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Running Silent and Algorithmic: The U.S. Navy Strategic Vision in 2019

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RUNNING SILENT AND ALGORITHMIC

The U.S. Navy Strategic Vision in 2019

As of January 2019, the U.S. Navy does not possess a coherent, public, strategic vision.[1] The official statement of strategy, or the Navy's *strategic concept,* to use a term inspired by the late Samuel P. Huntington's term, remains *A Cooperative Strategy for 21st Century Seapower: Forward, Engaged, Ready* of March 2015, whose acronym is *CS21R (R* for *revised).*[2] The Department of the Navy (DON) leadership has never declared *CS21R* to be superseded, nor has anything been published to supplant it.[3] However, *CS21R* was written to support (and possibly shape) the foreign policy proclivities of the administration of President Barack H. Obama; its predecessor document, *CS21* of October 2007, was released during the administration of President George W. Bush. Both of these presidents endorsed engagement with the international community (albeit in contrasting forms).[4] The public statements of President Donald J. Trump appear to indicate that some of the principles articulated in *CS21R* may no longer be a good fit, and indeed the emergence of an international system dominated by great-power competition is now more apparent. Outsiders who study the policies of the U.S. Navy are well aware of this disconnect.[5]

Yet the U.S. Navy does, in fact, have a strategic vision that reflects the tenets of former Secretary of Defense James N. Mattis's *National Defense Strategy (NDS).* Within the Chief of Naval Operations staff (OPNAV), this strategic document has been referred to as "the Navy's response to the *NDS*" or "the Navy's contribution to the joint force." Like the *NDS,* it is classified "Secret" and not available publicly. Unlike the *NDS,* however, the Navy document does not have an unclassified summary, and there is little indication that one eventually will be prepared.

If the Navy's strategic vision is not available publicly, how can we make sense of the service's future policies, resource requirements, dispositions and deployments, and budget submissions? Likewise, how can the U.S. Navy convince the

American people—and obviously the political decision makers—of the validity and logic of its course? How do we know what the naval leadership intends? In the spirit of the descriptions (and hype) of current discussions of artificial intelligence (AI), we can apply human intelligence by analyzing the sum of what can be described metaphorically as a complex algorithm. In other words, we can combine the current white papers and program guidance(s) of the Chief of Naval Operations (CNO) and Secretary of the Navy, along with related official and semiofficial sources, to generate an approximate outline of the U.S. Navy's strategic focus.[6]

STRATEGIC VISION BY ALGORITHM

Included in this algorithm are (1) the *2018 National Defense Strategy* and its publicly released *Summary;* (2) *CS21R,* which lays out what remains the official (DON) strategy but appears overtaken by events and out of sync with presidential guidance; (3) three white papers that provide general direction from the current CNO, Admiral John M. Richardson, USN; (4) remnants of the officially super-seded *Air-Sea Battle,* a victim of joint ideology; (5) the report to Congress from an officially unofficial Navy future fleet architecture study team; (6) a numerical goal—355 ships—that appears largely in the rhetoric of senior officials; and (7) a book-length monograph attempting to define the current Navy in terms of naval war fighting that was commissioned by a previous CNO but released only weeks before his retirement (and thus is of questionable authority). Unlike the seven samurai (or seven gunfighters) of legend and film, these seven share a similar cause but do not necessarily fight well together.

In addition to these seven items there are statutory reports to Congress, such as the thirty-year shipbuilding plan and the Secretary of the Navy's annual report, from which can be gleaned particular details or other clues about the Navy's navigational track.[7] Additionally, as previously noted, classified top-level guidance or guidances from the Secretary of Defense exist—including the *2018 NDS*—that cannot be ignored and, under Secretary Mattis, shaped (and changed) the Navy's approach to building its vision.

Meanwhile, the U.S. Navy also has its classified guidance prioritizing its resource requirements for its program objective memorandum (POM) submission to the defense budget.[8] This strategic planning guidance, long-range planning guidance, Navy strategic plan for program objective memorandum, or simply guidance (the name changes with CNOs) is used by Navy program analysts and resource sponsors in lieu of translating a loftier strategic vision from strategy-speak to programese.[9] The current Chief of Naval Operations guidance (CNOG) for the fiscal year 2020 program objective memorandum actually was written ahead of the then-under-draft "response to the *NDS.*" So, in fact, the

SEVEN PRIMARY SOURCES FOR DETERMINING NAVY'S STRATEGIC VISION

	Document Type	Source	Release Date	Status
1	Secretary of Defense guidance	*Summary of the 2018 National Defense Strategy (Summary NDS)*	2018	Dominant joint/DoD guidance
2	Preexisting strategic vision	*A Cooperative Strategy for 21st Century Seapower: Forward, Engaged, Ready (CS21R)*	March 2015	Current Navy official vision
3	Fleet design guidance from current CNO Richardson	a. *Design for Maintaining Maritime Superiority, 1.0 (Design 1.0)* b. *The Future Navy* c. *Design for Maintaining Maritime Superiority, 2.0 (Design 2.0)*	January 2016 May 2017 December 2018	Updated by *2.0* In effect Affirms majority of *1.0*; adds specific guidance
4	*Air-Sea Battle* remnants	a. Admiral Greenert, USN, and General Mark Welsh, USAF, *Breaking the Kill Chain* b. Air-Sea Battle Office, *Air-Sea Battle: Multi-service Collaboration to Address Anti-access and Area Denial* c. Hutchins et al., "Joint Concept for Access and Maneuver in the Global Commons," *Joint Force Quarterly,* no. 84 (1st Quarter 2017)	2013 May 2013 2017	Publicly subsumed by Joint Access and Maneuver in the Global Commons (JAM-GC) joint concept paper (however, JAM-GC is applicable only tangentially to antiaccess challenges)
5	Navy Project Team report to Congress (N8 representative lead)	*Report to Congress: Alternative Future Fleet Platform Architecture Study*	October/November 2016	Overtaken by events and 355 number?
6	Directive for 355-ship Navy	*Executive Summary, 2016 Navy Force Structure Assessment (FSA), 14 December 2016*	December 14, 2016	2018–19 FSA is under way
7	Former CNO Greenert's handbook on Navy enduring attributes	*How We Fight: Handbook for the Naval Warfighter*	July 2015	Unclear and unpublicized

programming transliteration actually appeared (within the OPNAV staff) prior to the written strategy narrative.[10]

In a well-planned deployment, all these sources would synchronize to create a whole greater than the sum of their parts. Alas, conflicting perceptions of the post–post–Cold War world and rival political and bureaucratic ambitions have created crosscurrents that subtract as well as add. For example, some of these documents were written under the assumption of increased defense resources, whereas the midterm election of November 6, 2018, led to new House Armed Services Committee leadership that has been warning of leaner defense budgets.[11]

The intent of this article is to sum the algorithm and provide an outline of the U.S. Navy's current service strategic vision.

DOES IT REALLY MATTER?

Before describing each of the seven algorithmic inputs, we first need to deal with the question whether having a public USN strategic vision really matters. To the naval analyst operating in fleet commands, or even in the trenches of the Pentagon, and other navalists in general, the probable answer is "not really." As Admiral Carlisle A. H. Trost, USN (CNO, 1986–90), stated, "Over the years our Maritime Strategy has been very much like the British Constitution—unwritten but thoroughly understood by those who practice it."[12] Indeed, for those who serve in the fleet, the objectives of deterring war, maintaining U.S. access to the materials and markets of international trade, intervening in crises when so ordered, fighting terrorist groups, and providing a sovereign, forward presence are quite evident. For those who work on future Navy programs and budget, the CNOG and other classified documents are more directly useful.[13]

Ultimately, however, it is not the Navy or even the Secretary of Defense that actually determines Navy programs and budget, but rather the members of Congress as representatives of the American people. The fact that congressmen who normally are supportive of the naval services recently have expressed their desire that the Navy articulate a clear vision should be of concern to the service.[14] Yet, taking its cue from Secretary of Defense Mattis, who showed a penchant to discourage "too much" openness to media, the Navy has continued to run (relatively) silent.[15]

There are at least three likely explanations for the secretary's caution with the media. First is the official reason: too much information should not be transmitted to potential enemies. But in the case of the U.S. Navy, whose strategic predilections were made clear through media speculation (and some public discussion) of the air-sea battle concept (circa 2009–15), that reason seems a bit implausible. The Chinese Communist Party (CCP) and others know toward whom the Navy's operational planning is directed.[16] Second might be his desire that the services tightly conform to the jointly focused *NDS*. Since the Navy is known for its independently derived strategic visions—primarily on the basis of applying its own traditional operating concerns against changing conditions and emerging threats—this seems a more plausible concern. Third, more speculatively, is that the Secretary of Defense wants to ensure that the Navy—along with the other services and the rest of the Department of Defense (DoD)—does not get crosswise with future tweets and other sudden proposals emanating from the White House.[17] The president announced his desire for a 350-ship Navy at approximately the same time as he announced his proposals for a reduced federal

budget.[18] Quiet might be prudent at this particular moment. However, silence over its service visions never has seemed to help the Navy's long-term viability in the past, particularly in terms of budget and force structure.

THE CASE OF THE *MARITIME STRATEGY*

The public release of the Cold War–era *Maritime Strategy* in 1986 is one example of how public discussion—particularly by influential academics, with all the disputation and opposition that implies—actually improved the vision, raised public awareness of the Navy's mission, and generated considerable congressional interest.[19] With strong presidential interest and support for the strategy (which justified the political goal of a six-hundred-ship Navy), the public discussion served the Navy's institutional interests.[20] Primarily through media reports of reactions and resulting controversies, American citizens who might never have given their Navy a thought became aware that the Navy was doing something important.[21]

Additionally, a case can be made that public release of the *Maritime Strategy* actually heightened Cold War conventional deterrence, since the cacophony of debate reinforced a belief in the minds of Kremlin decision makers that the U.S. Navy / Marine Corps actually would employ its major forces in carrying out audacious and high-risk attacks on the Soviet periphery in the High North and Pacific in the event of a war in central Europe.[22] If the U.S. Navy was willing to sail its carrier battle groups (in conjunction with its attack submarines [SSNs]) in the face of long-range Soviet bombers and attack aviation in an attempt to penetrate ballistic-missile submarine (SSBN) bastions and destroy the Soviet fleet within home waters, what else might it attempt?[23]

Interestingly, there are continuing indications that, similarly, analysts working for the CCP today frequently are concerned that they might miss critical policy nuances revealed in cacophonous American public debates, even while many American decision makers treat that cacophony as background noise.[24]

VISION AMID AUSTERITY

There is yet another purpose for creating and updating a clear strategic vision—but one that naval decision makers hesitate to contemplate, lest their fears become reality. A clear strategic vision helps to maintain the motivation and morale of naval personnel and public support for the naval services during times of fiscal austerity. Samuel Huntington identified this factor in his argument for a naval strategic concept in the 1950s. Huntington noted that "if a service does not possess a well-defined strategic concept, the public and political leaders will be confused as to the role of the service . . . and apathetic or hostile to the claims made by the service on the resources of society."[25] At that time, both a shrinking (or, rather, already shrunk) budget and the arguments of the U.S. Air Force

threatened to strip the U.S. Navy and Marine Corps of their wartime missions. Initially, the DON seemed unable to articulate its purpose in the nuclear age. After all, having defeated imperial Japan in the greatest joint campaign in military history, the service's relevance seemed evident—at least to the Navy itself. However, by accepting the need to develop and promulgate a strategic concept understandable to the public as well as political decision makers, Navy and Marine Corps leaders were able to reestablish an internal sense of purpose as well as regain public and congressional support. Having a vision that was both internal and public was a particular priority under the extended tour of duty of Admiral Arleigh A. Burke (CNO, 1955–61). As an internal guide, an unclassified Naval Warfare Publication (NWP) 1, *Strategic Concepts of the U.S. Navy,* was created as the foundation for all other naval publications. It was updated routinely until its quiet demise in the 1990s.[26]

The post-Vietnam Navy (circa 1974–81) was racked by personnel problems, arguably because of both reduced funding for readiness and a lack of a motivating sense of purpose. The creation of the *Maritime Strategy* was instrumental in regaining this sense of purpose.

