the way to recover from failures of prediction in strategic planning. An example is the recent, rapid development of unmanned aerial vehicles, both in the large quantities deployed and in the many design variations. Falling somewhere in between were the successes at Kelly Johnson's Lockheed Skunk Works, which responded quickly—from the U-2 in 1955 to the SR-71 in 1966—to fill a need for long-range surveillance aircraft perceived at the highest levels of the Central Intelligence Agency.

**Strategic Deception in Wartime**

Barton Whaley's *Stratagem* is a good, quantitative book on methods of deception to achieve strategic surprise, how many false clues it takes to achieve it, how to enhance your chances of success, and why attempts to deceive have not cost much in resources.\(^10\) He gives historical examples, such as the strategic surprise the
Germans achieved in 1941 when they invaded the Soviet Union and what the Allies achieved in the Normandy invasion. Whaley tells the deceiver how to succeed and the rewards that ensue. He shows that the victims of strategic deception behave much like Tetlock’s experts, who were blinded by their own overconfidence.

**Tactics, Technology, and Testing**

The measured performance predictions in peacetime exercises become caught up in the fog of war. Jon Sumida observes that before World War I the Royal Navy expected a hitting rate of 30 percent with the fleet’s big guns. But in the Battle of Jutland the Germans achieved a rate of about 4 percent and the British 3.5 percent. There were good reasons for the diminished performance at Jutland, but that is the point about prediction: there are always going to be ex post facto reasons your peacetime expectations will be wrong. The English operations analyst David Rowland has devoted much of his career to comparing ground combat exercise data with wartime data from similar battles. In one of his early papers he compares results from laser-instrumented, nonlethal training exercises with actual combat results in similar environments during World War II. The predictions based on the exercises overestimated the casualty production rate for tanks by a factor of two; for artillery duels by a factor of three; and for pure infantry actions by a factor of seven! Yes, a sevenfold overestimation of soldier performance. In effect, Rowland confirms S. L. A. Marshall’s highly controversial conclusions about the small number of American soldiers who fired their weapons when under fire in World War II.

One of the most famous model-based predictions—I think *prediction* is the apt word—was by Frederick W. Lanchester, who claimed that the square law phenomenon would apply to air-to-air combat. He wished to show the advantage of numbers over quality in a new age of air warfare. But Lanchester was wrong. From evidence reported by Philip Morse and George Kimball in their famous *Methods of Operations Research* and in more-detailed recent analysis by Niall MacKay, we know that through World War II the linear law applied in the air. What Lanchester failed to see was that air combat essentially consists of duels, in the form of dogfights or ambushes, so the square law assumptions are not met. This was no theoretical matter. As MacKay shows, the top Royal Air Force leaders in the Battle of Britain argued between massing defending fighters—in Lanchester square law fashion—and getting the fighters in the air as swiftly as possible, so that small detachments were in the best position to win duels between single aircraft. I also tell our students of campaign analysis that the greatest number of kills often does not come from air-to-air combat. If they want to anticipate—to predict, as it were—which side will achieve air superiority, they must make a
difficult estimate of how successful each side’s attempt will be to attack aircraft on the ground, the way the Japanese surprised and destroyed MacArthur’s air force in the Philippines immediately after Pearl Harbor.

Lest you think we are better off now, with modern computers and powerful algorithms built into our best models, here is a more recent example. The U.S. Navy depends mightily for defense of the fleet on the Aegis missile system. Using data from controlled experiments at sea, one might conclude that if you shoot two surface-to-air missiles (SAMs) at an incoming antiship cruise missile (ASCM), and if you also add some point defense, you can expect to shoot down 90 percent or more of the attacking ASCMs. What is the combat record? In battles at sea, warships of other states have averaged around 75 percent success in defending themselves from ASCMs. But all the successes must be attributed to soft-kill and point-defense weapons, not to SAMs. There are also several instances of warships that might have defended themselves but did not, illustrated by the recent successful missile attack on the Israeli warship Hanit. Navy officers also will remember the Exocet hits on USS Stark and HMS Sheffield, which might have defended themselves with surface-to-air missiles but did not. In the entire record, starting in 1967, of more than 220 missiles fired on ships at sea, only one antiship missile has been shot down by a SAM. The record of USN missile ships in combat is zero for two, if one counts the action of USS Vincennes in shooting down an Iranian airliner as a failure. As at Jutland, a careful examination of these missile-era events shows there were reasons for the wartime results—pretty good reasons, too—but the important conclusion is that the fog of war almost always makes peacetime predictions too optimistic. Wartime surprises, although not exactly black swans, always will be present.

OUR PRODUCT IS USEFUL INSIGHT
Now I am going to focus on the domain of gray swans when our tools are used for operational and tactical predictions. I will show that even though the predictive power of our analyses is less than we would wish, if we focus on the right objectives and use appropriate measures of effectiveness our results and recommendations will be a powerful aid to decision makers. Indeed, I am going to arrive at conclusions so cheerful they may surprise you.

Campaign Analysis
Campaign analysis is hard to do, and its predictive power is very much a matter of how demanding you want to be. For example, between the world wars the Naval War College played over three hundred games, most at the campaign level and most against Japan. They were highly valuable because they sobered our early optimism about the war’s most important elements. After the war, Admiral
Chester Nimitz wrote a famous letter saying that, except for kamikazes, the games had anticipated its major events accurately—referring, I suppose, to what happened in the drive through the Central Pacific that he oversaw. On the other hand, the Guadalcanal campaign, the shift from a battleship-centric force to a carrier-centric force, the vital contribution of American code breaking, and the drive by MacArthur up the New Guinea coast were vital aspects about which the games afforded no clues. In fact, after Pearl Harbor every class of warship except minesweepers changed its function.

At the tactical level, even the postmortems do not do justice to two factors that some operations analysis might have revealed. Looking back at the Battle of Midway of June 1942, historians recognized four things that were necessary for the Americans to overcome a numerical inferiority of seventy-five ships to twenty-five: code breaking; brilliant leadership by Nimitz, Fletcher, and Spruance; great courage in our naval aviators; and just plain good luck. But they missed two others. Until recently, no historian had picked up on the value of radar. If the Japanese ships had had our air-search radar, our surprise dive-bomber attack could not have succeeded. Nor has any historian I have read identified the key role of Midway Island itself, which served as an immobile fourth American aircraft carrier, drawing away Admiral Chuichi Nagumo's attention and firepower at the critical time.

And yet, and yet: war games and fleet exercises schooled our carrier commanders before the Pacific War to know that the best way to win—and the only way, if outnumbered—was to detect the enemy first and get off a decisive first strike with every aircraft you had. Simple but elegant salvo equations, not yet invented in 1942, would match the results and “predict” with sufficient quantitative accuracy the outcomes of all five of the big carrier battles in the Pacific ex post facto.

Having in mind, then, that both Admiral Nimitz and the Midway historians ought to be given some slack, I will now describe three remarkable examples of the power and utility of our methods applied to campaigns, to show how analyses can help military leaders make better decisions and avoid the worst blunders. The examples are entertaining because they were performed by our young officer students at the Naval Postgraduate School (NPS) in a course on joint campaign analysis. The students had to reach their conclusions very quickly, with maximum professional knowledge and minimum computation, because the class pretense—a realistic one—was that their decision maker needed their inputs within about seventy-two hours. In these “ministudies,” the students did not have time to construct a detailed, realistic simulation.
Foresight and Hindsight in Wars

The Falkland Islands War. In the first example, the students fought the Falklands War on paper in 1982 before it started. They had no inkling that General Belgrano was about to be sunk, taking the Argentine surface navy out of the war; or that Exocet missiles would be highly effective in destroying British ships; or that Argentine ground forces in the Falklands would be thoroughly outclassed. To do justice to their insightful work would take several paragraphs, but I can report the bottom line very quickly.

Neither side that fought had done such an analysis—early, fast, and basic. I believed then, and still do, that if they had the Argentine junta would have won the war, and British prime minister Margaret Thatcher would have been more cautious about sailing forty-two ships—essentially committing the United Kingdom to take back the Falklands. Why? Because the focused campaign analysis by the students showed that, with only a little foresight, the Argentine air force—all 140 fighter/attack aircraft, flown by capable pilots—could have staged through Stanley airfield on East Falkland Island. It did not take a detailed model or precise inputs to conclude that those aircraft, even when dropping iron bombs the old-fashioned way, would have penetrated the twenty-two Harriers and other air defenses and put enough British ships out of action to force the fleet to abandon the invasion.

Operation Desert Shield. While my class was meeting in the fall of 1990, a big debate was raging over whether the United States and our Middle East partners could force Saddam Hussein out of Kuwait without a ground campaign. At the time, many American members of Congress and pundits were arguing that this was possible.

The charge to my students was to do a fast-turnaround ministudy to determine whether there was an operation other than an invasion of Kuwait that would persuade Saddam Hussein to leave. After doing as much quantitative assessment as time permitted, the students concluded that if we wanted him out of Kuwait we would have to attack on the ground. This seems obvious in hindsight now, but it was not so when the students made their appraisal.

