

CSBA

Center for Strategic and Budgetary Assessments

CHINESE LESSONS FROM THE PACIFIC WAR

IMPLICATIONS FOR PLA WARFIGHTING



TOSHI YOSHIHARA

CHINESE LESSONS FROM THE PACIFIC WAR

IMPLICATIONS FOR PLA WARFIGHTING

TOSHI YOSHIHARA



Center for Strategic and Budgetary Assessments

2023

ABOUT THE CENTER FOR STRATEGIC AND BUDGETARY ASSESSMENTS (CSBA)

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

ABOUT THE AUTHOR

Toshi Yoshihara is a Senior Fellow at the Center for Strategic and Budgetary Assessments (CSBA). He was previously the inaugural John A. van Beuren Chair of Asia-Pacific Studies and a Professor of Strategy at the U.S. Naval War College. His latest book is *Mao's Army Goes to Sea: The Island Campaigns and the Founding of China's Navy* (Georgetown University Press, 2022). He co-authored, with James R. Holmes, the second edition of *Red Star over the Pacific: China's Rise and the Challenge to U.S. Maritime Strategy* (Naval Institute Press, 2018). The book has been listed on the Chief of Naval Operations Professional Reading Program, the Indo-Pacific Command Professional Development Reading List, and the Commandant of the Marine Corps Professional Reading Program. The first edition of *Red Star over the Pacific* was translated in Japan, China, South Korea, Taiwan, and Germany. In 2021, his CSBA report, *Dragon Against the Sun: Chinese Views of Japanese Seapower*, won the 8th annual *Kokkiken* Japan Study Award. In 2016 he was awarded the Navy Meritorious Civilian Service Award in recognition of his scholarship on maritime and strategic affairs at the Naval War College. Dr. Yoshihara served as a visiting professor at the Fletcher School of Law and Diplomacy, Tufts University; the School of Global Policy and Strategy, University of California, San Diego; and the Strategy Department of the U.S. Air War College. He currently teaches a graduate course on seapower in the Indo-Pacific at the School of Foreign Service, Georgetown University.

ACKNOWLEDGMENTS

The author is indebted to many individuals for their generous support to this research project. Special thanks to Bradford Lee, John Maurer, and Larry Wortzel for their invaluable feedback on an earlier draft of the report. The author is grateful to Michael Auslin, Christopher Bassler, Geoffrey Gresh, Trent Hone, Carter Malkasian, Daniel Marston, Michael McDevitt, Brent Sadler, Nicholas Sarantakes, Craig Symonds, Katsuya Tsukamoto, Jan van Tol, and Christopher Yung for offering sage advice at various stages of the project. Thomas G. Mahnken and Evan Montgomery provided thorough reviews of the manuscript. Many thanks to James Mersol, Joe Ross, and Ben Noon for their work on various aspects of the report. The author would like to recognize Madison Sparber for her diligent assistance, including initial research, workshop coordination, and graphics design, throughout the project.

Contents

EXECUTIVE SUMMARY	i
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: THE CASE FOR STUDYING THE PACIFIC WAR	7
China's Quest for a World-Class Military	8
Beyond Anti-Access/Area Denial	8
The PLA's Learning from the Past	14
The Pacific War Analogy	16
Sources and Methods	19
CHAPTER 3: BATTLE OF MIDWAY	25
Intelligence and Reconnaissance	26
Concentration and Disposition of Forces	30
Operational and Tactical Command	33
The Danger of Old Think	35
Converting Weakness into Strength	37
CHAPTER 4: THE GUADALCANAL CAMPAIGN	39
National Power and Strategy	40
Initial Campaign Assessment	41
Ground Combat	42
Naval Combat	46
Logistics	49
Looking Ahead to a Fight Between Peers	52
CHAPTER 5: BATTLE OF OKINAWA	53
Tactical Balance of Power	54
Shore-Based Airpower	56
Counterair Operations	58
Logistics	62
Key Decision Points	64
Japan's Cost-Imposing Campaign	67
CHAPTER 6: ASSESSING CHINESE VIEWS OF THE PACIFIC WAR	69
Select Common Themes	69
An Evaluation of Chinese Writings	74
Relevance to Contemporary Warfighting	76
Interrogating Chinese Lessons	79
A Balanced Approach to the Literature	83
CHAPTER 7: CONCLUSIONS	85
Relevance to U.S. Strategy	85
Areas for Future Research	87
Looking Ahead	89
APPENDIX A: BIBLIOGRAPHY OF CHINESE SOURCES	93
LIST OF ACRONYMS	101

