

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE (DD-MM-YYYY) 28-05-2021			2. REPORT TYPE JAWS Thesis			3. DATES COVERED (From - To) 10/07/20-05/28/21		
4. TITLE AND SUBTITLE China's Growing Home Field Advantage: The United States Must Revisit Its Approach to Confrontation						5a. CONTRACT NUMBER		
						5b. GRANT NUMBER		
						5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) LtCol Jason S. Schermerhorn, USMC						5d. PROJECT NUMBER		
						5e. TASK NUMBER		
						5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)						8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)						10. SPONSOR/MONITOR'S ACRONYM(S)		
						11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION / AVAILABILITY STATEMENT								
13. SUPPLEMENTARY NOTES								
14. ABSTRACT The balance of power shifts in the Pacific as the People's Republic of China (PRC) evolves into a maritime nation, investing heavily in its navy, air, and rocket forces. China enhanced and expanded its anti-access/area denial (A2/AD) capabilities to deter and frustrate U.S. action in the region. The Chinese People's Liberation Army (PLA) modernized significantly over the past 25 years, making a U.S. response to crises in East Asia challenging. Amid China executing a strategy to establish regional hegemony, the U.S. military struggles to design a force optimized for defeating China in a potential conflict. Instead, the service branches mainly developed parochial concepts and seek force structures lacking joint unity of effort. This research first examines PRC A2/AD, which provides China with defensive advantages, then evaluates PLA transformation, assessing the navy, air force, rocket forces, personnel, and command and control. The research then pivots to examine U.S. operational concepts and the transformation of American military forces in response to China's rise and a modern PLA. In sum, the PRC prepares for potential conflict with the U.S. at a time and place of its choosing, where America would operate at a marked disadvantage. Instead of adapting its strategy and operational concepts, the U.S. finds itself preparing to fight in a high-risk, high-cost manner that escalates quickly. To avoid defeat and credibility loss, America must sidestep China's advantage in A2/AD systems and exploit its substantial power projection advantages. America should adopt an indirect approach to potential conflict with China that avoids a head-to-head confrontation but maintains faith with its allies and partners while encouraging those states to contribute more to their defense.								
15. SUBJECT TERMS China, Anti-Access/Area Denial (A2/AD), People's Liberation Army (PLA)								
16. SECURITY CLASSIFICATION OF: UNCLASSIFIED				17. LIMITATION OF ABSTRACT		18. NUMBER OF PAGES 84		19a. NAME OF RESPONSIBLE PERSON
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED	19b. TELEPHONE NUMBER (include area code)					

NATIONAL DEFENSE UNIVERSITY

JOINT FORCES STAFF COLLEGE

JOINT ADVANCED WARFIGHTING SCHOOL



**CHINA'S GROWING HOME FIELD ADVANTAGE:
THE UNITED STATES MUST REVISIT ITS APPROACH TO
CONFRONTATION**

By

Jason Schermerhorn

Lieutenant Colonel, United States Marine Corps

This work cannot be used for commercial purposes without the express written consent of the author.

**CHINA'S GROWING HOME FIELD ADVANTAGE:
THE UNITED STATES MUST REVISIT ITS APPROACH TO CONFRONTATION**

by Jason S. Schermerhorn

Lieutenant Colonel, United States Marine Corps

A paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning Strategy. This paper's contents reflect my own personal views and are not necessarily endorsed by the Joint Forces Staff College or the Department of Defense.

This paper is entirely my own work except as documented in footnotes. (or appropriate statement per the Academic Integrity Policy)

Signature: 


28 May 2021

Thesis Advisor:


Signature: 

**David C. Rodearmel, MA, JD, LL.M
Assistant Professor**


Approved by:

Signature: 

**J. Hall Bain, Colonel, U.S. Marine Corps
Committee Member**

Signature: 

**F. X. Castellano, Captain, U.S. Navy
Committee Member**

Signature: 

**Miguel L. Peko, Captain, U.S. Navy
Director, Joint Advanced Warfighting**

THIS PAGE INTENTIONALLY LEFT BLANK

ABSTRACT

The balance of power shifts in the Pacific as the People's Republic of China (PRC) evolves into a maritime nation, investing heavily in its navy, air, and rocket forces. China enhanced and expanded its anti-access/area denial (A2/AD) capabilities to deter and frustrate U.S. action in the region. The Chinese People's Liberation Army (PLA) modernized significantly over the past 25 years, making a U.S. response to crises in East Asia challenging. Amid China executing a strategy to establish regional hegemony, the U.S. military struggles to design a force optimized for defeating China in a potential conflict. Instead, the service branches mainly developed parochial concepts and seek force structures lacking joint unity of effort. This research first examines PRC A2/AD, which provides China with defensive advantages, then evaluates PLA transformation, assessing the navy, air force, rocket forces, personnel, and command and control. The research then pivots to examine U.S. operational concepts and the transformation of American military forces in response to China's rise and a modern PLA. In sum, the PRC prepares for potential conflict with the U.S. at a time and place of its choosing, where America would operate at a marked disadvantage. Instead of adapting its strategy and operational concepts, the U.S. finds itself preparing to fight in a high-risk, high-cost manner that escalates quickly. To avoid defeat and credibility loss, America must sidestep China's advantage in A2/AD systems and exploit its substantial power projection advantages. America should adopt an indirect approach to potential conflict with China that avoids a head-to-head confrontation but maintains faith with its allies and partners while encouraging those states to contribute more to their defense.

ACKNOWLEDGMENTS

I wholeheartedly thank my wife Jennifer and sons Drew and Liam for their tremendous patience, understanding, and support for the days and evenings spent researching and writing. These three people uproot their lives every year or so to go where the United States Marine Corps sends me, this impacts their happiness, but they support me.

I thank my teammates in Seminar 3 at the Joint Advanced Warfighting School (JAWS). These are fourteen of the best people I have ever interacted with, and they provide encouragement, advice, and support.

Professor David Rodearmel, Colonel James Bain (USMC), Captain Francis Castellano (USN), and my classmates in the China Research Seminar at JAWS supported this effort. I am thankful for Prof. Rodearmel's feedback on several iterations of this thesis.

Finally, I appreciate the camaraderie of my fellow Marines, who for the last 21 years pushed me to exceed my expectations

DEDICATION

This work is dedicated to the Marines and Sailors, past, present, and future, who serve our Nation and Corps faithfully and honorably.

TABLE OF CONTENTS

<i>Section</i>	<i>Page</i>
ABSTRACT.....	iii
ACKNOWLEDGMENTS.....	iv
DEDICATION.....	v
INTRODUCTION.....	1
CHAPTER ONE: CHINESE ANTI-ACCESS/AREA DENIAL.....	6
CHAPTER TWO: THE PEOPLE’S LIBERATION ARMY TRANSFORMATION	19
CHAPTER THREE: HOW THE U.S. PREPARES TO FIGHT CHINA.....	34
CHAPTER FOUR: U.S. FORCE TRANSFORMATION.....	40
CHAPTER FIVE: ALTERNATIVE STRATEGIES TO COMPETE WITH CHINA LONG-TERM.....	55
CONCLUSION AND RECOMMENDATIONS.....	60
APPENDIX 1: TABLES.....	66
BIBLIOGRAPHY.....	68

THIS PAGE INTENTIONALLY LEFT BLANK

Introduction

The United States Navy once operated with impunity in China's adjacent seas, as displayed prominently during the Taiwan Straits Crisis of 1995-1996. During that confrontation, Chinese armed forces (collectively titled the People's Liberation Army (PLA)), powerless to prevent America from deploying two aircraft carrier battle groups to deter the People's Republic of China (PRC) from further interference in Taiwanese elections, watched helplessly. Most Americans forgot this historical event, but Chinese Communist Party (CCP) leaders chose to learn and intuit the forces and capabilities required to prevent the U.S. from interfering with the PRC in its adjacent seas.¹ The PLA learned valuable lessons from observing America's performance in Iraq, Kosovo, and Afghanistan during the intervening years, which provided a better understanding of how the U.S. projects military power abroad.² Two particular lessons stand out: the importance of information in modern wars and military services operating interdependently or "jointly."³ China then invested heavily and shrewdly in its anti-access/area-denial (A2/AD) capabilities, which grew precipitously in capacity and lethality over the last 25 years. The Chinese translation for A2/AD resembles "anti-intervention," which is appropriate given that the PRC's A2/AD capabilities reduce the speed at which the U.S. can project power into East Asia to support American allies and partner nations.⁴ More importantly, the risk to U.S. forces increased exponentially,

¹Joseph Fewsmith, "Domestic Drivers of China's Future Military Modernization," in *The Chinese People's Liberation Army in 2025*, ed. Roy Kamphausen and David Lai (Carlisle: U.S. Army War College Press, 2015), 64-65.

² Aaron A Friedberg, *A Contest for Supremacy: China, America, and the Struggle for Mastery in Asia* (New York: W.W. Norton & Company, 2012), 128-131.

³ Eric Heginbotham, et al, *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power 1996-2017* (Santa Monica: RAND Corporation, 2015), 25-26.

⁴ *Ibid.*, 4.

dictating that it is time to reconsider the strategic environment and the implications of thinking that confronting China today as the U.S. did in 1996 would yield favorable, much less acceptable results to the national interest.

The PRC went beyond merely investing in A2/AD technologies and capabilities to hold U.S. forces at risk by rapidly modernizing and reforming the PLA. The PLA of 1996 only vaguely resembles the current PLA, a far more lethal and capable force that observers believe would challenge the U.S. military in a regional conflict, yet remains several decades away from projecting power globally on a similar scale. Indeed, the PLA comprehensively transformed itself over the past 25 years under the direction of the CCP, backed by increased funding. What was a continental force focused on border security and regime protection evolved into a highly technical and sophisticated land, air, and maritime force, with a limited capability to project power regionally and to a much lesser extent globally.⁵ The consistent Chinese trend of upgrading and modernizing military hardware while improving personnel quality shifted the power balance, and the PLA is now a capable force that continues transforming in support of the CCP's objectives.

Of similar concern is the realization that the U.S. evolves its military force structure and focuses modernization spending on preparing for a head-to-head confrontation with the PRC, precisely where China is most potent: in its adjacent seas. The United States' direct approach to anticipated future conflict with China optimizes its military structure and capabilities for a high-risk, high-cost, low-probability of success scenario. Unlike the 1996 Taiwan Straits Crisis, should U.S. leaders decide to confront

⁵ Eric Heginbotham and Jacob Heim, "People's Liberation Army Trajectories: International Drivers," in *The Chinese People's Liberation Army in 2025*, ed. Roy Kamphausen and David Lai (Carlisle: U.S. Army War College Press, 2015), 87.

China in or around its near seas, escalation will likely occur. Because the U.S. and PRC are nuclear powers, one state or the other may escalate a conventional conflict to a nuclear one. Executing the direct approach for which the U.S. Department of Defense (DoD) prepares almost inevitably leads to a disastrous lose-lose scenario for both America and China.

The 2017 National Security Strategy (NSS) and 2018 National Defense Strategy (NDS) followed through on the Obama Administration pivot to the U.S. Indo-Pacific Command area of responsibility. The NSS and NDS focus American strategy, planning, and resources against China as a competitor who “seeks to displace the U.S. in the Indo-Pacific Region.”⁶ The 2018 NDS identifies long-term competition with China as a DoD priority.⁷ President Biden’s March 2021 *Interim National Security Strategic Guidance* affirms the previous administration’s perspective of China as an assertive competitor.⁸ Though President Obama correctly adjusted American strategic focus towards China, the resulting operating concepts and force design decisions anticipating a costly and high-risk confrontation within or near the first island chain are dangerous and wrongheaded. The DoD prepares for the worst-case scenario, and some of the military branches began force redesigns and, in some cases, began transforming structure and capabilities to optimize for a potential war with the PRC, assuming a direct approach. This direct approach pits U.S. strength against PRC strength, where China is most potent, close to its mainland,

⁶ U.S. President, *National Security Strategy of the United States of America* (The White House, 2017), <https://www.whitehouse.gov/>, 25.

⁷ Office of the Secretary of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military’s Competitive Edge* (The Pentagon, 19 January 2018), <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>, 4.

⁸ U.S. President, *Interim National Security Strategic Guidance* (The White House, March 2021), <https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf>, 8.

and within range of most of its A2/AD capabilities. A direct approach in responding to potential PRC aggression puts U.S. forces at a distinct disadvantage.

On the surface, the direct approach appears sensible because the NSS and NDS, though alluding to the preference towards non-aggression, presume armed conflict with the PRC remains possible.⁹ The author researched and analyzed two aspects of China's military power, the A2/AD system, which potentially delays or prevents U.S. response to a crisis in East Asia, and the improved PLA, which presents an increasingly challenging adversary to defeat. The author then examined the United States' operating concept to defeat A2/AD in the unclassified domain while analyzing the future U.S. military force design optimized for competing with China. A U.S. strategy relying upon a direct approach to potential conflict with the PRC is seriously flawed because Chinese military power increased to render a war in its adjacent seas disastrous for both nations. PRC A2/AD can disrupt and delay American force projection into the first and possibly second island chain.¹⁰ Should the U.S. respond today to a crisis similar to the Taiwan Straits Crisis of 1995-1996, PLA maritime, air force, and rocket capabilities could delay, if not defeat, American force deployment and inflict personnel and platform casualties. A2/AD and PLA capabilities might deter U.S. decision-makers from responding to PRC acts of aggression entirely.

While it is admirable that the U.S. remains steadfast to its allies in Asia and willing to invest massive resources and risk its future to come to their aid, a strategy

⁹ U.S. President, *The National Security Strategy of the United States of America*, 3.

¹⁰ Office of the Secretary of Defense, U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2020: Annual Report to Congress*, <https://permanent.fdlp.gov/gpo12242/2020/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>, 72.

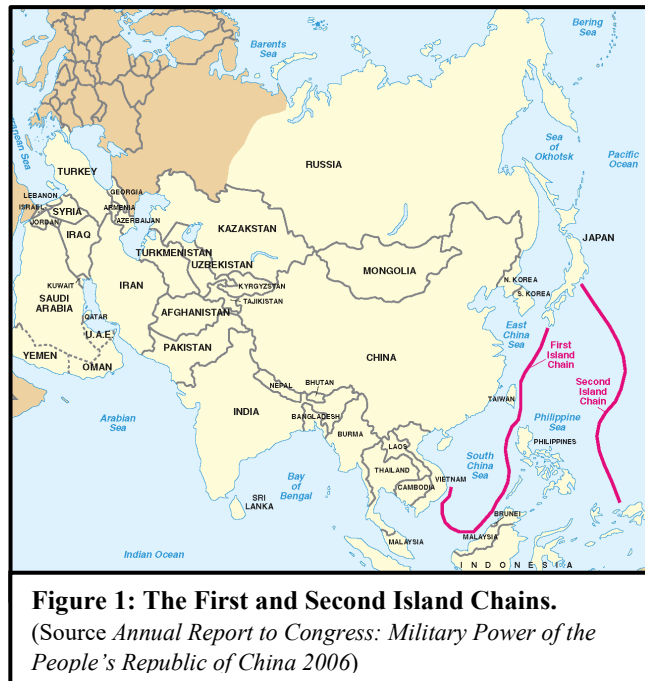
emphasizing conflict with China at its center of gravity is fundamentally flawed. Instead of preparing for a potential war with a nuclear-armed superpower China, where that nation benefits most from the advantages of the defense, the U.S. should accept that the balance of power shifted in the East Asia region, though not yet globally. With clear eyes, the U.S. must adjust its policy and strategic ends to realistic outcomes that stand a meaningful chance of affecting Chinese decision-making without a high likelihood of escalation and credibility-detracting failure.

China's military power, exemplified by growing A2/AD capabilities and PLA transformation, juxtaposed with the U.S. evolution of structure and operating concepts, renders American strategies involving direct conflict with the PRC risky and liable to fail. Instead, the U.S. should develop a military strategy focused on disrupting China outside its periphery and deemphasize preparing for war at China's strongest point. The PRC benefits from mass and greater relative combat power locally. The U.S. focuses on the proper adversary but prepares for the wrong kind of fight and in the wrong place. While the American military prides itself on playing "away games," confrontation with China in its adjacent seas presents the U.S. with few paths to achieve victory at an acceptable cost. There are more effective and less risky means to solve this problem; a better U.S. approach accepts that China succeeded in displacing America as the hegemon in the Indo-Pacific region, at least in the East Asia sub-region, and adapts to that reality. A better strategy acknowledges China's great power status and identifies ways the U.S. can indirectly erode PRC strength beyond its A2/AD system's limited reach. Shifting the emphasis on countering China from a military effort to a diplomatic, economic, and informational effort, supported by military strength, would yield preferable results.