Operation Iraqi Freedom. Lastly, I report on Operation Iraqi Freedom (OIF). This student appraisal was done even faster than a ministudy—over a single weekend. We asked the students how long it would take to win the war. Astutely they asked, “What do you mean by ‘win the war’?” Together we agreed that getting to Baghdad and toppling Saddam Hussein would constitute victory! I still think that was a suitably specific analysis goal, because everything after that comprised peacemaking operations—long and difficult though they turned out to be.
Four student teams each made independent estimates. One team said it would take four weeks; one team said two to four weeks; one team said two weeks to get there, but that they did not know how long the city fighting would last; and the last team said three weeks. As it transpired, it took three weeks and a day to overthrow the regime. What our students could not predict, of course, was that a sandstorm would slow the advance, and that some elite soldiers operating inside Baghdad would enjoy such luck and display such courage.

But the students had some crib notes to help them make their estimates. They knew that research, most notably by the Army analyst Bob Helmbold, had concluded that the rate of advance of an army unopposed or against light opposition has been and still is about twenty-five miles a day. The students could scale back the movement rate appropriately in making their estimates—predictions, as it were. In actuality, our soldiers and Marines advanced the three hundred miles to Baghdad in three weeks—a rate of fifteen miles per day.

**OTHER DOMAINS**

I have emphasized the rewards and limitations of operational and tactical analysis to prepare for war. There is a lot more to the story. Before summing up, here is a brief contrast with two other domains of prediction.

**Attenuating Terrorist Attacks**

I am not well informed on what kind of analysis would best supplement experience in fighting the perpetual war against terrorists. But I have read a fine paper entitled “How Probabilistic Risk Assessment Can Mislead Terrorism Risk Analysts.” It is a warning against a methodology that cannot help and might hinder prediction and planning for homeland defense.

Authors Jerry Brown and Tony Cox see two problems with the methodology. One danger is to put confidence in the predictions of experts that are in fact inputs to the analytical scheme. They are suspicious of expert opinion, as am I. The other problem is adapting a methodology—probabilistic risk assessment (PRA)—that has been effective for engineering analysis but is essentially a decision-theory way to design against adverse natural events and risks. The authors point out that when the enemy is not nature but an attacker who wants to outwit us and penetrate our defenses, then PRA actually can help the enemy. The proper mind-set is game theory, which says that we must do the best we can against the best he can do. The PRA methodology comes no closer to examining enemy choices and capabilities than to ask an expert the “probability of an attack”—without regard for what the enemy observes us doing.

There is wide agreement that a new attack against our homeland will come someday. Predicting where and against what target is the hard part that the PRA...
method cannot illuminate. Brown and Cox recommend shifting the emphasis of risk management from using experts to guess where risk might be greatest to calculating where targeted investments will most improve the resilience of critical infrastructures. This entails more attention to two things: First, install additional safeguards where they have the biggest payoff—for example, by adding some “inefficient” redundancies to our excessively “efficient” but vulnerable electrical-distribution system, as well as the grids that distribute trains, trucks, petroleum, and communications. Second, establish and practice procedures to recover after an attack—for example, on the large containerport at Long Beach or the San Francisco–Oakland Bay Bridge. Perhaps we have improved disaster recovery since the terrorist attack on the Twin Towers, but from the natural disasters of which I am aware, such as the 2004 Indonesian tsunami and Hurricane Katrina, and also from an NPS-conducted experiment in intergovernmental cooperation in San Diego, preparing to act after an attack may be more productive than trying to prevent every attack. It is likely that the two best ways to recover more quickly are by conducting inexpensive drills to improve coordination among many agencies and levels of government, and by ensuring readiness to employ emergency modes of communication. The general rule is “when there’s a war on, study the war.” That applies to the war on terrorists, to the frequent use of unmanned vehicles in peacetime, and to the unending competition to safeguard and exploit cyberspace.

Measuring Influence to Avoid War

The object of the Cold War was to exert American influence without fighting the Soviet Union. We never could measure past success in predicting outcomes of our campaigns, including a highly predictable world disaster from a nuclear exchange, because there was no war to study. The paradox is that the only available measures of the success of the analyses and the predictions resulting therefrom were that, year by year, deterrence held.

As far as I know, during the long Cold War there was only one attempt to measure the predictive power of the many campaign analyses of a hot war. It occurred because an inspired analyst at the Center for Naval Analyses (CNA) persuaded the CNA president to refight, on paper, a study that his think tank had conducted for the Navy in 1965, of a war at sea conducted ten years later. A study assumption was that the nuclear threshold would not be breached, in part because the American strategy was to confine the war to the oceans. The war was bloody enough among the combatants, but massive civilian casualties were avoided. Around 1976 (I am citing from memory) the analysis was repeated with the same military objectives, but with the geopolitical environment updated, resulting in somewhat heavier demands on NATO forces, principally those of the
U.S. Navy. In 1976, Soviet forces were slightly greater than had been projected in 1965; our estimates of Soviet maritime combat capabilities were about the same. On the other hand, between 1965 and 1976 the American fleet had become much smaller, and future combat capabilities projected to be in the fleet in 1976 had not lived up to technical expectations when actually deployed. Thus, all inputs for the repeat campaign analysis seemed to indicate a worse outcome. Yet the outcome of the campaign “fought” on paper in 1976 was amazingly about the same as in the 1965 study, and perhaps a little bit better. The reason was that in two or three instances after the new systems built in 1965 were deployed, new tactics were conceived and developed to fight with them more effectively. Better tactics more than offset technological disappointments and our smaller fleet.

But that interesting finding is peripheral to the two main points. First, it is highly useful to test our tactical and campaign analyses when their inputs and assumptions can be tested, yet it hardly ever is done. Second, the study results—even in 1965, and despite their flaws—were decisively instructive. The purpose of the study was to test whether a war against the Soviet navy limited to the sea was attractive for NATO. The answer was no. That was the conclusion of overarching importance. As with the Falkland Islands scenario, it did not take exquisitely detailed analysis to see why—after the analysis had been done. The Soviet Union was a continental power that did not depend fundamentally on the oceans, but NATO was a maritime alliance for which control of the Atlantic was essential. The Soviets had too little at risk and NATO too much risk to make the threat of a war at sea an effective deterrent. No more was heard of it. NATO continued, wisely, to believe the central front in Europe was the critical region of interest.

There is a modern analogy to the war at sea, as we contemplate ways to influence China, keep faith with friendly states in Asia, and avoid a big and economically disastrous war. Far from being unwise, analysis of a war-at-sea strategy in the western Pacific looks feasible and desirable because, unlike that of the Soviet Union, Chinese prosperity depends on the sea. Unlike the Soviet state, China has begun to build a fleet that can protect the movement of its shipping in the open ocean, while shifting from a sea-denial to a sea-control navy.

A brilliant recent article by Naval War College professors Toshi Yoshihara and James Holmes points out that one cannot construct a strategy unless its ends, ways, and means are well defined. Hence the state—namely, China—must be identified as the strategy’s object. The ends almost have been established, because the Secretary of State and others have indicated our intention to put more emphasis on the western Pacific. In effect, our policy experts have made a prediction about the future. Next must come an analysis of the best ways to sustain our influence there at an affordable cost. Yoshihara and Holmes describe the limits
of the Air-Sea Battle concept and suggest other actions at sea that can and should precede strikes on mainland China. U.S. and allied navy components should try to keep the war at sea, exploit American maritime strengths, and demonstrate that China has the most to lose at every level of escalation—from maritime interdiction short of a full blockade all the way up to sinking Chinese warships and commercial vessels with American submarines in their home seas. Once we have in hand the ways to constrain every kind of confrontation, next comes further campaign analysis, testing, and negotiation with allies and partners in Asia. We must ascertain the means: the types and numbers of forces to execute such a flexible strategy that also fits the desires of China’s neighbors and worldwide commercial interests.

The same fleet must be suitable in times of cooperation, competition, confrontation, or conflict, and China has a say in what our ends must be. If all our ships are expected to have thirty- and forty-year service lives, the challenge will be to construct one long-lived fleet for all circumstances. We do not yet know whether Yoshihara and Holmes are right about the ways and means, but analysis to meet various conditions, not a prediction of a single future, is the way to find out.

WHAT TO BELIEVE ABOUT PREDICTION

Black swans exist. Unavoidable surprises will continue. Black swans do not have to be deceptive, because, by definition, their surprise cannot be predicted.

Gray swans in the military world are complicated because they are concealed by a perverse enemy who wants to surprise us. Pearl Harbor happened not just because it was an unlikely event and the clues about the attack were mishandled but also because a clever enemy was doing his utmost to surprise us.

Regrettably, gray swans are not likely to become rarer. The growth of knowledge, illustrated by the replacement of a written Encyclopaedia Britannica with the electronic Wikipedia, exceeds our capacity to sort the information quickly. And in fast-moving military operations the enemy will be trying constantly to throw sand in our eyes.

Expert judgment for national policy and military strategy is unreliable unless it is substantiated with the quantitative methods of operations research. Critical decisions can be greatly—even decisively—enhanced by quantitative analysis, notwithstanding that a decision maker’s prewar conclusions will fall well short of—and should never claim to be—a prediction of the future. Useful insights come from wise application of dirty data processed in an appropriately simple model to yield results that are at once precise, inaccurate, and helpful.

