

TESTIMONY

STATEMENT BEFORE THE HOUSE ARMED SERVICES COMMITTEE ON FUTURE FLEET ARCHITECTURE STUDIES

March 8, 2017

**Statement by Bryan Clark
Senior Fellow, Center for Strategic and Budgetary Assessments**

Chairman Wittman, Ranking Member Courtney, and distinguished members of the committee: thank you for inviting me to testify today on the architecture and operations of the future fleet. This subject is both important and timely. The U.S. Navy is at a crossroads, with each major ship type undergoing a transition over the next several years. After delays in construction and testing, the first *Ford*-class aircraft carrier and *Zumwalt*-class destroyer are finally joining the fleet. Programs for the *Virginia*-class submarine, *Burke*-class destroyer, *San Antonio*-class amphibious transport dock, and Littoral Combat Ship are all beginning new variants. The *Columbia*-class ballistic missile submarine (SSBN) is in development. And the Navy is fielding a host of new unmanned air, surface, and undersea vehicles and systems.

These changes come as the United States faces security challenges it has not encountered since the end of the Cold War. Great power competitors such as China and Russia improved their military capabilities over the last two decades and now appear willing to challenge the international order. They are likely to soon replace transnational terrorism as the primary concern of U.S. military planners. At the same time, regional powers Iran North Korea will continue to field capabilities acquired from great powers and exploit their advantageous locations to cause outsized effects.

The Navy should reevaluate the fleet's configuration before it misses the opportunities associated with this time of transition. Deterring increasingly capable great powers and countering more aggressive regional adversaries will take more than simply recapitalizing today's ships when they reach the end of their service lives. It will require new operational concepts, force packages, posture and basing, readiness cycles, and manned and unmanned platforms, as well as update sensors and weapons. The fleet architecture studies directed by the Congress in the 2016 NDAA were intended to address these needs for the fleet of 2030.

A New Strategic Approach

Since the Berlin Wall fell, naval force structure requirements reflected an expectation that America's main military challenges would come from regional powers that lacked the ability to rapidly defeat a U.S. ally or prevent American forces from coming to the ally's defense. Naval force structure investments, therefore, focused on efficiently maintaining a visible presence in important regions, rather than on what would be needed to fight a peer competitor. Even if forces on or near the scene were unable to stop an act of aggression, in-theater naval and other forces could enable the mobilization of a U.S. and allied response to reverse the adversary's gains, as in the 1991 Gulf War, or overthrow the adversary's regime, as in the wars in Kosovo, Afghanistan, or Iraq.

Potential great power adversaries such as China and Russia are improving their capabilities and making it less likely that the mere presence of U.S. forces will deter them. Most significantly, their long-range air defense and strike systems could prevent the United States and its allies from mobilizing a conventional response in an adjacent theater as was done in the lead-up to the wars in Kosovo, Afghanistan, and Iraq. Instead of responding to aggression after the fact, to deter increasingly revisionist great powers, U.S. forces will need the capabilities and operational concepts to deny them the objectives of their aggression or to punish them until the aggression stops.

This "deny-and-punish" approach to conventional deterrence is how the United States and its allies countered the Soviet threat during the Cold War, and it has significant implications for fleet architecture. This strategic approach will increase America's reliance on forward-postured forces—particularly naval forces—that could rapidly interdict aggression and conduct attacks on targets the enemy values to compel the aggression to stop.

New Operating Concepts

Denying rather than responding to aggression will require that U.S. naval forces be able to operate and fight in highly contested areas close to an aggressor's territory or near the likely objects of aggression. Surviving and stopping an enemy attack in these areas will require a range of new operating concepts to better defend U.S. forces and increase their lethality.

New operating concepts are the most important element of a new fleet architecture because they will guide the packaging of forces and the characteristics needed for the fleet's platforms, sensors, weapons, and networks. We assessed that an overarching requirement for all new concepts in the 2030s would be to remain viable in a highly-contested communications environment. This will likely increase the fleet's reliance on short-range low probability of intercept/low probability of detection (LPI/LPD) communications and individual commanders leading operations without higher-headquarters guidance.