Chapter One: Chinese Anti-Access/Area-Denial

China's military strategy until 1982 focused almost entirely on border defense, with naval operations contained within two hundred nautical miles of the mainland due to obsolete PLA equipment. During the 1960s and 1970s, the Cultural Revolution prevented the PRC from updating the PLA due to competing priorities.¹¹ In 1982, a visionary Chinese Admiral, Liu Huaqing, set an ambitious course for the People's Liberation Army Navy (PLAN) to modernize, enhancing the PRC's role as a regional power. Liu advocated for "near-seas defense," emphasizing offensive operations within a strategically defensive posture, aligning with China's "active defense" military strategy.¹² The near-seas defense strategy approximates the defense-in-depth in the maritime realm.

It focuses on preventing adversaries from maneuvering into China's adjacent seas while protecting vital maritime centers.¹³ Liu defined the near seas as comprising "the Yellow, East China, and South China Seas," which incorporates most of the first island chain's maritime area, another concept Liu articulated.¹⁴ China



¹¹ Toshi Yoshihara and James Holmes, *Red Star Over the Pacific: China's Rise and the Challenge to U.S. Maritime Strategy, Second Edition* (Annapolis: Naval Institute Press, 2018), 123.

¹² *Ibid.*, 124-125.

¹³ Larry Wortzell, *The Dragon Extends Its Reach: Chinese Military Power Goes Global* (Washington: Potomac Books, 2013), 49-50; Yoshihara and Holmes, *Red Star Over the Pacific*, 138.

¹⁴ Bernard Cole, "The People's Liberation Army in 2020-2030 Focused on Regional Issues," in *The Chinese People's Liberation Army in 2025*, ed. Roy Kamphausen and David Lai (Carlisle: U.S. Army War College Press, 2015), 168.

subsequently adjusted the PLAN's composition from a mostly coastal "brown water" fleet to one optimized for regional operations, a change requiring massive modernization for the navy and its sister PLA services.¹⁵ Neither Admiral Liu nor CCP leaders envisioned the PLAN as the sole means of preventing competitors from threatening China or interfering with its aims. While the PLAN modernized, the PRC pursued capabilities to deter adversaries from closing with Chinese territory while simultaneously threatening and frustrating adversaries operating within a contested region.

Anti-access/area-denial (A2/AD) refers to "a series of sensors; anti-ship, anti-aircraft, and ground defense; and long-range fires utilized by U.S. competitors and designed to prevent the United States from entering into a close fight."¹⁶ The U.S. Department of Defense (DoD) adds, "the PLA is developing capabilities to provide options for the PRC to dissuade, deter, or, if ordered, defeat third-party intervention during a large-scale theater campaign such as a Taiwan contingency."¹⁷ Chinese A2/AD capabilities, such as anti-ship ballistic missiles (ASBMs) and anti-ship cruise missiles (ASCMs), threaten American bases, naval vessels, aircraft, and personnel within the second island chain and especially so within the first island chain. Should a PRC-Taiwan standoff similar to 1995-1996 occur today, the U.S. would be hard-pressed to respond as rapidly as it did then. Should the U.S. project force into contested East and South China Seas against PRC A2/AD, American forces will face considerable risk. To project power in response to any East Asia contingency, such as defending treaty allies like the

¹⁵ Yoshihara and Holmes, *Red Star Over the Pacific*, 124-125.

¹⁶ Alex Vershinin, "The Challenge of Dis-Integrating the A2/AD Zone: How Emerging Technologies Are Shifting the Balance Back to the Defense," *Joint Forces Quarterly* 97 (2nd Quarter 2020): 13.

¹⁷ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 72.

Republic of Korea (ROK) or Japan, America must expend enormous effort to neutralize China's A2/AD. Neutralizing A2/AD requires time, threatening to render a U.S. response to crisis moot. The PRC A2/AD system itself serves to deter U.S. action in East Asia, as years of Chinese statements and policy indicate willingness and preparation for employing these weapons.

This thesis does not seek to identify which of the Chinese A2/AD capabilities most threaten U.S. force projection or seek a critical vulnerability that could paralyze the system. Many scholarly works, including *The U.S.-China Military Scorecard* by Eric Heginbotham, analyze PLA capabilities and technologies. What is essential when considering Chinese A2/AD is that it exists as a system of three elements: sensors, shooters, and command and control (C2). Though resilient, China's A2/AD system is not a monolith. While aspects of the system remain vulnerable to manipulation, it lacks a single point of failure and presents the U.S. with a thorny problem.

Command and Control

Sensors incorporated into the PRC A2/AD system detect adversaries as they approach China's periphery and queue more precise sensors, which provide targeting data used by the C2 node to direct strikes. The detection, target development, location refinement, fire approval and clearance, and weapon engagement are called the kill chain. RAND succinctly defines the kill chain as "the process of finding, fixing, tracking, targeting, engaging, and assessing attacks on targets."¹⁸ The C2 element of China's A2/AD system likely resides in the Theater Command (TC), a joint operational command

¹⁸ Heginbotham, *The U.S.-China Military Scorecard*, 154.

structure formerly known by the Army-centric terminology of “military region.”¹⁹ The TC construct resembles the U.S. combatant command model, as it possesses operational command for all units assigned to its area of responsibility (AOR), allowing it to employ weapon systems, including missiles, submarines’ torpedoes, and fighter/bomber aircraft, against adversaries detected by A2/AD sensors. In a confrontation with the U.S. and its allies, the TC likely assumes responsibility for coordinating A2/AD kill chain actions within its geographical AOR, including weapons release approval.

Sensors

Intelligence, Surveillance, and Reconnaissance (ISR) platforms comprise the Chinese A2/AD system’s eyes and ears. Chinese ISR includes satellite imagery, radar early warning, SONAR, electronic intelligence (ELINT), unmanned aerial systems (UAS), and airborne warning and control aircraft (AWACs), amongst many others.²⁰ Two tasks are essential for sensors to perform as desired; first, they must detect the airborne, surface, or subsurface threat. Secondly, sensors must promptly report accurate locational data to one or more “shooters” to effectively target and strike forces entering the contested area. The PRC learned the critical importance of information by observing U.S. operations and transformed PLA strategy and doctrine, emphasizing “informatization” and timely, accurate, and actionable intelligence.²¹ China invested heavily in ISR for A2/AD, including constructing and launching space-based satellites

¹⁹ Office of the Secretary of Defense, *Military and Security Developments Involving the People’s Republic of China 2020*, 95-95.

²⁰ Cole, “The People’s Liberation Army in 2020-2030 Focused on Regional Issues,” 183.

²¹ M. Taylor Fravel, *Active Defense: China’s Military Strategy since 1949* (Princeton: Princeton University Press, 2019), 226-227.

into orbit, deploying imagery satellites for the first time in 2000.²² By 2019, the PRC used over 120 satellites for various ISR purposes alone, though not solely for military use.²³ In 2019 alone, China deployed 34 space-launched vehicles (SLVs), including several constellations enhancing its BeiDou-2 and BeiDou-3 satellite navigation system, which functions similarly to the Global Positioning System (GPS)²⁴. China's BeiDou-2/3 system removes its dependence on GPS and provides a warfighting advantage should conflict occur.²⁵ The PRC can use anti-satellite weapons (ASAT) to destroy or disable GPS, complicating U.S. forces' ability to navigate, employ precision-guided weapons, communicate, and other crucial warfighting tasks.²⁶

The PRC began using over-the-horizon (OTH) skywave radar in 2007, which detects targets to a range of 2,000 km but does not provide the precision locational data needed to strike a target immediately.²⁷ Since 2007, the PRC fielded more sophisticated OTH skywave radar systems and naval ocean surveillance system (NOSS) space-based satellites to provide the PLA accurate, long-range detection of surface craft.²⁸ OTH and NOSS radar systems surveil millions of square kilometers of ocean. While these systems may not be sufficiently accurate to provide the kill chain precise data for targeting, they queue other platforms, including airborne ISR, which reports precision targeting data.

The OTH radar and NOSS capability is impressive; however, it does not necessarily

²² Heginbotham, *The U.S.-China Military Scorecard*, xxv.

²³ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 65.

²⁴ *Ibid.*, 63-64

²⁵ Michael A. McDevitt, *China as a Twenty-First Century Naval Power: Theory, Practice, and Implications*, (Annapolis: Naval Institute Press, 2020), 93.

²⁶ Bates Gill and Adam Ni, "The People's Liberation Army Rocket Force: Reshaping China's Approach to Strategic Deterrence," *Australian Journal of International Affairs* 73, no. 2 (January 2019): 164, <https://www.tandfonline.com/doi/full/10.1080/10357718.2018.1545831>.

²⁷ Heginbotham, *The U.S.-China Military Scorecard*, xxv.

²⁸ *Ibid.*, 157.

mean that China could detect and immediately target a U.S. warship transiting within the first and second island chains. OTH and NOSS would not distinguish a warship from a commercial vessel; however, the radar track could be handed off to an airborne platform, surface, or subsurface vessel to pursue and identify.²⁹

PLAN surface vessels possess capable radar systems, which, as early as 2004, were able to detect fighter aircraft at ranges up to 450 km.³⁰ Additionally, China procured long-range, sophisticated ground-based radar systems for an integrated air defense system, increasing U.S. fourth-generation fighters' challenge to avoid detection. Improved Chinese radar enhances the danger to U.S. airmen and increases the time, effort, and American resources required to neutralize PRC sensors.

Shooters

The PLA possesses many modern weapon systems that it would employ to prevent U.S. response to a crisis in East Asia. Chinese weapons are increasingly difficult to defeat due to their sophistication and quantity. Several systems bearing particular mention are missiles, submarines, and fighter aircraft, as evidenced by China's investment and development. RAND concluded in 2015 that the PLA achieved very rapid improvements in these areas compared to "any reasonable historical standard," indicating their importance and role in China's efforts to deny adversaries the freedom to operate uncontested in the region.³¹

Missiles

²⁹ McDevitt, *China as a Twenty-First Century Naval Power*, 111.

³⁰ Heginbotham, *The U.S.-China Military Scorecard*, 155.

³¹ *Ibid.*, xxx.

China's missile development and procurement resulted in a force with capabilities that would have given President Clinton and his Joint Chiefs pause when considering whether to deploy two aircraft carrier battle groups, had the PRC possessed those assets in 1996. In 1996, the PLA's missile capabilities were limited in inventory and capability because of their short-range and limited accuracy. According to a RAND study, today's PLA possesses "roughly 1,400 ballistic missiles and hundreds of cruise missiles," and many can accurately strike U.S. airbases in Japan.³² RAND concludes that the People's Liberation Army Rocket Force (PLARF) can disrupt U.S. airbases as far away as 1,500 km from the Chinese mainland and that a small number of missiles would curtail flight operations at Kadena Air Base for days.³³ A concerted PLA effort involving more missiles might result in runway closures lasting weeks. Today's PLA missile inventory is accurate, long-ranged, and difficult to counter, making it increasingly lethal and concerning for U.S. strategists.

China's modern missile force includes sophisticated DF-21, DF-26, DF-31, and DF-41 ASBMs and similar naval equivalents (JL-1, JL-2), deploying aboard both PLAN conventional diesel and nuclear submarines.³⁴ The DF series of missiles operate from transporter erector launcher (TEL) vehicles from land, increasing these weapons' survivability.³⁵ The PRC also developed ASCMs, which might prove effective against

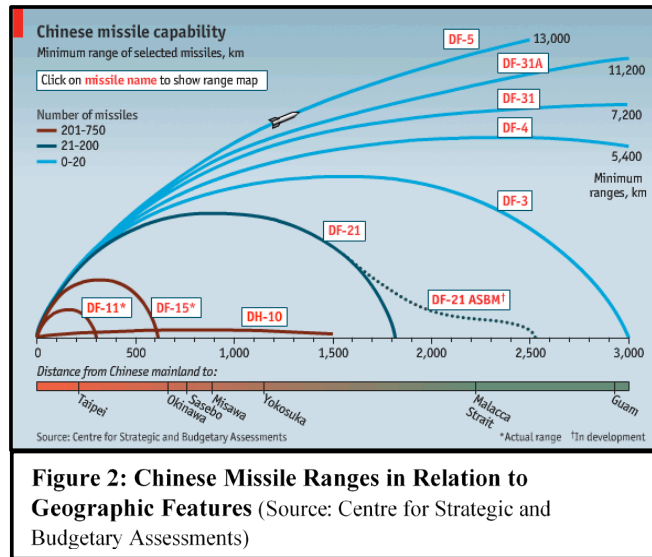
³² Ibid., xxiii.

³³ Ibid., 45.

³⁴ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 55-56; David C. Logan, "Making Sense of China's Missile Forces," in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, (Washington: NDU Press, 2019), 397.

³⁵ Logan, "Making Sense of China's Missile Forces," 402-403.

U.S. Navy surface combatants, especially with hypersonic glide weapons development.³⁶ The Chinese YJ-18 ASCM boasts a range of 290 nautical miles, well exceeding that of the U.S. Harpoon or even the newer Standard Missile-2 (SM-2) or SM-6.³⁷ The PLA



developed and tested several ASBMs on afloat targets, including several with maneuverable reentry vehicles (MaRVs) to support final adjustments as the warheads seek a moving ship.³⁸

Chinese missile technology is impressive, and while PLA has yet to publicly demonstrate its ability to hit a moving target at sea, the fact that the PRC fielded the systems implies they proved their effectiveness in operational tests. China will eventually demonstrate its ability to integrate all A2/AD system and kill chain elements to increase its confidence in deterrence and prevent a repeat of the 1996 Taiwan Straits embarrassment. As sensors gain fidelity and C2 integration improves, the kill chain will shorten, increasing the likelihood of successful strikes against U.S. platforms.³⁹ Chinese missileers may fire salvos of missiles to increase the probability of a successful hit, and not all of China's A2/AD targets will be mobile.⁴⁰ Many of the most valuable targets in a

³⁶ Yoshihara and Holmes, *Red Star Over the Pacific*, 233-236.

³⁷ *Ibid.*, 160-161.

³⁸ McDevitt, *China as a Twenty-First Century Naval Power*, 112-113.

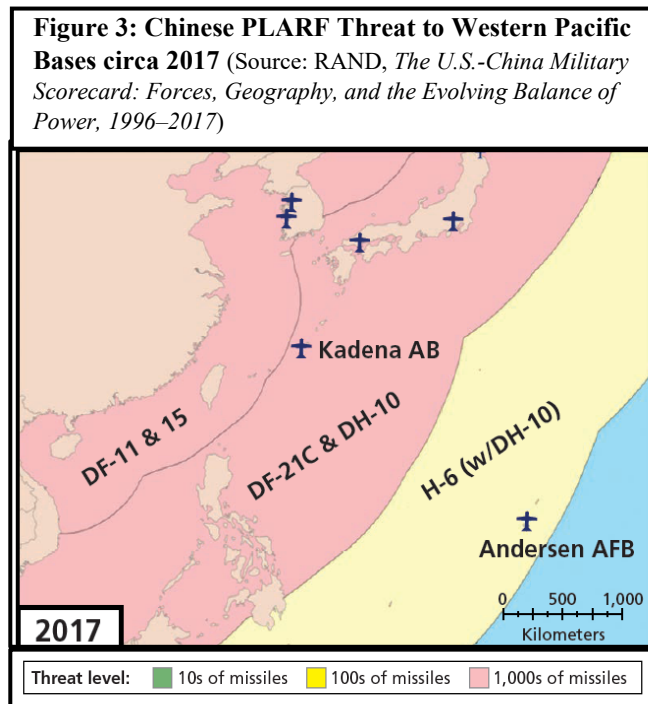
³⁹ Heginbotham, *The U.S.-China Military Scorecard*, 155-165.

⁴⁰ *Ibid.*, 169.

Taiwan or South China Sea confrontation are bases that the U.S. would use to project forces into the theater.⁴¹ American forward bases, particularly airfields and support infrastructure, offer easy targets for PLA strikes. The PLARF would use missile salvos to crater runways and destroy support infrastructure, requiring weeks or months of repair and reconstruction before those bases are useable to transport forces into the theater.⁴² U.S. bases in Japan, the ROK, and Guam stand at particular risk.

In the 1990s and the first decade of the 2000s, China possessed hundreds of short-range ballistic missiles (SRBMs) and cruise missiles capable of striking U.S. airbases in the ROK and Japan but lacked the weapon systems to seriously threaten Andersen Air Force Base (AFB) in Guam. Today, the PLA possesses medium-range ballistic missiles (MRBMs) and aviation-launched cruise missiles (ALCMs), effectively threatening

Andersen AFB.⁴³ Although PRC missile strikes against U.S. allies would increase the backlash China faces in a crisis, the missile threat might deter allies and partner nations from allowing America access, basing, or overflight of their territory. Should the U.S. lose basing privileges or host nation support for its force projection, responding to a



⁴¹ Heginbotham and Heim, “People’s Liberation Army Trajectories: International Drivers,” 89.