The Falklands War seventy-two-hour analysis by our campaign analysis students illustrates how decisive macro insights can be discerned in a very short
Despite limited knowledge of how a war will unfold, quantitative analysis is powerful for uncovering the essential features of good and bad choices.

The students’ overnight analysis ahead of OIF showed two different things. On one hand, the analysis demonstrated that an amazingly accurate estimate of how long it would take to overthrow the Hussein regime could be made swiftly. On the other hand, analytical power did not help anticipate that after toppling the regime there would be a very long aftermath of difficult peacemaking. It is not new news that the enemy gets a vote, and sometimes his choice will seem not to be in his own best interests.

Accurate predictions are useless if they are too late to help the decision maker. If he or she must act in seventy-two hours, we must help him within seventy-two hours. Our students follow the one-third, one-third, one-third rule of analysis. Given three days to complete the work, spend the first day figuring out how quantitative analysis can best help him make his decision; do the analysis on the next day; and take the third day to recover from your mistakes, answer his questions, or enrich the work.

There are many variations of conflict in which military operations analysis can supplement professional knowledge profitably. One is when the campaign goes on endlessly; this allows time to gather “combat” data, assess it, and apply it—while remembering that the enemy also is observing and adapting. Another is when the object is not to prepare for war but to adapt new ends, ways, and means to prevent war by retaining influence over a prospective enemy in changing circumstances. Then the goal of analysis is to help decide what strategy and capabilities will be the best ones to keep the peace or to contain the war at a low level of violence.

A paradigm of all prediction is the if-then statement, with two parts to the if side. To the extent that a model describes the circumstances and the data are accurate, the analysis process will give accurate results. When the model is a simplification (an artful one, we hope) and the data are dirty (but good enough, we hope), then the goal is not to predict the outcome but to help a decision maker do the best he can after adding his own wisdom to our quantitative analysis.

NOTES

2. I am referring to the classic book on economic bubbles by Charles Mackay, Extraordinary


14. For example, see Niall MacKay, “Is Air Combat Lanchestrian?,” *Phalanx* 44, no. 4 (December 2011). My Navy heritage demands that I say that the square law was appropriate for battles at sea in the battleship era because square law conditions were met. Also, two USN officers, J. V. Chase and Bradley Fiske, invented the square law to describe the advantage of numbers quantitatively, and they did so a decade before Lanchester, who never saw their work.

15. The Japanese had forty-one fighters in the air to protect the carriers, but they were at low altitude after shooting down the American torpedo bombers that served as an inadvertent but critical decoy.

16. I believe the journalist Hector Bywater’s book *The Great Pacific War, 1931–33*, written in 1926, was nearly as good in predicting how the war would transpire as were all the Naval War College (NWC) games. Bywater’s descriptions of the battle in a Pacific campaign had prescient predictions that even our many NWC war games did not foresee.


Having to answer such questions as how to maintain primacy and how to wield such power illustrates the luxury of exercising hegemony and the challenge of being a superpower. But it was not always thus for the United States. In the late nineteenth century, as the country rose and began to surpass Great Britain, the Naval War College’s own Alfred Thayer Mahan advocated a powerful vision of American growth by looking outward. Mahan’s grand strategy was inherently maritime, and he proposed an “expansion of national influences” through not only military means but also commercial trade and other tools of statecraft. To Mahan, American grand strategy required deep engagement in the world.

Of course, Mahan was not the first to preach this gospel. Decades earlier, John Quincy Adams had guided the fledgling state in feeling out the extent and limits of American power. Many European states viewed jealously the endowment of resources and demography of the United States. Foreign powers understood immediately the potential for American power—and the need to check it before its inevitable rise. According to historian and former Naval War College professor Charles Edel, Adams recognized the hostility of the continental powers, and he understood his “special duty” to pursue peace. Intent on securing
America’s rise, Adams conceived of a grand strategy to guide his nation toward power and, more importantly, toward justice.

Two recent works by Christopher Hemmer and Joseph Nye examine the challenges of acquiring power and holding on to it. Hemmer and Nye address the problems of American statecraft through the twentieth century until the Obama era. Today, as the presidential campaign season begins and we continue the perpetual debate over America’s role in the world, these books are timely and relevant. The analyses from these two scholars, one a dean of the U.S. Air War College and the other a former dean of Harvard’s Kennedy School of Government, indicate that American preeminence will extend far into the twenty-first century. However, the character of that power may look very different and will require the United States to make smart strategic choices at home and abroad.

At its outset, Christopher Hemmer’s *American Pendulum: Recurring Debates in U.S. Grand Strategy* asks, “Should a state invest more in its armed forces, its health-care system, the education of its young, its economic infrastructure, or its diplomatic apparatus?” (p. 4). For many, the answer to this question depends not only on how the state conceives of power but on whether one accepts the author’s definition of grand strategy. Hemmer frames his analysis using Barry Posen’s theory of security: that it is “national, comprehensive, and long term” and “advanc[es] some conception of a state’s national interests as a whole” (p. 2). This broader definition puts Hemmer into the conversation with other scholars such as Hal Brands, John Gaddis, Paul Kennedy, Christopher Layne, and John Mearsheimer. If Hemmer casts grand strategy as a guns-or-butter problem, Nye offers a sensible solution: both.

Hemmer’s chapters detail eight episodes in the last century. Beginning with the American rise to power under Theodore Roosevelt and Woodrow Wilson, Hemmer discusses the expanding security perimeter of the United States. He looks beyond the Monroe Doctrine to the dilemma facing a nation with increasing means and ambitions. For readers with an interest in the policy of containment, Hemmer discusses its origins, implementation, extensions, and culmination over the four central chapters of the book. Here readers will enjoy a rich discussion of the Truman Doctrine, the competing visions of George Kennan and Paul Nitze, détente, and the “end of history.” The chapters provide ample citations to a breadth of scholarship. For those who argue that strategy requires an adversary, Hemmer’s chapter titled “Grand Strategy in the Absence of a Clear Threat” examines the shift from containment to “enlargement” and the challenges that faced decision makers during the period to which Charles Krauthammer referred as “the unipolar moment”—from the fall of the Soviet Union until 9/11. The war on terror and the rise of China receive treatments in the final two chapters.
Hemmer frames the recurring debate in American grand strategy as the challenge of striking the right balance between unilateralism and multilateralism. From the Farewell Address of George Washington, who advocated for “as little political connection as possible” in commercial relations, to Thomas Jefferson’s warning about the dangers of “entangling alliances,” the American tradition is replete with skepticism about foreign engagement. The crucial debate for Hemmer, however, is “not about whether to be internationally involved, but about how to be internationally involved” (p. 7). Therefore the question Hemmer poses is not about American isolationism, but rather about how—and on what terms—the United States should engage in the world.

In *Is the American Century Over?*, Joseph S. Nye Jr. argues that multilateral engagement in the world was an essential element of the “American Century” and a fundamental feature of American power. The book’s title begs the question in a period of increased American unilateralism. Nye frames American power in terms not only of the sticks and carrots of hard power but of the attraction and persuasion of soft power—the latter being a term he coined. For Nye, America was at the height of its power when it led the club of nations that enjoyed unprecedented security and prosperity.

Whereas Hemmer focuses on American power in terms of the country’s economic and military might that came to the fore at the turn of the last century, Nye argues that the American Century began in 1941 as the United States assumed the central role in maintaining a global balance of power. Nye’s analysis proceeds from this foundational question about the start date of the American Century to ask whether the United States is in decline, in either absolute or relative terms. Ultimately, Nye concludes that the United States has passed its peak; nevertheless, he argues that the United States will remain the most powerful nation in the world. America will maintain its preponderance of power, but in less dominant proportions. Thus, even amid concerns about the rise of China and the supposed danger of Graham Allison’s “Thucydides trap,” Nye remains optimistic.

Yet immediately after his consideration of hegemonic transition and America’s responses to this challenge, Nye curbs his enthusiasm about American power by considering the problem of strategic overstretch. A concise examination of the culture, society, economy, and political institutions of Rome provides a brief but sobering lesson. In this analogy, Nye concludes that the key to America sustaining its strength lies in its political unity, a renewal through immigration and entrepreneurial innovation, and its political institutions. Whereas many strategists look beyond their borders for answers to American security within the international system, Nye focuses on internal factors as the means to maintain our place in the world.
Domestic politics, it turns out, is key to grand strategy both for Nye and for Hemmer—just as it was for the great Cold War strategist George Kennan. To the author of the containment strategy, domestic vitality was the key to successful foreign engagement. In his 1947 “long telegram,” Kennan urged the United States to “create among the peoples of the world generally the impression of a country which knows what it wants, which is coping successfully with the problems of its internal life and with the responsibilities of a world power, and which has a spiritual vitality capable of holding its own among the major ideological currents of the time.”¹ For the grand strategist, whose concern is to leverage the elements of national power to attain a political aim, both Hemmer and Nye might agree with Kennan that the theory of American security begins and ends—as it did during the competition with the Soviet Union—with “a nation dependent on pulling themselves together and accepting the responsibilities of moral and political leadership that history plainly intended them to bear.”² Hemmer and Nye complement each other well, and they remind us that the most important recurring discussions about grand strategy begin at home—wise words too often left out of the debate on statecraft.