There are strong indications that the promise of a 350- or 355-ship Navy by the Trump administration—whatever its degree of commitment—may give way to a reduction in the overall defense budget under new Democratic leadership in the House of Representatives. There had been previous stirrings among fiscal hawks in both parties, and Secretary of Defense Mattis never committed himself to the 355 number.[27] Thus, the Navy's anticipated increase actually may turn into a winter of decreased resources.[28] Such winters are times when strong and clear vision seems to be needed most.

In sum, a clear, publicly articulated Navy strategic vision has mattered—for congressional and public support, as well as for internal morale and sense of purpose. Its absence does have effects.

NDS AND THE NAVY

If *NDS* is the driver of the current Navy self-vision, what is in the document that directly affects the Navy?

Working from the unclassified *Summary of the 2018 National Defense Strategy of the United States of America* (hereafter *Summary NDS*), one first observes that its strategic change toward a "balance of power" approach to deterrence should mean a tilt toward the Navy's traditional missions. The *Summary NDS* states unequivocally, "Inter-state strategic competition, not terrorism, is now the primary concern in U.S. national security."[29] Although the U.S. Marine Corps, Naval Special Warfare (SEAL), and explosive ordnance disposal units and naval tactical aviation were involved deeply in countering jihadists—who also occasionally

were targeted by Tomahawk-firing ships and submarines—most of the blue-water Navy had but tangential roles in countering terrorism, even if one counts the Navy individual augmentees in the wars in Afghanistan and Iraq.[30] The Navy's primary purposes—of ensuring access to the markets and materials that constitute international trade and deterring, fighting, or facilitating power projection in interstate war—were not part of what former Defense Secretaries called "the wars we are in." If interstate conflict is now "where it's at," with the primary list of likely opponents being represented by the 2+2 construct of the People's Republic of China (PRC) and Russia, followed by Iran and North Korea, then the Navy has to be a primary fighting component, given that all the above are separated from the United States by oceans.[31]

However, as one reads through the *Summary NDS,* a subtle ground force–centric approach to strategy can be detected. For example, the global operating model for joint force posture is described by the four terms *contact, blunt, surge,* and *homeland* (CBSH).[32] The first three are general descriptions of phases of a land campaign that do not have exact naval equivalents. Would forward-deployed naval forces constitute a contact layer, or are they a standing blunt force? Both terms imply a classic ground engagement among armies, whereas modern naval combat is described most persuasively as "a struggle for the first salvo" (even if that is a Cold War Soviet concept) or an attempt to "attack effectively first" (in the words of Captain Wayne P. Hughes Jr., USN [Ret.]).[33] The U.S. Navy never actually has surged in a war against a powerful naval opponent. In the World War II Pacific War, most high-value units were already at sea or within range of the enemy; instead, the surge occurred in industrial production and mobilization—a feat that many doubt could be replicated today. Likewise, the maritime defense of the homeland is largely the responsibility of the U.S. Coast Guard, although SSBNs remain the most survivable leg of strategic nuclear deterrence, and naval theater ballistic-missile defense, along with Aegis Ashore, could be integrated into national missile defense (a mission the Navy has avoided). It simply is tough to fit naval war fighting into the CBSH formula—a fact that may have deeper implications. One can shoehorn naval force structure into the formula for comparative modeling with land forces, but only by "fuzzing" their designed operational employment.

Following a fairly traditional description of objectives, strategic objectives, and desired capabilities—none that would be completely out of place in a Cold War document—the *Summary NDS* sets goals of "building a more lethal force" and "modernizing key capabilities" in such areas as "forward force maneuver and posture resilience"—presumably a Navy forte. Although the *Summary NDS* calls for prioritizing investment in forces that "can deploy, survive, operate, maneuver, and regenerate in all domains while under attack," the sole detail offered

for this force investment is the effort to transition from "large, centralized, un-hardened infrastructure to smaller, dispersed, resilient, adaptive basing."[34] Since the Navy has advertised itself long and loudly as the strategic alternative to large, centralized, unhardened (land) infrastructure, one might assume that unique naval capabilities might be mentioned briefly at that point in the *Summary NDS* document—but they are not.

What does the absence of the quite standard praise of naval forces (even in joint documents) as maneuverable and dispersed sovereign territory not fettered to land infrastructure and capable of crisis response (blunting, perhaps?) mean? One merely can speculate, but perhaps the Secretary of Defense really did not believe that the fleet is actually as effective or survivable in an antiaccess scenario (or the current preferred term of *contested environment*) as the Navy perceives itself to be. In any event, the *Summary NDS* does not contain a lot of hooks on which the Navy can hang its narrative hat—unless it wants to challenge joint ideology. A search of the *Summary NDS* failed to detect a single use of the word *ocean*.[35]

The *Summary NDS* does devote a full two pages (out of eleven total) to DoD's desire to "strengthen alliances and attract new partners."[36] It focuses on three elements: "uphold a foundation of mutual respect, expand regional consulta-tive mechanisms and collaborative planning . . . and deepen interoperability." Regional alliance and partnership networks are delineated (*Indo*-Pacific, NATO, Middle East, Western Hemisphere, and Africa). In this, the *Summary NDS* could fit easily into an Obama or Bush (either forty-one or forty-three) administration document. It also, amazingly, could fit within *CS21R*—except for a few telling details in the "uphold" element that tie back to Trump administration themes, including accountability.

The first of those details alluding to the Trump administration's particular viewpoint is the recognition that "alliances and coalitions are built on free will and shared *responsibility*" (emphasis added). Then, in a possible jab at previous admin-istrations (whether stocked with neoconservatives or liberal internationalists)—and, in truth, a practical and significant change—the summary proclaims: "While we will unapologetically represent America's values and belief in democracy, we will not seek to impose our way of life by force."[37] But even as strongly, it states that "we expect allies and partners to contribute an equitable share to our mutu-ally beneficial collective security, including effective investment in modernizing their defense capabilities." Those are not firm requirements found in *CS21R*. It is hard not to perceive that "accountability" is the main message of the *NDS* coop-eration section and that the remaining standard alliance/partnership recitation in no way implies that America is absolutely dependent on its alliance structure or

that it expects any limits on its free will. In short, *CS21R* is built around alliances, partnerships, and (obviously) cooperation; the *NDS* is not.

Inclining one toward the cynical view that the two pages extolling cooperation are simply standard fare is the fact that they are followed by a concluding section titled "Reforming the Department for Greater Performance and Affordability." That goal has remained beyond the power of mere humans (including Defense Secretaries) nearly forever.

THE STATUS OF *CS21R*

As previously noted, officially the Navy's strategic vision remains *A Cooperative Strategy for 21st Century Seapower: Forward, Engaged, Ready* of March 2015, much better known by its acronym, *CS21R. CS21R* is a revision of the original *CS21,* signed by the three chiefs of the sea services (Marine Corps, Navy, Coast Guard) in 2007. No successor has replaced it; no naval leader has publicly repudiated it.

Although the original *CS21* was released under Admiral Gary Roughead (CNO, 2007–11), it was largely a confirmation of the concept of Admiral Michael G. Mullen (CNO, 2005–2007; Chairman of the Joint Chiefs of Staff, 2007–11) of a *one-thousand-ship Navy* (without using that term), consisting of the U.S. fleet and those of its allies and partners who would cooperate to ensure security at sea in accordance with international law and guided by the provisions of the United Nations Convention on the Law of the Sea (UNCLOS).[38] Thus, the changes in the world environment between 2007 and 2015 (primarily the expansion of a potentially hostile People's Liberation Army [PLA], along with the definite hostility of Russian president Vladimir Putin) necessitated a revision that—while maintaining an emphasis on global partnerships—expands its discussion of U.S. naval missions or functions and a fleet design that describes the capabilities needed to carry out these functions. One could invite the PLA Navy (PLAN) to participate in the U.S. Navy's annual RIMPAC exercise, but that would not mean the Chinese would honor any international tribunal ruling on law of the sea violations. Yet the flashing light of the one-thousand-ship Navy still shines through both texts; it is dimmer in the second *(CS21R)* only because the additional section was added to discuss naval missions and general force-design goals, making the revised document twice as long as the original.

Consider the contrast. The *Summary NDS* devotes two of eleven pages to alliances, partnerships, and international cooperation (18 percent of the document); *CS21R* devotes almost twenty of thirty-seven pages to alliances, partnerships, and international cooperation (54 percent). This provides the initial clue that the *CS21R* does not quite fit the Trump administration's focus on deterring (or, if

necessary, winning) great-power conflict with China or Russia. *CS21R*'s stress on cooperation always betrayed an optimistic view of the future roles of China and Russia in supporting the current international system (instead of undermining it) and often referred to their roles as "responsible stakeholders." In contrast, the *National Security Strategy of the United States of America* of December 2017— parent of the *NDS*—envisions a world of great-power competition in which cooperation cannot be assumed. Quite simply, *CS21R* is out of sync with current higher directives.

So, what can be salvaged? The second half of *CS21R,* beginning with "Seapower in Support of National Security," contains the traditional description of naval missions, including deterrence, sea control, power projection, and maritime security.[39] But it also adds a fifth mission that had not appeared previously in other higher-level documents: "all domain access," a focus on defeating the antiaccess "reconnaissance strike networks" of potential opponents.[40]

To achieve all-domain access requires the U.S. Navy, U.S. Marine Corps, and U.S. Coast Guard (to whatever extent it can) to commit to investments in battlespace awareness (persistent surveillance), assured command and control (resilient networks that can fight jamming), cyberspace operations, electromagnetic-maneuver warfare (EMW) (i.e., electronic warfare spread across domains), and integrated fires. This is certainly an appropriate list of capabilities necessary for countering antiaccess strategies. Additionally, it is similar to such lists contained in all subsequent USN public documents. If one added unmanned systems, machine learning, and AI as means of achieving the above capabilities, one would have a depiction of the Navy's current desired investments. These desired capabilities permeate discussions of the Navy's future fleet designs.

THE CNO, THE *DESIGN FOR MAINTAINING MARITIME SUPERIORITY,* AND *THE FUTURE NAVY*

The current CNO, Admiral Richardson, has released a series of three white papers that describe a design for maritime superiority and the characteristics of the future navy. Although they would seem disconnected from some of the premises of *CS21R,* the first document, *A Design for Maintaining Maritime Superiority, Version 1.0* (hereafter *Design 1.0*), describes itself as a step "along a future course to achieve the aims articulated in [*CS21R*] in this new environment."[41] (Notably, the subsequent *Design 2.0* does not mention *CS21R.*)

Design 1.0
Design 1.0 is a total of eight pages that are intended to "guide our behaviors and investments, both this year and in the years to come."[42] However, it also states that "[m]ore specific details about programs and funding adjustments will be

reflected in our annual budget documents," undoubtedly referring to, among others, the CNOG.

