



## Cruising for a Bruising: Maritime Competition in an Anti-Access Age

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### ABSTRACT

This paper explores the likelihood of maritime crisis stability between China and the United States by building on existing research on the Sino-American naval balance and the concepts of offense–defense theory. Whereas a “denialist” school in security studies argues that counterintervention technology makes defense dominant in the region, the US Navy remains a fleet designed for an offensive approach of power projection and sea control. Although this stubbornness in the face of a sophisticated anti-access capability might be attributable to a strong operational culture and obvious bureaucratic incentives, we posit additional forces suggesting defense dominance will not lead to crisis stability. At sea, offense–defense distinguishability is low and the temptation to strike first is high. Future interaction between current US and Chinese fleet designs risks a crisis or even war that will endanger the US fleet, potentially leading to the loss of the very military advantages underpinning American hegemony that its navy seeks to defend.

When does a military competition at sea lead to crisis instability and conflict? In this paper, we identify a remarkable amount of agreement among security studies scholars on the implications of recent military developments, particularly in the Western Pacific. Based on the classic security studies concept of the offense–defense balance, the consensus suggests we now live in a world of defense dominance, mutual denial of an opponent’s navy and air force to operate unmolested in war, and “no man’s sea.” We lay out theoretical and empirical reasons to be less confident in this consensus.

Previous research on offense–defense theory has inspired a large amount of second-order research qualifying it. This scholarship, based mostly on territorial warfare, made clear that academics’, or even policy-makers’, perception of defense dominance cannot prevent war in many

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instances due to both material and nonmaterial factors. We lay out these arguments and suggest how the unique characteristics of naval warfare may heighten several of them, making contemporary maritime competition less stable than these “denialists” suggest. We argue that defense dominance will not lead to crisis stability because, at sea, offense–defense distinguishability is low and the temptation to strike first is high. Moreover, naval culture and organizational interests, in the United States and perhaps in China as well, make accepting denial unattractive, echoing the “cult of the offensive” work of a previous generation of security studies.

Empirically, to date, this denialist body of work has spent considerable time on the People’s Liberation Army Navy (PLAN) and related Chinese capabilities. We briefly point out that it is far from clear, especially in the eyes of many American observers, that this capability only has defensive uses. Much less security studies research exists on how the United States, primarily its navy, intends to respond. And even less work exists on the interaction of these two states’ fleets. These topics are the paper’s empirical focus.

We argue that, based on its fleet design (a navy’s combined material capability and operational culture), the US Navy (USN), regardless of the relative costs of a sea denial versus a more aggressive power-projection or sea control strategy, will operate in a familiar way for decades to come. Given this stickiness, we argue that current USN and PLAN fleet designs may interact to risk a crisis or even war where much of the US fleet is endangered. Such a conflict could, ironically, speed the loss of the military advantage underpinning American hegemony, in defense of which the fleet was operating forward in the first place.

The paper proceeds as follows. The first section describes the puzzle that, although the majority of classic arms races are naval, almost all work on crisis stability associated with such competitions focuses on the land or nuclear domains. The section continues by reviewing what makes an arms competition dangerous, starting with offense–defense theory, and lays out the denialist case for defense dominance at sea. The second section covers previous work on factors, both material and nonmaterial, that qualify defense dominance’s contribution to crisis stability. It introduces the concept of fleet design to argue how naval racing can be particularly prone to crisis instability even in the face of defense dominance. The next section reviews PLAN fleet design and the ongoing US response. We then analyze the likely interaction of these two fleet designs for crisis stability. We conclude with implications for policy and future research.

## Maritime Competition and Crisis Stability

International relations scholarship has long sought to explain the links between great-power military competition and crisis stability.<sup>1</sup> Policy-oriented scholarship regards the Sino-American relationship as the principal contemporary great-power conflict.<sup>2</sup> As this issue's introduction points out,<sup>3</sup> the most likely location for great-power friction is at sea, and previous work in security studies largely sidesteps the potentially unique aspects of a maritime competition. We, therefore, seek to explore how that maritime aspect of this rivalry may shape the willingness to resort to force in a crisis.

Although scholars dispute whether the United States and China are arms racing, any arms competition between these two countries is taking place at sea.<sup>4</sup> It is debatable whether overall Sino-American military spending qualifies for most quantitative definitions of a race.<sup>5</sup> On the other hand, Chinese spending on the navy (not to mention its coast guard and maritime militia) is rising at a faster pace than its broader defense spending.<sup>6</sup> Moreover, most analyses of the naval balance (including our own below) describe an action–reaction relationship in which both sides are responding to the other's perceived search for a qualitative advantage.<sup>7</sup> As early as 1999, Thomas J. Christensen observed, “if we look at the variables that might fuel security dilemma dynamics, East Asia appears quite dangerous.” Christensen emphasized how the region's maritime nature contributes to this:

Not only could dramatic and unpredictable changes in the distribution of capabilities in East Asia increase uncertainty and mistrust, but the importance of sea-lanes and secure energy supplies to almost all regional actors could encourage a destabilizing

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<sup>1</sup>Crisis stability occurs when both sides' deterrent forces provoke fears and incentivize a first strike. Thomas C. Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960), 207–54; Glenn H. Snyder, *Deterrence and Defense: Toward a Theory of National Security* (Princeton, NJ: Princeton University Press, 1961), 104–10. John J. Mearsheimer identifies three variables affecting crisis stability: “Each side's perceptions of the other's aggressiveness; the degree of military advantage accruing to the side striking first; and the tendency of peacetime military operations to activate the opponent's rules of engagement.” Mearsheimer, “A Strategic Misstep: The Maritime Strategy and Deterrence in Europe,” *International Security* 11, no. 2 (Fall 1986): 3–57.

<sup>2</sup>Avery Goldstein, “First Things First: The Pressing Danger of Crisis Instability in U.S.-China Relations,” *International Security* 37, no. 4 (Spring 2013): 51. Thomas J. Christensen, “China, the U.S.-Japan Alliance, and the Security Dilemma in East Asia,” *International Security* 23, no. 4 (Spring 1999): 49–80; Aaron L. Friedberg, “Ripe for Rivalry: Prospects for Peace in a Multipolar Asia,” *International Security* 18, no. 3 (Winter 1993/94): 5–33; Jong Kun Choi, “Crisis Stability or General Stability? Assessing Northeast Asia's Absence of War and Prospects for Liberal Transition,” *Review of International Studies* 42, no. 2 (April 2016): 287–309.

<sup>3</sup>Jonathan D. Caverley and Peter Dombrowski, “Too Important to Be Left to the Admirals: The Need to Study Maritime Great-Power Competition,” *Security Studies* (forthcoming).

<sup>4</sup>Adam P. Liff and G. John Ikenberry, “Racing Toward Tragedy? China's Rise, Military Competition in the Asia Pacific, and the Security Dilemma,” *International Security* 39, no. 2 (Fall 2014): 52–91; David C. Kang, *American Grand Strategy and East Asian Security in the Twenty-First Century* (Cambridge: Cambridge University Press, 2017).

<sup>5</sup>On defining arms races, see Colin S. Gray, “Arms Races and Other Pathetic Fallacies: A Case for Deconstruction,” *Review of International Studies* 22, no. 3 (July 1996): 323–35.

<sup>6</sup>Tate Nurkin et al., “China's Advanced Weapons Systems” (Jane's by IHS Markit, 2018). US spending among the services remains roughly the same.

<sup>7</sup>Geoffrey Till, *Asia's Naval Expansion: An Arms Race in the Making?* (London: Routledge, 2012).

competition to develop power-projection capabilities on the seas and in the skies. Because they are perceived as offensive threats, power-projection forces are more likely to spark spirals of tension than weapons that can defend only a nation's homeland.<sup>8</sup>

We argue that enough evidence exists to justify examining whether such a maritime competition may escalate into conflict.

The link between great-power competition, particularly arms races, and the outbreak of war remains a primary concern of international relations.<sup>9</sup> Previous research largely focuses on land warfare, but we apply this research to explore links between maritime competition and crisis stability. Paradoxically, whereas most of the crisis stability literature focuses on the potential for land or nuclear conflict, most of the classic qualitative arms races have occurred at sea. Seven of the thirteen arms races identified by Samuel P. Huntington are naval, as are seven of the nine races and "competitions" identified by Grant T. Hammond.<sup>10</sup>

Despite their frequency, naval races may not lead to crisis instability. Not all arms races, to use Charles L. Glaser's term, are "suboptimal," making "war unnecessarily likely." Glaser identifies arms races as suboptimal when the "state's decision to launch a buildup is poorly matched to its security environment, then the military buildup and the arms race that it provokes reduce the state's security."<sup>11</sup> Five of the nine cases Glaser considers are naval. Two of Glaser's three suboptimal races are naval.<sup>12</sup> On the other hand, if we look at Huntington's classic series of cases (Table 1), almost none of his naval arms races resulted in a war. Two of the articles in this special issue begin to address this from a statistical perspective. Erik Gartzke and Jon R. Lindsay conclude that more sea power leads to more

<sup>8</sup>Christensen, "China, the U.S.-Japan Alliance, and the Security Dilemma in East Asia," 50.

<sup>9</sup>Samuel P. Huntington, "Arms Races: Prerequisites and Results," in *Public Policy: A Yearbook of the Graduate School of Public Administration, Harvard University*, ed. Carl J. Friedrich and Seymour E. Harris (Cambridge, MA: Graduate School of Public Administration, Harvard University, 1958), 8:41–86; Paul Kennedy, "Arms-Races and the Causes of War, 1850–1945," in *Strategy and Diplomacy, 1870–1945: Eight Studies* (Boston, MA: Allen and Unwin, 1983); Grant T. Hammond, *Plowshares into Swords: Arms Races in International Politics, 1840–1991* (Columbia: University of South Carolina Press, 1993); Toby J. Rider, Michael G. Findley, and Paul F. Diehl, "Just Part of the Game? Arms Races, Rivalry, and War," *Journal of Peace Research* 48, no. 1 (January 2011): 85–100; James D. Morrow, "A Twist of Truth: A Reexamination of the Effects of Arms Races on the Occurrence of War," *Journal of Conflict Resolution* 33, no. 3 (September 1989): 500–29. For a recent review, see Richard J. Stoll, "To Arms, To Arms: What Do We Know About Arms Races?" in *Oxford Research Encyclopedia of Politics*, ed. William Thompson (September 2017 [online]), <https://doi.org/10.1093/acrefore/9780190228637.013.350>.

<sup>10</sup>Huntington, "Arms Races"; Hammond, *Plowshares*, 243–46. Eight of Hammond's eleven arms "panics" were naval. There is surprisingly little "large N" work on naval arms races. Sean Bolks and Richard J. Stoll conclude that states respond to each other's capital ship acquisition, and examine hostility and institutions levels, but do not formally identify "racing." Bolks and Stoll, "The Arms Acquisition Process: The Effect of Internal and External Constraints on Arms Race Dynamics," *Journal of Conflict Resolution* 44, no. 5 (October 2000): 580–603. Newly collected data may help on this front. See Brian Benjamin Crisher and Mark Souva, "Power at Sea: A Naval Power Dataset, 1865–2011," *International Interactions* 40, no. 4 (2014): 602–29.

<sup>11</sup>Charles L. Glaser, "When Are Arms Races Dangerous? Rational Versus Suboptimal Arming," *International Security* 28, no. 4 (Spring 2004): 44–84.

<sup>12</sup>Glaser actually argues that the United States should have arms raced in the 1930s but instead showed suboptimal restraint that made conflict more likely.