⁴² Gill and Ni, “The People’s Liberation Army Rocket Force,” 164.

⁴³ Heginbotham, *The U.S.-China Military Scorecard*, 56.

contingency becomes more complex and the time required to close forces extends substantially.

Submarines

The PLAN increased its inventory of modern diesel submarines from two in 1996 to 37 in 2015; about 90% employ cruise missiles.⁴⁴ In the next decade, the PRC will grow and modernize to achieve a capable subsurface fleet of more than 70 combatants, including stealthy diesel vessels, many possessing air-independent-propulsion (AIP), and probably ten or more nuclear-powered submarines.⁴⁵ Nuclear submarines cost more to build and maintain; however, their ability to operate for long periods without refueling and using the reactor to produce oxygen provides them much greater ranges than diesel ships. Though the PLA lacks global reach, it is capable of operations beyond the second island chain.⁴⁶ Of most significant concern is RAND's conclusion that "Chinese submarines would present a credible threat to U.S. surface ships in a conflict over Taiwan or the South China Sea."⁴⁷ Though the U.S. submarine force possesses a qualitative advantage, that is likely to erode as Chinese technology advances, and the PRC engages in intellectual property theft and espionage.

PLAN submarines' significant threat lies in their capability to carry missiles and employ them against land-based sites or U.S. Navy surface vessels. Several missiles previously described and operated by the PLARF also deploy aboard Chinese submarines. The DF-21, designated the JL-1 for use aboard PLAN vessels, possesses a

⁴⁴ Ibid., xxv.

⁴⁵ McDevitt, *China as a Twenty-First Century Naval Power*, 110-111.

⁴⁶ Cole, "The People's Liberation Army in 2020-2030 Focused on Regional Issues," 185.

⁴⁷ Heginbotham, *The U.S.-China Military Scorecard*, xxvi.

1,750 km range, while the DF-31/JL-2 strikes targets at 7,000 km.⁴⁸ The PLAN built at least four *Jin*-class submarines, deploying the longer-range JL-2 missiles with them, although more submarines capable of embarking this weapon system may exist or be under construction. Further, the PRC seeks a longer-range variant of the JL-2, designated the JL-3, with the capability to strike the continental U.S. from the Chinese mainland.⁴⁹ By embarking long-range ballistic missiles aboard PLAN submarines, the PRC creates vexing problems for the U.S.

First, though American submarines exceed PRC vessels in technical capabilities, finding and destroying PLAN submarines presents a challenge. Despite their technological inferiority, PLAN submarines could avoid detection and offer China a stealthy means to disrupt U.S. bases and destroy ships until located and neutralized. Second, assuming the Chinese develop the JL-3 missile, with its extended range, and deploy it aboard China's subsurface fleet, the PLAN need only to sail its submarines into the Western Pacific to strike the continental United States. Finally, submarines offer the PLAN the capability to guard and protect vital maritime chokepoints, such as the crucial Strait of Malacca, for their ability to strike U.S. vessels potentially interdicting PRC maritime "roads" in the event of tension or armed conflict.⁵⁰ As China invests more resources into modernizing its subsurface fleet, increasing the number of platforms, and enhancing its missile capabilities, PLAN submarines will consume considerable U.S. attention and effort in any potential conflict.

Fighter Aircraft

⁴⁸ Logan, "Making Sense of China's Missile Forces," 397.

⁴⁹ *Ibid.*, 399.

⁵⁰ McDevitt, *China as a Twenty-First Century Naval Power*, 51.

The People's Liberation Army Air Force (PLAAF) and PLAN are increasingly retiring older aircraft and inducting fourth-generation fighter aircraft into service while producing more of China's fifth-generation fighters, the J-20, and J-31.⁵¹ Despite the PRC's emphasis on sea control, the PLAAF articulated the importance of air superiority for maritime dominance, thus competing for increased resources.⁵² Thus, the PLAAF continues to rapidly replace older aircraft with fourth-generation fighters, achieving dual goals of increasing the overall numbers of modern craft and the percentage of the total fleet on parity with U.S. counterparts.⁵³ Year to year, the PLAAF and PLAN jointly add about 70 fourth-generation or newer fighter aircraft to the inventory.⁵⁴ A 2020 U.S. DoD study indicated that the PRC could deploy 1,500 fighter aircraft in a hypothetical Taiwan Strait confrontation, including about 800 of fourth-generation or better design.⁵⁵ The growing number of PLAAF and PLAN fourth-generation or newer fighter aircraft indicates the balance of military power shifting tangibly towards the PRC. The Chinese advantage grows should the PRC, in a conflict, strike U.S. airbases, as it likely would, to destroy aircraft, runways, and support facilities, complicating American efforts to establish air superiority. Given current PLAN & PLAAF capabilities, fighter aircraft could strike targets in the ROK, Japan, Taiwan, the Philippines, and ships in China's periphery. However, striking further afield presents the PLA with a challenge of aerial refueling to extend its fighters' range.

⁵¹ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 50-76.

⁵² Ian McCaslin and Andrew Erickson, "The Impact of Xi-Era Reforms on the Chinese Navy," in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, (Washington: NDU Press, 2019), 142-143.

⁵³ Heginbotham, *The U.S.-China Military Scorecard*, 75.

⁵⁴ *Ibid.*, 75.

⁵⁵ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 166.

The PLAAF seeks a larger and more capable indigenously produced tanker, which might come in the form of a modified Y-20, in its base form an air transport craft, with long ranges capable of deploying paratroopers.⁵⁶ The PRC also purchased Russian-built IL-78 tankers, which will replace a small, obsolete Chinese tanker fleet.⁵⁷ Given a decade or so and the prioritization of PLAAF support aircraft, China would considerably enhance its fighters' strike range. In RAND's evaluation of hypothetical U.S.-PRC conflicts near Taiwan and the Spratly Islands given 2017 capabilities, researchers found that limited and aging tanker aircraft significantly diminished China's combat power to project into the South China Sea. On the other hand, most PLAAF and PLAN aircraft could strike Taiwan without refueling, significantly increasing the sorties generated against nearby forces. U.S. intelligence must carefully watch China's tanker fleet's growth and modernization, as this critical capability provides the PRC the means to expand its A2/AD coverage area and project power beyond its periphery. Increased Chinese procurement of tankers and aircraft carriers introduction means fighter aircraft of both services could strike well beyond the first island chain.⁵⁸

⁵⁶ Oriana Mastro, "A Global Expeditionary People's Liberation Army: 2025-2030," in *The Chinese People's Liberation Army in 2025*, ed. Roy Kamphausen and David Lai (Carlisle: U.S. Army War College Press, 2015), 215-216.

⁵⁷ McCaslin and Erickson, "The Impact of Xi-Era Reforms on the Chinese Navy," 143-144.

⁵⁸ Heginbotham and Heim, "People's Liberation Army Trajectories: International Drivers," 102.

Chapter Two: The People's Liberation Army Transformation

PRC anti-access/area denial (A2/AD) would cause U.S. leaders to pause before deciding to confront China militarily in its near seas. However, the People's Liberation Army's (PLA) rapid and profound transformation marks another significant change in the strategic environment from 1995-1996. The bloated PLA of 1996 possessed almost 3 million mostly conscript personnel, about two-thirds of whom belonged to the PLA Army (PLAA), equipped with antiquated equipment and vehicles.⁵⁹ Almost all of the People's Liberation Army Air Force (PLAAF) and Navy (PLAN) aircraft and vessels were outdated and obsolete.⁶⁰ The Chinese Communist Party (CCP) directed the PLA to modernize in 1993, but the PLA faced cultural and organizational challenges preventing it from accomplishing that objective. Not until the Taiwan Straits Crisis of 1995-1996 and the accidental U.S. bombing of China's embassy in Belgrade, Serbia, in 1999 was there an impetus to achieve the goal of fielding a modern military.⁶¹ These events and observing U.S. performance in Operation DESERT STORM reinforced the operational necessity to develop Chinese capabilities tailored to prevent or frustrate the American military from intervening against PRC strategic aims.⁶²

Years of American intervention in Iraq and Afghanistan fighting insurgents like the Taliban, or terrorists like Al-Qaeda, distracted the U.S. Department of Defense (DoD) from modernizing and reforming to compete with rising great power competitors like

⁵⁹ Michael Chase, et al, *China's Incomplete Military Transformation: Assessing the Weaknesses of the People's Liberation Army (PLA)* (Santa Monica: RAND Corporation, 2015), <http://search.ebscohost.com.nduezproxy.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=catt04199a&AN=ndu.878053&site=eds-live&scope=site>, 44-45.

⁶⁰ Heginbotham, *The U.S.-China Military Scorecard*, 26-27.

⁶¹ Friedberg, *A Contest for Supremacy*, 128-129.

⁶² Chase, *China's Incomplete Military Transformation*, 19.

China and resurgent threats like Russia. In the meantime, the PLA retired dated equipment in favor of state-of-the-art systems while simultaneously reforming its personnel processes to improve its human capital. China's military modernization focused on posturing the PLA to "win local wars under conditions of informationization" against the U.S.⁶³ China's original 1993 modernization guidance was updated in 2004, again in 2015, and most recently in *China's National Defense in the New Era*, published July 2019.⁶⁴

Today's PLA is a modern force, and in many ways, outstripped America's military in its modernization of equipment. The CCP achieved a remarkable transformation in three critical areas, first shifting its military emphasis from ground forces to become a maritime force, increasing priority and resources directed to the PLAN and PLAAF. Secondly, the PRC changed the dynamics of its recruiting, retention, and professionalization process to improve the PLA's human capital. Finally, the CCP directed the PLA to integrate the various services, and Chairman Xi followed through with organizational restructuring to force the PLA to embrace "jointness." The CCP transformation of the PLA enables the realization of the Party's goal to "win local wars under conditions of informatization."⁶⁵

China, Now a Maritime Power

⁶³ State Council Information Office of the People's Republic of China, *China's Military Strategy* (Beijing: Foreign Languages Press Co. Ltd., 26 May 2015), <https://news.usni.org/2015/05/26/document-chinas-military-strategy>, 7.

⁶⁴ Andrew Scobell, et al, *China's Grand Strategy: Trends, Trajectories, and Long-Term Competition* (Santa Monica: RAND Corporation, 2020), www.rand.org/t/RR2798, 74; State Council Information Office of the People's Republic of China, *China's National Defense in the New Era* (Beijing: Foreign Languages Press Co. Ltd., July 2019), <https://www.ssri-j.com/MediaReport/Document/ChinaDefenseWhitePaper2019.pdf>, 7.

⁶⁵ Scobell, *China's Grand Strategy*, 74.

The CCP most significantly transformed the PLA from a mostly continental military to a maritime force, a rare historical feat. Before the Peloponnesian War, King Archidamus of Sparta warned his countrymen that their nation needed to become a naval power to defeat Athens, the preeminent Greek city-state. Athens possessed the strongest navy in the world at the time, while Sparta boasted the best army.⁶⁶ CCP leaders appreciated, similarly to King Archidamus, that to defeat the U.S., at least in local wars, the PRC must become a maritime power, emphasizing its naval, air, and missile forces. By transforming into a maritime power, China deprioritized the PLAA, which historically outnumbered in total personnel all other PLA services combined. Reducing the PLAA's end strength freed up resources to be applied towards the PLAN, PLAAF, and PLARF. Both Xi Jinping, General Secretary of the CCP, and his predecessor Hu Jintao emphasized that the PRC, traditionally a continental power, must become a premier maritime power.⁶⁷ Xi's notion of maritime power appears to be broader in scope than merely possessing a capable blue water navy, instead encompassing marine resources, sea lines of communication (SLOCs), protection of maritime borders, sovereignty, and other economic and law enforcement concerns on the ocean.⁶⁸

In line with Admiral Liu's ambitious plan of transforming China's navy, the CCP acknowledged that the PLA needed to become maritime-focused to help achieve the "China Dream" and propel the nation back to being the center of the world.⁶⁹ China's defense strategy and white papers indicate the need to transform in this manner.⁷⁰ The

⁶⁶ Robert Strassler, ed., *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War* (New York: Free Press, 1996), 45.

⁶⁷ McDevitt, *China as a Twenty-First Century Naval Power*, 1-3.

⁶⁸ *Ibid.*, 3-4.

⁶⁹ Yoshihara and Holmes, *Red Star Over the Pacific*, 47.

⁷⁰ State Council Information Office, *China's National Defense in the New Era*, 6-7.

CCP views maritime power as integrating a capable coast guard, fishing fleet, shipbuilding, merchant marine, natural resource extraction, and the PLAN. The factors mutually reinforce each other, but the PLAN underpins and protects the system.⁷¹ The most recent Chinese defense white paper articulates that the PLAN is the highest priority, followed closely by the PLAAF and PLARF.⁷² The three services logically seem the most relevant agents to achieve the vision of a regionally strong and eventually global expeditionary force and perform the A2/AD role of deterring, if not frustrating, any U.S. response to PRC provocations in the near seas.

The People's Liberation Army Navy

The PLAN modernized immensely between 1995 and 2020, continuing on a track to increase its capability in the decades ahead. Significant developments include the procurement of a former Soviet ski-ramp aircraft carrier *Liaoning* and domestic construction of two Chinese aircraft carriers, the *Shandong*, commissioned in December 2019, and another vessel yet to be officially named.⁷³ The second indigenously built Chinese carrier will likely conduct sea trials in 2021-2022 and be operational by 2024.⁷⁴ China watchers anticipate the PRC constructing a fourth aircraft carrier, this one with nuclear propulsion, sometime later in the decade. By 2030, the PLAN will possess at least three operational aircraft carriers, with a fourth on the way.⁷⁵

⁷¹ McDevitt, *China as a Twenty-First Century Naval Power*, 4.

⁷² State Council Information Office, *China's National Defense in the New Era*, 17-19. The former PLA Second Artillery Force was renamed the PLA Rocket Force and elevated to the status of a service.

⁷³ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 47.

⁷⁴ *Ibid.*, 47.

⁷⁵ Cole, "The People's Liberation Army in 2020-2030 Focused on Regional Issues," 184.

Aircraft carriers are critical for China's grand strategy and ambition to rival the U.S. as a maritime power. These platforms offer China the ability to project power at great distances overseas.⁷⁶ From an A2/AD perspective, the CCP exploits the asymmetry between relatively inexpensive ASBM/ASCM missiles against the grossly expensive \$13.5B U.S. carrier.⁷⁷ However, the same CCP views aircraft carriers as essential to protect SLOCs, respond to crises, conduct operations abroad under cover of its embarked air wing, and deter adversaries beyond the first island chain.⁷⁸ Though not explicitly intended for A2/AD, the Chinese carrier fleet extends the range at which the PRC may conduct offensive air support, increasing the threat and extending the distance at which U.S. forces must operate until establishing air superiority.

The PLAN welcomed increased prioritization on other fronts, particularly as the rest of the surface fleet benefitted from substantial modernization. The Chinese navy commissioned a sizeable fleet of advanced destroyers, adding substantially to Chinese air defense warfare and anti-submarine warfare capabilities.⁷⁹ By 2030, the PLAN will possess 18 modern destroyers with air defense and anti-air warfare systems commensurate with the U.S. *Aegis* suite and 36 corvettes and frigates intended for anti-submarine warfare (ASW) and protection of China's SLOCs.⁸⁰ These vessels contribute additional sensors to the A2/AD system and employ missile systems to engage air, surface, and subsurface threats. The PLAN surface force is substantial enough to assess that this fleet possesses the combat power to dominate China's regional periphery.

⁷⁶ McDevitt, *China as a Twenty-First Century Naval Power*, 69-70.

⁷⁷ Sarwar Kashmeri, *China's Grand Strategy: Weaving a New Silk Road to Global Primacy* (Santa Barbara: Praeger, 2019), 39.

⁷⁸ *Ibid.*, 40.

⁷⁹ Chase, *China's Incomplete Military Transformation*, 69.

⁸⁰ Cole, "The People's Liberation Army in 2020-2030 Focused on Regional Issues," 184.

Considering the relatively short distances that Chinese vessels would operate from their bases compared to their U.S. Navy opponents, it is unlikely that America could project enough combat-ready ships to challenge the PLAN's defense of its near seas. The U.S. might still meaningfully challenge the PLAN in the far seas, potentially including the South China Sea, which would stretch the Chinese navy and limit the PLAAF's capacity to support due to its limited aerial refueling assets.