Design 1.0 begins by describing the U.S. Navy's mission in the joint-approved, domain-specific fashion: as conducting "prompt and sustained combat incident to operations at sea." But it subtly broadens this to include "protect[ing] America from attack and preserv[ing] America's strategic influence in key regions of the world," presumably through persistent naval presence. It follows with a description of the "strategic environment," which links Rear Admiral Alfred Thayer Mahan's articulation of the need for a navy that could guarantee access to international trade and overseas markets and materials to the technological changes driving prosperity. Later in the document, the CNO acknowledges the fundamental truths of the nature of war: "a violent human contest between thinking and adapting adversaries for political gain." He cites the thinkers whose wisdom has shaped the Naval War College course curriculum: Mahan (obviously), Thucydides, Clausewitz, Sun Tzu, Mao (strangely), and Corbett.[43]

Design 1.0 describes the strategic environment in terms of three trends, all of which have been articulated in previous Navy documents: increased international trade across seas, and potentially through the Arctic; a continually growing global information network; and increased rates of technological creation and adoption, including robotics, energy storage, three-dimensional printing, low-cost sensors, genetic sciences, and AI.

Adapting is the key point, and the CNO sees a peacetime competition in strategic technology among global powers: the United States, China, and Russia. This is a view that CNO Richardson has espoused frequently since the beginning of his tenure, before the election of President Trump, and in sync with proponents of the Third Offset Strategy such as former Deputy Secretary of Defense and Under Secretary of the Navy Robert O. Work (albeit not in the same words). Unlike *CS21R, Design 1.0* very clearly refers to China and Russia, pointing out that the "Russian Navy is operating with a frequency and in areas not seen for almost two decades, and the Chinese PLA(N) is extending its reach around the world." (The +2 of North Korea and Iran also are mentioned, but very briefly.) Here is where technological advancement links with the Navy's desired capabilities, as identified in the second half of *CS21R;* they are elements of the strategic competition with two regional powers that have antiaccess networks.

CNO Richardson does not use his predecessor's *assured access* term, and he has made his dislike of *antiaccess/area-denial (A2/AD)* terminology evident.[44] Yet it would seem that the Navy's goal is to adapt emerging technologies so as to retain (or regain) the ability to penetrate opponents' A2/AD networks. *A2/AD* remains a regularly used term throughout DoD.

Design 1.0 also lists the CNO's view of Navy "core attributes of our profession" as consisting of "integrity, accountability, initiative, and toughness." These are distinct from the also-cited Navy core values of honor, courage, and commitment. In the CNO's guidance, "[i]f we abide by these attributes, our values should be clearly evident in our actions."[45] Although his predecessor expressed these attributes somewhat differently, the desire to define naval attributes provides a link to the quietly released *How We Fight: Handbook for the Naval Warfighter,* document number seven in our algorithm, of Admiral Jonathan W. Greenert, USN (CNO, 2011–15).

The heart (and conclusion) of *Design 1.0,* however, is found in three pages describing the CNO's "four lines of effort," which are his objectives that are intended to guide current Navy decision-making. Since each of the four lines of effort is individually color coded, it has become common for Navy staff officers to explain their projects or tasks in the form of "it supports purple (or blue, green, or yellow)."

The first of the four lines (blue) is to "strengthen naval power at and from sea," an obvious and continuing goal.[46] Within this goal resides a prioritization of programs to align "our organization to best support generating operational excellence." First is to "[m]aintain and modernize the undersea leg of the strategic deterrent triad," described as "foundational to our survival as a nation." Indeed, CNO Richardson consistently has identified the forthcoming *Columbia*-class SSBN as his priority acquisition program.[47]

The second program priority in the blue line is to develop and test new concepts through fleet exercises for war fighting in "highly 'informationalized' and contested environment[s]" in "partnership with the Marine Corps." Since *contested environment* is a euphemism for A2/AD, one can speculate that this is intended to patch over some of the fraying between the two naval services that occurred during the development of the air-sea battle concept. The third priority calls for expansion of the EMW capabilities identified in *CS21R.*

This is followed by a related fourth priority: to "explore alternative fleet designs, including kinetic and non-kinetic payloads and both manned and unmanned systems" capable of operating in the "highly 'informationalized' environment." Indeed, as we shall see, this is a task to which OPNAV is devoting a considerable amount of effort.

The two final tasks of the blue line are organizational examinations of U.S. Fleet Forces Command (FFC); Commander, Pacific Fleet; and OPNAV itself. In reality, the comprehensiveness of this task has been impacted by the more immediate studies of the western Pacific warship collisions. However, a Second Fleet command has been created out of operational elements of FFC.

The second line of effort (green) is to "achieve high velocity learning at every level."[48] Tasks in this line include the incorporation of best practices, expanding the use of "learning-centered technologies, simulators, online gaming, analytics and other tools," and "[o]ptimiz[ing] the Navy intellectual enterprise." Of personal concern to the CNO is his desire to make Navy wargaming—a learning tool for which the service is justifiably famous—more iterative, possibly via the use of AI or AI-assisted systems.

The third line of effort (yellow), to "strengthen our Navy team for the future," focuses on improvements in personnel management and leadership, including information-technology learning in a Sailor 2025 program.[49] It does not discuss radical changes to personnel accessions, however. Most of the language of yellow has been used before.

The fourth line of effort (purple) is to "expand and strengthen our network of partners."[50] But international partnerships (à la *CS21R*) are but a small piece of this effort, while partnerships with other services and agencies (including future planning and assessments), private research and development labs, and commercial industry are emphasized.

Design 1.0 concludes with an exhortation for all to adopt a sense of urgency: "We will remain the world's finest Navy *only* if we all fight each and every minute to get better. Our competitors are focused on taking the lead—we must pick up the pace and deny them. The margins of victory are razor thin—but decisive!"[51] No one could deny that the CNO sees the U.S. Navy locked in a strategic and technological competition with very capable opponents.

The Future Navy

However, by 2017, CNO Richardson, possibly concerned that his Navy continued to lack his sense of urgency, issued a supplemental white paper, *The Future Navy*. There have been some contending interpretations of the impact and importance of *The Future Navy*.[52] In its defense, it is not designed to impart new direction or tasking beyond that already laid out in *Design 1.0*. Rather, as noted, it is intended to ratchet up the intensity of the Navy's analytical efforts for determining how to integrate unmanned systems and other technological developments.

In part, *The Future Navy* white paper likely was a reaction to several future force architecture studies that were performed at the direction of Congress as part of defense legislation for fiscal year 2016 (FY16). Congress (led by the late Senator John S. McCain) required three alternative studies of future Navy force structure (for the 2020–35 period) to use in checking the Navy's thirty-year shipbuilding plan. The first was by an independent study group made up of Navy staff members from OPNAV N8, Fleet Forces Command, and the Naval War College, and other naval analytical organization representatives. This report was not

staffed by the normal OPNAV process and was not endorsed by a cognizant flag officer but simply was forwarded to Congress by the CNO along with the other two alternative studies (via the Secretary of the Navy) without endorsement. This is the officially unofficial unclassified Navy Project Team report (source number five in table 1) that will be described later.[53]

At a total of nine pages, *The Future Navy* begins with its conclusions up front concerning the FY16 studies: (1) "the nation needs a more powerful Navy, on the order of 350 ships, [but] that includes a combination of manned and unmanned systems"; (2) "more platforms are necessary but not sufficient. The Navy must also incorporate new technologies and new operational concepts." This is followed by a section header intended to get across the sense of urgency: "Faster and More Complex. And Faster."[54]

The Future Navy does add statements of the value of naval forward presence back into the dialogue, pointing out that the "presence of capable platforms enables naval forces' inherent responsiveness" and that "U.S. ships are sovereign American territory" and "are self-sufficient when they respond." However, this is couched as enabling the U.S. Navy (and Marine Corps) to be "full partners with the Army and Air Force as conflicts unfold," being "often first on the scene, and continu[ing] to preserve U.S. interests in the long term, after the conflict subsides, through continued and routine operations forward."[55]

The Future Navy also attempts to clarify that, regardless of whether the optimum fleet size is 355 ships, numbers of ships do matter, because "[t]he number of ships in the Navy's fleet determines where we can be, and being there is a key to naval power."[56] In other words, a modern, highly capable warship may have the firepower of two less capable vessels, but—unlike the pair—that one ship cannot be in two oceans at the same time. Quantity does have a quality that quality alone cannot replicate.

The remaining text of *The Future Navy* concentrates on the need for greater force connectivity (even while dispersed), technological advances such as those identified in *Design 1.0,* and unmanned and autonomous systems as both extensions of existing platforms and sources of new capabilities.

One observation that does appear in *The Future Navy* and not in the other sources discussed here is CNO Richardson's conviction that the defense industrial bases can increase their speed of production to build a larger fleet faster than some analysts suggest. "Multiple shipbuilding and aircraft production lines are 'hot'—currently producing"—but "[t]hey can do more. . . . Buying aircraft carriers at the economically-optimal rate—three or four years apart instead of the current five or more years—will not only get us a more powerful fleet faster, but also will save considerable money. . . . [Likewise,] an analysis of the industrial base shows we could build up to seven additional destroyers in the near term,

and up to 14 more small surface combatants."[57] Similar industrial base statistics are cited for other ship types, adding to a total of "29 more ships and almost 300 more aircraft over the next seven years than our current plan." Therefore, if there is the will, the sense of urgency can be answered with action.

Design 2.0

In December 2018, the CNO released *A Design for Maintaining Maritime Superiority, Version 2.0.* Advance CNO briefings about the document indicated that it would note both areas in which progress had been made and where more or different types of progress would be needed. It does both, and, more importantly, it attempts to balance an ever-increasing sense of urgency against the need for "sustainability"—the avoidance of "overextension in the short- and long-term." *Overextension* is defined as "the pursuit of ends that are beyond the ways and means of the force."[58] Although the remarks on overextension appear in a section entitled "Our Response" (to the challenges of competition with China and Russia), it is buttressed by an earlier statement on the security environment: "We cannot become overwhelmed by the blistering pace. This is a long-term competition. We must think in terms of infinite, instead of finite, time frames. Only sustainable approaches will prevail."[59]

Design 2.0 continues the four color lines of effort; however, "yellow" has been changed to "gold." Their overall substance remains the same, but they are packed with much more detail, which is why *Design 2.0* is twenty pages, whereas *Design 1.0* was eight. The green line of effort is modified significantly from "achieve high velocity learning at every level" to "achieve high velocity outcomes," which allows for inclusion of very specific acquisition goals that did not appear in the previous version. These acquisition goals include the following: "Award the Future Frigate contract by 2020 to deliver as soon as possible (ASAP). . . . Develop and field an offensive hypersonic weapon by 2025," and other equally specific items.[60] There is a bit of irony, however, in having these goals as directives in a CNO-authored document since—as the CNO himself admits—DoD reorganizations in the past three decades have resulted in very limited CNO control over the acquisition process. The program executive officers of Navy acquisition programs largely report to the Assistant Secretary of the Navy (Research, Development & Acquisition), with the Joint Staff and Office of the Secretary of Defense critiquing almost every step along the way.

The green line also splits Navy analytical efforts into a "concept development hub" centered on the East Coast (DEVGRUEAST) and a "capability development hub" centered on the West Coast (DEVGRUWEST). Of the Navy's advanced educational institutions, the Naval War College would be a core of the former and the Naval Postgraduate School a core of the latter.