**Table 1.** List of arms races.<sup>a</sup>

Competitors	Years	Domain	War?
France vs. England	1840–1866	Naval	No
France vs. Germany	1874–1894	Land	No
England vs. France and Russia	1884–1904	Naval	No
Argentina vs. Chile	1890–1902	Naval	No
England vs. Germany	1898–1912	Naval	No
France vs. Germany	1911–1914	Land	Yes
England vs. United States	1916–1930	Naval	No
Japan vs. United States	1916–1922	Naval	No
France vs. Germany	1934–1939	Land	Yes
Soviet Union vs. Germany	1934–1941	Land	Yes
Germany vs. England	1934–1939	Air	Yes
United States vs. Japan	1934–1941	Naval	Yes
Soviet Union vs. United States	1946–1989	Nuclear	No

<sup>a</sup>Huntington, “Arms Races.”

militarized disputes in more places.<sup>13</sup> Whereas Sara McLaughlin Mitchell’s paper finds that more naval capability correlates to more coercive strategies, this effect may be tempered when the opponent has a similar capability.<sup>14</sup> Clearly, more research is required to disentangle the relationship between maritime competition, arms racing, and the outbreak of hostilities.

The large and growing body of contemporary research on maritime competition, however, suggests previous eras of naval racing will shed little light on the subject due to dramatic changes in technology. An important group of security studies scholars argue that new capabilities may render naval buildups nonthreatening to other states.

### ***The Case for a World of Denial***

The primary theoretical explanation for the existence of military competition between states remains the security dilemma, where steps taken to improve one’s own security (that is, arming) reduce the security of other actors.<sup>15</sup> And the offense–defense balance remains the primary theoretical explanation for variation in competition given the security dilemma.<sup>16</sup> Glaser and Chaim Kaufmann define this balance as “the ratio of the cost of the forces the attacker requires to take territory to the cost of the forces the defender has deployed.”<sup>17</sup> Space precludes a thorough overview of the concepts; we note

<sup>13</sup>Erik Gartzke and Jon R. Lindsay “The Influence of Sea Power on Politics: Domain- and Platform-Specific Attributes of Material Capabilities,” *Security Studies* (forthcoming).

<sup>14</sup>Sara McLaughlin Mitchell, “Clashes at Sea: Explaining the Onset, Militarization, and Resolution of Diplomatic Maritime Claims,” *Security Studies* (forthcoming).

<sup>15</sup>Robert Jervis, “Cooperation under the Security Dilemma,” *World Politics* 30, no. 2 (January 1978): 167–214; Charles L. Glaser, *Rational Theory of International Politics: The Logic of Competition and Cooperation* (Princeton, NJ: Princeton University Press, 2010).

<sup>16</sup>Stephen Van Evera, “Offense, Defense, and the Causes of War,” *International Security* 22, no. 4 (Spring 1998): 5–43.

<sup>17</sup>Charles L. Glaser and Chaim Kaufmann, “What Is the Offense-Defense Balance and Can We Measure It?” *International Security* 22, no. 4 (Spring 1998): 50.

simply that when offense has the advantage, the security dilemma grows more acute, arms races grow more intense, and war grows more likely.

Although Glaser and Kaufmann's definition explicitly focuses on territory, most scholarship on US-China maritime competition and the propensity for war uses these concepts as a starting point when discussing the most important technological development of this era: the increasing ability for states to threaten an opponent's ships at long range from the relatively safer and cheaper land-based aircraft and missile batteries, a range of capabilities termed "anti-access/area denial" (A2/AD) by the US military. Effective A2/AD threatens the operation of an opposing naval force in a given swathe of ocean. This operational goal of "sea denial" contrasts with two other classic naval missions: "sea control," allowing one's naval force to operate unmolested while preventing others from doing so, and "power projection," the use of naval power to deliver effects on an opponent's territory and away from one's own.<sup>18</sup>

Horatio Nelson famously observed "a ship's a fool to fight a fort." Analysts in the denialist school make a powerful case that the cost for the capability the United States would need to fight the Chinese fort far outweighs the investment China would need to counteract it. Emerging technologies such as long-range ballistic missiles, swarms of multiple drones and cruise missiles (akin to the sophisticated 2019 attack on Saudi oil facilities), and eventually hypersonic weapons, all seem to further favor the shore and the missile over the ship.

By this standard, the offense–defense balance has shifted decisively toward the latter. Not only does this make power projection into the Chinese mainland costly, but also it makes sea control within the range of this land-based firepower prohibitively expensive. On the other hand, if the United States and smaller states in the Western Pacific all invest in similar anti-access capabilities, then arms races can largely be avoided, and conflict averted.<sup>19</sup> Denialists, in general, advocate for the United States (and smaller states concerned with Chinese or Russian coercion, for that matter) to face this defense-dominant reality. They tend to recommend a combination of

<sup>18</sup>Julian S. Corbett, *Some Principles of Maritime Strategy* (London: Longmans, Green and Company, 1911); Stansfield Turner, "The Naval Balance: Not Just a Numbers Game," *Foreign Affairs* 55, no. 2 (January 1977): 339–54.

<sup>19</sup>Michael Beckley, "The Emerging Military Balance in East Asia: How China's Neighbors Can Check Chinese Naval Expansion," *International Security* 42, no. 2 (Fall 2017): 78–119; Stephen Biddle and Ivan Oelrich, "Future Warfare in the Western Pacific: Chinese Antiaccess/Area Denial, U.S. AirSea Battle, and Command of the Commons in East Asia," *International Security* 41, no. 1 (Summer 2016): 7–48; David Blagden, "Sea Power Is Benign Power: The International Case for a Maritime Posture," *RUSI Journal* 159, no. 3 (2014): 54–61; Eugene Gholz, "No Man's Sea: Implications for Strategy and Theory" (paper presented at The Annual Meeting of International Studies Association, Atlanta, GA, March 16–19 2016); Eugene Gholz, Benjamin Friedman, and Enea Gjoza, "Defensive Defense: A Better Way to Protect US Allies in Asia," *Washington Quarterly* 42, no. 4 (2019): 171–89.

two material and operational approaches: “active denial” and “offshore control.”

An active denial approach would rely on forward-deployed, resilient US combat power that can survive a first strike, counterattack capabilities that can directly attack Chinese forces engaged in offensive options, and “enhanced allies.”<sup>20</sup> Active denial focuses on a “high level of dispersion and mobility” that allows for resilience in the initial phases of a conflict and “attriting adversary lodgments” in later phases.<sup>21</sup> According to Michael Beckley, active denial “would maintain deterrence by denying China the possibility of a decisive military victory while enhancing crisis stability by reassuring China that it will not suffer a massive attack on its homeland on the first day of a war.”<sup>22</sup>

In terms of material investment required for active denial, Stephen Biddle and Ivan Oelrich recommend long-range antiradiation missiles, improved antisatellite capability, and, perhaps most importantly, new anti-ship missiles to establish an American A2/AD zone.<sup>23</sup> It would favor ships and carrier-based aircraft over long-range bombers. Command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) improvements and hardening would be essential to complete the “kill chain.” Ensuring local states have the ability to defend themselves with their own anti-access weapons also plays a prominent role.<sup>24</sup>

The offshore control approach would involve sealing off China’s “first island chain” to prevent PLAN egress into the greater Pacific; harassing Chinese assets with forward-deployed submarines and airstrikes; and imposing a distant blockade to bring economic pressure on Beijing.<sup>25</sup>

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<sup>20</sup>Eric Heginbotham and Jacob L. Heim, “Deterring Without Dominance: Discouraging Chinese Adventurism under Austerity,” *Washington Quarterly* 38, no. 1 (Spring 2015): 185–99. See also William S. Murray, “Revisiting Taiwan’s Defense Strategy,” *Naval War College Review* 61, no. 3 (Summer 2008): 12–38, <https://digital-commons.usnwc.edu/nwc-review/vol61/iss3/3>; James Holmes and Toshi Yoshihara, *Defending the Strait: Taiwan’s Naval Strategy in the 21st Century* (Washington, DC: Jamestown Foundation, 2011); Toshi Yoshihara and James R. Holmes, “Asymmetric Warfare, American Style,” *Proceedings* 138, no. 4 (April 2012): 24–29, <https://www.usni.org/magazines/proceedings/2012/april/asymmetric-warfare-american-style>; Toshi Yoshihara, “Sino-Japanese Rivalry at Sea: How Tokyo Can Go Anti-Access on China,” *Orbis* 59, no. 1 (Winter 2015): 62–75; Andrew F. Krepinevich Jr., “How to Deter China: The Case for Archipelago Defense,” *Foreign Affairs* 94, no. 2 (March/April 2015): 78–86, <https://www.foreignaffairs.com/articles/china/2015-02-16/how-deter-china>; Terrence Kelly, David C. Gompert, and Duncan Long, *Smart Power, Stronger Partners*, vol. 1: *Exploiting U.S. Advantages to Prevent Aggression* (Santa Monica, CA: RAND Corporation, 2016); Beckley, “Emerging Military Balance in East Asia.”

<sup>21</sup>Eric Heginbotham and Richard J. Samuels, “Active Denial: Redesigning Japan’s Response to China’s Military Challenge,” *International Security* 42, no. 4 (Spring 2018): 128–69. Variations include Heginbotham and Heim, “Deterring without Dominance”; Murray, “Revisiting Taiwan’s Defense Strategy”; Yoshihara, “Sino-Japanese Rivalry at Sea”; Krepinevich, “How to Deter China.”

<sup>22</sup>Beckley, “Emerging Military Balance in East Asia.”

<sup>23</sup>Biddle and Oelrich “Future Warfare in the Western Pacific.”

<sup>24</sup>Heginbotham and Samuels, “Active Denial”; Christian Le Mièrè, “The Spectre of an Asian Arms Race,” *Survival* 56, no. 1 (February–March 2014): 139–56.

<sup>25</sup>The “first island chain” is a common term apparently, but not conclusively, based on Chinese strategic documents. According to James R. Holmes, “Asia’s ‘first island chain’, to borrow the ubiquitous Chinese phrase, encloses the East Asian coastline. It arcs southward from the Japanese home islands through the Ryukyu Islands, Taiwan, and the Philippine archipelago. Each annual Pentagon report on Chinese military power, moreover, includes a map that traces the island chain from the Philippines westward to central Vietnam.” Holmes, “Defend the First Island Chain,” *Proceedings* 140, no. 4 (April 2014): 32–37, <https://www.usni.org/>



Offshore control avoids strikes at sites on the mainland, viewing such acts as dangerous escalation.<sup>26</sup> This could be accomplished via “small” ships well equipped with long-range missiles fired by vertical launching systems (destroyers and frigates versus aircraft carriers and amphibious assault ships) but would still require superior C4ISR and advanced logistics systems.

According to either brand of denialists, although sustainable sea control of large swaths of the Western Pacific may be beyond USN capability, it remains relatively simple to ensure the other side’s fleet cannot sail unhindered in this space either. The result would be a sort of no man’s sea.<sup>27</sup> In the United States’ worst-case scenario, according to Biddle and Oelrich, China and the United States will have spheres of influence and a contested zone of mutual denial.<sup>28</sup> This identification of defense dominance is often paired with the recommendation that the United States can safely reduce its overall defense spending.<sup>29</sup> In short, denialists argue that any arms race to overcome such capability would be futile and wasteful; Beckley cites one RAND study arguing that the average cost of A2/AD capability is about one-fiftieth of the cost of power-projection capability.<sup>30</sup> We live in a defense-dominant world at sea.<sup>31</sup>

## Denial Does Not Mean Defense Dominance

The denialists make a compelling case. We argue, however, that it is too optimistic regarding crisis stability and how much of an effect their preferred arsenals would have on it. This is largely due to denialists’ focus on potential types of capabilities being deployed on each side and the prevailing military technology. Nonetheless, even if we consider the material balance of naval power, several reasons exist to not trust in defense dominance. When we factor in nonmaterial considerations, our pessimism grows still further.