The PLAN also benefitted from the marked increase in its Marine Corps' (PLANMC) capacity from two to six brigades and creating a command and control headquarters.⁸¹ The expansion increased personnel end strength from about 12,000 Chinese marines to over 36,000, supporting the three fleets, with growth to over 100,000 marines possible in the future.⁸² Though the enhanced Marine Corps appears ready to show its usefulness in an amphibious operation involving Taiwan, the Chinese development of a capable naval expeditionary force implies much more. The PLANMC and the associated amphibious vessels provide the PRC with power projection, limited as it may be at this time. Before and during a contingency, Chinese marines could seize key terrain in the East China Sea or the South China Sea and elsewhere to support sea control and sea denial operations. Additionally, the PLANMC's growth indicates that the PRC is expanding its global military power to achieve strategic objectives, including protecting investments in Xi's Belt and Road Initiative (BRI).⁸³

⁸¹ Daniel Gearin, "PLA Force Reductions," in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, (Washington: NDU Press, 2019), 337.

⁸² Andrew Scobell and Nathan Beauchamp-Mustafaga, "The Flag Lags But Follows: The PLA and China's Great Leap Outward," in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, (Washington: NDU Press, 2019), 180.

⁸³ Heginbotham and Heim, "People's Liberation Army Trajectories: International Drivers," 15.

The People's Liberation Army Air Force

Surprisingly, the PLAAF benefitted greatly from China's turn to the sea. The PLAAF enhanced and expanded its fighter aircraft fleet, bombers, and refueling platforms that provide aircraft the necessary reach to strike beyond the first island chain.⁸⁴ Additionally, while the development and fielding of transport aircraft advanced less rapidly, analysts anticipate increased Chinese capability and capacity as the PLA builds the Y-20 aircraft, with a likely tanker variant.⁸⁵ Chairman Xi and the CCP seek the ability to project power globally, as evidenced in *China's National Defense in the New Era*, which earmarked 2049 as the deadline to “fully transform the people's armed forces into world-class forces.”⁸⁶ As alluded to with the PLAN and Marines' utility to safeguard and defend China's BRI economic interests, a robust air transport fleet allows the PLA to deploy forces worldwide to protect PRC interests rapidly.

The PLAAF and PLAN fielded sophisticated and stealthy fourth and fifth-generation fighter aircraft, including the Chinese J-15, J-20, and J-31.⁸⁷ The J-20 and J-31 are comparable to the American F-22 and F-35 platforms and bear remarkable similarities, potentially due to Chinese espionage and intellectual property theft. Regardless, the sheer numbers of PRC aircraft and their proximity to Chinese territory and waters imply the PLAAF will possess a greater mass of offensive airpower, at least initially, in any U.S.-PRC conflict. The PLAAF would operate from nearby airbases,

⁸⁴ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 50-52.

⁸⁵ *Ibid.*, 51.

⁸⁶ State Council Information Office, *China's National Defense in the New Era*, 10.

⁸⁷ Cole, “The People's Liberation Army in 2020-2030 Focused on Regional Issues,” 183.

augmented by naval aviation operating from airbases or aircraft carriers. U.S. fighter aircraft opposing the PLAAF and PLAN would operate at greater distances initially.

As discussed in the analysis of Chinese A2/AD, the PRC would likely strike U.S. regional airbases to disrupt aviation support to operations. Several studies analyzed the stark contrast from 1996 to the present day regarding a hypothetical air war between the U.S. and China. A RAND comparison of relative combat power identified that China's air forces (including naval aviation), supported by the country's integrated air defenses, correspond with a lengthier and riskier U.S. campaign to achieve air superiority.⁸⁸

RAND concluded that the number of U.S. Air Force and Navy air wings, each consisting of 72 airframes, required to win an attrition victory against China in a Taiwan conflict was five with airbase attacks or seven air wings without airbase attacks.⁸⁹ Further, winning victory with current relative combat power ratios could require up to 21 days for the U.S. to achieve. By delaying U.S. force deployment for 21 days while waging an air campaign, in addition to delays gained by striking airbases in the theater, China buys itself precious time to consolidate any territorial gains before American reinforcements could arrive. Should America and its allies persist in confronting China in such a scenario, the potential risks call into question whether Taiwan or a South China Sea dispute equates to vital U.S. national interests.

Finally, the Chinese operated an antiquated but capable bomber called the H-6 for many years, with approximately 120 aircraft in service between the PLAAF and PLAN. Over the past decade, the PLAAF overhauled the H-6 fleet, improved upon the design, fielding the H-6E, capable of delivering a nuclear payload, and the H-6H, which employs

⁸⁸ Heginbotham, *The U.S.-China Military Scorecard*, 85-86.

⁸⁹ *Ibid.*, 87.

land-attack cruise missiles (LACMs).⁹⁰ The H-6K, another variant, can strike Guam with its six LACMs, while the H-6J employs six supersonic YJ-12 anti-ship cruise missiles (ASCMs).⁹¹ The latter presents a concern for U.S. Navy surface ships, thanks to the missiles' range and capability of striking vessels within the second island chain.⁹² Additionally, the PLAAF demonstrated the H-6N evolution of the H-6K, noteworthy for its increased range, ability to refuel in-flight, and the capability to carry an unmanned aerial system (UAS), or an air-launched ballistic missile (ALBM), potentially with a nuclear payload.⁹³ The U.S. Office of the Secretary of Defense warned that the PLAAF seeks to field a strategic stealth bomber, which the Chinese announced in 2016.⁹⁴ The PRC investment in bomber aircraft, its commitment to developing increasingly long-legged and lethal systems, with stealth, represents a formidable threat to U.S. forces and bases, as well as those of America's allies.

PLA Personnel Modernization

The PLA personnel system substantially improved in the past 25 years, resulting in a highly professional, better trained, more capable soldier, sailor, airman, and marine. Several efforts contributed to the better PLA workforce. The PLAA, previously the crown jewel of China's military, downsized from roughly 3 million troops to just over 2 million in several decades.⁹⁵ Though many PLA junior enlisted troops were (and still

⁹⁰ Benjamin Lai, *The Dragon's Teeth: The Chinese People's Liberation Army- Its History, Traditions, and Air, Sea and Land Capabilities in the 21st Century*, (Philadelphia: Casemate Publishers, 2016), 133.

⁹¹ McDevitt, *China as a Twenty-First Century Naval Power*, 106.

⁹² Lai, 133-134; Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 51.

⁹³ *Ibid.*, 50-51.

⁹⁴ *Ibid.*, 51.

⁹⁵ State Council Information Office, *China's National Defense in the New Era*, 18-19.

are) conscripts, the vast reduction of mostly unskilled personnel freed up resources to increase end strength elsewhere that the CCP identified as a higher priority. Personnel cuts freed up resources to modernize equipment and increase PLA salaries and prestige.⁹⁶

The PLA now emphasizes training and education more thoroughly, actively recruits officers from universities, and increased salaries to make military service more competitive.⁹⁷ PLA training evolved towards “jointness,” integrating its disparate services’ capabilities, focused on lethality, in realistic and highly technical environments.⁹⁸ Personnel education also received significant attention with a restructuring of the various Chinese defense education systems.⁹⁹

The PLA draws a shrinking percentage of its recruits from conscription.¹⁰⁰ Whether conscripts or voluntary enlistees, recruits must be trained and led, something modern militaries rely upon a professional and capable noncommissioned officer (NCO) corps to accomplish. NCOs provide intermediate leadership between commissioned officers and junior enlisted troops and possess critical skills, training both conscript and volunteer soldiers. The PLA identified the lack of an NCO corps as a weakness and addressed the deficiency in 1999, establishing separate grades or rank structures for enlisted leaders and setting NCOs' educational requirements.¹⁰¹ Chinese enlisted personnel increasingly perceive the military as a viable career due to the PLA

⁹⁶ Scobell, *China's Grand Strategy*, 80.

⁹⁷ *Ibid.*, 89.

⁹⁸ Mark Cozad, “Toward a More Joint, Combat-Ready PLA?” in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow (Washington: NDU Press, 2019), 215; State Council Information Office of the People’s Republic of China, *China’s National Defense in the New Era*, 18-19; State Council Information Office of the People’s Republic of China, *China’s Military Strategy*, 8.

⁹⁹ State Council Information Office of the People’s Republic of China, *China’s National Defense in the New Era*, 19.

¹⁰⁰ Chase, *China’s Incomplete Military Transformation*, 46.

¹⁰¹ Chase, 44-46; Lai, *The Dragon’s Teeth*, 83.

recognizing the importance and value of a capable NCO corps.¹⁰² CCP leaders, including Chairman Xi, understand to achieve a joint and “informationized” military, the PLA structure must change, and equipment becomes increasingly advanced. However, such a profound transformation requires a highly talented, well-trained, and educated force.¹⁰³

PLA efforts to improve its personnel might sound eerily familiar to American military leaders – the U.S. DoD and service branches labored for decades to recruit, train, educate, and retain the best enlisted and commissioned personnel. While it would be premature to assert that the PLA is modeling itself after the U.S. military, the organization shifted its values and prioritized professional human resources as a crucial component of its strategy.¹⁰⁴ Though the American military views personnel as an area where U.S. capabilities exceed China, the PLA is steadily closing the quality gap.

Though it evolves rapidly, the PLA remains constrained by its need to fill ranks through conscription. PRC conscripts serve two years on active duty, and the number of draftees selected varies depending on anticipated shortfalls after voluntary recruitment.¹⁰⁵ Conscripts complete basic training and receive specialized training appropriate to their assigned unit. Cadres choose trainees who possess the ability to become NCOs; however, volunteer recruits increasingly receive these opportunities to progress, rewarding their commitment and preventing talent loss when the conscript NCO’s mandatory service expires.

¹⁰² Joel Wuthnow and Phillip Saunders, “Chairman Xi Remakes the PLA,” in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, (Washington: NDU Press, 2019), 3; Chase, 46.

¹⁰³ Joel Wuthnow and Phillip Saunders, “A Modern Major General: Building Joint Commanders in the PLA,” in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, (Washington: NDU Press, 2019), 295-296.

¹⁰⁴ Lai, *The Dragon’s Teeth*, 83.

¹⁰⁵ *Ibid.*, 80-81

As long as the PLA depends upon conscription to fill its ranks, the shift towards jointness and “informationization” occurs suboptimally. An enormous training apparatus brings draftees to a basic proficiency level, wasting tremendous capacity and never achieving professional militaries' readiness. A similar training churn occurs with western militaries and their volunteer forces, who serve four to six-year enlistments, but to a much lesser extent. The cycle of introducing inexperienced personnel into military service, training them to a basic standard, then demobilizing them ensures that most PLA personnel and units never achieve the proficiency they might otherwise accomplish, given a four to six-year voluntary enlistment. Conscription limits the Chinese military's ability to fulfill Xi's vision of a joint and informationalized PLA. A PRC shift from conscription to an all-volunteer force likely results in a corresponding decrease in end strength and implies that a more educated and technical workforce remains, led by capable NCOs. The PLA's progress in improving its personnel quality offers China the potential to achieve a more lethal military, capable of threatening U.S. forces and interests globally, particularly in the U.S. Indo-Pacific Command (USINDOPACOM) area of responsibility (AOR).

An area where U.S. personnel possess an advantage over PRC troops is combat experience. Many U.S. service members, particularly senior officers and staff NCOs (grades E-6 to E-9), experienced combat in Iraq or Afghanistan; however, the vast majority of current junior U.S. officers, NCOs, and enlisted personnel lack combat experience. U.S. reserve components and the National Guard also retained combat-experienced personnel. Many mid-grade to senior U.S. military leaders for the next five to ten years possess combat experience, providing the U.S. an advantage in planning,

preparing for, and executing combat operations. A detractor to this argument is that U.S. personnel gained their combat experience in a different theater against an intelligent and capable but much less technologically sophisticated adversary. Al Qaeda and the Taliban, as irregular forces, are dissimilar to the PLA. The counterargument ignores that U.S. troops faced an ideologically committed foe with Al Qaeda and the Taliban, who often sacrificed their own lives in spectacular fashions to achieve their ideological ends. PLA troops, lacking combat experience entirely and the confidence that instills and the factor of serving involuntarily, probably lack the same ideological commitment.

How China might overcome this disadvantage could stem from opportunities to deploy its personnel overseas to peacekeeping or other military operations short of armed conflict.¹⁰⁶ Though not the same experience as combat, Chinese personnel would use their skills, learn, and increase confidence from “non-war military activities” deploying abroad in an operational capacity.¹⁰⁷ Operational deployments, paired with improved joint training, education, and longer all-volunteer enlistments, could bring Chinese personnel close to parity in skill and quality to U.S. service members. However, this shift will probably require decades to change the PLA service culture.

The Chinese Embrace Jointness

CCP leaders repeatedly emphasized jointness in their guidance to the PLA, including in the 2015 *China's Military Strategy*, where the term “joint” appears 15 times.¹⁰⁸ The strategy foreshadows organizational structure changes to achieve the goal of a Chinese

¹⁰⁶ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 163.

¹⁰⁷ *Ibid.*, 32.

¹⁰⁸ State Council Information Office, *China's Military Strategy*.

military capable of planning and executing joint operations.¹⁰⁹ In 2019, the CCP bifurcated command into an operational command running from the Chinese Military Committee (CMC) to Theater Commands (TCs) to units and an administrative command

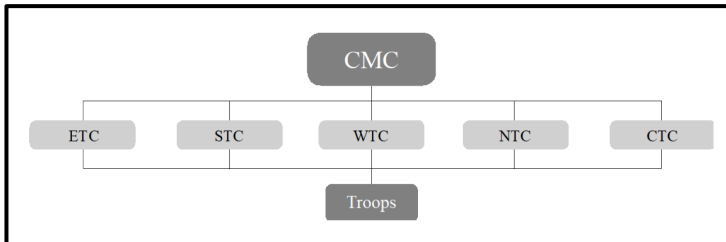


Figure 4: PLA Operational Command Structure
(Source: *China's National Defense in the New Era*, 2019)

running from the CMC to PLA services, to their constituent units.¹¹⁰ Here the Chinese seem to imitate sweeping military reforms undertaken by America

in its 1986 Goldwater-Nichols Department of Defense Reorganization Act, which separated the military services from operational command while mandating jointness.

The CCP disestablished the Army-centric Military Region system, replacing it with five TCs, with the goal of “establishing and improving the joint operations command system.”¹¹¹ The concept resembles the U.S. Combatant Commands (CCMDs) in construct and function, except that China’s TCs align to sub-regional foci. In contrast, the U.S. CCMDs focus regionally, maintain a global perspective, and in total provide the U.S. DoD a worldwide unified command structure. The TCs strategize and conduct



Figure 5: China’s Theater Commands
(Source: Kenneth Allen, Dennis J. Blasko, and John F. Corbett, “The PLA’s New Organizational Structure: What Is Known, Unknown and Speculation” (Part 1))

¹⁰⁹ State Council Information Office, *China’s Military Strategy*, 7-8.

¹¹⁰ State Council Information Office, *China’s National Defense in the New Era*, 16-18.

¹¹¹ *Ibid.*, 17.

contingency planning, retaining responsibility for all operations in the assigned AOR except nuclear strike, which the PLARF executes.¹¹² The TC structure, with its operational control over all assigned forces, will more likely conduct truly joint training that emphasizes interoperability between service capabilities and undoubtedly results in greater unity of command and effort.¹¹³ In sum, the Chinese embrace of a CCMD-like command and control system and structure offers the CCP and PLA a much more effective means to employ joint capabilities in an “informationized” environment to frustrate or defeat the United States around the near seas.

The CCP’s commitment to improve and modernize PLA personnel, hardware, and organizational structure, combined with the investment in its A2/AD system, should concern U.S. decision-makers. While the U.S. military projects power globally, conducts hard training, and boasts the most capable personnel, the PLA continues to gain ground and close qualitative gaps. There is little doubt that the PRC prepares itself for local conflict with the U.S. and grows its expeditionary capabilities to project power regionally and eventually globally. China’s focus and prioritization toward the PLAN, PLAAF, and PLARF provide the CCP the capability to prevent U.S. response to actions in the East China Sea and, in the future, the South China Sea. These PLA capabilities also allow the CCP to project power further abroad to protect its BRI interests and achieve other strategic aims and reinforce Chinese global prestige.

¹¹² Office of the Secretary of Defense, *Military and Security Developments Involving the People’s Republic of China 2020*, 94.

¹¹³ Wuthnow and Saunders, “A Modern Major General: Building Joint Commanders in the PLA,” 309; David Finkelstein, “Breaking the Paradigm: Drivers Behind the PLA’s Current Period of Reform,” in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, (Washington: NDU Press, 2019), 62.