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2. Ibid., p. 868.
WILL THE UNITED STATES LEARN FROM THE IRAQ WAR?

Daniel J. Cormier


The U.S. Army’s unofficial two-volume history of the Iraq War offers a critical examination of the conflict, one that is illuminating and controversial. In 2013, while serving as the U.S. Army’s Chief of Staff, General Raymond T. Odierno commissioned a team of Army warrior-scholars, all of whom had served in Iraq during the war, and asked them to conduct a candid examination of the conflict. He wanted to ensure that the Army and the nation grasped the war’s implications for the future. The study accomplishes this goal. It escapes the pattern of most official histories by openly addressing contentious topics. It is an engaging read that includes critiques of the decisions of senior military and civilian leaders as well as instructive lessons from the conflict.

But critics of the study are also accurate in pointing out that the work is not definitive. The complexity, scope, and duration of the conflict will foster a variety of interpretations. In the foreword, another Army former Chief of Staff, General Mark Milley, highlights this reality. He describes the history as an “interim” report that is intended to “sharpen thinking, and promote debate.” That description is accurate, and it underscores the study’s value. This history shines a light on the need for a national dialogue about how the United States understands, prepares for, and conducts war.

These goals challenge many of the current efforts in Washington to move on from the conflict and focus on the business of great-power competition. This desire, the authors correctly point out, epitomizes the type of conceptual failure that happened after Vietnam. It allowed the wrong “lessons of Vietnam” to take hold, leading the Army and the nation to overvalue technology and to focus, almost exclusively, on high-end conflict. The emphasis on tactical excellence created military leaders who were ill prepared for the complexities of modern war. It took several years for the United States to comprehend the fallacy of this outlook, as it had to relearn the same lessons in Iraq. That learning curve required a price that was paid in blood and treasure.
On the basis of a survey of recently declassified military records, as well as oral history interviews, the authors provide an unclassified account of how America’s senior military leaders in Iraq understood the conflict and reacted to the complex mosaic of challenges they faced. The second volume begins by summarizing the flawed decisions made by senior U.S. government leaders early in the war that were detailed in the first volume of the work. These included the proclamations that excluded Baath Party members from the new Iraqi government and disbanded the Iraqi army, as well as constraints that Washington placed on American troop levels. Those choices disenfranchised Iraq’s Sunni population and created a security vacuum. The former Iraqi soldiers and leaders became the backbone of insurgent movements that resisted efforts to establish a new government in Baghdad. The decisions also revealed an American strategy for the conflict that was overly ambitious. For example, the objectives for the war were poorly aligned with the resources provided. Additionally, the U.S. administration failed to sustain American public support or to create the international cooperation on which success depended. The administration never effectively responded to Syria’s direct support of Sunni insurgents and Iran’s sponsorship of Shia attacks on U.S. forces. This lack of a coherent regional strategy ceded the initiative early to “Syrian and Iranian proxies,” making the accomplishment of America’s “political and military objectives almost impossible” (pp. 620–21).

The study also makes clear that, from beginning to end, U.S. actions in Iraq suffered from naive assessments at the highest levels of the U.S. government. These included a “short-war assumption” and the superficial belief in the transformative power of democratization, specifically elections (p. 619). The authors detail how the parliamentary elections in 2005 chiefly served to empower a new Shia elite that was beholden to the interests of religious and tribal-based factions. This led Iraqi government officials to pursue efforts to control the nation’s security forces to dominate their Sunni rivals. A Kurdish push for semiautonomy for Iraq’s northern provinces further demonstrated the scramble for power that American decisions unleashed. Instead of rebuilding a new nation-state, the quick return of authority to the Iraqi government produced a new era of sectarian strife.

Additionally, the authors avoid re-creating the Vietnam myth that the U.S. military could have won but for the decisions of its civilian leaders. There was no dereliction of duty in Washington, DC, where national leaders simply pursued narrow interests over the advice of the military. In fact, the authors argue that several of America’s military leaders supported the decisions made in Washington—and thus helped lose the war (pp. 9–10). The faithful adherence to policy guidance by General George W. Casey, the U.S. Multi-National Force–Iraq (MNF-I) commander from 2003 to 2007, translated into a coalition strategy oriented toward quickly training and transferring responsibilities to indigenous forces in
Iraq. These choices squandered precious time and allowed the security situation to deteriorate (p. 618). By 2006, Iraq effectively was divided along sectarian lines, jeopardizing its survival as a unitary state.

The preponderance of volume 2 details the efforts of American forces to reverse this severe situation, from 2007 until they withdrew in 2011. The authors include a summary of the debates, critiques, and studies that took place in Washington, such as the congressionally appointed Iraq Study Group findings in 2006 that included seventy-nine recommendations and emphasized the need for bipartisan cooperation in Washington, DC, unity of effort by U.S. government agencies in the Middle East, and enhanced diplomatic efforts with Syria and Iran to produce the support required to stabilize Iraq. Several of the perspectives from academia and think tanks and from within the U.S. government are examined also. These include Secretary of Defense Donald Rumsfeld's support for a steady transfer of control from American to Iraqi forces (pp. 10–16). But President George W. Bush decided on a different course. He replaced Rumsfeld with Robert M. Gates, overruled many of his principal military advisers, and agreed to a “surge” of U.S. troops that others proclaimed offered a chance for success (pp. 17–24).

The study posits that the steps taken in Iraq after 2007 ushered in a new era of the war. General David Petraeus, who replaced Casey as the MNF-I commander, and Lieutenant General Raymond Odierno, the day-to-day commander of all coalition troops in Iraq, implemented several changes that transformed the security situation. For example, they ensured a more coherent U.S. whole-of-government effort and repositioned military units from large bases to small outposts. These shifts permitted counterinsurgency (COIN) techniques that improved understanding of Iraq's sociopolitical challenges. The authors also highlight that the new approach enhanced the integration of U.S. conventional and special forces efforts, leading to significant improvements in the security situation in Iraq.

The study's positive portrayal of the effectiveness of COIN operations is balanced by several sobering revelations. Chief among these is that the Iraqi prime minister, Nuri al-Maliki, never subscribed to the U.S. goal of reconciling with the disenfranchised populations of Iraq (p. 432). While America fought battles to rebuild Iraq, al-Maliki postured for a sectarian confrontation and continued his well-established pattern of marginalizing the Sunni factions (pp. 472–76). His unwillingness to embrace political compromise meant that the gains in security that the U.S. surge produced were temporary and indecisive.

By the end of 2008, as President Bush was preparing to leave office, the United States signed a strategic framework agreement with Iraq. The accord moved American forces out of Iraq’s cities in the summer of 2009 and included a pledge to
withdraw them completely by 2011. These steps undermined any remaining U.S. influence in Iraq; U.S. forces found themselves watching from the sidelines in 2010 as al-Maliki refused to relinquish power after a new round of parliamentary elections. The Iraqi prime minister also thwarted the final attempts of the United States to build a strategic relationship with Iraq through a status of forces agreement that would have allowed a residual American advisory presence. Instead, Iraq’s Shia-dominated government developed a closer relationship with Tehran (pp. 414–20). The report concludes that Iran was the “only victor” from the war (p. 639). But global affairs are rarely resolved. In 2014, American troops returned to Iraq to help it fight the Islamic State in Iraq and Syria—a mission that continues today.

In the last chapter, the authors catalog several of the major insights that permeate the study. These include identifying the ways that the Army culture and bureaucracy detracted from the war’s efforts. For example, Rayburn and Sobchak reject the prevalent view in Washington that technology can replace the troop-intensive requirements of modern combat operations. They emphasize that human interaction remains indispensable to understanding and addressing the sociopolitical dynamics of any war (pp. 615–16). Their study also contends that the U.S. government’s management of the war did not encourage American commanders to be innovative. The Washington culture and bureaucracy prefer compliance, centralize decision-making, and discourage risk taking. The authors argue that the nation must escape this pattern, prevalent since Vietnam. Instead, military commanders must share responsibility for ensuring the quality of decision-making and strategy formulation. They also must be able and willing to adapt rapidly as conditions on the ground change (p. 621).

Another major concern the study illuminates is that America’s senior commanders relied on “overly optimistic planning” and failed to reassess several assumptions adequately (p. 625). Among these assumptions was a reliance on the metric of violent incidents, particularly against their own forces, to measure stability and progress in Iraq. Commanders repeatedly and erroneously judged that Iraq was more stable than it was and that a rapid transfer of power was possible (p. 619). This confusion also was seen in Vietnam. Additionally, the nation’s generals never were able to anchor military coalition efforts successfully to the political goals of the United States in Iraq. This gap in strategy occurred in part because of a failure to discern the sociopolitical dynamics of Iraq and the Middle East, such as the rivalries that existed in Iraq and their link to its national politics. Instead, the U.S. generals continually were surprised that Iraqis and regional players were pursuing their own interests and remained focused “on the comfortable tactical and operational tasks that were necessary but not sufficient” to address Iraq’s challenges and accomplish American strategic objectives (pp. 619–20, 625–26).
The authors also illuminate gaps between how U.S. leaders conceptualized the conflict and the war’s realities. They cite the failure to appreciate that a “sovereignty dilemma” existed in Iraq, where gains in security led to a decline in American influence over government leaders in Baghdad, who became empowered to consolidate their political positions. They argue that a “counterintuitive application of U.S. national power” often is needed, such as the requirement for increases in economic and diplomatic commitments as security improves or the withholding of American capabilities in the absence of political progress (p. 619).