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magazines/proceedings/2014/april/defend-first-island-chain; Roger Cliff, *Anti-Access Measures in Chinese Defense Strategy: Testimony Before the U.S. China Economic and Security Review Commission on January 27, 2011* (Santa Monica, CA: RAND Corporation, 2011), 2, [https://www.rand.org/content/dam/rand/pubs/testimonies/2011/RAND\\_CT354.pdf](https://www.rand.org/content/dam/rand/pubs/testimonies/2011/RAND_CT354.pdf).

<sup>26</sup>T. X. Hammes, “Offshore Control: A Proposed Strategy for an Unlikely Conflict,” *Strategic Forum* 278 (June 2012): 1–16, <https://ndupress.ndu.edu/Portals/68/Documents/stratforum/SF-278.pdf>. See Sean Mirski, “Stranglehold: The Context, Conduct and Consequences of an American Naval Blockade of China,” *Journal of Strategic Studies* 36, no. 3 (2013): 385–421; Gabriel B. Collins and William S. Murray, “No Oil for the Lamps of China?” *Naval War College Review* 61, no. 2 (Spring 2008): 79–95, <https://digital-commons.usnwc.edu/nwc-review/vol61/iss2/10>.

<sup>27</sup>Also Gholz, Friedman and Gjoza, “Defensive Defense.”

<sup>28</sup>Biddle and Oelrich, “Future Warfare in the Western Pacific.”

<sup>29</sup>Gholz, “No Man’s Sea.”

<sup>30</sup>Kelly, Gompert, and Long, *Smart Power, Stronger Partners*, 88–93.

<sup>31</sup>Beckley, “Emerging Military Balance in East Asia,” 109.



If we have learned anything from previous work on arms competitions, many factors can lead to conflict in a defense-dominant world. To show how, we turn to other elements of the classic offense–defense debate. There are many reasons to believe that offense–defense theory does not explain important cases of disastrous (World War I) and potentially disastrous (nuclear war) outcomes of great-power competition.<sup>32</sup> This literature has, for obvious reasons, focused on land and nuclear war as its primary concern. We consider how a navy’s bundle of material (naval capability) and ideas (naval doctrine)—their fleet design—pose unique problems to a general confidence in defense dominance.

### ***Fleet Design: Expensive, Political, and Slow to Change***

Building a fleet is a deeply domestic political act, even compared to ground and nuclear forces.<sup>33</sup> Whereas the technical aspect of fleet design is largely the province of senior naval leaders—both civilian and uniformed—the large political, bureaucratic, financial, and strategic implications of fleet design involve leaders from across government.<sup>34</sup> Given that large fleets are inherently capital intensive, fleet design choices affect taxation and the national debt. Depending on regime type, fleet design can involve electoral politics, party politics, and/or rival factions within the government. Interservice rivalries shape strategy, war plans, and, of course, the share of a state’s aggregate military budget. The process of building a navy is slow, overdetermined, and hard to change.

Even setting aside the stickiness of strategic culture (of which more later), a fleet design’s influence lingers over subsequent eras of great-power competition (or lack thereof) for which it was not designed. Even after a domestic coalition reaches a consensus on the parameters of a new fleet suitable for meeting national objectives and the changing character of war, the implementation is necessarily slow as new acquisitions come on line and older warships are gradually retired. Geopolitical change (which itself often evolves glacially) often outpaces that of a fleet. The existing forces

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<sup>32</sup>Sean M. Lynn-Jones, “Offense-Defense Theory and Its Critics,” *Security Studies* 4, no. 4 (October–December 1995): 660–91; Keir A. Lieber, *War and the Engineers: The Primacy of Politics over Technology* (Ithaca, NY: Cornell University Press, 2005).

<sup>33</sup>Benjamin O. Fordham, “The Domestic Politics of World Power: Explaining Debates over the United States Battleship Fleet, 1890–91,” *International Organization* 73, no. 2 (Spring 2019): 435–68.

<sup>34</sup>In the words of Wayne P. Hughes Jr.: “Doctrine is a way of explaining to those outside the Navy the roles it expects to play in wartime—in other words, of describing its strengths and limits.” Hughes Jr., “The Power in Doctrine,” *Naval War College Review* 48, no. 3 (Summer 1995): 9, <https://digital-commons.usnwc.edu/nwc-review/vol48/iss3/2>. More than a decade later Milan Vego observed that “The U.S. Navy also still does not have a servicewide doctrine focused on the operational level of war at sea.” Vego, “On Major Naval Operations,” *Naval War College Review* 60, no. 2 (Spring 2007): 95, <https://digital-commons.usnwc.edu/nwc-review/vol60/iss2/8>. Not much has changed since despite the emergence of a potential “peer competitor” that Vego considers to be the sine qua non of a US naval doctrine. Vego, “On Major Naval Operations,” 122.

more closely resemble a hodgepodge of legacy platforms and their new counterparts than the ideal fleet that springs from strategists' minds.

### **Qualifying Defense Dominance**

Previous work in security studies posits several ways defense dominance may not prevent conflict: distinguishability, temptation for a first strike, and biases toward the offense. Before reviewing these, we start again with a more basic insight: these conflicts take place at sea rather than on land. Glaser and Kauffman's classic definition of the offense–defense balance cited above shows its origins from studies of ground combat.<sup>35</sup> Although Julian S. Corbett and Alfred Thayer Mahan did not agree on all things, both understood that conflict on the high seas primarily concerns the destruction of the enemies' capability rather than seizing land or water.<sup>36</sup> For the denialists to be correct, the contemporary maritime conflict must be better able to avoid the pitfalls previous scholars have identified in terms of the terrestrial offense–defense balance. We argue that because naval combat focuses on the destruction of capability rather than taking of territory, these problems may be even more acute than on land.

### **Distinguishability**

Naval platforms are inherently flexible. Indeed, this is one of their great strengths. However, this also means that the ability to distinguish between offense and defense is hampered at sea.<sup>37</sup> Although broadly skeptical of defense distinguishability, Keir A. Lieber describes in particular how parties to the Washington Naval Conference could not agree on which platforms were offensive or defensive.<sup>38</sup> A submarine, for example, is an excellent tool for a weak state to balance against a stronger navy, as the German experience in the world wars attests. But it is also the United States' pre-eminent tool for ensuring strike capability deep into other states' territory with little notice.<sup>39</sup>

Evan Braden Montgomery points out that many of the capabilities needed to successfully pursue a less ambitious “offshore balancing” grand

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<sup>35</sup>Glaser and Kaufmann, “What Is the Offense-Defense Balance and Can We Measure It?,” 46.

<sup>36</sup>On the similarities and differences between Mahan and Corbett see, for example, John Gooch, “Maritime Command: Mahan and Corbett,” in *Seapower and Strategy*, ed. Colin S. Gray and Roger W. Barnett (London: Tri-Service Press, 1989), 27–46; Barry M. Gough, “Maritime Strategy: The Legacies of Mahan and Corbett as Philosophers of Sea Power,” *RUSI Journal* 33, no. 4 (Winter 1988), 55–62.

<sup>37</sup>David W. Blagden, Jack S. Levy, and William R. Thompson, “Sea Powers, Continental Powers, and Balancing Theory,” *International Security* 36, no. 2 (Fall 2011): 190–202.

<sup>38</sup>Lieber, *War and the Engineers*.

<sup>39</sup>The administration's intention of putting nuclear-tipped submarine-launched cruise missiles only enhances this. Office of the Secretary of Defense, *Nuclear Posture Review* (Washington, DC: Department of Defense, 2018), xii, <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>.

strategy look much like those needed for a more forward-leaning posture.<sup>40</sup> This same logic suggests that an opponent will be unable to discern the United States' intentions from its force posture. When Biddle and Oelrich get into the specifics of how the United States can counter China with its own A2/AD capabilities, many of these weapons also resemble the necessary prerequisites for power projection: continued emphasis on carrier aviation, long-range antiradar capabilities, and a robust battle management network. Indeed, they themselves observe, "Some of the needed policies (e.g., a U.S. ASAT [antisatellite] capability) are often considered provocative."<sup>41</sup> David W. Blagden describes the United Kingdom's 2011 Operation Ellamy's "use of naval coercion and stand-off strike support to local allies" as a good illustration of "operations delimited by an offshore-balancing strategy," even while acknowledging that this operation's goal, regime change in Libya, went far beyond offshore balancing.<sup>42</sup>

The development of the vertical launch missile tube, and the ongoing shift to a greater emphasis on long-range strike missiles (rather than aircraft) by the USN and other forces, further exacerbates this indistinguishability through "magazine uncertainty." These generic cells can host a variety of missiles optimized for defending territory against ballistic missiles, offensive land attack, and self-defense missions. The vast majority of the 96 tubes on a Flight III Arleigh Burke destroyer may be devoted to protecting the ship from incoming munitions, but no opponent can know that in advance.

Arming allies and third-party states with "defensive weapons" will not eliminate this problem. Arming the Ryuku island chain with Japanese anti-ship cruise missiles will also be useful for a coercive blockade and will certainly contribute to American sea control everywhere but the East China and South China Seas.<sup>43</sup> Vietnam's acquisition of Kilo diesel submarines and its potential acquisition of Brahmos antiship missiles makes sense from a sovereignty-defense standpoint. The ability of these platforms to threaten Chinese shipping and transiting naval vessels will not be unnoticed by Beijing.

Finally, ships are mobile. Whereas Beckley suggests deploying US air and naval forces outside the second island chain will both reassure and deter China, in this issue Gartzke and Lindsay leverage the "bargaining model of war" to make the case that maritime powers are more likely than territorial

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<sup>40</sup>Evan Braden Montgomery, "Contested Primacy in the Western Pacific: China's Rise and the Future of U.S. Power Projection," *International Security* 38, no. 4 (Spring 2014): 115–49.

<sup>41</sup>Biddle and Oelrich, "Future Warfare in the Western Pacific," 47.

<sup>42</sup>Blagden, "Sea Power Is Benign Power," 57.

<sup>43</sup>Heginbotham and Samuels, "Active Denial."

ones to be involved in militarized interstate disputes in part because of the inherent uncertainty of the location of military forces at sea.<sup>44</sup>

### **Technology-Induced Uncertainty**

There has not been a large-scale naval battle since World War II. Many technologies developed since then—nuclear submarines, air-defense systems, stealth, massed antiship attacks from vertical launch tubes—have yet to be tested in a sustained battle. This is further compounded by what appears to be a qualitative race to field more recent innovations: cyberweapons, antisatellite weapons, hypersonic missiles, extremely long-range anti-ship ballistic missiles, quantum computing, and artificial intelligence. The interaction between forces with such qualitatively different capabilities will inject uncertainty into their interactions.<sup>45</sup>

One technological development contains the potential to reduce uncertainty: persistent, reliable reconnaissance of naval forces on both sides.<sup>46</sup> This would appear to be a long way off; regardless, we are skeptical that this will inject much crisis stability if and when such capability becomes widespread. Because ships move, any degradation of this tactical picture means that confidence over opponents' positions deteriorates over time. This degradation, even if accidental, may look to a local commander like a prelude to war since such a disruption would almost certainly precede an attack. This contributes to a temptation to launch one's own attack in response to any loss of the tactical picture.