New concepts for Air and Missile Defense (AMD) will be key to enabling offensive naval

operations inside contested areas. These new concepts will conduct air defense at shorter ranges to increase each ships' defensive capacity and posture naval forces in a more distributed manner to increase the number of targets the enemy must engage. Conducting air defense at 10 to 30 miles away, rather than 100 miles or more as is common today, allows naval forces to use higher capacity capabilities such as smaller, less expensive interceptors and electronic warfare systems instead of large, long-range interceptors. A shorter-range air defense concept would also enable ships to use new technologies such as laser, high-power microwave, or hypervelocity projectile weapons for air defense. To further increase the number of targets an enemy must engage, naval forces will need to adopt new approaches to electromagnetic spectrum (EMS) warfare that create many false decoy targets, degrade enemy sensors, and enable U.S. forces to find the enemy without being counter-detected.

Submarines are some of the most challenging missile launch platforms U.S. naval forces will face because they can approach undetected to within anti-ship missile range. As adversary submarine fleets continue to grow, U.S. forces will need to adopt new anti-submarine warfare (ASW) concepts that suppress enemy submarine operations instead of trying to find and destroy every enemy submarine. These new approaches could use active sonar to convince submarine crews they may have been detected and employ less-expensive air-launched or standoff weapons to attack each potential submarine detection to compel submarines to evade and lose the initiative.

To best exploit their own access to the undersea domain, U.S. forces will need to increasingly use unmanned vehicles and systems for offensive undersea operations in areas close to an adversary's coast. Although individual unmanned systems may not have the endurance, speed, sensor capability, and autonomy to replace submarines, they could attack ships in port and targets ashore, lay mines, conduct surveillance, or degrade enemy sensors. Networks of unmanned systems may be able to conduct more complex operations such as ASW or attacks on enemy warships. In these concepts, U.S. submarines will be used to provide command and control to undersea operations and conduct the most challenging surveillance and attack missions, rather than being a front-line force for all undersea operations.

By adopting a shorter-range AMD concept, U.S. naval forces should be able to devote more of their weapons capacity to offensive missions. Using concepts including Distributed Lethality, they could engage larger numbers of enemy targets with VLS-launched missiles, particularly in the initial days of conflict that will be most critical to denying or delaying aggression. Naval forces at sea should be complemented by amphibious forces ashore at expeditionary advance bases (EAB), which can conduct surface-to-air and surface-to-surface fires to further constrain enemy operations.

These concepts will employ unmanned systems to a larger degree than the current force for surveillance, targeting, countering enemy sensors, and delivering weapons. They do not, however, replace manned platforms with unmanned systems. Largely because of

the likely sensor and communication limitations of unmanned weapons platforms, manned platforms will be needed in the 2030s to manage unmanned vehicles and systems and provide the accountability to employ weapons. Moreover, the need for naval forces to focus on deterrence will reduce their ability to use unmanned systems for forward operations, since unmanned vehicles may not have the same deterrent effect as a manned platform and could more easily be tampered with or neutralized by an adversary.

Changing the Deployed Fleet

New operating concepts will give rise to a range of new force packages such as surface action groups (SAGs), ASW groups, unmanned vehicle squadrons, counter-C4ISR groups, and mining groups. These groups will combine manned and unmanned systems to specialize in the new operations needed to conduct survivable, high volume offensive operations in highly contested areas.

These force packages will likely need to be deployed differently in the 2030s than naval forces today. Given the short timelines in which aggression could occur and escalate against U.S. allies in East Asia, the Middle East, and Europe, the proximity and capabilities of deployed naval forces may make the difference between an adversary being deterred or perceiving an opportunity to act.

The size and composition of deployed naval forces, their deployment locations, and their overseas basing create an overall naval posture. In contrast to today's emphasis on presence, posture connotes an overall capability to conduct and sustain combat operations. In a period of great power competition, posture—not presence—will need to be the focus of a future fleet architecture.