Meanwhile, the revised blue line identifies continuing Navy support to recent operational changes: the reestablishment of Commander, Second Fleet in the Atlantic, and the implementation of the dynamic force employment concept outlined in the *NDS* to make warship deployments more situational and less predictable.[61] The gold line adds the establishment of a three-star Director for Warfighting Development (including education, experimentation, and analysis) as N7 in OPNAV. The purple line's discussion of partnerships specifically delineates supporting NATO and maturing Joint Forces Command–Norfolk "as the NATO headquarters for high-end naval operations and warfare in the Atlantic theater."[62]

Additionally, the CNO attached two letters to *Design 2.0* as addenda. The first, a "Charge of Command" to commanding officers, clearly reiterates that "[t]he responsibility of the Commanding Officer for his or her command is absolute," under all circumstances. The second, "One Navy Team," emphasizes inclusion and diversity within the Navy.

AIR-SEA BATTLE: FROM VISIBLE FOCUS TO UNDER THE RADAR

If broadened beyond its (presumably) exclusive focus on the PLA, the air-sea battle concept that consumed so much of the Navy's intellectual capital (along with some of the U.S. Air Force's) earlier in this decade could make a coherent Navy strategic vision by itself. Similarities to the *Maritime Strategy* are evident. The basic concept was to integrate Navy and Air Force capabilities to deal more effectively with the toughest potential war-fighting challenge of the day: to defeat the PRC's antiaccess strategy and respond to PRC aggression by conducting operations within Chinese-claimed water and airspace, including targeting military forces ashore. In short, it attempted to answer the A2/AD problem.

A detailed argument has been made that the Cold War–era *Maritime Strategy* was itself a counter-antiaccess strategy, with the U.S. Navy and Marine Corps attempting to penetrate the layers of Soviet long-range bombers, cruise-missile-firing submarines, and the Soviet naval fleet to breach the Soviet Union's periphery and take pressure away from NATO's central land front in Europe.[63] Ironically, the title *Air-Sea Battle* is a reference to the air/land battle doctrine that the U.S. Army and Air Force fashioned jointly to blunt a Soviet offensive on the central front. Similar to the *Maritime Strategy, Air-Sea Battle* acquired a number of influential academic and policy opponents, whose resistance gave the appearance of official doctrine to what, in reality, was a combination of think tank publications and an Air-Sea Battle Office assigned the task of coordinating USN and USAF programs appropriate to an antiaccess scenario in the East Asian maritime and littoral regions.[64]

However, by 2015, the air-sea battle concept was devitalized and finally consumed by joint ideology. It was a very logical approach to containing potential PRC expansion—so logical that it frightened the U.S. Army (which naturally had focused its force structure on "winning the wars we are in") into believing it could lose its appropriate share of the defense budget. Obviously, no one was contemplating a land war in East Asia. If counterterrorism would no longer be the primary fight for U.S. armed forces, what would be the role of decisive land forces? (At the same time, the Marine Corps—which would have a role in a maritime campaign—became concerned that its permanent partner, the U.S. Navy, might be spurning it for greater integration with the Air Force.) The result of bureaucratic and political pressure was that the Navy–Air Force Air-Sea Battle Office was converted into a joint staff with the inclusion of Army and Marine Corps representatives and outside contractors, under the supervision of the Joint Staff, to develop a concept for joint access and maneuver in the global commons (JAM-GC).

JAM-GC is another document that is classified but whose drafters have discussed it in open-source literature.[65] However, it is focused on a problem that is different from the air-sea battle concept. Its primary focus—access of military forces into and within the global commons of sea, airspace over the oceans, and space, all of which are not contested seriously—is not the same challenge as the penetration of PRC antiaccess networks, the hardware of which is located largely within sovereign PRC territory.[66]

Thus, the Navy lost control of a concept and narrative that could define its de facto strategic focus: deterring potential PRC aggression by holding at risk China's antiaccess networks and its protection of its military capabilities and homeland territory, and doing likewise to the potential threats of Russia, North Korea, and Iran. Such an effort would require capabilities to defeat the PLA's maritime and conventionally armed rocket forces and to suppress its land-based air defenses, hence requiring close Navy / Air Force collaboration. Inclusion of decisive ground forces simply would not seem to be a part of this mission—the approximation of a Cold War *Maritime Strategy* without any central-front battle on land. Such an independent strategic vision of the Navy's primary war-fighting purpose conflicts with the twenty-first-century version of joint ideology that mandates participation (or at least veto power) of every service in every mission.

Given the reluctance of the Obama administration to identify the PRC as a primary security threat, slipping the premises and operational concepts of *Air-Sea Battle* under the radar in favor of the joint examination of a much more theoretical threat could be justified. However, the Trump administration's *National Security Strategy* and the *NDS* provide the justification for its resurrection. There is

much in the air-sea battle concept that could shape a naval strategic vision—and, because of the Navy's focus on the Indo-Pacific region, it already has.

PACIFIC FLEET DOMINANCE OVER NAVAL STRATEGY

Although there is no one public document at which to point, the dominance of the U.S. Pacific Fleet in defining the Navy's de facto strategic vision is evident and deserves some comment.

The Obama administration's pivot to the Pacific may have required an adjustment for other U.S. agencies, but the USN pivot occurred prior to the 2006 transformation of U.S. Atlantic Fleet into FFC. The Atlantic's numbered war-fighting command, U.S. Second Fleet, also was disestablished in 2006. This move could be viewed as a delayed response to the collapse of the Soviet navy (and Soviet Union). The change also was prompted by the conversion of the joint combatant command (COCOM) U.S. Atlantic Command into U.S. Joint Forces Command (JFCOM) in 1999, an obvious indication that American decision makers did not envision a challenge from the Russian navy (or anyone else) in the Atlantic Ocean region.[67] FFC retained responsibility for training and readiness for Atlantic-based U.S. naval forces but also took a lead position in "providing" naval forces for all COCOMs. Additionally, FFC was assigned "command and control of subordinate Navy forces and shore activities during the planning and execution of assigned service functions in support of the Chief of Naval Operations (CNO)."[68] This paralleled the tasking of JFCOM to support the Joint Staff. (Ironically, JFCOM was disestablished in 2011 and its functions were transferred back to the Joint Staff.)

The result of the former Atlantic Fleet taking on staff responsibilities that might otherwise be directed by OPNAV was that its focus on naval war planning became diluted in comparison with U.S. Pacific Fleet, which, additionally, has a present potential threat in an expansionist PRC. Because of this circumstance and the force of personality of the commanders, Pacific Fleet increased its influence on naval strategy as a whole, with the creation of *Air-Sea Battle* as but one result. Through a series of articles and statements, and with heavy use of the Navy's wargaming and analytical assets, Commander, U.S. Pacific Fleet (COMPACFLT), Admiral Scott H. Swift, USN (COMPACFLT, 2015–18), became a primary spokesman not only in identifying the PLAN as the U.S. Navy's primary "pacing" threat but in elucidating the changes the U.S. Navy would make to meet it.[69] It became obvious that U.S. Pacific Fleet sought its direction directly from the CNO, not through FFC, and, in turn, sought to influence the CNO's vision.

With the tremendous expansion of the PLAN, it is logical that the Pacific region would focus and dominate Navy thinking in the same way that imperial Japan did during the interwar years. However, with the reactivation of U.S.

Second Fleet on August 24, 2018, as a subordinate of FFC, it is possible that this dominance eventually will be challenged.

AN OFFICIALLY UNOFFICIAL REPORT TO CONGRESS

The National Defense Authorization Act for FY16 required DoD to furnish Congress with three studies of the composition of the future U.S. fleet that would function as alternatives to the U.S. Navy's thirty-year shipbuilding plan. As previously noted, the first of these studies was conducted by a Navy team consisting of subject-matter experts from naval analytical organizations without the concurrence or endorsement of DON leadership. The other two were conducted by a federally funded research and development center, MITRE Corporation, and an independent think tank, the Center for Strategic and Budgetary Analyses (CSBA, which previously had devoted a considerable amount of its own research to *Air-Sea Battle*).

The three reports took significantly different approaches to evaluating a future fleet. MITRE evaluated requirements against an air-sea approach to defeating the antiaccess "reconnaissance strike network" of the PRC. The result was a set of specific recommendations concerning new capabilities and platforms. CSBA proposed a new concept for naval operations, dividing the fleet between tailored regional presence forces and a powerful maneuver force that would surge to a region of conflict. Meanwhile, the Navy team centered its recommendations on three concepts then under investigation by FFC and Pacific Fleet: distributed fleet lethality; EMW; and distributed, agile logistics.[70] The visibility and viability of these three concepts have been challenged and their relative prominence has changed since then because of changes in operational Navy leadership. However, it is fair to conclude that they still might be, or eventually will be, aspects of a Navy strategic vision.[71]

The guiding premise of the Navy Project Team was that the Navy needs a distributed fleet, which would be created by breaking the current methodology of battle-force deployments centered on an aircraft carrier strike group (CSG, formerly known as *CVBG* for "carrier battle group") consisting of an aircraft carrier, destroyers as escorts, and associated logistics ships. In contrast, a *distributed architecture* "would field a widely dispersed force, operating in dozens of areas, netted to mass firepower, and supported by robust kill chains and survivable logistics."[72] The study views the proposed change from CSG-centered operations to a distributed architecture of dispersed forces as a significant change in the Navy's operational strategy (and thereby in its strategic concept or strategic vision). The distributed fleet architecture integrates the three mutually supporting concepts of distributed fleet lethality; EMW; and distributed, agile logistics.

Distributed lethality was a concept championed by Vice Admiral Thomas S. Rowden, USN, former Commander, Naval Surface Forces, and Naval Surface Force, Pacific.[73] In its simplest expression, the concept proposed placing offensive weapons on platforms that previously had not carried them—particularly the littoral combat ship (LCS) and, presumably, amphibious warships and combat logistics force ships. Unfortunately, the details for the latter two types of vessels were never elucidated prior to Vice Admiral Rowden's retirement in February 2018, and choosing a missile for the LCSs took an unexpectedly long time. Vice Admiral Rowden tied distributed lethality to his desire to shift the focus of the surface navy away from the power-projection (strike against land) mission emphasized by *Air-Sea Battle* and toward sea control against the PLAN fleet.[74] With the change in surface navy leadership, the status of distributed lethality is now unclear.

The EMW concept is described by the Navy team study as promoting "improvements in protected, assured datalinks and communications paths . . . to support a geographically distributed force . . . [including] unmanned vehicles," as well as providing "soft-kill" of enemy communications and weapons systems.[75] EMW is also an element contained in *CS21R* and can be considered almost a traditional operational concept for the modern U.S. Navy, since it was clearly a major component of war-fighting operations in previous conflicts.

The third concept on which the study was built—distributed, agile logistics—is described as combining "new technologies, more secure shore-based hubs, afloat sea-based hubs, afloat sea-bases supporting maneuver forces, and assured and resilient logistics command and control networks to sustain distributed fleet operations in a contested environment."[76] Unfortunately, there is no programmatic evidence or public, professional discussions that indicate that distributed, agile logistics is a developed or developing concept. Improvements in the Navy's current logistics capabilities remain marginal, incremental, and secondary to acquisition of new combat platforms. Since 2017, the distributed, agile logistics nomenclature has been used only rarely. However, there has been public discussion of improving capabilities for rearming vertical-launch system missiles at sea, a capability in which the U.S. Navy chose not to invest during the unipolar moment. There also is a recognition within the Navy that greater planning and resources need to be directed toward improving logistics capacity in contested environments.