### **Battle of the First Salvo**

Technological uncertainty may, therefore, exacerbate an already-existing temptation to attack first at sea, even in the face of defense dominance. Biddle, Oelrich, and Vanes Ibric observe, "Perhaps the defining difference between attack and defense at the theater-operational level is the attacker's control of the initiative, or the ability to choose the time and place of the attack."<sup>47</sup> This is a defensible distinction but also does not get at one of the central characteristics of war at sea. That a defense advantage exists does not preclude the initiation of hostilities due to a feared first-strike advantage.

Even if we stipulate that defense can be distinguishable at sea, defense having the advantage at the operational level implies that, at the tactical level,

<sup>44</sup>Gartzke and Lindsay "The Influence of Sea Power on Politics."

<sup>45</sup>Michael C. Horowitz, "When Speed Kills: Autonomous Weapon Systems, Deterrence and Stability," *Journal of Strategic Studies* 42, no. 6 (September 2019): 764–88; Jacquelyn Schneider, "The Capability/Vulnerability Paradox and Military Revolutions: Implications for Computing, Cyber, and the Onset of War," *Journal of Strategic Studies* 42, no. 6 (September 2019): 841–63.

<sup>46</sup>Sean Cate and Jesse Sloman, "Operating under Constant Surveillance," *Proceedings* 142, no. 5 (May 2016): 48–53, <https://www.usni.org/magazines/proceedings/2016/may/operating-under-constant-surveillance>.

<sup>47</sup>Stephen Biddle, Ivan Oelrich, and Vanes Ibric, "Technology, Offense, and Defense" (working paper).

ships' defenses against the ballistic and cruise missile threat are lagging. In general, modern warships appear to have glass jaws, where a single hit can result in a "mission kill." As one USN official recently testified to Congress:

Naval weapons have gotten so long-range, so precise and so lethal that, in hundreds of studies ... here at the Navy, what really comes out strongly is that it's the battle of the first salvo. Naval forces, by their nature, are mobile, and therefore they have to be targeted to be hit. And so whichever side completes that targeting kill chain first and fires first almost always wins.<sup>48</sup>

On the high seas, it is therefore large numbers (of ships and munitions) that determine outcome rather than technology.<sup>49</sup> This is compounded by the fact that, whether a carrier, destroyer, or even a guided-missile frigate, a single ship has enough strike aircraft or vertical launch missiles to destroy several opposing ships if it attacks first.

### *Cult of the Offensive at Sea*

So far, theoretical caveats to defense dominance at sea rest largely, like offense–defense theory in general, on the role of technology in militarized competition. Previous parts of this section have explored the interaction of hardware and crisis stability. But fleet design also incorporates software: the beliefs about future naval operations associated with the warships. This paper suggests the current state of naval technology means it will be hard to distinguish offensive from defensive potential within the US (or Chinese) fleet. It is possible that fleets can be operated in a manner that reassures potential opponents, the second half of our fleet design lens.<sup>50</sup>

Perhaps the most important modification to offense–defense theory in previous research is what we lump under the umbrella term cult of the offensive: extra-rational explanations for the failure of militaries to recognize the defense dominance of military conflict, leading to crisis instability.<sup>51</sup> There are generally three lenses researchers use to consider military approaches to doctrine: organizational theory, bureaucratic politics, and strategic culture. Barry R. Posen and Jack Snyder identify a tendency of militaries to favor offensive doctrine, largely due to a desire for autonomy,

<sup>48</sup>Megan Eckstein, "Panel: Navy Must Invest in Counter-C4ISR, Unmanned Boats, Railgun to Prepare for Future Fight," *USNI News*, 9 March 2017, <https://news.usni.org/2017/03/09/panel-navy-must-invest-counter-c4isr-unmanned-boats-railgun-prepare-future-fight>.

<sup>49</sup>Wayne P. Hughes, Jr., *Fleet Tactics and Coastal Combat*, 2nd ed. (Annapolis, MD: Naval Institute Press, 2000), 40–44.

<sup>50</sup>Organizational software is endogenous to the material makeup of the fleet. A state's "adoption capacity" will shape what sort of military gets built, and how it will be operated. This is likely to be an important influence on the maritime offense–defense balance in the long term, meriting further research, but is beyond this paper's scope. Michael C. Horowitz, *The Diffusion of Military Power: Causes and Consequences for International Politics* (Princeton, NJ: Princeton University Press, 2010), 1–17, and esp. chap. 5. Andrea Gilli and Mauro Gilli, "The Diffusion of Drone Warfare? Industrial, Organizational and Infrastructural Constraints," *Security Studies* 25, no. 1 (January–March 2016): 50–84.

<sup>51</sup>Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World War," *International Security* 9, no. 1 (Summer 1984): 58–107.

resources, and prestige.<sup>52</sup> Elizabeth Kier identifies similar tendencies, tying it to organizational culture.<sup>53</sup> Many of these theories rest on civil-military relations, with the underlying assumption being that if left to their own devices, even in the face of overwhelming evidence of defense dominance, military leaders will often either fail to change their doctrine or will even pursue changes in the direction of more offensive-oriented strategies. Change is possible in military institutions, but only when resources are endangered or the threat changes massively.<sup>54</sup>

Here too, although research to date has focused on ground combat, we assess that the problems are likely to be even more acute when it comes to naval forces. As one observer of US military service culture notes, “The reverence for tradition in the U.S. Navy has continued right to the present, not just in pomp or display, but in the Navy’s approach to almost every action from eating to fighting.”<sup>55</sup> Secretary of War Henry L. Stimson famously grouched about “the peculiar psychology of the Navy Department, which frequently seemed to retire from the realm of logic into a dim religious world in which Neptune was god, Mahan his prophet, and the U.S. Navy the only true church.”<sup>56</sup> Navy prestige and resources are tied to large, offensive capital ships, such as the aircraft carrier. There may be no cult like a navalist cult.

### The Interaction of Chinese and US Fleet Designs

The previous section briefly covers several theoretical reasons to be skeptical of defense dominance based on previous work qualifying the offense–defense balance and on work focused on maritime (rather than nuclear or ground) competition. Given these theories, in this section we examine Sino-American maritime competition in the Western Pacific. Based on publicly available information, we estimate the developing fleet designs, delving into material factors like distinguishability as well as non-material factors such as cult of the offensive, of the two major powers and their interactions.

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<sup>52</sup>Barry R. Posen, *The Sources of Military Doctrine: France, Britain, and Germany between the World Wars* (Ithaca, NY: Cornell University Press, 1984); Jack Snyder, *The Ideology of the Offensive: Military Decision Making and the Disasters of 1914* (Ithaca, NY: Cornell University Press, 1984).

<sup>53</sup>Elizabeth Kier, *Imagining War: French and British Military Doctrine Between the Wars* (Princeton, NJ: Princeton University Press, 1997).

<sup>54</sup>Kimberly Marten Zisk, *Engaging the Enemy: Organization Theory and Soviet Military Innovation, 1955–1991* (Princeton, NJ: Princeton University Press, 1993).

<sup>55</sup>Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore, MD: Johns Hopkins University Press, 1989), 18. Roger W. Barnett, *Navy Strategic Culture: Why the Navy Thinks Differently* (Annapolis, MD: Naval Institute Press, 2009), 57–73.

<sup>56</sup>Henry L. Stimson and McGeorge Bundy, *On Active Service in Peace and War* (New York: Harper Brothers, 1948), 506.

### **The PLAN: A2/AD, Blue Water, or Both?**

Since the 1996 Taiwan crisis, the PLAN has greatly increased in size and is now the largest navy in Asia, with roughly 300 ships.<sup>57</sup> Moreover, the PLAN has focused on increasing the quality and capabilities of its naval forces, rather than only its number of ships and aircraft.<sup>58</sup> China's plans for the future size and composition of the PLAN remain largely unknown.<sup>59</sup>

Recent PLAN developments include commissioning aircraft carriers and large amphibious warships, the gradual creation of bases and naval support facilities across the Indian Ocean (the so-called "String of Pearls"), and increasing frequency of PLAN deployments far from Chinese waters.<sup>60</sup> A recent RAND study reports the PLAN has "greatly improved its sensing and surveillance capabilities," developed "combat systems with greater range and more capable onboard sensors," and acquired "dedicated ISR platforms."<sup>61</sup> These capabilities may be useful for a wide range of maritime missions but are essential for sea control and power projection.<sup>62</sup> Many American analysts fear that under the umbrella of an ostensibly defensive A2/AD system, these platforms will extend Chinese coercive capability at significant distances from its littoral.<sup>63</sup>

If the material dimensions of the PLAN's build-up are only somewhat clear, China's intentions for this capability are even less understood. Most academic attention to date has focused on the most logical goal of China's

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<sup>57</sup>See the introduction to this issue, Caverley and Dombrowski, "Too Important to Be Left to the Admirals," for more details on China's fleet.

<sup>58</sup>See *ibid.* for greater detail. Bernard D. Cole, *The Great Wall at Sea: China's Navy in the Twenty-First Century*, 2nd ed. (Annapolis, MD: Naval Institute Press, 2010); Toshi Yoshihara and James R. Holmes, *Red Star over the Pacific: China's Rise and the Challenge to U.S. Maritime Strategy*, 1st ed. (Annapolis, MD: Naval Institute Press, 2011); Andrew S. Erickson, Lyle J. Goldstein, and Carnes Lord, eds., *China Goes to Sea: Maritime Transformation in Comparative Historical Perspective* (Annapolis, MD: Naval Institute Press, 2009); Office of Naval Intelligence, *The PLA Navy: New Capabilities and Missions for the 21st Century* (Washington, DC: Office of Naval Intelligence, 2015), 5.

<sup>59</sup>Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress* (Washington, DC: Congressional Research Service, 1 August 2018 update), 4, <https://crsreports.congress.gov/product/pdf/RL/RL33153/222>.

<sup>60</sup>Andrew Scobell, Michael McMahon, and Cortez A. Cooper III, "China's Aircraft Carrier Program: Drivers, Developments, Implications," *Naval War College Review* 68, no. 4 (Autumn 2015): 65–79, <https://digitalcommons.usnwc.edu/nwc-review/vol68/iss4/7>; David Brewster, "Beyond the 'String of Pearls': Is There Really a Sino-Indian Security Dilemma in the Indian Ocean?" *Journal of the Indian Ocean Region* 10, no. 2 (July 2014): 133–49. Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2018* (Washington, DC: Department of Defense, 2018), 7–9, <https://media.defense.gov/2018/Aug/16/2001955282/-1/-1/1/2018-CHINA-MILITARY-POWER-REPORT.PDF>.

<sup>61</sup>Eric Heginbotham et al., *US-China Military Score Card: Forces, Geography, and the Evolving Balance of Power, 1996–2017* (Santa Monica, CA: RAND Corporation, 2015), 155, [https://www.rand.org/pubs/research\\_reports/RR392.html](https://www.rand.org/pubs/research_reports/RR392.html).

<sup>62</sup>For the important claim that US military officers tend to conflate potential capability with intent, particularly when it comes to identifying a more aggressive PLAN, see James Johnson, "Washington's Perceptions and Misperceptions of Beijing's Anti-Access Area-Denial (A2-AD) 'Strategy': Implications for Military Escalation Control and Strategic Stability," *Pacific Review* 30, no. 3 (2017): 271–88.

<sup>63</sup>*Ibid.*



growing maritime power: reunification with Taiwan.<sup>64</sup> As PLAN capabilities have developed, the possibility that China might threaten the vital sea-lane through the South China Sea has also arisen, whether through “island” building or more traditional conventional efforts to control the sea.<sup>65</sup> Analysts have called attention to a “hybrid” or “grey zone” strategy in which China uses the PLAN in combination with its coast guard and maritime militia to gradually coerce its neighbors and, ultimately, the United States using salami-slicing tactics to achieve its territorial aims and assert ever greater maritime claims.<sup>66</sup> Clearly, should these activities increase at the same rate as PLAN ship construction, this will produce more opportunities for crises between the PLAN and other fleets in the region.