We propose dividing the deployed fleet into two main groups to achieve an effective posture: “Deterrence Forces” of surface, amphibious, and undersea forces that are organized into discrete regions rather than Combatant Commander (CCDR) areas of responsibility (AOR), and a “Maneuver Force” of two carrier strike groups (CSG) that is assigned broadly to the Indo–Asia–Pacific theater.

Separating the deployed fleet into these two main groups enables Deterrence Forces to be tailored to their region and improves their ability to influence, prepare for, and adapt to adversary advancements. And because Deterrence Forces will remain in their region, the Maneuver Force would be able to respond to tensions and conflict in any part of the Indo–Asia–Pacific theater, including the Middle East, without leaving an opening for opportunistic aggression by an adversary seeking to exploit a shift in U.S. focus to the area of conflict. In turn, because the Maneuver Force is not tied to a specific theater, it will be able to conduct concept development, experimentation, and exercises when on deployment.

Operationally, separating the deployed fleet into Deterrence Forces and the Maneuver Force enables commanders to align elements of the fleet with their likely operational needs. Deterrence Forces of surface combatants, submarines, and amphibious ships

could provide prompt, high-capacity fires to deter an adversary seeking a rapid *fait accompli*, such as China or Russia. The Maneuver Force of multiple CSGs would be able to relieve Deterrence Forces once conflict occurs to deliver sustained combat power at moderate levels over an indefinite period.

The Deterrence Force posture in each region is designed to provide the ability to promptly deny adversaries their likely objectives and attack targets the enemy would value. Although the characteristics of Deterrence Forces are focused on great powers such as China and Russia, they can also address strategically located regional powers such as Iran or North Korea. Because of their location, Deterrence Forces would conduct day-to-day operations such as maritime security and disaster response, particularly with the maritime forces of allies and partners. These less-stressing missions, however, do not drive the composition of Deterrence Forces.

Composition and Costs of the Proposed Fleet

The CSBA fleet architecture translates naval posture into an overall number of ships and aircraft required to carry out the strategy of deterring aggression through denial and punishment. In addition to supporting the rotational readiness cycle, the architecture includes additional ships to account for the time ships are in transit and the long-term maintenance that takes ships out of their readiness cycle. Further, the architecture assumes that, consistent with the Navy’s current force structure assessment, the rotation base of non-deployed forces in the readiness cycle is sufficient for wartime surge requirements.

The table below depicts the proposed fleet architecture. It includes 382 manned ships, of which 340 fall under the Navy’s battle force counting rules. The architecture also includes extra-large unmanned vehicles (XLUSV and XLUUV) and ground-based patrol aircraft. Shipborne aircraft such as CVW aircraft, Tactical Exploitable Reconnaissance Node (TERN) UAVs, and helicopters are assumed to be included with the ships on which they would deploy.

COMPOSITION OF THE PROPOSED FLEET¹

	Total Fleet Required
CVN	12
CVL	10
DDG-1000	3
DDG	71

¹ The totals at the bottom of this chart use current counting rules or total number of manned ships. The current counting rules do not count ships that do not directly support combat operations, such as sealift ships or hospital ships. The current rules also do not include ships that are not able to move themselves to their deployed area and must instead be carried there by a lift ship, such as today’s patrol coastal (PC) or the proposed patrol vessels. See Secretary of the Navy, *General Guidance for The Classification of Naval Vessels and Battle Force Ship Counting Procedures*, SECNAVINST 5030.8C (Washington, DC: Department of the Navy, June 14, 2016), p. 2.