It is important to note that the Army’s narrative history is not the final word. The research for the study was limited primarily to American, allied, and recently unclassified sources. As more documents are released and additional perspectives are assessed, such as Iraqi and Middle Eastern views, a different and more comprehensive picture of the Iraq War likely will emerge. The authors also could have engaged more thoroughly with several analytical inquiries. For example, their examination of the value of COIN operations is focused too narrowly against the presurge strategy inside Iraq and at the operational level of war. They also could have examined whether America’s COIN approaches were misaligned with the sociopolitical context of Iraq, such as privileging centralized Western conceptions of governance. Other pertinent factors that are worthy of consideration include whether and how the undertow of global geopolitics, regional perceptions that America’s actions were neocolonial, and the challenges presented by tribal culture affected America’s application of COIN concepts. These types of investigations may paint a different picture about the course and lessons of the war.

But this history of the Iraq War illuminates several problems that must be addressed if the United States is going to avoid repeating the same mistakes in future conflicts. For the military, there is a need for substantive changes in how leaders are prepared to serve at the strategic level. This includes reconsidering how the context of modern war affects the efficacy of military force and conceptions of success, as well as how hybrid warfare techniques and disruptive technologies—such as information, cyber, space, artificial intelligence, and robotics—challenge traditional preparations for conflict and competition. Importantly, the military needs senior leaders who are capable of wrestling with this complexity and linking the use of martial means to the context of the environment, as well as the political ends desired. They also must serve as custodians of competent and responsible strategic thinking. The “best” military advice is irrelevant if it is not tied to achievable political objectives. These considerations could impel a profound change in how the Army and the nation develop the talent, technology, and concepts of operations they will need to be successful in the future. But whether this study achieves its goal of producing the burst of introspection that Washington requires remains to be seen.
Lee Cordner applies decades of regional experience and maritime expertise in a comprehensive assessment of the Indian Ocean maritime environment and makes a rational, risk-based argument for the necessity of cooperative approaches in maritime security within the region. Cordner’s analysis of this region identifies important characteristics of the political, economic, and security environment. He also examines a broad list of other regional influences affecting maritime security and cooperation. Cordner analyzes the effects of the region’s rich demographic composition and identifies significant challenges to collective action posed by differences in culture, religion, ethnicity, and language. His assessment captures the difficulty in finding common interests among Indian Ocean states. Although his analysis describes the Indian Ocean region as a disparate collection of subsystems, he identifies numerous challenges in promoting and achieving a shared value of regionalism among Indian Ocean states. Cordner further develops a multinational concept of regionalism that is more than mere collective action and activities; it also includes a shared regional identity and purpose. Cordner examines the Indian Ocean as a maritime system that is vital to global trade, worldwide economic prosperity, and energy security. His analytical approach includes assessment of the maritime security effects of international rules and norms such as freedom of the sea, the law of the sea, the United Nations Convention on the Law of the Sea (i.e., UNCLOS), and state maritime claims within the region. Over the years, compliance with these rules has been the predominant state behavior in the region, with a few subregional exceptions (such as periods of piracy by nonstate actors or sea-denial operations by states in key geographic choke points). Extraregional powers have been crucial to countering these violations of the maritime order, but the author recognizes potential value in a coordinated regional state response, associated collective security capabilities, and leadership in the future. Cordner analyzes the Indian Ocean as a transportation system or “highway.”
that enables global trade by connecting markets in the east and west. He examines the interests and actions of regional states and intergovernmental organizations, including a subregional relative power and influence assessment for the Arabian Gulf and northern Arabian Sea. This evaluation suggests the absence of an influential regional state power with the requisite will to exert regional leadership and power at sea. Further, the region also lacks a powerful intergovernmental organization of states capable of expanding a regional dialogue on maritime security. As complications of any organic movement among regional states for increased maritime cooperation, Cordner identifies governance issues affected by dynamic domestic political systems, developing economies, contentious intranational demographic relationships, and limited military capabilities and capacities.

In his assessment, Cordner crafts an analytical framework that defines security in this context, evaluates risks within the region, and identifies the ensuing vulnerabilities in the security environment. His framework’s conceptual foundation is built on theories of decision-making and risk analysis. This approach includes a detailed progression of scholarly references and conceptual themes related to security, risk, and vulnerability—all while examining the relationships and linkages among these three concepts. This book would interest a decision-making and risk-analysis scholar in search of a practical application of risk-management theory in an international maritime context, or a regional expert seeking an assessment of the Indian Ocean from a maritime perspective.

The author makes the argument that through a comprehensive, fact-based risk assessment of the Indian Ocean maritime environment, identification of common risks and shared vulnerabilities will inspire states in the region to create a more effective, mutually beneficial, collaborative maritime security environment. Employing risk criteria on the basis of a likelihood-versus-consequence construct produces a prioritized list of nineteen specific risks in the Indian Ocean region. Such a risk-based approach in national decision-making considers the possibility that states may be willing to accept certain risks—or seek to mitigate potential consequences—rather than dedicate resources to eliminate the risk outright. Of course, the possibility of a “free rider” course of action poses another kind of risk, yet it remains attractive to Indian Ocean states with limited resources, capabilities, and popular support for shared maritime-security activities. Even the prospect of cost sharing can be problematic. While Cordner understands these vexing challenges, he nevertheless remains undaunted as he considers the prospects for achieving greater regional cooperation. In the course of doing so he makes a stimulating argument, and recommendations, for increased regional dialogue and further study on maritime security.

SEAN SULLIVAN


Fortune Favors Boldness: The Story of Naval Valor during Operation Iraqi Freedom, by Vice Admiral Barry M. Costello, USN (Ret.), is a compilation of historical anecdotes, entertaining
sea stories, leadership lessons, and inspirational passages that cumulatively shine a light on the heroic deeds of the sailors, Marines, and Coast Guardsmen who helped topple the Saddam Hussein regime in 2003. This concise, yet detailed, historical narrative that focuses on wartime naval operations in the Arabian Gulf is a must-read for all naval personnel who desire to learn from those who sailed into harm’s way to fulfill the national security imperatives of political leadership. This graphically depicted slice of U.S. naval history is also an excellent read for all Americans. Too often the real-world exploits of sailors and Marines, and their contribution to national security, go unnoticed by a citizenry whose only knowledge of the naval service stems from having watched Top Gun, NCIS, and A Few Good Men. Costello’s uncanny ability to simplify and relate complex military operations through the eyes of the actual senior leaders, surface warriors, aviators, submariners, minehunters, flight-deck hands, and engine-room operators makes this collection of stories a gripping yet educational read for the general populace.

As a professor at the Naval War College, I have observed that far too many officers lack a factual grasp of post–World War II naval history. Therefore I agree wholeheartedly with Vice Admiral Costello’s motivation for authoring his memoir, which stemmed from a recognition that there is a “dearth of writings from Navy leaders over the last several decades from which current and future generations can benefit” (p. 6). Indeed, Costello explains that junior naval personnel made it clear “that they want to know what happened and why certain decisions were made.” Fortune Favors Boldness delivers on this yearning.

As the commander of Cruiser Destroyer Group 1 (CCDG-1), embarked in USS Constellation (CV 64) (commissioned in 1961, the ship was on its final deployment), Vice Admiral Costello had a unique vantage point from which to relate the story of naval operations during Operation IRAQI FREEDOM (OIF). This is evident as he not only shares his own recollections but also includes several personal accounts from members of the strike group. These include the aviators who flew “downtown” into the teeth of enemy air defenses on the first strikes of the war, the embedded press corps who had surprisingly free and open access to all the strike group’s planning and operations, the surface and subsurface officers who launched hundreds of Tomahawk land-attack missiles, the mine-hunting forces that cleared critical waterways in the northern Arabian Gulf, and the forces that secured critical oil platforms just before Saddam Hussein’s forces could destroy them.

The book’s title, derived from the motto of Vice Admiral Costello’s CRUDEVGRU, “Fortune Favors Boldness,” is fitting as the reader is made privy to the messages, phone calls, e-mails, and private conversations between and among a cadre of leaders who understood clearly that the naval service’s contribution to the “shock and awe” campaign of General Tommy Franks, USA, would be decisive in the early stages of the war. The discourse among senior military leaders from the United States and partner nations provides a treasure trove of leadership lessons for future officers that the author brilliantly highlights to make it easy for the reader to absorb.

Vice Admiral Costello notes at the outset that his goal was to write a great adventure story for the sailors, Marines,
and Coast Guardsmen who served in the Arabian Gulf during OIF, for veterans of all times and services, and for the American people so that they could appreciate the sacrifices of the young heroes who stood the watch to protect their security. Furthermore, he clearly states that his mission was to pen a “leadership book with an emphasis on lessons to help” future naval leaders (p. 9). Vice Admiral Costello accomplished his mission, as did the naval forces he was proud to lead into battle during Operation IRAQI FREEDOM.