In responding to Congress, the Navy team report argues that shifting to a distributed fleet requires a much greater number of platforms over the thirty-year shipbuilding plan that had proposed building up to 314 vessels (identified as 304 manned, ten unmanned). However, the report proposes a vast increase in large,

unmanned platforms and a comparatively modest increase in manned ships. Proposed numbers are 321 manned, 136 unmanned, for a total of 457 vessels.[77]

What elements of the Navy Project Team report would constitute new aspects of a Navy strategic vision? There are at least two: (1) a move away from a CSG-centered employment/deployment concept toward a distributed fleet, and (2) adoption of unmanned systems as equivalents to ships. Both would change both internal and public conceptions of naval operations and force structure. The 355-ship goal postdates the submission to Congress of the Navy Project Team report.

THE RHETORIC OF 355 SHIPS

Most critics view the Navy as opportunistic in publicizing a goal of 355 battle-force ships for a future fleet.[78] There seemed to be little coincidence in the fact that presidential candidate Trump suggested the number of 350 ships as an appropriate size for the American fleet during his campaign. (This was first suggested on September 7, 2016, in a campaign speech in Philadelphia. In subsequent speeches as president, he has adopted the 355 number.)[79] At the time, few inside the Beltway possibly could conceive of a Trump victory and the Navy was content to urge a fleet size of 308, derived from a *Navy Force Structure Assessment (FSA)* conducted in 2014. Once President Trump achieved his unexpected electoral victory, the Navy issued a new *FSA* on December 14, 2016, "justifying" the 355 number, with the claim that the assessment had been conducted in a thoroughly analytical manner. Critical doubts about the thoroughness of the analytics have prompted the Navy more recently to conduct a new, 2019 *FSA* (already under way) that "is expected to better detail the types of ships needed."[80]

However, as noted in the Navy Project Team report to Congress (source number five in table 1) and the competing independent reports, the 355 number (depending on how calculated) is actually a lower estimate of the fleet size required for a full-scale conflict versus the PRC or Russia, let alone a fleet to handle some mix of dispersed 2+2 contingencies. The Navy Project Team called for a total of 457 ships, although 136 of those would be large, unmanned vessels. The competing reports from CSBA and MITRE called for 382 (arguably 340, by current ship-counting rules) and 414 ships, respectively.

It is difficult to find a single independent naval analyst who will argue that fewer than 355 ships would be sufficient to ensure victory in a naval campaign against the antiaccess network of the PRC. Instead, many will argue that the current defense budget cannot support the acquisition and subsequent operations and maintenance costs of a 355-ship fleet—making that estimate moot.[81] However, that is a different assessment from whether the current fleet would prevail in war or even match peacetime COCOM requirements.

What, then, does the 355 number really mean? It simply means that the U.S. Navy recognizes that in a world of 2+2 threats (as opposed to the assumption of global cooperation that laces *CS21R*), neither the current number of approximately 285 total ships, nor the thirty-year shipbuilding plan total of 304 ships, nor the previous 2014 *FSA* total of 308 would be enough when the potential opponent (the PRC) simply is building ships—with designed capabilities similar to U.S. warships—at a much faster rate. Unlike under previous administrations, the Navy leadership now is willing to say so. In previous administrations, the rhetoric was that, even if fewer in numbers, U.S. warships were more capable. Yet again, rigorous and detailed unclassified/open-source analyses of that claim have not been conducted in recent years. And they particularly have not been done in the context of planned PLA capabilities (such as indigenous aircraft carrier construction). From the perspective of an aspirational goal, and given the lack of detailed analyses, 355 ships is as good a number as any other that is greater than today's.[82]

The wrinkle, however, is that the acquisition of a 355-ship Navy now has become law! The 2018 National Defense Authorization Act includes a provision requiring a buildup to 355 ships "as soon as practicable."[83] Of course, the weakness of the statement ("as soon as practicable" could be 2050) and the inability to enforce such a provision—even if it were to be placed into a subsequent appropriations act—is well evident to the rest of Congress. As noted, changes in House of Representatives leadership following the 2018 midterm elections augur fiscal restraints.

HOW WE (MIGHT) FIGHT

Of all the inputs to the algorithm, *How We Fight: Handbook for the Naval Warfighter* is the least authoritative but originally was intended to be the most publicly accessible.[84] It remained on CNO Greenert's "to do" list from his first day in office but with a low priority, so attending to other events frequently superseded work on it, and it was released only several months before his retirement from office in September 2015. It was placed on the Navy's professional reading list immediately, but—since it never was endorsed by his successor, Admiral Richardson, and never was publicized—its impact on public debate can be described, charitably, as minimal.

CNO Greenert envisioned a public monograph that would explain the missions, attributes, capabilities, current operational concepts, and combat history (in brief) of the U.S. Navy to new officers and petty officers and the American public at large.[85] It was meant to highlight the uniqueness of the Navy (with all the consequences for public and congressional support that implies). With a final product at 166 pages, it obviously is a more extensive exposition than a standard official document. It is not a service strategic vision, per se, but describes its

purpose thus: "to articulate in a single volume the elements that determine the way we [the Navy] operate, as well as some of the overall concepts that guide our methods." The book proceeds in a logical sequence, describing the shaping factors of "the maritime environment, our Service attributes, our history, and our current and projected future missions," in that order.[86] This is more akin to Samuel Huntington's strategic concept approach to articulating the Navy's purpose than the more recent strategic vision approach.

The value of *How We Fight* as an evocation of the Navy's strategic vision is that it gathers many of the justifying arguments used by the strategic-level documents into one source. Many of the justifying arguments are captured succinctly in tables and, more importantly, are presented in context rather than the isolated factoid manner in which they appear in other documents. As an example, the "political characteristics of the maritime environment" (which, incidentally, are not mentioned at all in the *Summary NDS*) are listed as the following:

- Customary Law of the Sea (LOS) provides rights of ships, delineates high seas from territorial seas

- Warships are the sovereign territory of their nation wherever they operate in accordance with LOS

- Freedom of navigation must be demonstrated against unlawful claims

- Sea provides a base for power projection, forward presence and crisis response

- Littorals are population, economic and political centers

- Operating forward, navies have considerable political influence and deterrent effects and can provide humanitarian assistance[87]

Similar concise depictions and tables are provided for physical characteristics, economic characteristics, strategic and tactical attributes, basic types of naval warfare, future trends with operational effects, and others—all often incorporated into Navy strategic documents but rarely roped into one corral in mutual support. The ties to the other sources also include expanded discussions of all-domain access and EMW, both introduced in *CS21R* and, in the case of EMW, remaining in subsequent documents. Access and EMW are placed in the context of more-traditional naval warfare areas such as air warfare and missile defense, expeditionary warfare, strike warfare, surface warfare, and undersea warfare. Resilience is discussed as an attribute required of sailors as well as ships, which resonates with CNO Richardson, even if he prefers the word *toughness*.

In bringing the seven sources into a Navy future vision, *How We Fight* could be put in the "background information and detailed explanation" category, supporting the more authoritative documents. However, given its content and

structure, perhaps the work would be better subtitled "Handbook for Drafting Navy Strategic Visions."[88]

GLEANING FROM OTHER SOURCES

Other sources from which may be gleaned additional clues about the Navy's strategic vision include the DON Fiscal Year 2017 Annual Financial Report, a report that appears to have taken the place of what once was the Annual Report of the Secretary of the Navy to Congress.[89] The title and format of the report have changed throughout different presidential administrations, but it still is meant to be a DON report created independently of the Office of the Secretary of Defense. To deconflict potential parochial statements by the Secretary of the Navy from more-authoritative statements by the Secretary of Defense, the report's scope has been narrowed to focus on the DON budget. However, it still gives the Secretary of the Navy some room to discuss priorities and objectives that could shape a new naval narrative.

Other sources are the congressional testimonies of the Navy leadership as well as speeches and articles, primarily by the Secretary of the Navy and CNO, to a wide variety of audiences. As in political stump speeches, frequently repeated themes indicate elements of the Navy strategic vision. Such speeches and articles might be expected to coincide with the *NDS, CS21R,* and the other five sources we have examined. However, they often are tailored to audiences in a way that can identify emerging concepts not elucidated previously. Other naval leaders also may expound on emerging concepts.

Many of the speeches can be obtained from official Navy websites (such as www.navy.mil). However, much more can be gleaned from the independent professional publication U.S. Naval Institute *Proceedings,* which routinely publishes articles by senior naval leaders alongside critiques, alternative ideas, and criticisms by other serving naval personnel and civilians in a continuing debate on the future of national security. Few ideas make it into naval documents that have not been discussed—perhaps debated fiercely—in *Proceedings* previously.

Authoritative information also can be obtained from reports on the Navy prepared for Congress by the Congressional Research Service (CRS) and the Congressional Budget Office (CBO). Even OPNAV staffers rely on CRS and CBO reports as quick sources for data.

AND THEN THERE IS THE POM

The longest-running debate concerning DoD is whether it is strategy or budget that drives its programs and force structure.[90] In theory, national strategy should be the driving factor. The military is a tool the nation uses to achieve its security

objectives in a dangerous world. Of course, the economic reality is that wants are generally unlimited, while resources are limited. In battle, the commander wants every possible resource available to defeat the enemy while preserving the lives of his or her own troops. History indicates that overwhelming force applied decisively ends most wars quickly. Yet no one can determine fully how much money to spend on security since—at least for democratic states—wars can be predicted only in the abstract, not their precise occurrence in time and space.

In peacetime, a democratic state may use a security strategy to determine the details of its military, but funding these details becomes a political process requiring compromise among competing domestic requirements. This is a weakness that democratic states do not necessarily share with authoritarian states having command (or mostly command) economies. The situation provokes critics to argue that public strategy documents are poor guides for determining a democratic state's defense strategy.[91] Better, they argue, to "follow the money" in the president's budget submission and congressional legislation. Others have argued that a realistic strategic vision should be designed primarily on the basis of resources available, rather than the service's (or defense agency's) self-concept or aspirations.

For the Navy, CNO Richardson attempted to end the debate by directing in October 2016 that the Navy's POM process be initiated by the Deputy CNO (DCNO) for Operations, Plans and Strategy (OPNAV N3/N5) and consist of three phases.[92] First is the strategy phase, led by OPNAV N3/N5, with other OPNAV staff codes participating, followed by a requirements program-integration phase, led by the DCNO for Warfare Systems (OPNAV N9), and a resource-integration phase, led by the DCNO for Integration of Capabilities and Resources (OPNAV N8). At the CNO's direction, "under this new process, POM-19 and subsequent POMs [began] three months earlier than historical POMs . . . [with] the end product of the POM development process [being] a strategy-based, fiscally balanced, and defendable Navy Program for submission to OSD [Office of the Secretary of Defense], which appropriately implements OSD fiscal and programming guidance, addresses [Secretary of the Navy] and CNO priorities, and achieves the best balance of strategic guidance as provided in the CNOG."[93] To achieve this result, the CNO also directed an OPNAV staff realignment.

The significance of the CNO's directive is that it again reinforces the theoretical role of strategy as the determinant of program requirements and force structure. In turn, this also should reestablish the importance of a Navy strategic vision in guiding future Navy decision-making. Of course, thorough implementation of the renewed process under the congressional mandate of a 25 percent headquarters staff reduction throughout DoD may prove challenging.