FFG	71
Patrol Vessel	42
SSN	66
SSBN	12
Small Deck Amphibious Ships (LPD, LX(R))	29
Large Oiler (T-AOE)	26
Large Dry Stores Ship (T-AKE)	4
Unmanned Vehicle Support Vessel	14
Afloat Forward Staging Base	2
Large Dry Stores Transport Ship w/VLS	1
Tender	5
Salvage/Fleet Tug	6
Oceanographic Research Ship	5
Command Ship	3
Total Battle Force Ships (using current counting rules)	340
Total Fleet (including patrol vessels)	382
XLUSV	40
XLUUV	40
MQ-4 Detachment (3 A/C)	14
P-8 Detachment (3 A/C)	44
Unmanned Vehicle Squadron	6

Implementing the Proposed Fleet Architecture

We estimate that the CSBA architecture will likely cost about 15–20 percent more to build, operate, man, and sustain than the Navy’s planned fleet of 308 ships.² The shipbuilding industrial base could reach the objective number for each ship type of the proposed fleet architecture in the 2030s, but additional investment will likely be needed in shipyards and the supplier industrial base to support increased production.

The alternative shipbuilding plan that delivers the proposed fleet architecture will cost an average of \$23.2 billion per year, 18 percent more than the \$19.7 billion annual cost of the draft 30-year shipbuilding plan associated with the President’s Budget for FY 2017 (PB17).³ If the Navy expands the CLF fleet to meet the wartime demands of the proposed fleet architecture, the average annual cost rises to \$23.6 billion, 20 percent greater than the PB17 plan. The operations and maintenance (O&M) costs associated with the proposed fleet architecture plan will cost an average of \$16.5 billion per year, 14 percent

² The Navy has not published any plans to build or sustain its new 355-ship requirement.

³ Chief of Naval Operations (CNO), *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2017* (Washington, DC: Department of the Navy, July 2016), p. 7.

more than the \$14.6 billion associated with the PB17 budget.

The alternative shipbuilding plan balances the need to achieve the proposed architecture with the imperative to manage costs. For the new ship types proposed by the CSBA architecture, the plan assumes existing platforms, with modest modification, will support the new operational concepts of the proposed architecture. The plan replaces these platforms at the end of their service lives with new, purpose-built ships and aircraft designed for their missions in the new architecture.

Conclusion

Today's Navy emphasizes efficiency over effectiveness. This was a rational reaction to the presumed end of great power competition with the fall of the Soviet Union. In the decades that followed, the U.S. Navy developed a process to affordably maintain a continuous presence of deployed forces in each CCDR AOR. These forces may not be able to stop aggression by regional powers but could support an eventual response by follow-on forces as was done in Kosovo, Iraq, and Libya.

This approach to conventional deterrence will not likely work against the potential great power aggressors of the 2030s, who will have much greater military capabilities than past regional adversaries and probably seek a quick, decisive victory over their adversaries. Efforts to reverse the results of aggression after the fact would require a much larger conflict and would likely have global consequences that would create international pressure to reach a quick settlement.

To be deterred in the 2030s, aggressors must be presented with the possibility that their goals will be denied or that the immediate costs to pursue them will be prohibitively high. The architecture proposed by this report would achieve that effect with more powerful day-to-day Deterrence Forces tailored by region. Bolstering that immediate deterrent would be the Maneuver Force, which in peacetime would hone its skills in multi-carrier, cross-domain, high-end warfare. These two forces would be comprised of some of the same elements, but packaged and supported differently.

This proposed fleet architecture emphasizes effectiveness over efficiency. Built on new operating concepts the Navy is already pursuing and incorporating a new approach to conventional deterrence, the new architecture offers the prospect of protecting and sustaining America's security and prosperity, as well as that of our friends and allies around the world, in the decades ahead. Deterring great power war demands the readiness to contest and win it—and a fleet that supports this approach.

About the Center for Strategic and Budgetary Assessments

The Center for Strategic and Budgetary Assessments (CSBA) is an independent, nonpartisan policy research institute established to promote innovative thinking and debate about national security strategy and investment options. CSBA's analysis focuses on key questions related to existing and emerging threats to U.S. national security, and its goal is to enable policymakers to make informed decisions on matters of strategy, security policy, and resource allocation.