SEAN P. HENSELER


Of the major military services of the twentieth century, the Imperial Japanese Army (IJA) and the Imperial Japanese Navy (IJN) are two of the least understood outside their national homes. As a result, Willem Remmelink’s work in translating into English the official Japanese history of the invasion of the Dutch East Indies in 1942 is a major contribution to the study of World War II.

This book is volume 3 of 102 in the War History series (Senshi Sōsho) that the Japanese National Defense College—now called the National Institute for Defense Studies—produced between 1966 and 1980. It is the first of three that Remmelink plans to translate on the Dutch-Japanese war in 1942. The series is joint in that it examines the activities of both the IJA and IJN. With that said, this volume focuses primarily, but not exclusively, on ground operations. The other two planned translations will focus on sea and air operations in and around modern-day Indonesia. Remmelink’s translation work is impressive. This English-language volume is full and unabridged. The book includes seventy maps and probably as many photos. The quality of the maps is high, but that of the photos leaves a little to be desired; they seem to be scans of the photos printed in the Japanese originals. Extras include the Japanese order of battle, useful glossaries of military and naval terms, and indexes of personal and place-names in both English and Japanese.

The book starts off slowly, with the early chapters containing a collection of documents with a single sentence connecting one staff memo to the next; there is very little historical analysis or narrative. But if one pulls back a bit, these early chapters offer a fascinating look at a military staff at work planning real combat operations. The Japanese enjoyed enormous and rapid success in the seizure of the Dutch East Indies. Why? The central argument of history is that the Japanese isolated the battlefield with air and naval assets. The IJA and IJN worked well together in joint operations. While the IJA had material shortages even in 1942, it overcame these problems with bold, innovative leadership. For example, the IJA conducted its first airborne operation during the invasion. The Japanese also had the support of the local population, which wanted to rid itself of the Dutch.

This history raises some interesting new questions. Many of the strengths the Japanese brought to the fight against the Dutch were the exact opposite of things they did in their war against the
Americans. What happened? Why was there such a fundamental change? Why were the Japanese unable to sustain these traits later in the war? Books that challenge the received wisdom are always fun, and this one only increases the interest in the next two translations.

NICHOLAS EVAN SARANTAKES


Air Vice-Marshal Arjun Subramaniam is not a man to shy away from challenges. In India’s Wars, he attempts to explain in one volume the creation, evolution, and employment of India’s armed forces during the first quarter century of its independence. He succeeds remarkably well, and this volume likely will be the best example of its genre for the foreseeable future.

India’s Wars is more than an impressive chronological discussion of battles fought and mostly won. Subramaniam also examines questions and issues of high strategy and national identity. For example, he examines how a country led by the heroically popular pacifist Jawaharlal Nehru could create a joint military consisting of former colonial regiments with long and storied traditions, elements of the Indian army that had fought alongside Japanese troops in World War II, and air and naval forces. This section of the book looks at India’s martial past during the precolonial and colonial periods.

The book then follows a chronological path, examining major military actions. Subramaniam looks hard at the first Indo-Pakistan War, of 1947–48. Responsibility for initiating the war is placed solely on Pakistan. Associated chapters feature detailed descriptions of India’s attempts to hold ground in Jammu and Kashmir. Useful maps accompany every battle description.

It is easy to forget, except in the well-known example of Jammu and Kashmir, that the boundaries of modern India were not permanently established at partition. The princely state of Hyderabad chose not to join greater India and opted to continue as an independent state. Similarly, Portugal did not relinquish its city colony of Goa on India’s west coast. When efforts at political solutions increasingly appeared doomed to fail, the government decided to settle both situations via military means.

The 1962 India-China war is examined thoroughly with as much attention to this Indian defeat as is given to earlier victories. Subramaniam identifies political failures on the basis of unrealistic expectations regarding Chinese intentions and miscalculation of Chinese capabilities. Mistakes in operational dispositions and tactics are faced squarely.

Subramaniam’s best writing covers the 1965 war with Pakistan. He carefully explains Pakistan’s strategic and operational preparation for the conflict, including an alliance with the United States, modernization of the Pakistani armed forces with U.S. equipment, and substantial improvement of such capabilities as close air support. Although Pakistan was unable to field as many divisions as India, Subramaniam makes a convincing case that the acquisition of Patton tanks, better artillery, and F-86 fighter-bombers gave Pakistan a qualitative edge. Subramaniam also makes a point...
of crediting Air Marshal Asghar Khan of the Pakistani air force as responsible for significant improvements in his service.

The role of paramilitary mujahideen is discussed in detail, Subramaniam arguing that these forces were largely ineffective in sparking popular uprisings. He also looks at the opposing navies, and attributes lack of any real Indian naval campaigns to the unavailability of INS Vikrant, India’s sole aircraft carrier, during the period of hostilities.

Subramaniam provides clear descriptions of combat actions, supported by adequate maps and occasional pocket biographies of key personalities. He candidly admits to failures of Indian intelligence, and notes that Pakistani forces experienced similar problems. Indian mistakes and losses are cataloged carefully, as are those of Pakistan. He draws extensively from personal interviews, unit war diaries, and secondary sources.

The book concludes with the liberation of Bangladesh. Although Pakistan is identified as responsible for widespread human rights abuses in what was then East Pakistan, Subramaniam recognizes that Indian leaders from Indira Gandhi on down recognized the greatly improved strategic situation India would face if Pakistani forces were removed from a shared eastern border. The war’s depiction follows Subramaniam’s pattern of explanatory description, buttressed by maps. He examines the rapid collapse of Pakistani forces in Bangladesh and military operations along the West Pakistan–Indian border. Subramaniam provides a careful examination of the naval war and mentions the roles of militia forces, intelligence, and covert operations.

Regrettably, Subramaniam stopped his examination of India’s military at 1971. His excellent ability to analyze and explain would have been welcome in looking at the role of the Indian military during the national emergency of 1975 to 1977. An examination of the impact of India’s nuclear capabilities on doctrine, strategy, tactics, and forces also would be a notable addition to this work.

Taken in its entirety, the picture India’s Wars paints of the evolving Indian military is a flattering one. Modern military prowess rides comfortably on proud traditions and achievements of the past. If a reader detects a certain satisfaction on the part of the author, it is as well deserved as it is understandable.

RICHARD J. NORTON


In the past, Larrie Ferreiro has combined his expertise in military history with his extensive knowledge of naval architecture to produce unique interpretations of eighteenth-century events that shaped our world. Building on the impressive scholarship in works such as his Ships and Science and The Measure of the Earth, Brothers at Arms combines familiar accounts of French officers who served with the Continental Army with descriptions of the contributions of other French and of Spanish officials without whose assistance the newly created United States likely would not have survived.

The book begins with the interesting assertion that the courts of Europe, particularly the Bourbon monarchies of France and Spain, were the principal audience for the Declaration of
Independence. It is this assertion that frames the balance of the work. The chapters then explore how different segments of French and Spanish society aided the American cause. Beginning logically, it describes the contributions of the merchants who provided the covert shipments of arms that sustained the Continental Army through the early years of the conflict. Ferreiro then moves through the ministers who directed events, the soldiers whose expertise leavened the new American army, and the sailors whose exploits secured the final victory.

The thread that runs through the entire book is the international dimension of the struggle for American independence. The various strands are tied together in the concluding chapters. In turn, Ferreiro explores the closing phases of the war in North America, the global struggle that eventually transcended the American war, and finally the international legacy of the conflict. Ferreiro’s writing is crisp and his style accessible to the general reader, while the scholarship remains first-rate and valuable to the specialist. While the notes are presented in a style more typical of popular history, the combination of primary sources, archival material, and scholarly works cited is a testament to the depth of research supporting this volume.

The only minor weakness in the work is that it includes only three, small-scale maps, each covering an enormous theater. For a reader unfamiliar with the geography involved, larger-scale maps within the text might be more useful. This is, however, a minor issue in an otherwise masterful treatment.

It is the blending of the stories of familiar characters such as Lafayette and Rochambeau with the invaluable contributions of other French and of Spanish officers and officials that proves most effective, particularly with regard to the efforts of the lesser-known characters. While the contributions of the prominent and well-known French officers are not neglected in this volume, it is the supporting members of the cast of characters who shape the narrative. While a recently published biography of Bernardo de Gálvez also has mined this rich vein of historical material, *Brothers at Arms* serves a different purpose. Ferreiro makes a compelling case for the often-neglected contributions of Spain to the American cause, but does so in the context of the complex and interrelated set of theaters. The operations of Gálvez against the British possessions in West Florida set the stage for French participation in the North American finale at Yorktown; a Spanish official in Havana provided the financial resources for the campaign as well. Ferreiro makes clear that each state acted out of self-interest rather than altruism.