Chinese blue water rhetoric appears to be developing alongside the potential power-projection force of aircraft carriers and amphibious warships. Scholars since the 1990s have argued that the PRC’s grand strategy has demanded the acquisition of PLAN capabilities to assert power globally due to a combination of economic and political interests. Later work emphasized the growing role of naval leaders, endorsement of civilian leadership, and changing external security environment.<sup>67</sup> China’s 2015 defense white paper states:

In line with the strategic requirement of offshore waters defense and open seas protection, the PLA Navy (PLAN) will gradually shift its focus from “offshore waters defense” to the combination of “offshore waters defense” with “open seas protection,” and build a combined, multi-functional and efficient marine combat force structure... The traditional mentality that land outweighs sea must be abandoned, and great importance has to be attached to managing the seas and oceans and protecting maritime rights and interests.<sup>68</sup>

<sup>64</sup>Andrew S. Erickson and David D. Yang, “Using the Land to Control the Sea? Chinese Analysts Consider the Antiship Ballistic Missile,” *Naval War College Review* 62, no. 4 (Autumn 2009): 53–86, <https://digital-commons.usnwc.edu/nwc-review/vol62/iss4/6>; Scott L. Kastner, “Is the Taiwan Strait Still a Flash Point? Rethinking the Prospects for Armed Conflict Between China and Taiwan,” *International Security* 40, no. 3 (Winter 2015/16): 54–92; Murray, “Revisiting Taiwan’s Defense Strategy.”

<sup>65</sup>M. Taylor Fravel, “China’s Strategy in the South China Sea,” *Contemporary Southeast Asia* 33, no. 3 (December 2011): 292–319; Leszek Buszynski, “The South China Sea: Oil, Maritime Claims, and U.S.–China Strategic Rivalry,” *Washington Quarterly* 35, no. 2 (Spring 2012): 139–56; Andrew S. Erickson, “America’s Security Role in the South China Sea,” *Naval War College Review* 69, no. 1 (Winter 2016): 7–20, <https://digital-commons.usnwc.edu/nwc-review/vol69/iss1/3>; Andrew Scobell, “The South China Sea and U.S.–China Rivalry,” *Political Science Quarterly* 133, no. 2 (Summer 2018): 199–224.

<sup>66</sup>Robert Haddick, “Salami Slicing in the South China Sea,” *Foreign Policy*, 3 August 2012, <http://foreignpolicy.com/2012/08/03/salami-slicing-in-the-south-china-sea/>; Robert Haddick, *Fire on Water: China, America, and the Future of the Pacific* (Annapolis, MD: Naval Institute Press, 2014).

<sup>67</sup>You Ji and You Xu, “In Search of Blue Water Power: The PLA Navy’s Maritime Strategy in the 1990s,” *Pacific Review* 4, no. 2 (1991): 137–49; Nan Li, “The Evolution of China’s Naval Strategy and Capabilities: From ‘Near Coast’ and ‘Near Seas’ to ‘Far Seas,’” *Asian Security* 5, no. 2 (June 2009): 144–69; Michael McDevitt, “China’s Far Seas’ Navy: The Implications of the ‘Open Seas Protection’ Mission” (paper presented at The “China as a Maritime Power” Conference, Arlington, VA, July 28–29 2015, revised and updated April 2016), [https://www.cna.org/cna\\_files/pdf/China-Far-Seas-Navy.pdf](https://www.cna.org/cna_files/pdf/China-Far-Seas-Navy.pdf).

<sup>68</sup>The State Council Information Office of the People’s Republic of China, *China’s Military Strategy* (Beijing: Ministry of National Defense, May 2015), [http://english.www.gov.cn/archive/white\\_paper/2015/05/27/content\\_281475115610833.htm](http://english.www.gov.cn/archive/white_paper/2015/05/27/content_281475115610833.htm).

Xi Jinping reiterated this position in April 2018, saying, “The task of building a powerful navy has never been as urgent as it is today.”<sup>69</sup>

Public statements, while suggestive, do not tell us much about the actual doctrine underpinning this naval modernization. Indeed, the Chinese may not even know. Joshua Rovner argues that China’s “doctrine for using these weapons has lagged behind acquisition.”<sup>70</sup> This accords with assessments of Chinese security institutions more broadly, where “Chinese crisis-management theory, decision-making mechanisms and operational procedures remain relatively under-developed, poorly coordinated, stymied by stove-piping and incomplete.”<sup>71</sup> But this in itself might be part of the problem, given uncertainty is often blamed for conflicts escalating to war.<sup>72</sup>

Some PLAN professional journals provide suggestions that, as predicted by cult of the offensive arguments, naval officers may outstrip their Party masters in their willingness to use force. As one example, Ryan Martinson and Katsuya Yamamoto quote two PLAN strategists advocating for “rapid and effective offensive operations against the enemy before he attacks.” This, argue Martinson and Yamamoto, “represents a striking disavowal of the PLA’s longstanding doctrine of attacking only after the opponent has done so first.”<sup>73</sup> As the PLAN modernized, several experts predicted that the expeditionary and technical nature of these reforms would encourage a more autonomous sea service.<sup>74</sup> On the other hand, the balance of research on China civil-military relations suggests that the tight subordination of the PLA to the Chinese Communist Party means the cult of the offensive, based as it is on Western militaries, may be less relevant.<sup>75</sup> Xi Jinping has simultan-

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<sup>69</sup>Steven Lee Myers, “With Ships and Missiles, China Is Ready to Challenge U.S. Navy in Pacific,” *New York Times*, August 29, 2018. For a broad overview of PLAN doctrine, see Liu Lijiao and Chen Wenhua, “Theoretical Development of Naval Strategy since Reform and Opening up and Implications for Today,” trans. Ryan Martinson and Conor Kennedy of China Maritime Studies Institute, *China Military Science*, no. 6 (2018): 59–65. Available from authors.

<sup>70</sup>Joshua Rovner, “Two Kinds of Catastrophe: Nuclear Escalation and Protracted War in Asia,” *Journal of Strategic Studies* 40, no. 5 (July 2017): 702; Christopher P. Twomey, “What’s in a Name: Building Anti-Access/Area Denial Capabilities Without Anti-Access Doctrine,” in *Assessing the People’s Liberation Army in the Hu Jintao Era*, ed. Roy Kamphausen, David Lai, and Travis Tanner (Carlisle, PA: US Army War College Press, 2014), 129–70.

<sup>71</sup>Johnson, “Washington’s Perceptions and Misperceptions.” Alastair Iain Johnson, “The Evolution of Interstate Security Crisis-Management Theory and Practice in China,” *Naval War College Review* 69, no. 1 (Winter 2016): 29–71.

<sup>72</sup>James D. Fearon, “Rationalist Explanations for War,” *International Organization* 49, no. 3 (Summer 1995): 379–414.

<sup>73</sup>Ryan Martinson and Katsuya Yamamoto, “How China’s Navy Is Preparing to Fight in the ‘Far Seas,’” *National Interest*, 18 July 2017, 1–4. Emphasis in original.

<sup>74</sup>Nan Li, “Chinese Civil-Military Relations in the Post-Deng Era,” *CMSI Red Books* 4 (2010): 1–47.

<sup>75</sup>M. Taylor Fravel, *Active Defense: China’s Military Strategy since 1949* (Princeton, NJ: Princeton University Press, 2019), 283.

eously increased his control over the military even as the PLAN has grown.<sup>76</sup> This may be cause for optimism, but the effect is likely to be modest if its potential opponent remains offensively minded.

### ***US Response: Offensive Sea Control, Power Projection, or Both?***

As noted above, denialists and even many navalists have done a thorough job of describing the anti-access world that may soon dominate the Western Pacific. However, less work has been done on how the United States will or should respond. The research that does exist focuses on tactical responses, such as the development of new platforms or weapons, or speculates on the implications for US grand strategy, like choosing deep engagement versus offshore balancing. This section will focus on the middle ground of fleet design, which, as we argue above, can drive both tactics and grand strategy.<sup>77</sup>

To reiterate, fleet design changes slowly and its influence hangs over subsequent eras for which it was not designed. For example, it is debatable whether the “Maritime Strategy” of the 1980s was a suitable design for the late Cold War, but its carrier-based power-projection capability proved usable for the frequent interventions of the unipolar era that followed, even if the strategic results were not always impressive. The unipolar moment, despite lasting decades, had a minimal physical effect on the USN. Attempts to develop new platforms like the Littoral Combat Ship (LCS), thought to be useful for lower-end conflicts and maritime security missions, were expensive failures.<sup>78</sup>

However, we argue that even if the USN could quickly develop a new fleet, its doctrine likely remains wrapped up in unipolar-era conceptions about projecting power ashore wherever it chooses, even as it trumpets the return to great-power competition and the strategic shift to Asia. Given the growing quantity, quality, and sophistication of the PLAN, it seems at least debatable whether the US fleet design developed for the unipolar era, much

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<sup>76</sup>Phillip C. Saunders and Joel Wuthnow, “Large and in Charge: Civil-Military Relations under Xi Jinping,” in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phillip C. Saunders et al. (Washington, DC: National Defense University Press, 2019), 519–56, <https://ndupress.ndu.edu/Publications/Books/Chairman-Xi-Remakes-the-PLA/>.

<sup>77</sup>We are greatly indebted to the efforts of Sam J. Tangredi in consolidating and analyzing the myriad documents that hint at USN strategy in advance of the Bridging the Straits: A Research Agenda for a New Era of Maritime Competition Conference at the Naval War College in December 2018. A revised version was published as Tangredi, “Running Silent and Algorithmic: The U.S. Navy Strategic Vision in 2019,” *Naval War College Review* 72, no. 2 (Spring 2019): 129–65, <https://digital-commons.usnwc.edu/nwc-review/vol72/iss2/20>.

<sup>78</sup>Early Navy planning efforts in the post–Cold War period “emphasized the role of the Navy in creating stability, supporting “international law enforcement,” and preventing and controlling crises.” Edward Rhodes, “... From the Sea” and Back Again: Naval Power in the Second American Century,” *Naval War College Review* 52 no. 2 (Spring 1999), 14; Geoffrey Till, “A Cooperative Strategy for 21st Century Seapower”—A View from Outside,” *Naval War College Review* 61, no. 2 (Spring 2008), 25–38.

**Table 2.** Comparing Current USN Fleet and the 2016 Force Structure Assessment (FSA).<sup>a</sup>

Type	Current	2016 FSA	% change
Total	301	355	18%
Carrier	11	12	9%
Attack subs	52	66	27%
Large surface warships	94	104	11%
Small surface warships	30	52	73%
Amphibious warfare ships	33	38	15%
Combat logistics	29	32	10%
Support ships	34	39	15%
Ballistic-missile subs	14	12	-14%
Guided-missile subs	4	0	-100%

<sup>a</sup>US Navy, *PB20 Shipbuilding Plan (FY2020–2024)* (Washington, DC: Department of the Navy, 2019), 10, 13, [https://www.navy.mil/strategic/PB20\\_Shipbuilding\\_Plan.pdf](https://www.navy.mil/strategic/PB20_Shipbuilding_Plan.pdf).

less potential conflict with the former Soviet Union, will be suitable for great-power competition at sea in the twenty-first century.