Chapter Three: How the U.S. Prepares to Fight China

The United States shifted its strategic focus to the Pacific in 2011, with President Barack Obama's "Pivot to the Pacific." The change of direction came at a crucial time. Wars in Afghanistan and Iraq diverted U.S. military modernization resources towards fighting insurgencies and low-intensity conflicts, postponing upgrades to capabilities needed for high-intensity conflict. In their 2012 strategic guidance, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*, President Obama, and Secretary of Defense (SECDEF) Panetta provide clear guidance that the future U.S. military will be smaller but more agile and technologically advanced. They indicate that America's military will focus primarily on the Asia-Pacific region and secondarily on the Middle East.¹¹⁴

U.S. Concepts for Power Projection into East Asia

The U.S. Air Force (USAF) and Navy began developing an operational concept called Air-Sea Battle (ASB) in September 2009, ostensibly to contend with adversaries employing anti-access/area denial (A2/AD) capabilities to prevent the U.S. from projecting forces into a theater.¹¹⁵ While U.S. strategists avoided naming China as the primary concern, the People's Republic of China (PRC) presents the most significant challenges to U.S. force projection with its A2/AD capabilities. The U.S. Department of Defense (DoD) incorporated ASB into its 2012 Joint Operational Access Concept

¹¹⁴ U.S. Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* (January 2012), https://archive.defense.gov/news/Defense_Strategic_Guidance.pdf.

¹¹⁵ U.S. Department of Defense, *Joint Operational Access Concept* (17 January 2012), https://dod.defense.gov/Portals/1/Documents/pubs/JOAC_Jan%202012_Signed.pdf, 4; Heginbotham, *The U.S.-China Military Scorecard*, 42.

(JOAC), including the U.S. Army and Marine Corps. The JOAC later evolved into the Joint Concept for Access and Maneuver in the Global Commons (JAM-GC).¹¹⁶ The DoD published the JOAC as an unclassified document but classified the JAM-GC, protecting it on a secure medium to prevent adversary exploitation. Despite researchers' inability to access the JAM-GC, it most likely entails evolutionary, rather than revolutionary, thinking from the ASB and JOAC; thus, the JOAC provides an acceptable means of assessing, in an unclassified domain, the U.S. approach against competitors like China, who possess substantial A2/AD capabilities.

The JOAC sheds adequate light on the U.S. thinking towards countering A2/AD to enable power projection. Several supporting concepts, such as the Joint Concept for Entry Operations (JCEO), offer further insight into how the U.S. will act within an operational area once joint forces succeed in gaining access. These concepts align with U.S. joint doctrine. The JOAC addresses some key issues: First and foremost, America must be capable to "project military force into any region of the world" to support its national interests.¹¹⁷ However, the JOAC's authors warn that current and future adversaries increasingly possess A2/AD capabilities, viewing them as crucial to disrupt U.S. power projection. The core thesis of the JOAC entails the theory that "cross-domain synergy," or the idea that joint forces provide more capability than the sum of their parts, will enhance each services' contribution to the joint fight.¹¹⁸ The concept postulates that the A2/AD threat requires greater jointness and integration than any other challenge the U.S. military faced.¹¹⁹ The JOAC identifies principles and lists 30 capabilities that the

¹¹⁶ Ibid., 42.

¹¹⁷ U.S. Department of Defense, *Joint Operational Access Concept*, i.

¹¹⁸ Ibid., 14-16.

¹¹⁹ Ibid., ii.

joint force requires to defeat an A2/AD system to gain operational access.¹²⁰ Underlying the entire concept is an inherent assumption that in some future conflict with a peer competitor, the United States' primary course of action must be a military thrust into the operational area protected by A2/AD. Herein lies the dilemma; while it is necessary to deter adversaries and reassure allies by demonstrating capability and resolve to defeat A2/AD, the direct approach likely results in high personnel and platform casualties and carries the most risk of mission failure and escalation. While adhering to the principles of the JOAC, the U.S. would ostensibly attack into a well-prepared, robust defense, violating Sun Tzu's advice against such a course of action.¹²¹

The JOAC acknowledges that its employment aims against a highly advanced adversary with sophisticated A2/AD capabilities and identifies that weapons of mass destruction (WMD) are a vital consideration.¹²² Herein lies another concern with the JOAC and JAM-GC; they seem to envision a direct strike into the periphery, if not the sovereign territory of an adversary possessing nuclear weapons with the potential for escalation. The reality that in some future contest over Taiwan, the United States' execution of a counter-A2/AD strategy could escalate to nuclear conflict, increasing risks associated with the JOAC. While the JOAC or JAM-GC may represent one potential tool in the U.S. arsenal to address potential conflict with the PRC, the circumstances in which it becomes the most favorable option seem limited.

The JOAC identifies the platforms, weapons, and technologies potential adversaries might use to disrupt U.S. power projection; the PRC invests heavily in almost

¹²⁰ Ibid., ii-iii.

¹²¹ Stephen F. Kaufman, *Art of War: The Definitive Interpretation of Sun Tzu's Classic Book of Strategy* (New York: Tuttle Publishing, 2012), 63.

¹²² U.S. Department of Defense, *Joint Operational Access Concept*, 3.

all of them. Reviewing the U.S. estimate of A2/AD, it would seem that the PRC prioritized anti-access to a considerable degree, as ballistic and cruise missiles, reconnaissance and surveillance systems, anti-satellite weapons, submarine forces, and cyber attack capabilities rank high in importance.¹²³ The concept identifies 30 requirements for the U.S. joint force to overcome A2/AD, these include costly capabilities such as missile defense, advanced Intelligence, Surveillance, and Reconnaissance (ISR), and long-range precision fires, to name a few.¹²⁴ The concept entails increasing the American capabilities required to overcome PRC threats, amounting to pitting U.S. strength against adversary strength.

Success in executing the JOAC, by its authors' account, lies in achieving the notions of "joint synergy" and "cross-domain synergy." Cross-domain synergy "requires the integration across domains without regard for which Service provides the action or capability."¹²⁵ Achieving cross-domain synergy requires accomplishing a level of joint integration heretofore unseen in U.S. history. This type of integration must be driven forcibly by the President and SECDEF but more likely requires legislation along the lines of Goldwater-Nichols to achieve practically. Parochial service interests seem to stand in the way of accomplishing the JOAC's intent.

Refuting the notion that cross-domain synergy might be achievable in the near term is the reality that the individual services, or sometimes several services working in tandem advanced service-specific employment concepts. Service-driven concepts often emphasize their own strengths to highlight or sell the service's role in future conflicts to

¹²³ Ibid., 9-10.

¹²⁴ Ibid., 33-36.

¹²⁵ Ibid., 16.

receive more resources. The Army championed Multi-Domain Operations (MDO), while the Navy advanced Distributed Maritime Operations (DMO).¹²⁶ The Marine Corps produced the Expeditionary Advanced Base Operations (EABO) and Littoral Operations in a Contested Environment (LOCE) concepts. The Navy, Marine Corps, and Coast Guard recently collaborated on a naval strategy *Advantage at Sea*.¹²⁷ That each department or service produces a distinct strategy, concept, or approach is natural. Each branch of the armed forces competes for funding, with little incentive to collaborate holistically. Congress and DoD would need to change the budgeting process to align with an Office of the Secretary of Defense (OSD) and Joint Staff model of control to reduce, if not eliminate, the services' ability to implement and resource their parochial structure and capability priorities. Attacking the current DoD modus operandi is not an objective of this research; however, in examining the adversary's capabilities, America's conceptual approach to defeating a capable adversary reveals misalignments in its defense structure.

The logical U.S. approach to developing a military strategy against China would incorporate all of the uniformed services, identifying the force design holistically to accomplish that strategy and prepare for other contingencies. Based on the president's guidance, the SECDEF should direct the military departments and services to develop, maintain, and modernize capabilities ruthlessly in line with the strategy, with the SECDEF as the sole agent before Congress advocating for resources. This approach

¹²⁶ Department of the Army, *The Army Strategy* (25 October 2018), <https://www.army.mil/standto/archive/2018/10/25/>, 1-5; Department of the Navy, *Advantage at Sea: Prevailing with Integrated All-Domain Naval Power* (17 December 2020), <https://news.usni.org/2020/12/17/u-s-maritime-strategy-advantage-at-sea>, 7.

¹²⁷ Department of the Navy, *Advantage at Sea*, 1.

reduces the unnecessary redundancies between the services, allowing divestiture of now irrelevant capabilities. Unfortunately, a critical limitation of the current budgeting and appropriations process remains that Congressional representatives and senators take umbrage at plans to close bases or reduce capabilities impacting their states' economies and often intervene to retain these items in the budget, even when they no longer meaningfully contribute to the nation's defense. When Congress acts in this manner, it handicaps the SECDEF in implementing a coherent military strategy with the necessary components to execute it. Lacking an efficient top-down driven strategy process that drives requirements and funding, each of the services pursued priorities they believed were relevant to the current and future operating environment.

In some cases, the services linked their relevance with other services, an example being the Marine Corps' force design, which returned to its historic role as the naval expeditionary force of the U.S. Navy.¹²⁸ Though the Marine Corps contributed immensely to the wars in Iraq and Afghanistan, the nation does not need a second army. Elsewhere, such as the Army's MDO and the naval services' *Advantage at Sea* strategies, reliance upon and teamwork with other services gets hinted at, but none weave together what all the services do to achieve cross-domain synergy.

¹²⁸ Headquarters Marine Corps, *Force Design 2030* (March 2020), <https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf?ver=2020-03-26-121328-460>, 1-3.

Chapter Four: U.S. Force Transformation

Since the Obama Administration announced the Pivot to the Pacific, the U.S. military largely withdrew from Iraq and Afghanistan; only a few thousand service members remain in each theater at the time of publication. Several operational concepts, such as Air-Sea Battle (ASB), the Joint Operational Access Concept (JOAC), and Joint Access and Maneuver in the Global Commons (JAM-GC), were published. The 2017 National Security Strategy (NSS) and 2018 National Defense Strategy (NDS) provided direction in an unclassified domain, guiding the U.S. military towards competition primarily with China but preparing for potential conflict with China and Russia. Several of the services proactively addressed force design; others approached the problem more deliberately—the following overviews service transformation efforts.

The United States Army

The United States Army raced in the wake of the 2017 National Security Strategy (NSS) and 2018 National Defense Strategy (NDS) to adapt and modernize, issuing in 2018 *The Army Strategy*, authored by then Chief of Staff General Mark Milley. General Milley set a goal of achieving by 2028 an army “ready to deploy, fight, and win decisively against any adversary, anytime and anywhere, in a joint, combined, multi-domain, high-intensity conflict,” all while emphasizing the need for the service to become expeditionary.¹²⁹ General Milley highlighted the Army’s Multi-Domain Operations (MDO) flagship concept, articulating that the Army must fight in the air, land,

¹²⁹ Department of the Army, *The Army Strategy* (25 October 2018), <https://www.army.mil/standto/archive/2018/10/25/>, 1-5.

and sea and operate in all domains.¹³⁰ The strategy articulates that great power competition stands at the forefront of the strategic environment's challenges and indicates a concerted and costly modernization effort is needed for the Army to support deterring, and if necessary, defeating the People's Republic of China (PRC) and Russia.¹³¹

The *Army Strategy* makes essential and bold assumptions, namely that the Army will receive funding predictably and adequately to fund a myriad of modernization requirements and improve readiness.¹³² General Milley's strategy entails a phased approach, focusing the Army in the immediate future on increasing readiness and conducting research and development, then shifting emphasis in 2022 to modernizing the force to procure and field modern systems by 2028.¹³³ Between 2028 and 2035, the Army will improve and expand its proficiency to conduct MDO.

The *Army Modernization Strategy* (AMS), issued in 2019, provides details on the service's goal to transform to a multi-domain force by 2035.¹³⁴ The AMS encompasses material, training and education, and concepts and doctrine that guide how the Army fights. Interestingly, the AMS identifies Russia as the Army's pacing threat for the next few years but highlights that China continues modernizing its military and becomes the primary threat actor just as the Army transitions to modernizing itself.¹³⁵ Though conforming to the 2018 *Army Strategy*, the AMS makes additional assumptions, some more austere, indicating that the service's budget will flatten, with reduced spending power over time. Nonetheless, the AMS describes how competitors employ capabilities

¹³⁰ Ibid., 1.

¹³¹ Ibid., 2.

¹³² Ibid., 3.

¹³³ Ibid., 4.

¹³⁴ Department of the Army, *Army Modernization Strategy* (17 October 2019), <https://www.army.mil/standto/archive/2019/10/17>, 1.

¹³⁵ Ibid., 2-3.

in multiple domains, often with stand-off, to accomplish their goals. Significantly and within MDO, the Army describes how it sees itself contributing to U.S. strategy in the competition below armed conflict.¹³⁶ The Army offers itself within MDO as a critical participant in the joint force across numerous domains. Still, the AMS fails to indicate how the service's new and improved capabilities are integrated into a joint force or commanded and controlled.

The modernization strategy identifies six modernization priorities:

1. Long-range precision fires
2. Next-generation combat vehicles
3. Future vertical lift
4. Army network technologies
5. Air and missile defense
6. Soldier lethality initiatives, such as night vision

These priorities generally align with the 30 requirements identified in the JOAC for conflict with an A2/AD-enabled adversary. With long-range precision fires, the Army, similarly to the Marine Corps, might support the Navy in sea control and sea denial efforts in China's periphery, potentially turning the A2/AD tables on the PLA. Long-range fire capabilities could strike critical Chinese A2/AD components to allow U.S. forces to flow into the theater with less risk. Similarly, the Army could limit various PLA missile platforms' effectiveness and lethality, removing some of the "teeth" of the A2/AD system by modernizing and expanding its missile defense capabilities.¹³⁷ Vehicle upgrades, vertical lift, network improvements, and soldier lethality initiatives might provide value in potential conflicts with China or Russia. These initiatives will make the Army more capable and versatile to combat various threats in numerous scenarios.

¹³⁶ Ibid., 5.

¹³⁷ Ibid., 2.

Overall, the Army’s vision for the future is well-articulated, with clear objectives and realistic timelines. The service’s strategies address that the U.S. military’s most significant concern in the future is great power competition (GPC), with an intriguing twist that Russia primarily concerns the Army in the near term. The service identifies several capabilities as requirements for countering A2/AD but does not solve the more significant problem of defeating a belligerent China without resorting to the direct approach pitting strength against strength. General Milley and his successor drive the Army toward a more expeditionary role, similar to that of the Marine Corps, but do not provide details on how the Army fits into the U.S. Indo-Pacific Command (USINDOPACOM) area of responsibility (AOR). The Army identifies what it wishes to transform to but leaves the reader unsure how the service fits into the big, joint, multi-domain picture.

The United States Navy

The naval services issued *Advantage at Sea: Prevailing with Integrated All-Domain Naval Power* in December 2020, tying together the roles of the U.S. Navy, Marine Corps, and Coast Guard in competing with China. *Advantage at Sea* identifies provocative PRC behaviors intended to undermine the U.S.-led international order and that

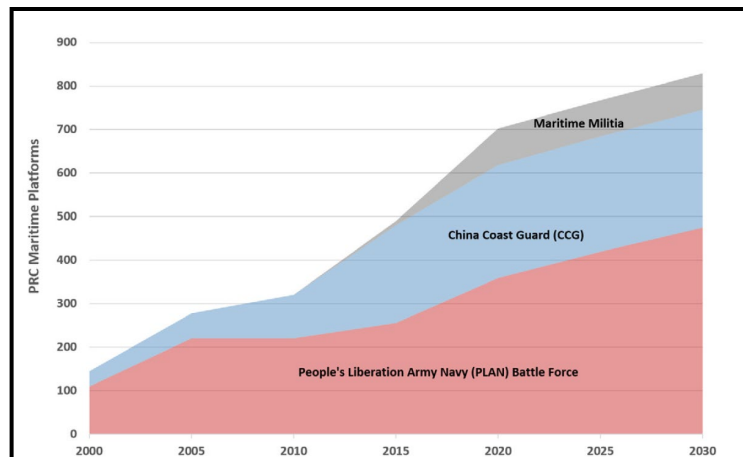


Figure 6: PRC Maritime Forces Growth Since 2000
(Source: *Office of Naval Intelligence*)

these acts frequently occur in the maritime domain.¹³⁸ The naval services identify the PRC and Russia as the United States' primary competitors but focus on China due to its goal of undermining America's maritime power.¹³⁹ *Advantage* points out that China procures platforms to challenge America's naval preeminence, such as aircraft carriers, nuclear submarines, amphibious assault ships, and advanced fighter aircraft. Similarly, the PRC built naval auxiliaries, such as its large coast guard and maritime militia, to augment the People's Liberation Army Navy (PLAN).¹⁴⁰ China's efforts resulted in a maritime force with almost three times the number of ships as the U.S., although America retains a qualitative edge at present.¹⁴¹ The increase in PRC naval capabilities is noteworthy because it occurred in about two decades, accompanied by enormous shipbuilding capacity growth.¹⁴² Finally, the strategy points out that the U.S. disperses its maritime power globally, while the PRC concentrates its naval strength in China's periphery.¹⁴³ *Advantage* warns that America and its partners face difficulty increasing their naval capabilities amid fiscal austerity, exacerbated by the Coronavirus 2019 (COVID-19) pandemic.¹⁴⁴

The maritime strategy identifies three concepts, Distributed Maritime Operations (DMO), Littoral Operations in a Contested Environment (LOCE), and Expeditionary

¹³⁸ Department of the Navy, *Advantage at Sea*, 1.