A MURKY MIX

If we metaphorically sum up the algorithm, what can we determine concerning the U.S. Navy's collective vision of its appropriate future?

Although the Navy always has had a reputation for independent views that make the staunchest joint ideologues livid, it is clear that CNO Richardson and the Navy leadership are committed to a vision that conforms to the 2018 *NDS* and its joint requirements. The problem they face is that the *NDS* (at least in its *Summary*) betrays a land-centric approach to understanding warfare that is hard to translate into a naval strategy. It is not only that the terminology does not fit naval campaigns; it is that, although there can be a tactically defensive naval posture, there is no such thing as a strategic defensive posture in naval warfare except not to fight at sea. Unlike in a land campaign, there are no physical spaces to defend, only forces. Thus, wartime forces at sea exist only to attack; there are no contact or blunt phases in naval warfare.

This problem is magnified by the fact that the great-power competition, which serves as the premise of the *NDS,* is not inherently a land-centric competition. If conflict were to break out today or in the immediate future with the potentially toughest opponent, the PLA, the fighting would not take place on the land. It primarily would be (for the United States) a counter-antiaccess campaign in the maritime, air, space, and electronic spectrum / cyber dimensions.[94] No planner has suggested that it is in the interest of the United States and its allies to fight a land war in East Asia. Victory in a counter-antiaccess campaign would require strikes on military targets in mainland China (C4ISR nodes, missile TELs, airfields, command structures, etc.). However, most of these strikes would not come from ground forces. Such a campaign simply does not fit a land-centric approach.

In the case of Russia, there could be ground combat, but—given the methods the Putin regime has demonstrated—it likely would be small-unit combat in a hybrid/gray-zone scenario. However, the likely locations of such scenarios—the High North, the Baltic region, the Black Sea—largely would require a naval and air response by U.S. forces, at least in the initial phases.

The other two potential opponents, Iran and North Korea, have unique characteristics but would not present the regional-to-global character of great-power war. However, in both cases, the majority of U.S. forces would be located outside the contested territory and would require an initial maritime response to reenter.

Thus, it is very difficult to craft a naval strategic vision to satisfy the challenges of the great-power competition world while remaining within the confines of the public *Summary NDS*. A great-power-competition strategy for naval forces would be more similar to the Cold War *Maritime Strategy* than any recent conception. However, a *Maritime Strategy* approach to describing the Navy's vision rams into joint ideology.

The *NDS* does discuss the need for allies and coalitions. *CS21R* is premised completely on such cooperation. However, the Trump administration does not appear willing to make the sacrifices necessary to maintain the tight alliance structure on which America's Cold War posture was predicated and that is the overarching assumption of *CS21R*. If preserving the alliance structure is no longer a priority, much of the front section of *CS21R* cannot be a rallying point for the Navy's public image.

There is nothing in the 2016 *Design 1.0* that contradicts the 2018 *Summary NDS*. However, much of *Design 1.0* is concerned with Navy organization, leadership, and training—all subjects that are of great importance to the CNO and that have an impact on operations, but that are not involved primarily in defining the service's force structure or employment. The sections that discuss force structure assessments have stimulated debate and resulted in considerable internal discussion concerning gaps in naval capabilities and employment of unmanned and potentially autonomous platforms, but it was not the CNO's intent to define an answer to such questions. *Design 1.0* does emphasize the complexity of contested environments, particularly the need for the Navy to examine how it would operate in severe electromagnetic warfare conditions that would interfere with its objective to conduct dispersed but networked operations. This is a problem that OPNAV and the fleet commands previously had a tendency to ignore, although the Naval Postgraduate School has been examining the need for "network optional" operations for some time.[95]

CNO Richardson's *The Future Navy* also is in sync with the *NDS* and willing to name names concerning the threats from the PRC, Russia, North Korea, and Iran. The paper's emphasis is new technology development, and in its own way it casts doubt on the 355-ship number as a defining metric by maintaining that a "355-ship Navy using current technology is insufficient for maintaining maritime superiority."[96] Rapid introduction of technology is the CNO's measure of success.

There is a significant contradiction within the CNO's white paper series, however. This contradiction begins to show itself in *Design 2.0,* in the remarks on sustainability and the call to avoid being overwhelmed by the blistering pace. It is the CNO who is directing—throughout the three papers—the sense of urgency in response to the security environment. One could surmise that, in adding the caution in his second version of the *Design,* he is reacting to analyses of the recent Seventh Fleet ship collisions that blamed them, in part, on a sense of operational urgency that required the crews to skip necessary training and certification. Indeed, *Design 2.0* does direct the "execution of the Comprehensive Review and Strategic Readiness Review program" resulting from the accident investigations.[97] Yet the sense of great urgency remains at the forefront, and there are no details on how to achieve a balance between that and sustainability.

Moreover, there seems to be no final, identifiable goal. In saying that "[w]e must think in terms of infinite, instead of finite, time frames," the CNO is giving the Navy an endless quest.[98] How can one maintain morale and conviction in the face of a perilous and absolutely infinite voyage? Even in the high-tempo/high-pressure competition of the Cold War, American leaders held to the expectation that someday the internal contradictions in Communism would bring about its own collapse. There was, therefore, light at the far end of the tunnel, a victory (through deterrence) for which to strive. Not only does *Design 2.0* not define an end state, but it seems to imply that—except through a major war—there is no possible end to the urgent, relax-not-a-minute military competition. It is hard to establish a pace or balance if there is nothing but an endless loop ahead. And it is hard to construct a persuasive public Navy strategic vision if endless competition is the only goal—a reason why the *Design* series, in itself, cannot fill the role of Navy vision.

The air-sea battle concept certainly would support the objectives of the *NDS,* but it only defines one particular Navy mission, in one particular theater. On the other hand, it does define a victory. Unfortunately, *Air-Sea Battle* effectively has been declared "not joint enough." The whole premise of its joint successor, JAM-GC—that the struggle is over access to the global commons—is, in contrast, anemic.

The various force-structure assessments and the 355-ship number together do not constitute a strategic vision. Meanwhile, *How We Fight* is obviously too long for executive reading and does not have the narrative arc that makes modern nonfiction popular.

Therefore, the overall conclusions are as follows:

1. The Navy leadership recognizes that *CS21R* does not fit the Trump administration's needs for a Navy strategic vision. Some sections could be recycled, but the overall package has been overtaken by events.

2. The current Navy leadership does want to have a Navy vision that fully supports the *NDS* focus on great-power competition, but the *NDS* (at least in its *Summary*) is not written in a way that the Navy can parrot. The tenor of the *NDS* seems to be that because strategy should be joint, there is no distinction in the strategic approaches to land and naval combat. (We will put traditional airpower doctrine aside for this discussion.)

3. At present, the Navy leadership still is following Secretary of Defense Mattis's concerns about the negative effects of extensive public discussion.[99] A publicly articulated strategic vision is not a current priority.

4. *Design 1.0* and its subsequent statements do give the Navy internal directions and tasks that conform to the *NDS;* however, they are not written in a way that would provide for a public strategic vision that captures the Navy's current and future missions (and resulting structure). Both *Design 1.0* and *2.0* contain one-paragraph summaries of the Navy mission, but they are too brief to present a full image. Perhaps the most important inclusion from the CNO's *Design* in a public vision would be his sense of urgency in experimentation and technology adoption.

5. Nevertheless, a public, unclassified, strategic vision could enhance public and congressional support for the U.S. Navy. The correlation between a compelling public vision and enhanced support has been demonstrated historically.

6. On the other hand, the internal programs and operations of the U.S. Navy do not need a publicly articulated and elegantly crafted vision to conform to the direction of the *NDS.* Highlighted by the pivot to the Pacific, the Navy largely had conformed to Secretary of Defense Mattis's *NDS* even before the 2018 *NDS* existed.

7. A Navy strategic vision that focuses on great-power competition as it exists and that conforms to the objective, although not the strategic, philosophy of the *NDS* would look more like *Air-Sea Battle* (with an appropriate addition of U.S. Marine Corps capabilities) than any other strategic concept currently extant. However, joint ideology and U.S. ground forces have defeated *Air-Sea Battle.* The air-sea battle concept had the misfortune of coming into prominence when the presidential administration did not want the word *China* spoken except in the context of that country inevitably being a "responsible stakeholder." This prohibition does not apply, necessarily, to the current administration.

8. The 355 number is a program and budgetary marker that, in itself, has no dependence on—nor does it provide a basis for—a Navy strategic vision.

9. The panoply of Navy and independent force-structure assessments are useful for exposing appropriate debates—such as how much of the fleet should be unmanned, and why. The most-detailed analyses have been done appropriately on the basis of an *Air-Sea Battle* approach, even if it is not mentioned. Yet it is difficult to explain why the fleet should have 355 ships instead of 354 or 353 or 350. The consensus is that the current number of approximately 285 is too low for war fighting and, possibly,

for great-power deterrence. What the actual number should be has not been assessed thus far to conclusive and persuasive rigor. What the new Congress will fund may be another number entirely.

10. To provide the number of platforms necessary in a conflict against a great power, the Navy intends to pursue aggressively the development of unmanned surface and undersea vessels (as well as aircraft), some of which will be self-deploying and comparable in size to manned vessels. This could help operationalize the distributed fleet and distributed lethality concepts. The assumption, however, is that unmanned vessels can be acquired and operated more cheaply than manned platforms.

11. A summarized *How We Fight* could provide the keel for an updated public Navy strategic vision, with appropriate *NDS* themes and *Design 1.0* and *2.0* concerns added. In its current state, however, *How We Fight* is an unread textbook.

What should a Navy strategic vision appropriate to the objectives of the *NDS,* the CNO's directions, and Trump administration objectives overall say? Summing the algorithm and adding other clues, a concise recommended summary follows.

In the peacetime, military-technological competition with great powers, the U.S. Navy will experiment continually with new technologies and concepts so as to remain ahead of competitors and profit from the ideas of competitors, when appropriate. New technologies and concepts will be introduced to the fleet when matured and engineered for sea. These will include substantial numbers of unmanned, partly manned, and optionally manned vessels and aircraft, which—combined with EMW capabilities—could enable a more widely distributed fleet. These experiments and developments—necessary for achieving victory in future conflicts—will take priority over the peacetime deployment and forward-presence requirements of the COCOMs. Additionally, a dynamic force-employment model will modify the previous predictability and length of forward deployments, allowing for greater experimentation.

The U.S. Navy will be sized and structured to support and win a conventional-weapons joint campaign that likely will be primarily maritime (which includes air over sea, space, and electromagnetic/cyber warfare) in character against the PRC, as led by the CCP, or Russia, as led by President Putin. Being able to win such a conflict will provide the most effective deterrence against its occurrence. It is assumed that all other missions can be accomplished successfully by tailoring this force structure in scope to other assigned tasks.

With these capabilities, the U.S. Navy will carry out its enduring function as the guarantor of access to the global commons and to overseas markets and materials on which America's economic prosperity depends. Access to the global commons also ensures the ability of the joint force to transit foreign areas of crises and conflict when called on. The U.S. Navy also will provide for defense of the U.S. homeland by maintaining the most survivable leg of the strategic nuclear triad, and the Navy can function as the forward edge of U.S. missile defense when necessary.

A perusal of U.S. Naval Institute *Proceedings* would indicate that the Navy has the narrative and speechwriting talent to write an updated public strategic vision quite well.