### *The Hardware*

The official shipbuilding plan that outlines the Navy's strategic materiel priorities is the 2016 Force Structure Assessment.<sup>79</sup> Table 2 compares this planned fleet to the currently existing one. The most recent proposal calls for 355 ships, 47 more than the USN's previous goal outlined in 2014 and roughly 54 more ships than currently in its inventory. The increase would require raising the annual shipbuilding budget by roughly \$5 billion USD for the next thirty years.<sup>80</sup> The Navy asserts this number “balances an acceptable level of warfighting risk to our equipment and personnel against available resources and achieves a force size that can reasonably achieve success,” although it also notes that it would take a 653-ship force to “meet all global requirements with minimal risk.”<sup>81</sup>

As relevant as ship counts are the makeup of the proposed fleet. The USN's 2016 plan requests 16 large surface combatants, 18 attack submarines, and one additional carrier over those proposed in the 2014 plan. The large combatants are needed to “deliver increased air defense and exped-

<sup>79</sup>US Navy, *Executive Summary: 2016 Navy Force Structure Assessment (FSA)* (Washington, DC: Department of the Navy, 14 December 2016), [https://news.usni.org/wp-content/uploads/2016/12/FSA\\_Executive-Summary.pdf](https://news.usni.org/wp-content/uploads/2016/12/FSA_Executive-Summary.pdf). A revised FSA is overdue, but both the secretary of the Navy and the chief of naval operations have reiterated the call for 355 ships, not counting unmanned systems. Marcus Weisgerber, “The US Navy Needs More Money, Its Top Admiral Bluntly Argues,” *DefenseOne*, January 14, 2020, <https://www.defenseone.com/politics/2020/01/us-navy-needs-more-money-its-top-admiral-bluntly-argues/162449/>.

<sup>80</sup>Ronald O'Rourke, *Navy Force Structure: A Bigger Fleet? Background and Issues for Congress* (Washington, DC: Congressional Research Service, November 9, 2016), <https://fas.org/sgp/crs/weapons/R44635.pdf>; Eric J. Labs, *An Analysis of the Navy's Fiscal Year 2017 Shipbuilding Plan* (Washington, DC: Congressional Budget Office, February 2017), <https://www.cbo.gov/sites/default/files/115th-congress-2017-2018/reports/52324-shipbuildingreport.pdf>. The Navy has since developed a new thirty-year shipbuilding plan as part of an *Integrated Naval Force Structure Assessment*. This plan is currently being held up by the secretary of defense who has initiated a comprehensive review. Megan Eckstein, “Pentagon Leaders Have Taken Lead in Crafting Future Fleet from Navy,” *USNI News*, June 24, 2020, <https://news.usni.org/2020/06/24/pentagon-leaders-have-taken-lead-in-crafting-future-fleet-from-navy>.

<sup>81</sup>USN, *Executive Summary*.

itionary [ballistic missile defense] capacity and provide escorts for the additional aircraft carrier.”<sup>82</sup> It thus appears that the aircraft carrier remains the focus of the USN. In terms of fleet resources, it may even be growing in importance; carrier strike groups cost about 14 percent of total Navy operating costs in the 1980s, compared to 31 percent today.<sup>83</sup> USN studies suggest the number of ships in the battle group needed for carrier protection should increase from five to seven or eight due to the rapid improvement in Chinese antiship capability.<sup>84</sup>

There exists some evidence of change in the USN. Three recent congressionally mandated Future Fleet Platform Architecture studies suggest possible gradual changes to fleet makeup. Increasing the number of attack submarines was on each study’s wish list. In addition to increasing the number of aircraft carriers, all three studies advocated creating smaller carriers that could carry short-range but heavily networked strike fighters (for example, F-35Bs), potentially at the expense of the ability to land Marines amphibiously. All agree on a robust C4ISR network that can survive various attacks from electronic countermeasures, cyberattacks, and interference with US satellites being essential. Each plan posits larger numbers of unmanned platforms, many deployed far forward.<sup>85</sup> A recent Congressional Research Service report identifies a Navy desire for “a more-distributed architecture” including proportionately fewer large surface combatants (cruisers and destroyers), relative to small surface combatants (frigates and LCSs) and large unmanned vessels.<sup>86</sup> Finally, ships and planes alone do not dictate the capabilities of a navy. Longer-range missiles, a better battle-management network (integrated information acquisition and processing to enhance command and control), and a large number of smaller unmanned vehicles (air, surface, and subsurface) have all been mooted—and some even funded. Nonetheless, as pointed out above, all of these capabilities will be slow to arrive in the fleet. Even if they do, it is unclear whether they can be distinguished in terms of offense and defense.<sup>87</sup> If the aircraft carrier is finally to lose its preeminence, it is clear that the proposed

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<sup>82</sup>Ibid., 3.

<sup>83</sup>Megan Eckstein, “Modly: Navy Current Warship Mix Is Not Optimal for Future Fight,” *USNI News*, October 28, 2019, <https://news.usni.org/2019/10/28/modly-navy-current-warship-mix-is-not-optimal-for-future-fight>.

<sup>84</sup>Sam LaGrone and Megan Eckstein, “Navy Wants to Grow Fleet to 355 Ships; 47 Hull Increase Adds Destroyers, Attack Subs,” *USNI News*, December 16, 2016, <https://news.usni.org/2016/12/16/navy-wants-grow-fleet-355-ships-47-hull-increase-previous-goal>.

<sup>85</sup>Navy Project Team, *Alternative Future Fleet Platform Architecture Study* (Washington, DC: Navy Project Team, October 27, 2016); Bryan Clark et al., *Restoring American Seapower: A New Fleet Architecture for the United States Navy* (Washington, DC: Center for Strategic and Budget Assessments, 2017); MITRE Corporation, *Navy Future Fleet Platform Architecture Study* (McLean, VA: MITRE Corporation, 2016).

<sup>86</sup>Ronald O’Rourke, *Navy Large Unmanned Surface and Undersea Vehicles: Background and Issues for Congress* (Washington, DC: Congressional Research Service, 2019), 4.

<sup>87</sup>Montgomery, “Contested Primacy in the Western Pacific.”

alternative will be smaller forward-deployed platforms, many stealthy, loaded with long-range missiles.<sup>88</sup>

### *The Software*

If the fleet's makeup cannot change quickly, what about its doctrine? The USN approach to its missions has remained remarkably consistent and offensive minded, regardless of technology or threat.<sup>89</sup> The USN has focused on offensive sea control and power projection since at least World War II and arguably since the origins of the modern Navy in the 1880s. Moreover, while sea control is clearly a prerequisite for power projection, the USN's maximalist idea of sea control itself demands power projection. The Navy continues to advocate forward deployment and offense to maximize its deterrent effect, even as it acknowledges the same thorny opposing defenses highlighted by denialists.

*Before "A2/AD".* The most germane historical document for understanding the USN's software dates from the last time the Navy seriously contemplated a competition with a peer competitor possessing a blue water fleet and a formidable A2/AD system (before the term "A2/AD" came into being). Developed over a decade starting in the late 1970s, the Maritime Strategy is explicitly cited as an example for current naval strategy.<sup>90</sup> It envisioned an explicitly offensive war plan in pursuit of both sea control and power projection.<sup>91</sup> Using a combination of attack submarines followed by carrier battle groups (with a possible amphibious assault to boot), the USN would destroy the Soviet surface fleet as a prelude to sinking its nuclear ballistic missile submarines (SSBNs) and assaulting Soviet command and control inland using the newly developed Tomahawk cruise missile. Security studies scholars reacted strongly to this proposal, suggesting such an expensive strategy (it called for 600 ships) would at best be a waste of resources that should be used in Europe's Central Front—and at worst

<sup>88</sup>Sam LaGrone, "Navy Lacks 'Clear Theory of Victory' Needed to Build New Fleet, Experts Tell House Panel," *USNI News*, June 4, 2020.

<sup>89</sup>For an overview of USN strategic guidance, see Peter M. Swartz with Karin Duggan, *U.S. Navy Capstone Strategies and Concepts (1991–2000): A Brief Summary* (Alexandria, VA: CNA, 2011). For a thorough examination of the many, many current governing USN strategy documents see Tangredi, "Running Silent and Algorithmic."

<sup>90</sup>John T. Hanley Jr., "Creating the 1980s Maritime Strategy and Implications for Today," *Naval War College Review* 67, no. 2 (Spring 2014): 11–29, <https://digital-commons.usnwc.edu/nwc-review/vol67/iss2/4>. The strategy developed in response to intelligence that the Soviet Union's own naval strategy involved sea control close to the Soviet shoreline and sea denial out to 2,000 kilometers using ground-based aircraft and missiles, largely in an attempt to protect its nuclear ballistic missile submarine fleet (as opposed to interdiction of western sea lines of communications in the Atlantic).

<sup>91</sup>James D. Watkins, "The Maritime Strategy," in *The Maritime Strategy Supplement, Proceedings* 112, no. 1 (January 1986), <https://www.usni.org/magazines/proceedings/1986/january-supplement/maritime-strategy-0>. Note that the very term "anti-access" emerged from Office of Net Assessment analysis of the Maritime Strategy and the difficult Soviet defensive fight that awaited it. Sam J. Tangredi, *Anti-Access Warfare: Countering A2/AD Strategies* (Annapolis, MD: Naval Institute Press, 2013), 39–50.



risk nuclear escalation.<sup>92</sup> We see much continuity in the USN approach to contemporary challenges.

While the 1980s Maritime Strategy remains, in one naval thinker's assessment, "the most complete statement of offensive military intent ever laid down by [the US] navy," the offensive predilection both predates and outlives that particular document.<sup>93</sup> One chief of naval operations wryly observed, "Over the years our Maritime Strategy has been very much like the British Constitution—unwritten but thoroughly understood by those who practice it."<sup>94</sup> The roots reach deep into Navy history, at least back to the aftermath of its unquestionably dominating performance during World War II.<sup>95</sup>

Although the effectiveness of the Maritime Strategy was never tested in a naval conflict, both the fleet and the operating concept lingered in the unipolar era. The quick victory of US-led coalition forces in the 1991 Gulf War appeared to show the relative utility of power-projection capability in a post-Cold War era. The Navy-Marine Corps concept of "expeditionary maneuver warfare" codified this employment of preexisting capability, optimized for conflict in Iraq and Afghanistan.<sup>96</sup>

The first six months of Operation Enduring Freedom involved six carrier battle groups, four amphibious ready groups, a large support fleet, and around 73,000 personnel.<sup>97</sup> A Marine task force assaulted a remote desert airstrip in southern Afghanistan 400 nautical miles from its flotilla to seize what became Forward Operating Base Rhino.<sup>98</sup> Although Air Force heavy bombers flying from outside the theater delivered the vast preponderance of munitions, US carrier-based air power flew 75 percent of all strike missions.<sup>99</sup>

*Responding to A2/AD.* To be sure, given its institutional orientation to peer competition and regional attachment to the Pacific, the Navy, in tandem with the Air Force, recognized the advent of more advanced weapons designed to counter US power-projection forces. Admirals, as well as many in the US national security community, have advocated that circumstances

<sup>92</sup>Mearsheimer, "A Strategic Misstep"; Barry R. Posen, "Inadvertent Nuclear War? Escalation and NATO's Northern Flank," *International Security* 7, no. 2 (Fall 1982): 28–54.

<sup>93</sup>Martin N. Murphy, "Kick the Door Down with AirSea Battle... Then What?" *Parameters* 45, no. 2 (Summer 2015): 98.

<sup>94</sup>Carlisle A. H. Trost, "Looking Beyond the Maritime Strategy," *Proceedings* 113, no. 1 (January 1987): 13–20, <https://www.usni.org/magazines/proceedings/1987/january/looking-beyond-maritime-strategy>.