¹³⁹ *Ibid.*, 3.

¹⁴⁰ Lyle Morris, "Organizing for the Gray Zone: Assessing the Rights Protection Capabilities of the New China Coast Guard," in *China's Maritime Gray Zone Operations*, ed. Andrew Erickson and Ryan Martinson (Annapolis: Naval Institute Press, 2019), 83.

¹⁴¹ McDevitt, *China as a Twenty-First Century Naval Power*, 67-70.

¹⁴² Department of the Navy, *Advantage at Sea*, 3-4.

¹⁴³ McDevitt, 67-69. McDevitt discusses how the U.S. Seventh Fleet "faces as many as 270 PLA Navy ships and submarines that could shoot advanced weapons at them, as could all of the land-based air and missile forces...In short, in its home waters, China possesses a formidable and still-growing navy that on a day-to-day, routine basis- and this is the most important point---overshadows the United States alone, or even the combined capabilities of the United States and Japan."

¹⁴⁴ *Ibid.*, 5.

Advanced Base Operations (EABO), that the three services will employ in combat under a future Joint Warfighting Concept (JWC).¹⁴⁵ Unfortunately, DoD has yet to deliver the JWC due to COVID-19, which stymied wargaming the concept.¹⁴⁶ However, DMO, LOCE, and EABO seem purpose-built to address aspects of PRC A2/AD. DMO presents the PLA with a challenging targeting problem by dispersing U.S. Navy vessels across the vast Pacific Ocean, making it more difficult to find, track, and strike ships with anti-ship ballistic missiles (ASBMs), frustrating the Chinese kill chain. LOCE addresses how the Marine Corps supports sea control in the littoral environment. EABO allows the naval services to mitigate PRC missile and other weapons systems' threats, facilitating maneuver over critical maritime terrain, and supporting sea denial, sea control, and sustainment missions.¹⁴⁷ The naval concepts nest within the JOAC and allude to operations in multiple domains and could apply to both direct and indirect approaches against an A2/AD-enabled adversary. *Advantage* alludes to the potential to create risk and impose costs by turning the A2/AD tables on China, which starts to hint at alternative and indirect methods to respond to PRC provocation and potential aggression. The naval strategy appears versatile and flexible to interact with the other services' strategies, but it remains unclear how naval services' "all-domain" efforts interact with the Army's MDO concept. Perhaps the JWC, once completed, will unify the disparate service concepts.

For the Navy, *Advantage at Sea* articulates that sea control now takes primacy over all other naval missions.¹⁴⁸ The document emphasizes distributing capabilities over

¹⁴⁵ Ibid., 13.

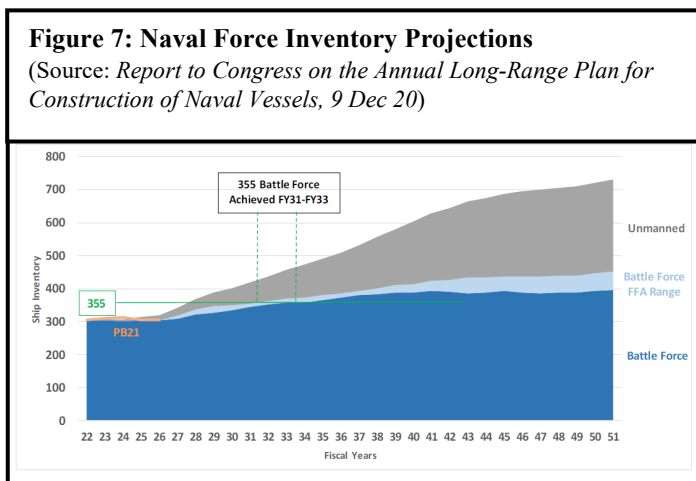
¹⁴⁶ "COVID Delays Joint Warfighting Concept: Hyten," Breaking Defense, last modified 22 January 2021, 15:26, <https://breakingdefense.com/2021/01/covid-delays-joint-warfighting-concept-hyten/>.

¹⁴⁷ Ibid., 25.

¹⁴⁸ Ibid., 16.

“fewer exquisite platforms,” ostensibly referring to nuclear aircraft carriers, which the U.S. would reluctantly expose to PRC A2/AD.¹⁴⁹ The Navy, in its most recent report to Congress for the construction of ships for fiscal years 2022 to 2051, provides crucial insight on the future composition of the fleet to accomplish national objectives.

The Navy’s plan adheres to 2018 NDS guidance and the tri-service strategy, prioritizing the *Columbia*-class ballistic missile submarine, a forward and ready combat force, a lethal and modern navy against China and Russia, and growth of the fleet



towards a goal of 355 ships.¹⁵⁰ The Navy seeks to reach 316 crewed ships by fiscal year (FY) 2026 while constructing 21 unmanned vessels in the same timeframe.¹⁵¹ Further, between FY22 and FY26, the Navy intends to fund the *Virginia*-class attack submarines to replace the *Los Angeles*-class vessels, purchasing ten ships in the Future Years Defense Program (FYDP). The service plans to purchase two *Arleigh Burke* (DDG-51) Flight III destroyers every year and purchase three or four frigates (FFG 62) per year. The Navy will also purchase support vessels, including fleet oilers and 16 used sealift vessels. While the Navy intends to fund two *Gerald Ford*-class nuclear carriers, CVN 80 and CVN 81, the service acknowledges the need to reassess potential alternatives. As

¹⁴⁹ Ibid., 16.

¹⁵⁰ Chief of Naval Operations, Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels (9 December 2020), https://media.defense.gov/2020/Dec/10/2002549918/-1/-1/0/SHIPBUILDING%20PLAN%20DEC%202020_NAVY_OSD_OMB_FINAL.PDF, 3-4.

¹⁵¹ Ibid., 4.

depicted in Figure 7, should the Navy’s plan be funded and executed as scheduled, the service would achieve its 355-ship goal sometime in FY31 to FY33, and by 2050 would compose a roughly 700-ship Navy, approximately half of which would consist of uncrewed platforms.¹⁵²

The Navy’s ambitious plan appears optimized for potential conflict with China and its A2/AD. While the Navy intends to maintain 11 aircraft carriers, the numbers may

Table 1: Current versus Fiscal Year 2045 Ship Structure
(Source: Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels, 9 Dec 20)

Platforms	Current Inventory	Plan FY45 Inventory	FNFSFFA Ranges
Aircraft Carrier	11	11	8-11 ¹
CVL	0	0	0-6 ²
LHA/LHD	10	9	9-10
Amphibious Warfare Ships (less LHA/LHD)	23	57	52-57 ³
Large Surface Combatant	91	74	73-88
Small Surface Combatant	30	66	60-67
Attack Submarines / Large Payload Submarine	54	72	72-78
Ballistic Missile Submarines	14	12	12
Combat Logistics Force	29	69	69-87 ⁴
Support Vessels	34	33	27-30
Unmanned Surface	0	119	119-166 ⁵
Unmanned Subsurface	0	24	24-76 ⁵
Battle Force	296	403	382-446
Battle Force + Unmanned Surface	-	522	501-612
Battle Force + Unmanned Surface + Unmanned Subsurface	-	546	525-688

fluctuate between 8-11, indicating a tacit willingness to shift resources to more risk-worthy platforms.¹⁵³

The large surface combatant fleet, comprised of cruisers and destroyers, will decline in size by approximately 20%. However, smaller

surface combatants, such as frigates, will increase by over 200%. Attack submarines increase from 54 to 72 vessels, and amphibious warfare ships, not including the LHA or LHD platforms, increase from 23 to 57 vessels, incorporating a future platform, the light amphibious warship (LAW).¹⁵⁴ For the battle fleet, the Navy increases the overall number of vessels by over 30% but shifts the composition towards smaller platforms, distributing capabilities. Finally, over 140 unmanned surface and subsurface vessels

¹⁵² Ibid., 9-10.

¹⁵³ Ibid., 7-11.

¹⁵⁴ Ibid., 9-10.

would augment the battle fleet, both as combatants and support vessels. The unmanned fleet's growth presents opportunities to impose risk on China at relatively low cost and danger to U.S. personnel. The Navy's future fleet composition appears more capable of confronting a belligerent China in its near seas, especially if allied and partner nations' navies augment the U.S. fleet.

The United States Marine Corps

Under General David Berger's direction, the Marine Corps analyzed its current force structure and embarked on an ambitious force design effort informed by the 2018 NDS and Commandant's Planning Guidance (CPG). The Marines' force design assumed that the Corps structure was "not organized, trained, equipped, or postured to meet the demands of the rapidly evolving future operating environment."¹⁵⁵ Berger guided planners to design the Marine Corps' future structure to fight using the DMO, EABO, and LOCE operational concepts, acknowledge the proliferation of A2/AD threats, and address means to overcome those.¹⁵⁶ The Commandant directed his team to identify what the Navy needed from the Marine Corps, further illustrating that the Corps' future in GPC lies with reinvigorating its role as a naval expeditionary force, synergizing with the Navy.¹⁵⁷ During years of war in Iraq and Afghanistan, the nation's need for ground forces drove the Marines to step into a second army's role, but Berger indicates a backup Army is not what America requires to compete with China. The U.S. Army seems to

¹⁵⁵ Headquarters Marine Corps, *Force Design 2030* (March 2020), <https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf?ver=2020-03-26-121328-460>, 2.

¹⁵⁶ *Ibid.*, 3.

¹⁵⁷ *Ibid.*, 3.

agree with Berger, as that service's strategy and modernization plan indicate a shift from large and heavy forces to a more expeditionary mindset.

The Marines' force design results were noteworthy for several reasons. First, rarely do U.S. military branches recommend downsizing their end strength, but the Corps proposed cutting 12,000 Marines by 2030.¹⁵⁸ Ostensibly the cost savings from these personnel reductions could fund other materiel programs or shape personnel grades and military occupational specialties to allow the Corps to retain skilled and experienced personnel. Second, the Corps moved to divest three of 24 active-duty and two of eight reserve component infantry battalions, the Marines' crown jewels. The reduction of five infantry battalions, almost 20% of the Corps' infantry force structure, precipitated a corresponding reduction of support units, such as medium tiltrotor, heavy-lift helicopter, and light attack helicopter squadrons.¹⁵⁹ Light attack helicopter squadrons provide less utility in many Indo-Pacific scenarios due to their limited range and lift capacity. Recognizing A2/AD, the Marines recommended divesting 16 of 21 cannon artillery batteries but intended to increase from seven to 21 rocket artillery batteries, providing the Corps with added long-range precision fires. In acknowledging China as the pacing threat and the Army's role as the heavyweight ground combat force, the Marine Corps divested all seven of its tank companies and its prepositioned M1-A1s and divested its active component law enforcement battalions.¹⁶⁰

These are aggressive divestments and amounted to the slaughtering of sacred cows to some in the Corps. Undoubtedly, eliminating tanks alone will save many

¹⁵⁸ Ibid., 7.

¹⁵⁹ Ibid., 7.

¹⁶⁰ Ibid., 7.

millions of dollars in operations and maintenance costs and eliminate the need to upgrade and modernize the aging M1-A1 platform. Deep cuts allowed force designers to recommend increasing three active component unmanned aerial vehicle (UAV) squadrons and adding three light armored reconnaissance (LAR) companies.¹⁶¹ UAVs and LAR offer more useful capabilities in GPC and potential conflict with China in the Pacific than 70-ton main battle tanks and military police. The Corps cut other capabilities and units from its force structure, and General Berger hinted that the remaining infantry battalions would potentially trim down further. Like the themes of adding long-range precision fires, the Corps seems laser-focused on preparing for impending conflict with the PRC.

Unlike its sister services, the Marines began executing force design decisions, shuttering units planned for deactivation, and implementing personnel policies to smoothly and rapidly transition to its new structure. Force redesign will result in a lighter and more expeditionary Marine Corps by 2030, better able to support naval operations in the USINDOPACOM AOR and execute operational concepts intended to frustrate and disrupt A2/AD. The new Corps duplicates fewer Army capabilities, distinguishing itself as the naval expeditionary force supporting sea control and sea denial.

The Corps' bold redesign may, like the Navy's shipbuilding plan, fail to fully incorporate the service's ideas for its future role in great power competition with the other branches. The Marines may be getting far ahead of the proverbial pack, but should the JWC envision a different role than the Corps intends, a redesign could be required and structure decisions potentially reversed. Though alluded to in *Force Design 2030*,

¹⁶¹ Ibid., 7.

nowhere does the service identify how the futuristic Marine Corps interacts with the Army and Air Force. Teaming with the Navy remains a consistent theme throughout the strategy, and the Marines see their relevance dependent upon providing the naval service an auxiliary to support maritime campaigns. The Corps' design assumes that the Army will support Marines with armor, cannon artillery, and military police capabilities, should the Corps need them. Marine planners potentially assumed that by acting quickly to redesign the Corps, they tied the Army's hands to maintain those gap capabilities that the Corps no longer possesses. This assumption may prove costly should the Army similarly divest or merely reduce those capabilities. General Milley's strategy directs the Army toward an expeditionary role, creating the opposite situation from Iraq and Afghanistan. Now the Army follows the Marines to become a second expeditionary force.

The United States Air Force

The U.S. Air Force's (USAF) recently appointed Chief of Staff, General Charles Q. Brown, Jr., issued guidance to his service to *Accelerate Change or Lose*, indicating his imperative to evolve and modernize to win in competition or conflict with the PRC. General Brown also points his service towards China as the competitor who seeks to erode U.S. military advantage.¹⁶² Like Commandant Berger and the Marines' *Force Design 2030*, General Brown assesses that today's USAF will not prevail in the future and thus identifies his service's force design efforts as crucial to "joint all domain operations."¹⁶³ From General Brown's comments, the Air Force barely began its force

¹⁶² U.S. Air Force, *Accelerate Change or Lose*, (31 August 2020), <https://www.airforcemag.com/app/uploads/2020/09/CSAF-22-Strategic-Approach-Accelerate-Change-or-Lose-31-Aug-2020.pdf>, 3.

¹⁶³ *Ibid.*, 5.

design efforts, as the chief of staff indicates in *Accelerate Change or Lose*. That the Air Force trails behind the other services may present opportunity and risk. Because the USAF often supports its sister services, a lag in designing the future force and executing structure changes may allow the Air Force to optimize to best support the other branches, as the dust settles from their reconfigurations. However, the Air Force's deliberate approach risks the possibility that DoD leaders, much less Congress, consider that service's absence of a compelling vision as a rationale to deprioritize its funding. Underfunding the Air Force jeopardizes mission success, especially if the nation intends to defeat PRC A2/AD directly, as bombers, fighters, and support aircraft will be essential to disrupting and eventually defeating Chinese threats. Another risk is that USAF platforms require time to research and develop, vast funding to procure, and additional time to produce exquisite platforms like the F-22 or F-35. The USAF presently possesses an advantage over the People's Liberation Army Air Force (PLAAF) due to the former's inventory of fifth-generation fighters, including 185 F-22 aircraft, and a growing inventory of F-35 Joint Strike Fighters similar to the Navy and Marine Corps.¹⁶⁴ Should the Air Force identify significant changes necessary to support a future Joint Warfighting Concept optimally, the service will require a long lead time to transform.

Several themes emerge from the largest services' visions for change and transformation. First, while terms like multi-domain, all domain operations, and joint repeatedly appear throughout each service's strategy or vision, noticeably lacking are explanations of *how* the disparate capabilities and concepts tie together to achieve the cross-domain synergy identified in the JOAC as the crucial element to assure the U.S.

¹⁶⁴ Heginbotham, *The U.S.-China Military Scorecard*, 3.

access to operational areas. Perhaps the JWC will provide a coherent vision of how cross-domain synergy occurs; however, the military services commenced force design activities lacking the big picture. Each service conducted force design and advanced operational concepts lacking a unifying strategy or concept to tie these disparate capabilities together to achieve cross-domain synergy. Thus, when the JWC arrives, each service will fight to retain the concepts and capabilities each labored independently to develop. When comparing the U.S. approach at force design and transformation with that of the PRC, one quickly realizes the Chinese execute a top-down strategy driving resource decisions and operational concepts, putting America at a further disadvantage. Two outcomes of the JWC following service force redesign are imminent; either the JWC merges aspects of Army, Navy, and Marine Corps redesign into compromise guidance accepting each service's work or the JWC provides a wholly fresh and possibly revolutionary vision, requiring some or all of each service's force designs and concepts to change markedly. In the second scenario, all services except the USAF, trailing in force design, may have to reverse some of their decisions.