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NOTES

1. The term *strategic vision* is used instead of *strategy* (as in the *Maritime Strategy*) because of the controversy over which Department of Defense component "does strategy." Under joint ideology, the services man, train, and equip the forces, but do not create strategy, which is the exclusive purview of the combat-ant commanders. While this may seem to be merely an argument over terminology, and despite the fact that the services and defense analysts routinely refer to service plans as "strategy," use of the term *strategic vision* side-steps that whole debate. Many of the plans are indeed visions that do not survive contact with the reality of the budget.

2. The term *strategy concept* is from Samuel P. Huntington, "National Policy and the Transoceanic Navy," U.S. Naval Institute *Proceedings* 80/5/615 (May 1954), pp. 483–93. From the mid-1950s to the mid-1990s, the U.S. Navy was enamored of using *strategic concept* to describe its definition of purpose, but it largely has been dropped in the last two decades. (For example, after the Cold War, the Office of the Chief of Naval Operations' Strategic Concepts Branch was renamed the Strategy and Concepts Branch.) This is another reason this article uses the term *strategic vision*.

3. A bureaucratic reason that *CS21R* remains in the public vision is that it is a DON document signed by the Secretary of the Navy as well as the heads of the three sea (not only naval) services: the U.S. Navy, U.S. Marine Corps, and U.S. Coast Guard (the latter is not actually part of the DON). To negotiate a document approved and signed by all four individuals (thus representing all their equities) is a prodigious and lengthy effort.

4. Like all endeavors done well by military officers and defense civil servants, the drafting of naval strategic visions takes time and energy that spill over between administrations, and the process does not necessarily follow the drafting of higher-level guidance (such as the *National Security Strategy*) in tight, sequential order. In the case of *CS21R,* drafting of the document—which involved Navy and Marine Corps staff officers, scholars at the Naval War College and Naval Postgraduate School, and other members of the naval analytical enterprise—began in the waning months of the George W. Bush administration, even though it eventually was issued under President Obama. For an assessment of the drafting of *CS21R,* see Peter Swartz, William Rosenau, and Hannah Kates, *The Origins and Development of* A Cooperative Strategy for 21st Century Seapower *(2015)* (Arlington, VA: CNA, September 2017), available at www.cna.org/.

5. An underlying theme found in Simon Reich and Peter Dombrowski, *The End of Grand Strategy: US Maritime Operations in the Twenty-First Century* (Ithaca, NY: Cornell Univ. Press, 2017). The book, however, does not necessarily endorse the Trump administration's foreign policy perspective.

6. There is an existing official USN web page that holds links to so-called strategic documents ranging from the *Summary NDS* and 2018 *Nuclear Posture Review* to the *U.S. Coast Guard Arctic Strategy* and DON *Innovation Vision.* See "Strategic Documents," Navy.mil. However, this is a nonhierarchical mixture, and there is no attempt to explain how they relate to each other or whether they are directive or aspirational. The site also includes links to Secretary of the Navy and CNO speeches and transcripts.

7. The full name of the thirty-year plan is the Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels. Officially overlaid on all these is joint doctrine—but a good portion of joint doctrine is so banal or boilerplate that the services often can ignore it with some impunity.

8. The POM is the formal document each DoD entity prepares for submission to the Secretary of Defense outlining its spending on new systems acquisition, operations and maintenance, personnel, and other costs. All programs of record must be included in the POM to ensure sustained funding. The internal DoD approval process, now referred to as PPBE (planning, programming, budgeting, and execution), is complex, with multiple (and sometimes redundant) phases. Not all POM submissions necessarily make it into the defense budget the Secretary of Defense presents to the president, or that the president transmits to Congress, or that Congress approves.

9. On the most recent title changes, see Swartz, Rosenau, and Kates, *Origins and Development,* p. 88.

10. Stuart B. Munsch [RAdm., USN], unclassified phone conversation with author, October 2, 2018.

11. Jeff Schogol, "Rep. Adam Smith: Trump's Military Spending and Planning Needs a Reality Check," *Task & Purpose,* February 19, 2018, taskandpurpose.com/; Katie Bo Williams, "What the Midterms Mean for National Security," *Defense One,* November 7, 2018, www.defenseone.com/.

12. Carlisle A. H. Trost [Adm., USN, CNO], "Looking beyond the Maritime Strategy," U.S. Naval Institute *Proceedings* 113/1/1,007 (January 1987), p. 15.

13. Swartz, Rosenau, and Kates suggest that the OPNAV programming organizations (codes) do not always see the need for a formal strategic vision document, since they "have tended to believe that they have more than enough other guidance to get their jobs done without an additional product . . . to accommodate in the POM process" (p. 102). My own view is that the absence of a formal document allows the programmers and budgeteers to cherry-pick preferred guidance statements from the CNO and Secretary of the Navy documents and speeches. On this point, a good discussion can be found in Irv Blickstein et al., *Navy*

Planning, Programming, Budgeting, and Execution: A Reference Guide for Senior Leaders, Managers, and Action Officers (Santa Monica, CA: RAND, 2016), p. 10.

14. Joe Gould, "Wittman to US Navy: 'You Have to Say 355 Is the Number,'" *Defense News,* April 11, 2018, www.defensenews.com/.

15. Jason Schwartz, "'We Are Fighting for Information about War': Pentagon Curbs Media Access," *Politico,* July 26, 2018, www.politico.com/.

16. The reference to the CCP is deliberate, because the People's Liberation Army is pledged to the party, not to the state of China.

17. Kevin Baron, "Pentagon Began Clampdown on Senior Leader's Public Speaking Months Ago," *Defense One,* November 14, 2018, www.defenseone.com/.

18. Donald J. Trump (@realDonaldTrump), "I am certain that, at some time in the future, President Xi and I, together with President Putin of Russia, will start talking about a meaningful halt to what has become a major and uncontrollable Arms Race. The U.S. spent 716 Billion Dollars this year. Crazy!," Twitter, December 3, 2018, twitter.com/realdonaldtrump/status/1069584730880974849.

19. An excellent example of a discussion by an influential academic is John J. Mearsheimer, "A Strategic Misstep: The Maritime Strategy and Deterrence in Europe," *International Security* 11, no. 2 (Fall 1986), pp. 3–57, available at mearsheimer.uchicago.edu/. There was also concern that implementing the *Maritime Strategy* might spark a nuclear exchange. See Barry R. Posen, "Inadvertent Nuclear War? Escalation and NATO's Northern Flank," *International Security* 7, no. 2 (Fall 1982), pp. 28–54, available at www.jstor.org/. A detailed assessment that is supportive of the *Maritime Strategy* is found in Norman Friedman, *The U.S. Maritime Strategy* (Annapolis, MD: Naval Institute Press, 1988). The best source for the briefings and documents that built the *Maritime Strategy* is John B. Hattendorf and Peter M. Swartz, eds., *U.S. Naval Strategy in the 1980s: Selected Documents,* Newport Paper 33 (Newport, RI: Naval War College Press, December 2008), available at digital-commons.usnwc.edu/.

20. William Schneider Jr., "Financing the Reagan 600-Ship Naval Modernization Program, 1981–89" (statement at the "Options and Considerations for Achieving a 355-Ship Navy from Former Reagan Administration Officials" hearing before the Seapower Subcommittee of the Senate Armed Services Committee, July 18, 2017), pp. 1–4, available at www.hudson.org/.

21. John T. Hanley Jr., "Creating the 1980s Maritime Strategy and Implications for Today," *Naval War College Review* 67, no. 2 (Spring 2014), p. 22, available at digital-commons.usnwc.edu/.

22. In addition to articles in such journals as *International Security,* the Soviets undoubtedly were aware of some of the results of the Navy-sponsored Global War Game series (conducted at the Naval War College) in which both DoD civilian appointees and individual academic experts participated as game decision makers. Elements of the *Maritime Strategy* were gamed at this forum even before its public release. For details, see Bud Hay and Bob Gile, *Global War Game: The First Five Years,* Newport Paper 4 (Newport, RI: Naval War College Press, June 1993).

23. In a special issue of *Journal of Strategic Studies* edited by Lyle J. Goldstein, John B. Hattendorf, and Yuri M. Zhukov, two Russian scholars maintain that the Kremlin did not see a credible threat to their SSBN bastions but were concerned about Tomahawk land-attack cruise missiles carried on U.S. SSNs, which could be used to attack military installations ashore from positions in the northern seas. See Vladimir Kuzin and Sergei Chernyavskii, "Russian Reactions to Reagan's 'Maritime Strategy,'" *Journal of Strategic Studies* 28, no. 2 (April 2005), pp. 429–39. In a review of John Lehman's *Oceans Ventured: Winning the Cold War at Sea* (New York: W. W. Norton, 2018), Dov Zakheim insists that Soviet leaders did take notice of the U.S. naval threat to their SSBNs and that "[i]t is no exaggeration to assert, as Lehman does, that the Navy played a vital role in bringing the Cold War to a successful conclusion in America's favor." Dov S. Zakheim, "Lehman's Maritime Triumph," review of *Oceans Ventured: Winning the Cold War at Sea,* by John Lehman, *Naval War College Review* 71, no. 4 (Autumn 2018), pp. 141–46.

24. An interesting recent commentary on this from a reputable source is found in George Friedman, "A Speech by Mike Pence and the Sum of All Chinese Fears," *Geopolitical Futures* subscription e-mail list, November 9, 2018. Friedman contrasts U.S. media disinterest in a speech that was given by the vice president and whose themes had been expressed previously by subordinate officials with Chinese parsing of it and resultant perceptions of it heralding increased tensions. In reference to *CS21R,* Swartz, Rosenau, and Kates maintain that by failing to engage academic "carpers" the Navy lost opportunities to reinforce its message publicly (*Origins and Development,* p. 109).

25. Huntington, "National Policy and the Transoceanic Navy," p. 483. Also cited in Swartz, Rosenau, and Kates, *Origins and Development,* p. 2.

26. The final version of NWP 1 is available at www.history.navy.mil/. During the shift of responsibility for drafting naval doctrine from OPNAV to the short-lived Naval Doctrine Command in the early 1990s, NWP 1 fell through the cracks. There was a stillborn effort within OPNAV to revive it in 1998–99.

27. John Grady, "Congress Presses SECDEF Mattis on US Navy Path to 355 Ships," *USNI News,* June 13, 2017, news.usni.org/.

28. David B. Larter, "Will Looming Budget Cuts Bust Up the Navy's Plans for an Enormous Fleet?," *Defense News,* November 16, 2018, www.defensenews.com/.

29. U.S. Defense Dept., *Summary of the 2018 National Defense Strategy of the United States of America* [hereafter *Summary NDS*] (Washington, DC: 2018), p. 1.

30. Individual Navy personnel played surprising roles. For example, a nuclear submarine commander served as the commanding officer of the provincial reconstruction team in Khost, Afghanistan.

31. Although the 2+2 shorthand is not used in the *Summary* (despite the military's proclivity for acronyms and numerical descriptions), those four states are identified clearly as the threats. U.S. Defense Dept., *Summary NDS,* p. 4.

32. Ibid., p. 7.

33. Wayne P. Hughes Jr. [Capt., USN (Ret.)], *Fleet Tactics and Coastal Combat,* 2nd ed. (Annapolis, MD: Naval Institute Press, 2000), pp. 40–44.