<sup>95</sup>Michael A. Palmer, *Origins of the Maritime Strategy: The Development of American Naval Strategy, 1945–1955* (Annapolis, MD: Naval Institute Press, 1990).

<sup>96</sup>James Jones, "Expeditionary Maneuver Warfare Concept Author," *Inside the Navy* 14, no. 49 (10 December 2001): 11–15.

<sup>97</sup>Gregory Bereiter, *The U.S. Navy in Operation Enduring Freedom, 2001–2002* (Washington DC: Naval History and Heritage Command, 2016).

<sup>98</sup>Nathan S. Lowrey, *U.S. Marines in Afghanistan, 2001–2002: From the Sea* (Washington, DC: United States Marine Corps, 2011), 111–20; Steven Lee Myers and James Dao, "The Marines' 21st Century Beachhead Is Far Inland," *New York Times*, December 22, 2001.

<sup>99</sup>Benjamin S. Lambeth, *American Carrier Air Power at the Dawn of a New Century* (Santa Monica, CA: RAND Corporation, 2005), <https://www.rand.org/pubs/monographs/MG404.html>.



require the USN to shift from deterrence by punishment to deterrence by denial.<sup>100</sup> But perhaps ironically, despite the use of the term “denial,” the approach little resembles that which denialists advocate. Instead, the philosophy envisions maximizing deterrence by “reliance on ready, forward-based, lethal forces.”<sup>101</sup> The newly revised Navy Doctrine Publication 1 describes sea denial as an “offensive, cost-imposing approach [that] can be applied when it is impossible or unnecessary to establish sea control. Sea denial is offensive in nature because the attacker chooses the times, places, and targets of attack.”<sup>102</sup>

“AirSea Battle,” the most visible initial example of addressing A2/AD in this manner, identified a need “to counter growing challenges to U.S. freedom of action” and “guide the development of future capabilities needed for effective power projection operations.”<sup>103</sup> Clearly, rather than consider pulling back into the traditional sea control role of fleets during great-power competition, this represented a focus on continuing to project power against more capable opponents than in the post-Cold War era. Operationally, it would require strikes on the Chinese mainland, explicitly to “blind” the PLA, making targeting US forces difficult to impossible.<sup>104</sup>

Although the concepts (and ambition) found in AirSea Battle have not disappeared, the USN has sought to focus more on sea control relative to power projection without giving up on either. One recent admiral charged with managing the USN surface fleet contrasts the power-projection force of the unipolar era with the current needs of the United States, lamenting that “the major mission areas that comprise the surface force’s participation in sea control—integrated air and missile defense and antisurface and anti-submarine warfare—were lower priorities than maritime security and precision strike.”<sup>105</sup> His successor also advocates for “a renewed emphasis on sea control.”<sup>106</sup>

In addition to calling for a modified fleet composition, the Future Fleet Platform Architecture studies cited previously all argue that wider distribution

<sup>100</sup>Elbridge Colby, “How to Win America’s Next War,” *Foreign Policy*, May 5, 2019, <https://foreignpolicy.com/2019/05/05/how-to-win-americas-next-war-china-russia-military-infrastructure/>; Mike Gallagher, “State of (Deterrence by) Denial,” *Washington Quarterly* 42, no. 2 (Summer 2019): 31–45.

<sup>101</sup>Richard A. Brown, “Owning Tomorrow’s Fight Today: A Surface Warfare Update,” *Proceedings* 145, no. 12 (December 2019), <https://www.usni.org/magazines/proceedings/2019/december/owning-tomorrows-fight-today-surface-warfare-update>.

<sup>102</sup>Department of the Navy, *Naval Doctrine Publication 1: Naval Warfare* (Washington, DC: Department of the Navy, April 2020), 22. Available from authors.

<sup>103</sup>Department of Defense, *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, February 2010), 32–33, <http://www.comw.org/qdr/fulltext/1002QDR2010.pdf>.

<sup>104</sup>For a thorough description of AirSea Battle and potential alternatives, see Aaron L. Friedberg, *Beyond Air–Sea Battle: The Debate over US Military Strategy in Asia* (Washington, DC: International Institute for Strategic Studies, 2014).

<sup>105</sup>Thomas A. Rowden, “Sea Control First,” *Proceedings* 143, no. 1 (January 2017), <https://www.usni.org/magazines/proceedings/2017/january/commentary-sea-control-first>.

<sup>106</sup>Brown, “Owning Tomorrow’s Fight Today.”

of offensive capabilities (missiles and strike aircraft) would enable the Navy to survive longer in an A2/AD environment. They envisioned keeping a substantial amount of striking power in the form of submarines and missile-armed surface ships rather than carrier-based strike aircraft forward deployed in the South China Sea region as a deterrent. The studies argued that after the first exchange this fleet would withdraw, no doubt with losses. Different plans envision different timelines, but all plans envision a second wave, primarily carrier strike groups, fighting its way in to reestablish sea control and project power. The Center for Strategic Budgetary Assessments proposal distinguishes, for example, between a “deterrent fleet” of three destroyers, three submarines, and a light carrier (along the lines of an America-class amphibious assault ship) continually present in the region bearing the brunt of first-exchange fire; and a “maneuver fleet” of two heavily armed carrier strike groups that would steam within a short number of days into hostilities.<sup>107</sup>

The last two Chiefs of Naval Operations have released three versions of a strategic document entitled “A Design for Maintaining Maritime Superiority,” with the latest published in December 2019. Despite the term “superiority” in the title, the text has evolved from a statement that “the Navy ... will control the high end of maritime conflict,” to a more denial-centric tone of “prevent[ing] China and Russia from controlling the Eurasian rimland and its adjacent seas.”<sup>108</sup> The documents suggest less of difference in strategic ends than the means with which the Navy will pursue them.

Based on open-source strategic documents, the Navy’s primary response to China’s anti-access threat will be “Distributed Maritime Operations” (DMO), in which the fleet and its firepower are spread out over a greater distance, making their targeting by the opponent more difficult while not sacrificing the ability to mass firepower on a target through coordinated, long-range munitions.<sup>109</sup> This would “complicate adversary targeting and create more opportunities for surface forces to attack the enemy.”<sup>110</sup>

<sup>107</sup>Clark et al., *Restoring American Seapower*. These concepts represent the naval version of the “blunt” and “contact” forces laid out by the US *National Defense Strategy*. Department of Defense, *Summary of the 2018 National Defense Strategy of The United States of America: Sharpening the American Military’s Competitive Edge* (Washington, DC: Department of Defense, 2018), <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

<sup>108</sup>“Combat capable and lethal forces maximizing the benefits of Distributed Maritime Operations, Expeditionary Advanced Base Operations, and Littoral Operations in a Contested Environment.” John M. Richardson, *A Design for Maintaining Maritime Superiority*, version 2.0 (Washington, DC: Department of the Navy, December 2018), [https://www.navy.mil/navydata/people/cno/Richardson/Resource/Design\\_2.0.pdf](https://www.navy.mil/navydata/people/cno/Richardson/Resource/Design_2.0.pdf). Mike Gilday, *FRAGO 01/2019: A Design for Maintaining Maritime Superiority* (Washington, DC: Department of the Navy, December 2019), <https://www.navy.mil/cno/docs/CNO%20FRAGO%20012019.pdf>. The other two terms are Marine Corps plans to create (and even seize) small bases far forward to provide US A2/AD capability.

<sup>109</sup>John Richardson, “Navy Planning for Gray-Zone Conflict; Finalizing Distributed Maritime Operations for High-End Fight,” interview by Megan Eckstein, *USNI News*, December 19, 2018, <https://news.usni.org/2018/12/19/navy-planning-for-gray-zone-conflict-finalizing-distributed-maritime-operations-for-high-end-fight>.

<sup>110</sup>Bryan Clark and Timothy A. Walton, *Taking Back the Seas: Transforming the U.S. Surface Fleet for Decisions-Centric Warfare* (Washington, DC: Center for Strategic and Budgetary Assessments, 2019), 6, <https://csbaonline>.

DMO purports to be a genuinely new USN approach to fighting a near-peer competitor with a highly capable navy supported by A2/AD systems. That said, it has not yet adjusted its acquisition priorities to acquire appropriate platforms and systems. The surface fleet will still largely protect and augment carrier battle groups. The chief of naval operations defined DMO in 2018: “Our fundamental force element right now in many instances is the carrier strike group. We’re going to scale up so our fundamental force element for fighting is at the fleet level, and the strike groups plug into those numbered fleets.”<sup>111</sup> Even if the Navy should shift to smaller, networked missile boats, it remains an open question whether this will improve or exacerbate the offense–defense balance, especially given the continued offensive mindset.

Summing up this section, since WWII, the USN has consistently favored the same fleet design, with modest fluctuations in emphasis on offensive sea control and power projection as the maritime balance of power changes. The fleet design intends to provide the United States with maximum flexibility and offensive power. On balance, given the hardware available to it, and its historical approach to the high-end maritime competition, it seems likely that the USN continues to pursue sea control for power projection and vice versa. This clearly relies heavily on hidden, forward-deployed submarines (and Air Force stealth bombers) coupled with “surface forces outfitted with robust defensive systems and armed with credible surface-launched stand-off weapons, survivable in both contested and communications degraded environments, [which] will help to secure sea territory and enable forces to flow for follow-on power projection operations.”<sup>112</sup> In terms of current great-power competition, at the minimum, it appears the USN will focus on destroying the PLAN fleet and associated island bases in the South China Sea should a conflict erupt. At the maximum, it, along with the Air Force, is preparing for a rapid, blinding assault on the Chinese mainland to remove any Chinese capability for denying US access beyond the twelve nautical miles of the territory the United States recognizes as Chinese. In pursuit of deterrence by denial, the USN is planning a continuous forward presence in the littoral of another great power to execute this plan, something that has few precedents. Ultimately, should conflict occur, five or six carriers will steam toward the Western Pacific, asserting sea control and projecting power in and around

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org/uploads/documents/Taking\_Back\_the\_Seas\_WEB.pdf; Thomas Rowden, Peter Gumataotao, and Peter Fanta, “Distributed Lethality,” *Proceedings* 141, no. 1 (January 2015), <https://www.usni.org/magazines/proceedings/2015/january/distributed-lethality>.

<sup>111</sup>Richardson, “Navy Planning for Gray-Zone Conflict.”

<sup>112</sup>Rowden, “Sea Control First,” 20.

the first island chain. In short, the most likely approach will look a lot like the Maritime Strategy of the 1980s.

### ***Assessing the Sino-American Maritime Interaction: Deterrence versus Crisis Stability***

This paper has described a USN that views itself having the unenviable task of responding to an increasingly capable PLAN whose ultimate size and mission remain uncertain. It continues to operate a slowly changing fleet far forward in the name of deterrence. What is the likely interaction between these two fleet designs? Admirals, and many in the US national security community, have advocated that circumstances require the Navy to shift from deterrence by punishment to deterrence by denial. This would suggest the denialists are on to something. But unless such an effort is decoupled from a strong offensive stance, the increase in deterrence will come at the cost of crisis stability, much as John J. Mearsheimer predicted for a similar USN plan in the 1980s.<sup>113</sup> Any US fleet, even if designed for a denial strategy, is unlikely to make China comfortable, just as China's A2/AD network, however "defensively" it performs at the operational level, will never reassure the United States.