Second, regardless of progress in force design, all services view China and Russia as the pacing threats, with the PRC identified by all as the primary long-term adversary for its economic and military power. To a lesser extent, the capabilities identified by the Army, Navy, and Marine Corps seem geared towards explicitly addressing Chinese A2/AD. However, the Army's desired capabilities provide the most utility across a broad spectrum of competition beyond conflict with the PRC. The Army and Marine Corps' emphasis on long-range precision fires, at first glance, appears to pertain primarily towards destroying A2/AD threats; however, these capabilities offer applicability to other

strategies. Both services' procurement of long-range rockets and missile systems offers the U.S. the potential to turn the first and second island chains into an A2/AD ring around China. The High Mobility Artillery Rocket System (HIMARS) and Multiple Launch Rocket System (MLRS) support Navy sea control and sea denial efforts by threatening PLAN maritime platforms.

Finally, the analysis points to the likelihood that should U.S.-PRC competition rise to armed conflict, America appears focused on warfare in China's periphery. The services indicate as much in their strategies, deriving this from the NSS and NDS. Indeed, the most likely cause of conflict between the U.S. and China arises from Taiwan, which the PRC identifies as a core national interest.¹⁶⁵ Xi Jinping indicated in various speeches his commitment to unify Taiwan with the mainland, potentially during his lifetime, and potential to use force to accomplish such.¹⁶⁶ Should the PRC blockade or seize Taiwan, U.S. efforts to develop a counter-A2/AD strategy and concepts would make sense if the most effective American response were a direct military thrust towards the East China Sea. However, this course of action carries with it the most significant risk of escalation, risks the most U.S. blood and treasure, and failure. While breaking through Chinese A2/AD may be necessary, it will consume precious time and may not offer the PRC the best incentive to deescalate.

¹⁶⁵ Friedberg, *A Contest for Supremacy*, 174-178.

¹⁶⁶ McDevitt, *China as a Twenty-First Century Naval Power*, 80-81;

Chapter Five: Alternate Strategies to Compete with China Long-Term

If the direct response to Chinese provocation or aggression carries the most risk, is there another way to deal with China? America needs to think differently about competing with, and if necessary, defeating a belligerent China. At the grand strategic level, America can only compete with China if it stops focusing on the military lever of national power as the best solution. The PRC coherently employs diplomatic, informational, military, and economic (DIME) power.¹⁶⁷ In contrast to the United States, China focuses on economic competition, with its Belt and Road Initiative (BRI) as its key mechanism for victory.¹⁶⁸ China's strategy emphasizing economic power offers the PRC a way to achieve Sun Tzu's advice to win without fighting.¹⁶⁹ Simultaneously, China's growing economy provides it the means to build and maintain a world-class military, while budget deficits and staggering national debt challenge the U.S and its allies to sustain large and modern militaries. Thus, America would best consider diplomatic, informational, and economic levers as carrying the best chance of maintaining the U.S.-led international order while retaining a military optimized to support the other aspects of grand strategy and for use in a crisis, armed conflict, or war.

Several China watchers offer alternative strategies to address China's rise. Hugh White, in *The China Choice*, suggests building a Concert of Asia.¹⁷⁰ White's Concert of Asia entails the U.S. stepping back from primacy in the region to acknowledge China's

¹⁶⁷ Ronald O'Rourke, Congressional Research Service, *U.S.-China Strategic Competition in South and East China Seas: Background and Issues for Congress* (28 August 2020), <https://crsreports.congress.gov>, 22.

¹⁶⁸ Kashmeri, *China's Grand Strategy*, 32-33.

¹⁶⁹ Derek M. C. Yuen, *Deciphering Sun Tzu: How to Read The Art of War* (New York: Oxford University Press, 2014), <http://search.ebscohost.com.nduezproxy.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=nlebk&AN=939808&site=eds-live&scope=site>, 106.

¹⁷⁰ Hugh White, *The China Choice: Why We Should Share Power* (Oxford: Oxford University Press, 2013), 125-151.

rise while encouraging two other powers, Japan and India, to help maintain a balance of power in the region. U.S. leaders, including former USINDOPACOM Commander Admiral Harry Harris, acknowledged that China possesses the most military power in the South China Sea and can now control it.¹⁷¹ America disperses its military spending and resulting power globally, while China focuses on regional hegemony.¹⁷² Essentially, realizing a Concert of Asia acknowledges that China is a strong peer competitor, and containment is not a viable strategy. If there is any way to check aggressive PRC behavior, it lies with engaging other rising powers to balance China, while America recognizes and welcomes the PRC's increasing role in decision-making. Aaron Friedberg asserts that as long as the U.S. maintains a strong alliance with Japan, the two nations can balance against China and restrain its influence.¹⁷³ Table 2 illustrates on a macro-scale that Japan and the U.S. currently balance China's naval power.¹⁷⁴ While the likelihood China opts for a cooperative power-sharing agreement appears slim, America's best chance to maintain the international world order it built is by aggregating many nations' strengths.¹⁷⁵

While theories and suggestions abound on how the U.S. should deal with a rising China, the problem remains that as the PRC grows stronger, particularly in its region, the likelihood of competition rising to conflict increases. Expecting the U.S. to abdicate responsibility to its allies and partners in East Asia is unrealistic, but so too is expecting

¹⁷¹ Kashmeri, 38. Admiral Harry Harris stated in April 2018 before the Senate Armed Services Committee that "China is now capable of controlling the South China Seas in all scenarios short of war with the United States." Kashmeri asserts that China achieved hegemony in its regional periphery by updating the PLA while simultaneously claiming ownership to most of the South China Sea, reinforcing those claims by militarizing islands and reefs, and ignoring the claims of other nations.

¹⁷² Ibid., 40.

¹⁷³ Friedberg, *A Contest for Supremacy*, 178.

¹⁷⁴ McDevitt, *China as a Twenty-First Century Naval Power*, 68.

¹⁷⁵ O'Rourke, *U.S.-China Strategic Competition in South and East China Seas*, 23-24.

China not to flex its muscles as a great power. Identifying ways to change Chinese Communist Party (CCP) leadership behavior is beyond this paper's scope but merits consideration. Should competition between the U.S. and PRC escalate to conflict, America should consider alternative military strategies.

In a hypothetical conflict between the PRC and Taiwan, or the PRC and another U.S. ally in East Asia, such as Japan or the Republic of Korea (ROK), America's military response should be indirect and unpredictable, putting the CCP in a dilemma. The PRC's most significant concern and threat, which it spent the past 25 years preparing for, is U.S. direct response to a crisis similar to 1995-1996 with Taiwan, where America deploys naval and air forces to China's periphery to project power.¹⁷⁶ The PRC prepared well for this scenario, and America must appreciate that China militarily strengthened its periphery, so the U.S. must instead seek an indirect approach to influence CCP decision-making. The downside of CCP investments in anti-access/area denial (A2/AD) is that these capabilities, though mobile and difficult to target, fulfill a role of threatening and striking targets within the first and second island chains.¹⁷⁷ A2/AD capabilities generally do not contribute to power projection abroad. A truck mobile DF-21, for example, may relocate within mainland China and strike objects as distant as Guam; however, the PLA cannot project power with this weapon. To generalize, China's emphasis on A2/AD resulted in a mostly fixed defense; the nation possesses a limited capacity to project power well beyond the first island chain, and indeed the second island chain, although it

¹⁷⁶ Fravel, *Active Defense*, 223-224.

¹⁷⁷ Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, 72.

is slowly moving in that direction with the construction of aircraft carriers, more large surface combatants, and support craft.

The PRC requires decades to build the force capable of deploying military power globally on the scale of the U.S. and herein lies the dilemma for CCP decision-makers.¹⁷⁸ Should the CCP deploy its military abroad, especially outside its East Asia home territory, every capability projected denudes the A2/AD system of military power. For example, a Chinese aircraft carrier deployed to the Middle East or the Indian Ocean is one less carrier and air wing available to deter and defend against the U.S. in a crisis. A nascent PRC capacity to project military power, combined with the dilemma associated with denuding its Theater Commands of capabilities comprising A2/AD, offers America the ability to operate outside the threat ring to defeat a belligerent China indirectly.

In a hypothetical conflict in East Asia, America's military should assume a strategic defensive in that region while assuming a strategic offensive against China everywhere else. China's BRI entails trillions of dollars of investments in Asia, Africa, and Europe; its associated infrastructure programs are vital to China's economic future.¹⁷⁹ Additionally, China's reliance upon oil imports, carried by tankers through numerous choke points or within pipelines, makes the country vulnerable to interruption of global commerce. In a potential conflict, instead of directly responding to an attack by attempting to breach the PRC A2/AD shield, the U.S. should use its globally dispersed forces and reach to irreparably break the Chinese economy, causing physical and psychological damage last decades. America could interdict ships sustaining the PRC's

¹⁷⁸ State Council Information Office, *China's National Defense in the New Era*, 10.

¹⁷⁹ Andrew Erickson, "China," in *Comparative Grand Strategy: A Framework and Cases*, ed. Thierry Balzacq, Peter Dombrowski, and Simon Reich (Oxford: Oxford University Press, 2019), 83-85.

economy and seize key terrain on its periphery to hold until the PRC acquiesces. Static infrastructure, such as pipelines, that sustain the PRC could be struck and destroyed.

This strategy entails risk for the U.S. and its allies. A key implication is that America's allies in East Asia must significantly build their defenses, acknowledging that a U.S. indirect approach toward defeating an aggressive China requires time and patience to execute. Unilaterally defending allies and partners while those nations minimally invest in their military capabilities is not economically feasible for the U.S. nor politically palatable for its citizens. Just as the PRC exploits the power of the defense, U.S. allies must improve defensive and A2/AD capabilities, such that if China chooses to pursue aggression, it faces high costs economically and diplomatically. America's allies and partners deserve reasonable expectations, that the U.S. will support them faithfully but will not rescue them from their lack of preparedness, and that these states must blunt Chinese aggression while the U.S. maneuvers for the *coup de grace*. Indigenous militaries and forward-deployed American forces would bear the brunt of initial hostilities, with little likelihood of immediate reinforcement.

The strategy risks destabilizing the PRC, should the approach choke China's economy, risking disorder and humanitarian crisis. China's leaders might see no other option for retaining their hold on power but to strike violently against the U.S. and its allies with its nuclear arsenal. Ideally, the two nations never find themselves in conflict, but the U.S. can no longer deter China unilaterally, especially in the latter's immediate periphery. Only by America's allies and partners building their strength militarily and preparing themselves for conflict with China can the U.S. adopt a viable strategy that does not resemble the proverbial direct attack on a machine gun nest.

Chapter Six: Conclusion and Recommendations

Since the 1995-1996 Taiwan Straits Crisis, China dramatically improved its military forces; the People's Liberation Army (PLA) now possesses exquisite technology. The Chinese Communist Party (CCP) pursues a strategy focused on achieving regional hegemony, for which it now possesses the necessary economic, informational, and military power.¹⁸⁰ The CCP focused its efforts and investments in the PLA Navy, Air Force, and Rocket Force, shifting the PLA's character from a continental force to a maritime one.¹⁸¹ Meanwhile, the CCP reformed the PLA structure and organization to achieve greater jointness and informationalization, and its Theater Commands now resemble the U.S. Combatant Command (CCMD) model.¹⁸² The PRC implemented progressive personnel policies improving the recruitment, retention, training, and education of its human capital, resulting in a much more capable force to execute Xi Jinping's vision. While continuing to transform, the modern PLA is highly capable, especially in China's periphery, and can challenge the U.S. to control the near seas.

Meanwhile, the U.S. military lags behind the PLA in transforming, getting a late start after the 2017 National Security Strategy (NSS) and 2018 National Defense Strategy (NDS) refocused America's military on great power competition. The four largest uniformed services within the Department of Defense (DoD) are at various stages of transformation to meet the threat and environment, mainly pursuing their theories of operational relevance. The Navy, Marines, and Army began executing their force design

¹⁸⁰ Kashmeri, *China's Grand Strategy*, 4-5.

¹⁸¹ Erickson, "China," 89.

¹⁸² Fravel, *Active Defense*, 7-8.

visions, each with varying timelines, while the Air Force recognizes it is behind and needs to catch up.

The services seemed to have considered operational concepts such as Air-Sea Battle and the Joint Operational Access Concept, which envision the U.S. acting directly against nations such as China, which possess formidable anti-access/area denial (A2/AD) systems. Unfortunately, the lack of a Joint Warfighting Construct (JWC) causes discordant efforts as the services continue to modernize and reform without a unifying concept to achieve cross-domain synergy. The U.S. identified the most pressing adversaries but lacks consensus on the best way to compete and, if necessary, create the cross-domain synergy necessary to defeat aggression. In sum, the U.S. military is slowly adapting to a notion of potential conflict involving a direct approach against an adversary's strongest points, but without a blueprint or strategy of how to build the force by directing each service to raise, train, and equip the capabilities needed to achieve success. A hodgepodge force consisting of each service's favored capabilities likely results from the lack of a JWC, such that any cross-domain synergy achieved is more accidental than deliberate and by design. Pursuing a direct approach to confrontation in the PRC's near seas, while lacking a unifying JWC, also undoubtedly results in avoidable casualties, risks failure, and increases the likelihood of escalation.

Synthesis

Given the importance of China's economic power within its grand strategy, the PRC likely desires to avoid military conflict with the U.S. to maintain its economic

growth.¹⁸³ China is limited in its ability to project power to and beyond the second island chain and will remain hamstrung in deploying forces outside of Asia without a concerted procurement effort in several key areas. However, the PRC is willing, capable, and actively pursuing the expeditionary capabilities and developing forces required to further project power from Asia. The U.S. should monitor PRC fielding of replenishment ships and aerial refueling tankers to extend China's maritime and aviation reach beyond the first island chain. These developments will signal a shift in strategy from a regionally-focused maritime one to something more global in character.¹⁸⁴

Analysis of U.S. and PRC capabilities and concepts reveals that the balance of power shifted significantly in East Asia, changing the equilibrium relative to a potential conflict in China's periphery. In the future, China will gain an advantage through its employment of A2/AD and an increasingly modern, capable PLA, primarily as these forces remain massed in East Asia. China's maritime, aviation, and missile capabilities will continue improving in quality, sophistication, and quantity, providing the PLA a quantitative and qualitative edge *locally* over the U.S. in a potential conflict. The PRC will gradually develop the means to project power beyond China's periphery and the first or second island chain; however, China will lag well behind the United States in this arena for at least several decades. Additionally, China's reach is already limited beyond the first island chain and significantly beyond the second island chain.

Recommendations

¹⁸³ Phillip Saunders, "Implications: China in the International System," in *The Chinese People's Liberation Army in 2025*, ed. Roy Kamphausen and David Lai (Carlisle: U.S. Army War College Press, 2015), 327.

¹⁸⁴ Cole, "The People's Liberation Army in 2020-2030 Focused on Regional Issues," 184.

The United States possesses a significant advantage militarily operating beyond the first island chain, at the limit of China's reach. The CCP invested considerable effort to advance its capability to keep U.S. forces at arm's reach; therefore, a more elegant American strategy would avoid pitting strength against PRC strength. The U.S. should instead make China's mostly fixed A2/AD assets and limited operational reach a weakness to exploit. While the CCP seeks to move beyond defending the near-seas to "safeguard China's overseas interests and support the country's sustainable development," its ability to do so will remain limited for several decades.¹⁸⁵ Additionally, the CCP faces a dilemma in that every unit or platform deployed abroad is one less resource available to maintain a defense around China's periphery. While the PLA may become more capable of projecting force beyond the second island chain, the CCP's willingness to do so may remain limited.

Therefore, the United States should do several things to adjust to the reality it now faces, balance against China, and counter any belligerent PRC actions in East Asia. First, the U.S. should weigh the importance of defending Taiwan in any hypothetical scenario against its national interests, then communicate clearly to the CCP what actions will trigger an American military response. While strategic ambiguity may cause CCP leaders to second guess themselves, U.S. messaging that it will or will not respond militarily if China seeks unification by force would send a clear signal to international audiences of the level of American commitment to Taiwan as a liberal democracy.

Second, the U.S. military should focus its strategies and concepts on an indirect approach to potential conflict with China. The U.S. will never defeat China at an

¹⁸⁵ State Council Information Office, *China's National Defense in the New Era*, 7.

acceptable cost by breaking the PRC A2/AD shield to force its way into East Asia. Instead, the U.S. should identify aspects of China's economic livelihood, including its Belt and Road Initiative (BRI), that it can manipulate to compel China to adhere to international norms. Simultaneously, the DoD must invest the intellectual rigor into completing the JWC, beta test, and wargame the concept, then aggressively use it to unify the services in a coherent strategy and operating concept, enabled by corresponding force design decisions. The DoD should continuously improve and evolve the JWC as the environment and threats change.