Larrie Ferreiro has added depth and breadth to our understanding of the American War of Independence, particularly the global dimension of that struggle. He has placed the commonly understood struggle over control of the colonies within a broader international context. Where other works have considered the strategies that European powers employed during this fight, he has challenged us to assess the interactions among these various states and among the various theaters. In *Brothers at Arms* the war is presented as a global, integrated struggle. An informative book for the general reader, it also is a valuable and insightful volume for historians of the period. Ferreiro’s book points the way to a more nuanced understanding of the American war and
should inspire more inquiries into the international dimension of the conflict. It challenges us to think first of Vergennes and Floridablanca, who thought in terms of grand strategy, rather than of soldiers and sailors with whom we are familiar.

KEVIN J. DELAMER

*Plutarch’s Politics: Between City and Empire*, by Hugh Liebert. New York: Cambridge Univ. Press, 2016. 264 pages. $104.

Although the price of this volume may discourage individual ownership, unfortunately, do not let it deter you from seeking it out. The author, a professor of political science at West Point, has produced a tour de force of scholarship and analysis of an underrated, if not neglected, classical writer. Plutarch, a Greek of the first century AD, who thus lived under the Roman Empire, was one of the most consequential ancient authors in his impact on later European culture; not least, he is the authority for the history forming the backdrop of Shakespeare’s Roman plays. His massive work *Parallel Lives* paired biographical accounts of one Greek and one Roman statesman or military commander from the period of the ascendancy of the independent state system of Greece and the Roman Republic. The focus therefore is on political-military leadership in the context of republican political orders. Representative pairings include Numa and Lycurgus, the founders of Rome and Sparta; Fabius and Pericles; Alcibiades and Coriolanus; Crassus and Nicias; and Demosthenes and Cicero.

Liebert’s overriding intention is to disprove a widely held view that Plutarch’s writing is superficial, merely a form of hero worship. The author shows convincingly that neither Plutarch’s choice nor his treatment of the men about whom he writes suggests a hagiographical purpose. Some of his statesmen are exemplars of severely flawed greatness. In all cases, he provides information supporting a negative as well as a positive interpretation of them. In an interesting and original discussion, Liebert suggests that the unusual format of the *Lives* is intended to set up an agonistic confrontation between the paired Greeks and Romans, one whose fundamental purpose is to make his readers reflect deeply on human personality and leadership styles. (Apparently, Augustus, the founder of the Roman Empire, used to enjoy watching boxing matches between a Greek and a Roman—perhaps the source of Plutarch’s inspiration.)

The other central thrust of Liebert’s argument is that Plutarch deserves to be regarded not just as a chronicler of political and military deeds but as a political philosopher, one intent on exploring and preserving an understanding of the workings of the political order of the classical polis, or city-state, prior to the advent of universal Roman rule at the beginning of the millennium. Plutarch was not in any sense a revolutionary. He was a prominent citizen in his hometown of Chaeronea in central Greece and well connected with the ruling Roman elites of the day. 

But he seems to have been concerned to nourish a recollection of the time of polis independence, as a way to encourage local patriotism and civic engagement in the circumstances facing him.

Liebert’s book is far from a comprehensive study; rather, it focuses primarily on two of the lives, those of Numa and Lycurgus. This allows the author to develop a richly detailed portrait of the
polities that are in many ways the most important and instructive of Graeco-Roman antiquity, as revealed especially in their foundings. Sparta is the quintessential Greek polis in its self-contained and parochial nature; Rome, by contrast, is the city destined to become an empire and put an end to the classical world.

CARNES LORD


The magnitude of World War II is difficult to comprehend fully. The scope, course, and details of the war are such that gaining a useful working knowledge of it can be challenging. The authors have assisted such endeavors greatly with the present volume. They come to the project with significant knowledge of the war and expertise in writing and editing military history. Additionally, Guillerat was trained as a data designer and graphic artist. The result is an informative, enjoyable, and aesthetically pleasing volume that is easy to use. The authors go far beyond simply presenting chronology, statistics, and lists.

Containing hundreds of easy-to-read and visually appealing color charts and graphics, the volume divides its subject matter into fifty-three areas, grouped in four sections: “The Context of the War,” “Arms and Armed Forces,” “Battles and Campaigns,” and “Aftermath and Consequences.” Among the areas of particular naval interest are the infographics labeled “Combat Fleets,” “A Carrier Battle Group in 1942,” “A Tidal Wave from Japan,” “The Battle of the Atlantic,” “The Battle for Midway,” “War in the Mediterranean,” and “Japan: The Final Days.” Economic, demographic, and military information is presented visually in a manner that moves beyond names and numbers and provides the reader with useful and memorable information. For example, of the 2.2 billion people alive in 1939 when the war erupted, 130 million of them, from thirty nations, were mobilized for military service (p. 23).

The volume’s inclusion of coverage of areas not always presented in others works, such as the Manhattan Project and the Holocaust, is extremely helpful. Also of interest are infographics on troop mobilization, armaments production, civilian displacements, military collaboration and resistance, and Operation BAGRATION. The work provides information on major battles but not a graphic portrayal of every battle, so some users may desire more details on specific battles and campaigns. This should not be viewed as a defect, however, since supplying the latter is not the purpose of the work.

The authors have managed to organize and portray visually, using state-of-the-art graphic design, the scope and course of the war. The only thing lacking in the book is a CD of the work, which would allow the infographics to be used in the classroom or elsewhere. Its 9½” × 11¾” size makes it very readable and functional as a research volume. The book does not have an index.

Each of the volume’s fifty-three areas of study is introduced with a well-written narrative overview of the section that is contextualized historically. What one finds in this volume that sometimes is lacking in other, similar works is references and sources for all the data presented. For historians and students, this is necessary and extremely helpful.
The design layout and choice of information presented allow for the voluminous facts and figures pertaining to World War II to be comprehensible not only to specialists but to students and general readers. It will withstand both the requirements of scholarship and the expectations and desires of general readers. Such balance is difficult to obtain.

Although the volume is one of graphics and not pictures, the saying that “a picture is worth a thousand words” is certainly applicable and accurate in the instance of World War II Infographics. Coupled with a good historical atlas of the war, it should be a ready reference work for research and pleasure browsing by anyone with more than a nominal interest in World War II. There are several helpful infographic books on World War II on the market, but, from this reviewer’s perspective, this volume goes far beyond the others.

TIMOTHY J. DEMY


Many books have been published on “cyber” in recent years, many of which leave the reader with the sense that cyber must be important, while never clearly communicating what cyber actually is or what a “cyber warrior” might do all day. Clint Watts’s Messing with the Enemy is distinctive in providing an accessible yet detailed account of what Watts and his colleagues did to detect, analyze, and disrupt online two very different adversaries: jihadist terrorist organizations and the Russian government. The book is not technical and does not hide behind buzzwords, nor does it imply that the subject is too classified or too specialized for the reader to understand. The social media world in which Watts works may depend on technology, but ultimately the story in Messing with the Enemy is of very human communication and manipulation. The book is an engaging read and, while it is not a scholarly study, its “operator” perspective fills a niche likely to interest the Naval War College Review audience.

Author Clint Watts is a West Point graduate who became a Federal Bureau of Investigation (FBI) counterterrorism field agent, returned to West Point as cofounder of its Combating Terrorism Center, went back to the FBI in counterintelligence, and today is an independent consultant. Watts’s writing is lively, conveying plenty of personality while still delivering serious substance. Watts comes across as someone who would be fascinating to share a drink with; would be maddening to supervise; and, on balance, is an asset to America.

With respect to terrorists, Watts and his teams mapped organizational and intellectual networks faster than the U.S. Intelligence Community did, using public social media posts and open-source data ranging from weather reports to donkey prices. Watts directly “messed” with terrorist leaders, who—as if they were Bond villains—proved surprisingly willing to converse with a counterterror operative. Watts recounts goading jihadists into incautious revelations or, for one U.S.-born leader, into angering his al-Shabaab hosts by tweeting about preferring Applebee’s to Somali cuisine. Such “messaging” is a staple of conducting counterintelligence or fighting organized crime, yet official U.S.
“countering violent extremism” efforts often consist of milquetoast declarations that violence and extremism are bad. Watts could not mess so personally with the Kremlin, but he was among the earliest voices warning of Russian social-media-influence operations. The book details Russian support to pro-Assad trolls and hackers in 2011, then an exponential increase in Russian actions targeting the United States after the occupation of Crimea in 2014. Russia-linked sources promoted all manner of conspiracy theories, extremist ideologies, racial animosity, and negative news stories. Watts’s description of the 2016 Russian efforts to help Trump specifically may be old news in the wake of the Mueller report, but the book places the 2016 election story within the proper context of a much larger Russian campaign predating Trump. The book’s title promises survival tips for a new world of online adversaries. Watts has some logical policy suggestions, but their implementation is unlikely politically, so one comes away pessimistic. For individuals, Watts encourages readers to think critically, read widely, and vet sources. Someone motivated enough to read the book might follow that advice, but effecting widespread social change will be very difficult. Ideas such as content “trust” ratings on social media sites quickly run into issues with the First Amendment, the power of tech companies, and the ability of seductive bad content to migrate to new platforms. Watts has justifiably harsh words for the federal government’s social media outreach and its cumbersome bureaucracy and contracting rules. How one might scale up the expertise of street-smart iconoclasts such as Mr. Watts is unclear, however.