One possibility is that the denialists are right and the United States is simply wasting its money trying to counter Chinese A2/AD. Beckley has already cited a fifty-to-one advantage for the defense.<sup>114</sup> How much will the USN's distributing the fleet ameliorate this? As one influential think tank's report observes, "Proliferation and improvements to commercial and military ground-based, airborne, and satellite sensors, however, will likely overcome any complexity imposed by simply distributing today's fleet."<sup>115</sup>

On the other hand, it is possible that the Navy, while acknowledging the challenged posed by Chinese A2/AD, does not share the denialists' pessimism about offensive advantages. As one admiral, expounding on the USN's concept of "distributed lethality,"<sup>116</sup> said in a 2015 speech: "[In wargames] this is what we found: ... you lose some LCS in a full-up nation on nation war, [but] you put entire enemy fleets on the bottom of the ocean."<sup>117</sup> The Navy's

<sup>113</sup>Mearsheimer, "Strategic Misstep."

<sup>114</sup>Beckley's claim is derived from Kelly, Gompert, and Long, *Smart Power, Stronger Partners*, 88–93.

<sup>115</sup>Clark and Walton, *Taking Back the Seas*, 6.

<sup>116</sup>The relationship between the term "distributed lethality" and DMO is somewhat obscure. Both had been used in naval circles for years before appearing in public debates and official documents. In brief, distributed lethality appears to be an older term that can be summarized by the aphorism, "if it floats, it fights." DMO is a more fully thought out set of ideas—connecting lethality, command and control, and logistics—that appears during Admiral John M. Richardson's time as chief of naval operations. See Kevin Eyer and Steve McJessey, "Operationalizing Distributed Maritime Operations," *CIMSEC*, March 5, 2019, <http://cimsec.org/operationalizing-distributed-maritime-operations/39831>.

<sup>117</sup>Sydney J. Freedberg Jr., "If It Floats, It Fights': Navy Seeks 'Distributed Lethality,'" *Breaking Defense*, January 14, 2015, <https://breakingdefense.com/2015/01/if-it-floats-it-fights-navy-seeks-distributed-lethality/>. Italics in the original.

desire to create a distributed network—“if it floats it fights”—means every ship is a threat to Chinese assets, especially as the missile load inside the standardized vertical launch tubes of these ships will probably be unknown to the Chinese. Under this concept of operations, we will likely see more tense interactions between fleets in an environment of reduced crisis stability.

Ian Bowers notes that during the Cold War, NATO and Soviet “navies often operated in proximity, both in important geostrategic areas such as the waters of northern Europe and the Mediterranean and in their respective littoral zones.” From 1950 to 1984, Bowers catalogues 422 “distinct acts of extremely dangerous behavior” between US and Soviet naval and state-controlled vessels and aircraft that at least one side described as “exceeding peaceful operations.”<sup>118</sup> Whereas Bowers argues such interactions were unlikely to escalate, we are not so sanguine, given two of the most dangerous conflicts in the Cold War were the blockade of Cuba and the US-Soviet standoff in the Mediterranean during the 1973 Arab-Israeli War.<sup>119</sup> How much more frequent, and how much more dangerous, will Sino-American interactions be when, unlike the Cold War, the global commons at sea will likely be the primary arena for great-power interaction? One Pacific commander has already described the region as “ripe for miscalculation that could escalate to conflicts that no one wants, in an area vital to global prosperity.”<sup>120</sup>

### Naval Decisions: Too Important to Be Left to the Admirals

This paper argues that, although there is considerable agreement among security studies scholars that defense dominates the maritime competition between the United States, China, and other states in the Western Pacific, it is less clear that policymakers both inside and outside the PLAN and USN agree. Even if they do concur that defense is cheaper, it is unclear if the fleets will, or can, change sufficiently to take advantage of the potential for increased crisis stability.

The stakes of a dangerous competition at sea between the United States and China are high. Right now, the USN and academic security studies community differ dramatically in their respective assessments of the appropriate response to PLAN fleet design and the balance of military technology. A continued emphasis on power projection and offensive sea control is, according to the denialist camp, at best a waste of resources and at worst a dangerous provocation. However, even in the

<sup>118</sup>Ian Bowers, “Escalation at Sea: Stability and Instability in Maritime East Asia,” *Naval War College Review* 71, no. 4 (Autumn 2018): 45–65, <https://digital-commons.usnwc.edu/nwc-review/vol71/iss4/5>.

<sup>119</sup>Lyle J. Goldstein and Yuri M. Zhukov, “A Tale of Two Fleets: A Russian Perspective on the 1973 Naval Standoff in the Mediterranean,” *Naval War College Review* 57, no. 2 (Spring 2004): 27–63, <https://digital-commons.usnwc.edu/nwc-review/vol57/iss2/4>.

<sup>120</sup>Statement of Admiral Harry B. Harris Jr., U.S. Navy commander, U.S. Pacific Command Before the Senate Armed Services Committee On U.S. Pacific Command Posture (February 23, 2016), [https://www.armed-services.senate.gov/imo/media/doc/Harris\\_02-23-16.pdf](https://www.armed-services.senate.gov/imo/media/doc/Harris_02-23-16.pdf).

unlikely event of the USN revising its long-held organizational, bureaucratic, and strategic cultural incentives, the nature of maritime conflict makes the denialist case less solid. As such, in this conclusion, we lay out a research agenda.

First, despite a majority of classic arms races appearing to occur at sea, there is little agreement on whether they are more dangerous than those on land. Glaser has described many previous naval arms races as unnecessarily risking war. Gartzke and Lindsay in this special issue link larger fleets to more militarized disputes. Yet Huntington's canonical list of naval arms races (Table 1) supports Bowers's argument that maritime competition rarely leads to war.<sup>121</sup> We are thus faced with a paradox: many races and few wars.

Research needs to examine why. Perhaps, because ships are inherently expensive, any competition looks like an arms race, especially if judging by defense spending. Conversely, a state that has spent vast sums and many years building a fleet may not wish to risk sending so much capital to Davy Jones. Or perhaps, more simple still, the stakes of sea control are not high because blockades rarely work.<sup>122</sup> This said, Great Britain relied for decades on its capacity to blockade the European continent before World War I, and other articles in this special issue suggest the need to take seriously the conduct and implications of a blockade against China.<sup>123</sup>

Second, this paper avoids the link between the nuclear balance and maritime competition. This is partly because this aspect of maritime competition has been studied at length. Moreover, China does not yet have a sea-based deterrent of any consequence; its most survivable strategic deterrent, intercontinental ballistic missiles, would not be targeted by even the most maximalist US operation against China's littoral command and control.<sup>124</sup> It would be ironic indeed if China acquires a more "survivable" deterrent in capable SSBNs, only for this to reduce crisis stability as the USN targets them, as was the case during the Cold War.<sup>125</sup>

Third, what would a long-term Sino-American maritime competition look like? One insight from fleet design is that arms races are as much a political economic competition as they are a military power and technology

<sup>121</sup>Bowers, "Escalation at Sea," 61.

<sup>122</sup>John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W. W. Norton, 2001).

<sup>123</sup>Paul Haggie, "The Royal Navy and War Planning in the Fisher Era," *Journal of Contemporary History* 8, no. 3 (July 1973): 113–31; Gabriel Collins, "A Maritime Oil Blockade Against China: Tactically Tempting but Strategically Flawed," *Naval War College Review* 71, no. 2 (Spring 2018): 49–78, <https://digital-commons.usnwc.edu/nwc-review/vol71/iss2/6>; Mirski, "Stranglehold"; Evan Braden Montgomery, "Reconsidering a Naval Blockade of China: A Response to Mirski," *Journal of Strategic Studies* 36, no. 4 (August 2013): 615–23. On the Royal Navy and blockade prior to World War I see, for example, M. S. Partridge, "The Royal Navy and the End of the Close Blockade, 1885–1905: A Revolution in Naval Strategy," *Mariner's Mirror* 75, no. 2 (1989): 119–36; and, more generally, on the blockade as a tool of British strategy: Shawn T. Grimes, *Strategy and War Planning in the British Navy, 1887–1918* (Woodbridge, UK: Boydell Press 2012).

<sup>124</sup>Dennis C. Blair and Caitlin Talmadge, "Would China Go Nuclear?" *Foreign Affairs* 98, no. 1 (January/February 2019), <https://www.foreignaffairs.com/articles/2018-12-11/would-china-go-nuclear>.

<sup>125</sup>Caitlin Talmadge, "Would China Go Nuclear? Assessing the Risk of Chinese Nuclear Escalation in a Conventional War with the United States," *International Security* 41, no. 4 (Spring 2017): 50–92; Mearsheimer, "Strategic Misstep"; Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks* (Ithaca, NY: Cornell University Press, 1991).



competition. Great powers, especially non-status-quo powers, inevitably attract the attention of their peers when they publicly embark on major fleet expansions. The leading actor often responds in kind, attempting to match or exceed the efforts of the challenger. Historically, the leading naval power—for example, Great Britain relative to Germany before World War I and the United States relative to the Soviet Union in the 1980s—has had inherent advantages in peacetime naval competitions. Both Great Britain and the United States had naval industrial bases exceeding those of their respective challengers. That may not be the case in this current round of international politics. Although the United States remains the world's leading economy, the gap between it and China has closed on many fronts, particularly in terms of manufacturing capacity. More relevant to a naval race, China has excelled in shipbuilding capacity and the production of a wide range of missiles necessary to pursue an A2/AD strategy.<sup>126</sup> The range of this A2/AD weapons engagement zone will likely continue to creep outward from China's coastline.

Fourth, what are the consequences should these two fleets go to war? Note that the significant forward US naval presence in the Western Pacific, if routed, would represent a massive reversal of power, and may thus be worth trying from China's perspective. Rather than short and sharp as many naval officers plan for, an initial heated exchange at sea may lead to a long, drawn-out confrontation of attrition if the denialists are right about the material effects of current technology. Yet the USN appears willing to risk it. It is not clear to us that the stakes justify this. Extending the World War I offense–defense analogy, the potential for a Schlieffen Plan at sea exists.

This leads us to our final call for research and, just as importantly, for policy debate. Ultimately, while we speculate here that small crises can escalate quickly given the nature of naval combat and naval leaders, war is ultimately a political decision.<sup>127</sup> Throughout this special issue, authors have pointed out that building and operating fleets are massive domestic political economic undertakings, albeit ones often managed by technical specialists in a fairly arcane form of warfare. A firm grasp by policymakers of both states' fleet designs, and a firm control on their operation in the coming years, will be more important for crisis stability than any technological development.

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<sup>126</sup>On shipbuilding, see Andrew S. Erickson, ed., *Chinese Naval Shipbuilding: An Ambitious and Uncertain Course* (Annapolis, MD: Naval Institute Press, 2016), and further, Carl O. Schuster, review of *Chinese Naval Shipbuilding: An Ambitious and Uncertain Course*, by Andrew S. Erickson, *Parameters* 47, no. 4 (Winter 2017–18): 132–34, <https://ssi.armywarcollege.edu/parameters-vol-47-no-4-winter-2017-18/>. On antiship missiles, see James Samuel Johnson, "China's 'Guam Express' and 'Carrier Killers': The Anti-Ship Asymmetric Challenge to the U.S. in the Western Pacific," *Comparative Strategy* 36, no. 4 (August 2017): 319–32; Kevin Pollpeter, "The US-China Reconnaissance-Strike Competition: Anti-Ship Missiles, Space, and Counterspace," *Study of Innovation and Technology in China Research Briefs* 2017-7 (January 2017): esp. 3–4, <https://escholarship.org/uc/item/4s99s9rs>.

<sup>127</sup>Richard K. Betts, "Must War Find a Way? A Review Essay," *International Security* 24, no. 2 (Fall 1999): 166–98.



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