Third, shifting away from strategies and concepts intended to attack into the teeth of China's defense would allow the U.S. to invest more heavily in its force structure for purposes of maintaining America's asymmetric advantage of global power projection. The CCP prepares itself for a conflict on its doorstep, and strangely the U.S. seems all too willing to accommodate Chinese preferences for the time and place of potential conflict. The PRC home-field advantage consists of a robust A2/AD system, with a modern PLA that continues improving around jointness and informationization themes. Sun Tzu advises against attacking directly into an adversary's strength. The U.S. would be wise to pursue approaches that avoid PRC strength, including harnessing its advantage in global power projection to achieve effects outside China's periphery for the foreseeable future.

The indirect approach to potential conflict with China is the most sensible for efficiently and effectively accomplishing U.S. national goals and least likely to escalate a conventional conflict to a nuclear war. China undeniably possesses a significant home-field advantage, gained through concerted investment and focus. The United States, distracted in Iraq and Afghanistan, squandered resources that otherwise might have

maintained a favorable balance of power in the East Asia sub-region. The U.S. must adjust its course now if it wishes to maintain the liberal international order.

The U.S. must remain loyal to its allies in Asia. However, if North Korea commits acts of aggression against the Republic of Korea (ROK) or Japan, China might interfere with America's response, potentially delaying the flow of U.S. forces into the theater. Embracing this reality will force Japan and the ROK to reassess their own defense apparatus's sufficiency and invest in defending their sovereignty. The U.S. could focus its diplomatic and informational influence and considerable economic power to support these states but retain military capabilities to respond to a crisis. However, American reinforcements might take longer to arrive than desired. Meanwhile, the U.S. could begin to strangle China's economic lifelines while punishing the PRC through counterforce strikes.

Finally, a military strategy alone will not position America globally to deter PRC aggression or provocation. The U.S. must develop a comprehensive grand strategy employing all national power levers to encourage the PRC to ascend to great power status responsibly. Chairman Xi leads China in executing its grand strategy, focused internally and externally through the BRI, an economic lever of national power, on displacing America as the global leader.¹⁸⁶ America must devise its coherent grand strategy, harnessing its strengths and exploiting PRC weaknesses, of which there are many, to retain its strength, assure allies and friends, and defeat authoritarianism.

¹⁸⁶ Kashmeri, *China's Grand Strategy*, 6-8.

Appendix 1: Tables

Table 1. Current versus the Fiscal Year 2045 Ship Structure

Platforms	Current Inventory	Plan FY45 Inventory	FNFS FFA Ranges
Aircraft Carrier	11	11	8-11¹
CVL	0	0	0-6²
LHA/LHD	10	9	9-10
Amphibious Warfare Ships (less LHA/LHD)	23	57	52-57³
Large Surface Combatant	91	74	73-88
Small Surface Combatant	30	66	60-67
Attack Submarines / Large Payload Submarine	54	72	72-78
Ballistic Missile Submarines	14	12	12
Combat Logistics Force	29	69	69-87⁴
Support Vessels	34	33	27-30
Unmanned Surface	0	119	119-166⁵
Unmanned Subsurface	0	24	24-76⁵
Battle Force	296	403	382-446
Battle Force + Unmanned Surface	-	522	501-612
Battle Force + Unmanned Surface + Unmanned Subsurface	-	546	525-688

(Source: Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels, 9 Dec 20)

Table 2. Blue-Water-Capable Ships of Major Naval Powers (in Commission or Fitting Out, ca. 2021)

	China	U.K.	France	Japan	India	Russia	United States
Carriers	2	2	1	2 (<i>Izumo</i> class being adapted for F-35B aircraft)	1	0	11
Aegis-like Destroyer*	36	6	4	6 (Aegis) 6 (Aegis-like)	4	0	90 (CGs and DDGs)
Modern Frigate (FFG)	30	13	6 (FREMM) ^b	0	4	10	0 (25 LCSs are not FFGs)
Large Amphibious	9	3	3	3+2DDH	1	0	34
AOR/AOE	11	3	3	5	5	3 very old	30
SSN	8	6	5	0	1	17+8 SSGN	53+4 SSGN
SS	30			22	16	19	0
SSBN	6	4	4	0	1	13	14
Total	132	37	26	46	33	70	236 (plus 25 LCSs)

a. "Aegis-like" ships are modern destroyers with phased-array, electronically scanned radars and mission suites optimized toward air defense, having surface-to-air missiles with sufficient range for area as opposed to unit defense. For the PLA Navy, these are Types 052C/D and Type-055. Japan has both U.S.-supplied Aegis radar and combat systems and domestically developed Aegis-like systems. Others are the U.K. Type 045 *Daring* class, the French *Horizon* class, the Japanese *Kongo* and *Atago* classes, and the Indian *Kolkata* and *Visakhapatnam* classes.

b. FREMM: *Frigate europeene multi-mission*, European Multipurpose Frigate. Sources: DoD *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China*, 2012, 2018, 2019; *Jane's Defense Weekly* announcements of ship commissionings; International Institute of Strategic Studies, *Strategic Balance*, 2019, for all countries listed in the table; websites for the Indian Navy, Royal Navy, French Navy. Rick Joe's *Diplomat* series on the future of the PLA Navy; Ronald O'Rourke's semiannual update of his Congressional Research Service report *China Naval Modernization*; Office of Naval Intelligence, *The Russian Navy 2015: A Historic Transition*, and ONI's *The PLA Navy: New Capabilities and Missions for the 21st Century*.

(Source: Michael A. McDevitt, *China as a Twenty-First Century Naval Power: Theory, Practice, and Implications*, (Annapolis: Naval Institute Press, 2020), 68.)

Bibliography

- Breaking Defense. "COVID Delays Joint Warfighting Concept: Hyten." Last modified January 22, 2021, 15:26. <https://breakingdefense.com/2021/01/covid-delays-joint-warfighting-concept-hyten/>.
- Chase, Michael, Jeffrey Engstrom, Tai Cheung, Kristen Gunness, Scott Harold, Susan Puska, Samuel Berkowitz. *China's Incomplete Military Transformation: Assessing the Weaknesses of the People's Liberation Army (PLA)*. Santa Monica: RAND Corporation, 2015. https://www.rand.org/pubs/research_reports/RR893.html.
- Chief of Naval Operations. *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels*. Washington, DC, 9 December 2020. <https://media.defense.gov/2020/Dec/10/2002549918/-1/-1/0/SHIPBUILDING%20PLAN%20DEC%202020%20NAVY%20OSD%20OMB%20FINAL.PDF>, 3-4.
- Chuaren, Chen. "The People's Liberation Army Turns 70: A Technologically Revolutionary Parade." *Asia Pacific Defence Reporter* 45, no. 9 (November 2019): 40-43. <https://venturaapdr.partica.online/apdr/apdr-nov-2019>.
- Cole, Bernard. "The People's Liberation Army in 2020-2030: Focused on Regional Issues." In *The Chinese People's Liberation Army in 2025*, edited by Roy Kamphausen and David Lai, 165-206. Carlisle: US Army War College Press, 2015.
- Cozad, Mark R. "Toward a More Joint, Combat-Ready PLA?" In *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, 203-255. Washington: National Defense University Press, 2019.
- Department of the Army. *Army Modernization Strategy*. 17 October 2019. <https://www.army.mil/standto/archive/2019/10/17>.
- . *The Army Strategy*. 25 October 2018. <https://www.army.mil/standto/archive/2018/10/25/>.
- Department of the Navy. *Advantage at Sea: Prevailing with Integrated All-Domain Naval Power*. 17 December 2020. <https://news.usni.org/2020/12/17/u-s-maritime-strategy-advantage-at-sea>.
- Drezner, Daniel, Ronald Krebs, and Randall Schweller. "The End of Grand Strategy: America Must Think Small" *Foreign Affairs* 99, no. 3 (May/June 2020): 107-117.
- Erickson, Andrew. "China." In *Comparative Grand Strategy: A Framework and Cases*, edited by Thierry Balzacq, Peter Dombrowski, and Simon Reich, 73-98. Oxford: Oxford University Press, 2019.

- Fewsmith, Joseph. "Domestic Drivers of China's Future Military Modernization." In *The Chinese People's Liberation Army in 2025*, edited by Roy Kamphausen and David Lai, 57-81. Carlisle: US Army War College Press, 2015.
- Finkelstein, David M. "Breaking the Paradigm: Drivers Behind the PLA's Current Period." In *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, 45-83. Washington: National Defense University Press, 2019.
- Fravel, M. Taylor. *Active Defense: China's Military Strategy since 1949*. Princeton: Princeton University Press, 2019.
- Friedberg, Aaron A. *A Contest for Supremacy: China, America, and the Struggle for Mastery in Asia*. New York: W.W. Norton & Company, 2012.
- Gates, Robert M. "The Overmilitarization of American Foreign Policy: The United States Must Recover the Full Range of Its Power." *Foreign Affairs* 99, no. 4 (July/August 2020): 121-132.
- Gearin, Daniel. "PLA Force Reductions." In *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, 125-170. Washington: National Defense University Press, 2019.
- Gill, Bates, and Adam Ni. "The People's Liberation Army Rocket Force: Reshaping China's Approach to Strategic Deterrence." *Australian Journal of International Affairs* 73, no. 2 (January 2019).
<https://www.tandfonline.com/doi/full/10.1080/10357718.2018.1545831>.
- Headquarters Marine Corps. *Force Design 2030*. Washington, DC, March 2020.
<https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%20202030%20Report%20Phase%20I%20and%20II.pdf?ver=2020-03-26-121328-460>.
- Heginbotham, Eric, Forrest Morgan, Jacob Heim, Jeff Hagen, Sheng Li, Jeffrey Engstrom, Martin Libicki, Paul Deluca, David Shlapak, David Frelinger, Burgess Laird, Kyle Brady, and Lyle Morris. *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power 1996-2017*. Santa Monica: RAND Corporation, 2015.
- Heginbotham, Eric, and Jacob Heim. "People's Liberation Army Trajectories: International Drivers." In *The Chinese People's Liberation Army in 2025*, edited by Roy Kamphausen and David Lai, 83-127. Carlisle: U.S. Army War College Press, 2015.
- Hoffman, Frank. "The Missing Element in Crafting National Strategy: A Theory of Success." *Joint Forces Quarterly* 97 (2nd Quarter 2020); 55-64.

- Kashmeri, Sarwar A. *China's Grand Strategy: Weaving a New Silk Road to Global Primacy*. Santa Barbara: Praeger, 2019.
- Kaufman, Stephen F. *Art of War : The Definitive Interpretation of Sun Tzu's Classic Book of Strategy*. New York: Tuttle Publishing, 2012. <https://search-ebSCOhost-com.ndueZproxy.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=nlebk&AN=1567300&site=ehost-live&scope=site>.
- Lai, Benjamin. *The Dragon's Teeth: The Chinese People's Liberation Army - Its History, Traditions, and Air, Sea and Land Capabilities in the 21st Century*. Philadelphia: Casemate Publishers, 2016.
- Logan, David C. "Making Sense of China's Missile Forces." In *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, 393-435. Washington: National Defense University Press, 2019.
- Loong, Lee Hsien. "The Endangered Asian Century: America, China, and the Perils of Confrontation." *Foreign Affairs* 99, no. 4 (July/August 2020): 52-64.
- Manley, Richard. "Rocks and Shoals Ahead." *Proceedings* (June 2020): 36-41.
- Mastro, Oriana Skylar. "A Global Expeditionary People's Liberation Army: 2025-2030." In *The Chinese People's Liberation Army in 2025*, edited by Roy Kamphausen and David Lai, 207-234. Carlisle: U.S. Army War College Press, 2015.
- McCaslin, Ian, and Andrew Erickson. "The Impacts of Xi-Era Reforms on the Chinese Navy." In *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, 125-170. Washington: National Defense University Press, 2019.
- McDevitt, Michael A. *China as a Twenty-First Century Naval Power: Theory, Practice, and Implications*. Annapolis: Naval Institute Press, 2020.
- Morris, Lyle J. "Organizing for the Gray Zone: Assessing the Rights Protection Capabilities of the New China Coast Guard." In *China's Maritime Gray Zone Operations*, edited by Andrew Erickson and Ryan Martinson, 77-91. Annapolis, Naval Institute Press, 2019.
- O'Rourke, Ronald. Congressional Research Service. *U.S.-China Strategic Competition in South and East China Seas: Background and Issues for Congress*. 28 August 2020. <https://crsreports.congress.gov>
- Office of the Secretary of Defense. *Military and Security Developments Involving the People's Republic of China 2020: Annual Report to Congress*. <https://permanent.fdlp.gov/gpo12242/2020/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.

- . *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge*. By James Mattis. Washington, DC, 19 January 2018.
- Saunders, Phillip. "Implications: China in the International System." In *The Chinese People's Liberation Army in 2025*, edited by Roy Kamphausen and David Lai, 301-333. Carlisle: U.S. Army War College Press, 2015.
- Saunders, Phillip, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow. *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*. Washington: National Defense University Press, 2019.
- Saunders, Phillip, and Kevin McGuinness. "The Changing Balance of Military Power in the Indo-Pacific Region." Paper prepared for the 2020 Conference on Taiwan in the Indo-Pacific Region at the Hoover Institution, Stanford University, October 12-29, 2020.
- Scobell, Andrew, Edmund Burke, Cortez Cooper III, Sale Lilly, Chad Ohlandt, Eric Warner, J.D. Williams. *China's Grand Strategy: Trends, Trajectories, and Long-Term Competition*. Santa Monica: RAND Corporation, 2020.
www.rand.org/t/RR2798.
- Scobell, Andrew. *China's Use of Military Force: Beyond the Great Wall and the Long March*. New York: Cambridge University Press, 2003.
- Scobell, Andrew and Nathan Beauchamp-Mustafaga. "The Flag Lags But Follows: The PLA and China's Great Leap Outward." In *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*. Edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, 171-199. Washington: NDU Press, 2019.
- State Council Information Office of the People's Republic of China. *China's Military Strategy*. Beijing: Foreign Languages Press Co. Ltd., 26 May 2015.
<https://news.usni.org/2015/05/26/document-chinas-military-strategy>.
- State Council Information Office of the People's Republic of China. *China's National Defense in the New Era*. Beijing: Foreign Languages Press Co. Ltd., July 2019.
<https://www.ssri-j.com/MediaReport/Document/ChinaDefenseWhitePaper2019.pdf>.
- Stires, Hunter. "Win Without Fighting." *Proceedings* (June 2020): 20-25.
- Strassler, Robert, ed. *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War*. New York: Free Press, 1996.
- U.S. Air Force. *Accelerate Change or Lose*. 31 August 2020.
<https://www.airforcemag.com/app/uploads/2020/09/CSAF-22-Strategic-Approach-Accelerate-Change-or-Lose-31-Aug-2020.pdf>.

- U.S. Department of Defense. *Joint Operational Access Concept*. Washington, DC, 17 January 2012. https://dod.defense.gov/Portals/1/Documents/pubs/JOAC_Jan%202012_Signed.pdf.
- . *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*. Washington, DC, January 2012. https://archive.defense.gov/news/Defense_Strategic_Guidance.pdf.
- U.S. President. Interim National Security Strategic Guidance. The White House, March 2021. <https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf>.
- . The National Security Strategy of the United States of America. The White House, 2017. <https://www.whitehouse.gov/>.
- Vershinin, Alex. “The Challenge of Dis-Integrating the A2/AD Zone: How Emerging Technologies Are Shifting the Balance Back to the Defense.” *Joint Forces Quarterly* 97 (2nd Quarter 2020): 13-19.
- White, Hugh. *The China Choice: Why We Should Share Power*. Oxford: Oxford University Press, 2013.
- Wortzell, Larry. *The Dragon Extends Its Reach: Chinese Military Power Goes Global*. Washington: Potomac Books, 2013.
- Wuthnow, Joel, and Phillip Saunders. “Chairman Xi Remakes the PLA.” In *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, 1-42. Washington: National Defense University Press, 2019.
- . “A Modern Major General: Building Joint Commanders in the PLA.” In *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, edited by Phil Saunders, Arthur Ding, Andrew Scobell, Andrew Yang, and Joel Wuthnow, 293-323. Washington: National Defense University Press, 2019.
- Yoshihara, Toshi, and James Holmes. *Red Star Over the Pacific: China’s Rise and the Challenge to U.S. Maritime Strategy*. Annapolis: Naval Institute Press, 2018.
- Yuen, Derek M. C. *Deciphering Sun Tzu: How to Read The Art of War*. New York: Oxford University Press, 2014. <http://search.ebscohost.com.nduezproxy.idm.oclc.org/login.aspx?direct=true&AuthType=ip,url,uid&db=nlebk&AN=939808&site=eds-live&scope=site>.