In fairness, Watts does not claim to have easy solutions (however confident he is of his own talents). He recognizes that the fundamental problem is with us, not our adversaries. So long as American society is polarized, distrustful, and weak in critical thinking, enemies will have ample opportunity to mess with us.

DAVID T. BURBACH


As a child living on Army posts during the Vietnam War, I noticed that most interior spaces had a distinctive, common odor. I later realized that what I thought of as “Army building smell” was actually the odiferous residue of thousands of smoked cigarettes, coupled with gallons of pine-scented cleaning products. The “soldier-cigarette bond” and the historical ubiquity of smoking within the U.S. military—particularly the Army—constitute the subject of Joel R. Bius’s Smoke ‘Em If You Got ‘Em: The Rise and Fall of the Military Cigarette Ration. His book charts the “rise and entrenchment of [the] soldier-cigarette bond from 1918 to 1945” before turning to its “demise and dislodgment . . . from 1973 to 1986” (p. 2).

Bius and the Naval Institute Press should be commended for producing this well-written and researched work of political and cultural history. Additional credit is due to Matt Simmons for an exceptionally striking and clever cover design.

Smoke ‘Em If You Got ‘Em explains well the military’s role “in establishing and entrenching” an American
The Great War catalyzed cigarette consumption and production within the United States. Prior to that war, factory-made cigarettes—a still-new product favored primarily by women—accounted for less than 10 percent of tobacco consumption. However, cigarettes proved to be an invaluable adaptogen, valued by soldiers for their ability to soothe nerves and mask the stench of trench warfare. Eventually recognizing these morale-enhancing effects, the U.S. Army began to include free cigarettes as part of a soldier’s daily ration in June 1918. Free government-issued cigarettes would continue as an integral part of a soldier’s ration until 1973. As a result, cigarette smoking became an American habit, reaching “staggering levels after WWI” (p. 59). This soldier-cigarette bond legitimized cigarette smoking as a marker of patriotic masculinity. Cigarettes quickly became so popular among all Americans that by the time of the Second World War smoking was “as much a part of American culture as baseball or apple pie” (p. 65). While the Great War’s daily ration was four cigarettes, soldiers in the Second World War were “authorized anywhere from twelve to twenty-eight free cigarettes per day” (p. 73). Cigarettes had become such “an essential part of the WWII soldiers’ routine” (p. 64) that cigarette production and distribution constituted “a vital warfighting issue of strategic consequence” (p. 62). Bius details the ensuing political wrangling over tobacco crop subsidies, home-front shortages, and hoarding that threatened this now strategically vital resource.

Cigarette smoking—widespread among civilians and the military alike during the Second World War—continued after the war. Bius describes how during this period the “cigarette had essentially become an appendage on men’s bodies” (p. 89). In fact, in 1950, 80 percent of American men smoked, tobacco was the nation’s fourth-largest cash crop, and 3.5 percent of consumer spending on nondurable goods went toward the purchase of cigarettes (p. 88).

Bius’s narrative then fast-forwards to 1973 and the post-Vietnam establishment of the all-volunteer force. That same year, Congress abolished free cigarette rations as a cost-cutting measure. Soldiers continued to smoke. Bius argues that it took growing health concerns about smoking, coupled with rising health-care costs associated with an all-volunteer military, eventually to sever the soldier-cigarette bond. A 1986 Department of Defense report on smoking and health in the military and ensuing antitobacco initiatives sought to curtail smoking dramatically within the military. Bius claims that these efforts were so successful that by “1986 cigarette smoking among the military ranks . . . dwindled” to a rate no higher than that of the larger civilian population (p. 207).

Smoke ‘Em If You Got ‘Em creates the impression that the soldier-cigarette bond remains severed; I’m not so sure. The antitobacco “Truth Initiative” (www.truthinitiative.org) reports that military personnel continue to smoke at rates notably higher than civilians. Moreover, while overall rates of cigarette smoking have declined within both populations, use of both smokeless tobacco and e-cigarettes has surged within the military. This is especially true among deployed soldiers and Marines. Even Bius recognizes the persistence of the soldier-cigarette bond—at least in wartime; in a footnote, he observes that
it has been his “personal experience” that “smoking rates among military officers and enlisted personnel deployed to combat zones such as Iraq or Afghanistan increase dramatically” (p. 273).

While Smoke ’Em If You Got ’Em excels in telling the story of the rise of cigarettes within the U.S. military, it fizzes out in describing its purported fall. It is true that Uncle Sam no longer issues free cigarettes—the cigarette ration has fallen away. However, it would seem that the soldier-nicotine bond continues. Indeed, according to Bius himself, “when it comes to the soldier and the cigarette (or pipe, or cigarillo, or cigar)—to which I would add chewing tobacco or vaped nicotine—“some things never change” (p. 273).

BRAD CARTER

O UR R EVIEWERS

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From the robot vacuum cleaner that patrols my floors to the unmanned planes that my friends in the Air Force use to patrol the skies, humanity has started to engineer technologies that are fundamentally different from all before. Our creations are now acting in and upon the world without us.

P. W. Singer, Wired For War

The formal mission statement underpinning the CNO PRP reads as follows: “The mission of the Chief of Naval Operations Professional Reading Program is to assist Sailors on their career-long path of personal development in the naval profession. Reading professionally relevant books will help Sailors develop as leaders of character who are strategically minded critical thinkers and skilled naval and joint warfighters, capable of meeting the operational and strategic challenges of the future.”

One way for sailors to prepare for the strategic challenges of the future is to read what the world’s foremost thinkers and futurists have written. New York Times best-selling author Dr. P. W. Singer is considered widely to be the premier scholar on all things futuristic, including drones, cyber warfare, and the weaponization of social media. Several of his books appear in the CNO PRP, as well as on the professional reading lists of other military services. Of particular note are four of Singer’s books, which their publishers describe as follows:

- **Ghost Fleet** (with coauthor August Cole) is a page-turning imagining of a war set in the not-too-distant future. Navy captains battle through a modern-day Pearl Harbor, fighter pilots duel with stealthy drones, teenage hackers fight in digital playgrounds, Silicon Valley billionaires mobilize for cyber war, and a serial killer carries out her own vendetta. Ultimately, victory will depend on who best can blend the lessons of the past with the weapons of the future. But what makes the story even more notable is that every trend and technology
in the book—no matter how sci-fi it may seem—is real. *Ghost Fleet* has drawn praise as a new kind of techno-thriller while also becoming the new must-read for military leaders around the world.

- **Wired for War: The Robotics Revolution and Conflict in the 21st Century** explores the greatest revolution in military affairs since the atom bomb: the dawn of robotic warfare. We are on the cusp of a massive shift in military technology that threatens to make real the stuff of *I, Robot* and *The Terminator*. Blending historical evidence with interviews with an amazing cast of characters, Singer shows how technology is changing not just how wars are fought but also the politics, economics, laws, and ethics that surround war itself. Traveling from the battlefields of Iraq and Afghanistan to modern-day “skunk works” in the midst of suburbia, *Wired for War* will tantalize a wide readership, from military buffs to policy wonks to gearheads. (This book is the primary text used in the Naval War College’s highly regarded elective course entitled “Unmanned Systems and Conflict in the 21st Century,” in which Singer is a frequent guest lecturer.)

- In *LikeWar: The Weaponization of Social Media*, Singer and coauthor Emerson Brooking tackle the mind-bending questions that arise when war goes online and the online world goes to war. They explore how ISIS copies the Instagram tactics of Taylor Swift, a former World of Warcraft addict foils war crimes thousands of miles away, Internet trolls shape elections, and China uses a smartphone app to police the thoughts of 1.4 billion citizens. What can be kept secret in a world of networks? Does social media expose the truth or bury it? And what role do ordinary people now play in international conflicts? Delving into the web’s darkest corners, we meet the unexpected warriors of social media, such as a rapper-turned-jihadist PR czar and the Russian hipsters who wage unceasing info wars against the West. Finally, looking to the crucial years ahead, *LikeWar* outlines a radical new paradigm for understanding and defending against the unprecedented threats of our networked world.

- In *Cybersecurity and Cyberwar: What Everyone Needs to Know*, Singer and noted cyber expert Allan Friedman team up to provide the kind of easy-to-read yet deeply informative resource book that has been missing on a crucial issue of twenty-first-century life. Written in a lively, accessible style and filled with engaging stories and illustrative anecdotes, the book is structured around the key question areas of cyberspace and its security: how it all works, why it all matters, and what can we do? Along the way, they take readers on a tour of the important (and entertaining) issues and characters of cybersecurity, from the Anonymous hacker group and the Stuxnet computer virus
to the new cyber units of the Chinese and U.S. militaries. *Cybersecurity and Cyberwar: What Everyone Needs to Know* is the definitive account on the subject for us all—and comes not a moment too soon.

Military professionals at all levels are being bombarded by constant technological change and must master the complexities of their current environment while keeping a weather eye on scientific and engineering developments that could alter significantly the way in which we will fight in the future. As we frequently note at the Naval War College, the future is closer than you think!

JOHN E. JACKSON