34. U.S. Defense Dept., *Summary NDS,* p. 6.

35. However, Secretary of Defense Mattis has made some independent statements concerning the need for U.S. strategy to have a more maritime focus. See, for example, Mike Gallagher, "How to Save the U.S. Navy," *National Interest,* October 15, 2018, nationalinterest .org/. Gallagher quotes Mattis as follows: "I believe we are moving toward a more maritime strategy in terms of our military strategy to defend the country"; quoted from Office of Sen. Roger Wicker, "Wicker Asks Mattis about Shipbuilding Schedule, Russia Threat," press release, April 26, 2018, www .wicker.senate.gov/. In the press release, the Secretary of Defense continues, "It is the nature of our time, so I would be supportive if the Senate found a way to increase the shipbuilding budget."

36. U.S. Defense Dept., *Summary NDS,* pp. 8–10.

37. It does seem strange, however, that this statement appears in the midst of a section on alliances rather than threats.

38. The United States has never ratified the Law of the Sea Treaty officially. But it has adhered to and demonstrated support of its provisions, and therefore still can be considered a participant in UNCLOS.

39. U.S. Navy Dept., *A Cooperative Strategy for 21st Century Seapower: Forward, Engaged, Ready* (Washington, DC: March 2015), pp. 19–26.

40. The *reconnaissance strike network* construct was popularized in the publications of the Center for Strategic and Budgetary Assessments. For a study in antiaccess and its related terminologies from all aspects, see Sam J. Tangredi, *Anti-access Warfare: Countering A2/AD Strategies* (Annapolis, MD: Naval Institute Press, 2013).

41. John M. Richardson [Adm., USN, CNO], *A Design for Maintaining Maritime Superiority, Version 1.0,* Navy.mil, January 2016, p. 1.

42. Ibid., p. 4.

43. Ibid., pp. 1, 4.

44. John M. Richardson [Adm., USN, CNO], "Deconstructing A2/AD," *National Interest,* October 3, 2016, nationalinterest.org/.

45. Richardson, *A Design for Maintaining Maritime Superiority, 1.0,* p. 5.

46. Ibid., p. 6.

47. Several fellows of the Brookings Institute, an influential and long-standing Washington think tank, have suggested that the Navy will find it unaffordable to fund both the replacement SSBNs and a 355-ship "conventional" fleet. John Grady, "Panel: Navy May Have to Choose between New Ballistic Missile Subs or 355 Ship Fleet," *USNI News,* November 23, 2018, news.usni.org/.

48. Richardson, *A Design for Maintaining Maritime Superiority, 1.0,* p. 7.

49. Ibid.

50. Ibid., p. 8.

51. Ibid. Emphasis in original.

52. See Peter Dombrowski, "One Cheer Only," and Sam J. Tangredi, "A Powerful Helm Order," both in U.S. Naval Institute *Proceedings* 143/7/1,373 (July 2017), pp. 62–64.

53. The CNO also convened his own advisory panel (October 2016–March 2017) to analyze the three reports, during which many of the themes that later appeared in *The Future Navy* were discussed.

54. John M. Richardson [Adm., USN, CNO], *The Future Navy,* Navy.mil, May 17, 2017, p. 1.

55. Ibid., p. 3.

56. Ibid., p. 4.

57. Ibid., p. 7.

58. John M. Richardson [Adm., USN, CNO], *A Design for Maintaining Maritime Superiority, Version 2.0,* Navy.mil, December 2018.

59. Ibid., p. 4.

60. Ibid., p. 9.

61. Ibid., p. 8.

62. Ibid., p. 15.

63. A point used to illuminate the origins and outlines of the concept of antiaccess warfare in Tangredi, *Anti-access Warfare*. See especially pp. 36–40.

64. An example of academic opposition is Amitai Etzioni, "Who Authorized Preparations for War with China?," *Yale Journal of International Affairs* 8, no. 2 (Summer 2013), pp. 37–51, available at yalejournal.org/.

65. Michael E. Hutchins et al., "Joint Concept for Access and Maneuver in the Global Commons: A New Joint Operational Concept," *Joint Force Quarterly,* no. 84 (January 2017), pp. 134–39. *JAM-GC* is also one of the most cringe-worthy acronyms ever to come out of DoD.

66. For a discussion on aspects of and threats to the maritime commons—which includes the airspace over the water and, arguably, aspects of space and cyberspace—see Sam J. Tangredi, "The Maritime Commons and Military Power," in *Conflict and Cooperation in the Global Commons: A Comprehensive Approach for International Security,* ed. Scott Jasper (Washington, DC: Georgetown Univ. Press, 2012), pp. 71–88.

67. Properly, the term *COCOM* refers to the individual in command of a U.S. unified combatant command (UCC), not the organization itself. However, *COCOM* has become standard usage inside and outside the Pentagon to refer to an entire UCC organization, not only its commanding officer. This discussion continues that bad habit.

68. "U.S. Fleet Forces Command Mission," *U.S. Fleet Forces Command,* www.public.navy.mil/. My own view is that many of these functions should be returned to the OPNAV staff, under tighter control of the CNO.

69. For example, Scott H. Swift [Adm., USN], "A Fleet Must Be Able to Fight," U.S. Naval Institute *Proceedings* 144/5/1,383 (May 2018), pp. 28–33, available at www.usni.org/.

70. U.S. Navy Dept., *Report to Congress: Alternative Future Fleet Platform Architecture Study* (Washington, DC: Office of the Chief of Naval Operations [N8], November 2016), pp. 3, 11–13.

71. For example, one commentator proclaimed distributed lethality as the surface navy's "strategy for the Trump era." See Loren Thompson, "'Distributed Lethality' Is the Surface Navy's Strategy for the Trump Era," *Forbes,* January 10, 2017, www.forbes.com/.

72. U.S. Navy Dept., *Report to Congress,* p. 3.

73. Thomas S. Rowden [VAdm., USN], Peter A. Gumataotao [RAdm., USN], and Peter J. Fanta [RAdm., USN], "'Distributed Lethality,'" U.S. Naval Institute *Proceedings* 141/1/1,343 (January 2015), pp. 18–23, available at www .usni.org/.

74. Thomas S. Rowden [VAdm., USN], "Surface Force Strategy: Return to Sea Control" (presented at the 29th Annual Surface Navy Association Symposium, Arlington, VA, January 9, 2017), available at www.public.navy .mil/.

75. U.S. Navy Dept., *Report to Congress,* p. 12.

76. Ibid., p. 13.

77. The question of what size an unmanned system must reach to be designated a "ship" remains unresolved.

78. Steven Stashwick, "The U.S. Navy's New 30-Year Plan Grows Its Fleet Realistically, but Slowly," *The Diplomat,* February 16, 2018, thediplomat.com/.

79. Amy Sherman, "Trump Touts 350-Ship Promise at Naval Academy Graduation," *Politifact,* May 25, 2018, www.politifact.com/.

80. Joe Gould, "US Navy to Launch Force Structure Assessment," *Defense News,* September 5, 2018, www.defensenews.com/.

81. The Congressional Budget Office estimates that current Navy budget requests barely can support the current fleet size, let alone fund an increase to 355 ships. "CBO: 355-Ship Fleet Will Cost $6.7 Billion More per Year Than Current Navy Budget Request," *USNI News,* March 15, 2018, news.usni.org/.

82. In fact, there are indications that the 2019 Navy Force Structure Assessment still will consider 355 to be the minimum number of ships. Vice Adm. William R. Merz, USN, Deputy CNO for Warfare Systems (OPNAV N9), stated at a congressional hearing on November 27, 2018, "We have seen nothing from the combatant commands to date, or from Secretary Mattis's National Defense Strategy, that will give us any indication we'll be coming off that 355-ship [fleet] in composition or in total numbers." Ben Werner, "Next Navy Force Structure Assessment Unlikely to Alter Plan for 355-Ship Fleet," *USNI News,* November 28, 2018, news.usni.org/.

83. National Defense Authorization Act for Fiscal Year 2018, Pub. L. No. 115-91, § 1025 (a), 131 Stat. 1283, 1549 (2017); David B. Larter, "Trump Just Made a 355-Ship Navy National Policy," *Defense News,* December 13, 2017, www.defensenews.com/.

84. U.S. Navy Dept., *How We Fight: Handbook for the Naval Warfighter* (Washington, DC: GPO, 2015), available at news.usni.org/.

85. In their discussion of the drafting of *CS21R,* Swartz, Rosenau, and Kates suggest that there were some differences among the drafters regarding the intended audience. The authors state that CNO Greenert "was looking for a document that was generally authoritative for any audience: The naval officer corps, Capitol Hill, [Office of the Secretary of Defense], friends and allies, potential adversaries . . . whomever" (*Origins and Development,* p. 15). However, many of the OPNAV staff members involved had very specific audiences in mind. One can speculate that the result could have motivated CNO Greenert to insist that *How We Fight* be completed during his tenure, even though this required contracting the job outside OPNAV.

86. U.S. Navy Dept., *How We Fight,* p. 1. Admiral Greenert specified this order himself, and it has a nuclear-power training program–type logic: mathematics background, scientific principles, systems design, and then engineering procedures. Admiral Greenert was a nuclear submariner, as is Admiral Richardson.

87. Ibid., p. 32.

88. There is an excellent brief that details methodologies and personal experiences of the process of drafting naval strategy: Bruce Stubbs, "Personal Observations on Creating Navy Strategy" (presentation to the Naval War College, Newport, RI, July 6, 2015; updated and presented October 18, 2018). Although Stubbs is Director of Strategy (N50), OPNAV, the presentation is unofficial. His major points are summarized in Swartz, Rosenau, and Kates, *Origins and Development,* pp. 113–15.

89. U.S. Navy Dept., *Accountability to America: Department of the Navy Fiscal Year 2017 Annual Financial Report,* available at www .secnav.navy.mil/.

90. The debate concerning whether strategy drives Navy programs is discussed in Thomas-Durrell Young, "When Programming Trumps Policy and Plans: The Case of the US Department of the Navy," *Journal of Strategic Studies* 39, no. 7 (2016), pp. 936–55.

91. Anthony H. Cordesman of the Center for Strategic and International Studies colorfully writes: "For several decades, American strategic planning has been little more than a facade for annual line item budget debates. . . . U.S. strategy documents bordered on farce. They set broad policy goals without any supporting plans, force goals, clear mission-oriented programs, future years spending plans, and measures of effectiveness." *America's FY2020 Defense Strategy and Programming Crisis* (Washington, DC: Center for Strategic and International Studies, November 13, 2018), www.csis.org/.

92. John M. Richardson [Adm., USN, CNO], "POM Process Reorganization and OPNAV Staff Realignment," NAVADMIN 231/16, October 18, 2016, available at www.public .navy.mil/.

93. Ibid. The last comment indicates that the CNOG is expected to be a translation of the guiding strategy rather than a simultaneous or individually developed document.

94. Tangredi, *Anti-access Warfare,* pp. 161–82.

95. See Todd Wyatt and Donald Brutzman, "Network Optional Warfare," *NPS Wiki,* May 3, 2018, wiki.nps.edu/. Responding to the issue from the Pacific Fleet perspective, Admiral Swift has championed "mission command." See Scott H. Swift [Adm., USN], "Master the Art of Command and Control," U.S. Naval Institute *Proceedings* 144/2/1,380 (February 2018), pp. 28–33, available at www.usni.org/.

96. Richardson, *The Future Navy,* p. 4.

97. Richardson, *A Design for Maintaining Maritime Superiority, 2.0,* p. 8.

98. Ibid., p. 4.

99. Current CNO Richardson was Joint Forces Command (JFCOM) Director of Strategy and Policy (J5) while General Mattis was the JFCOM commander. One logically can assume that the CNO is particularly aware of the former Defense Secretary's strategic philosophy.