FIGURES

FIGURE 1: TOTAL BATTLE FORCE SHIPS OF U.S. NAVY AND PLAN	9
FIGURE 2: PLAN FORCE STRUCTURE 2010–2030	10
FIGURE 3: U.S. NAVY FORCE STRUCTURE, 2010–2030	10
FIGURE 4: SELECT U.S. NAVY AND PLAN BATTLE FORCE COMPARISON (2022)	11
FIGURE 5: SELECT U.S. NAVY AND PLAN BATTLE FORCE COMPARISON (2030)	11
FIGURE 6: U.S. PACIFIC FLEET VS. IMPERIAL JAPANESE NAVY (DECEMBER 1941)	13
FIGURE 7: SELECT U.S. PACIFIC FLEET VS. PLAN BATTLE FORCE SHIPS (2022)	13
FIGURE 8: HEIGHT OF IMPERIAL JAPAN’S EXPANSION IN 1942	16
FIGURE 9: RANGES OF SELECT PLA FIREPOWER	17
FIGURE 10: BATTLE OF MIDWAY	26
FIGURE 11: GUADALCANAL CAMPAIGN	40
FIGURE 12: BATTLE OF OKINAWA	54
FIGURE 13: OKINAWA’S NORTHERN AND SOUTHERN FLANKS	59

Executive Summary

China's quest to transform the People's Liberation Army (PLA) into a "world-class military" by midcentury will upend Asia's strategic balance and severely challenge U.S. regional strategy. Chinese military modernization, sustained since the 1990s, furnishes Beijing with warfighting options that were unavailable to it just a decade ago. China's armed forces will be expected to command the air and the seas, project power, and wage a far wider range of wars against rivals large and small, near and far.

More troubling, the PLA will reach parity with or achieve superiority over the U.S. armed forces in many warfare areas. The United States will need to entertain the prospect of high-end combat, such as fleet-on-fleet and air-to-air engagements, in an evenly matched contest against Chinese forces. As the PLA erodes America's military prowess, the character of great power war in Asia could shift radically over this decade. The U.S. policy community thus needs analytic tools to evaluate how the PLA thinks about future conflict.

One way to discern how China might fight the next war is to assess how Chinese strategists look to the past. This study surveys Chinese histories of the Pacific War to discern lessons that mainland analysts have drawn from the ocean-spanning struggle. It examines the literature on the great battles at Midway, Guadalcanal, and Okinawa and identifies operational lessons that Chinese strategists have learned from the war. The three campaigns involved carrier air warfare, contested amphibious landings, expeditionary logistics, and electronic warfare. These are the same kinds of warfighting that will feature prominently in a future Sino-American conflict. The battles are also rich historical case studies from which to mine timeless principles of strategy and war.

This report's premise is that the history of warfare teaches many valuable and enduring lessons that are relevant to the PLA, a warfighting organization that is expected to climb a steep learning curve as it takes on new roles and missions. Chinese interpretations of past great power wars can reveal much about the PLA's expectations about the character of warfare in the coming years. By assessing mainland writings about previous conflicts and their possible implications for the twenty-first century, outside observers can catch glimpses of China's thinking about modern war and strategy.

By looking at the Pacific War through Chinese eyes, there is an opportunity for the policy community to understand Beijing's evolving appraisals of a potential great power war against a peer rival. Chinese lessons from the war at sea in the Pacific can provide policymakers with clues about the PLA's operational thought and tactical preferences. Insights that Chinese observers have drawn from the conflict can deepen policymakers' understanding of the PLA as a learning organization. Chinese writings about the war can reveal whether analysts have sought to extract meaningful lessons or whether they have cherry-picked lessons to validate existing beliefs.

Drawing on an extensive literature on the Pacific War, this study offers three interrelated findings. First, Chinese analysts, including those affiliated with the PLA, have subjected the maritime conflict and its campaigns to scrutiny. The historical accounts render clear and sound judgments about the sources of operational success that in turn reveal much about the PLA's views of strategy and war. Second, the extant literature explicitly draws lessons for the future of PLA warfighting. The writings frequently link the insights from the Pacific War campaigns to contemporary military affairs, including warfare in the information age, modern amphibious operations, shore-based firepower, and expeditionary logistics. Third, Chinese findings from these retrospectives offer tantalizing hints of the PLA's deeply held beliefs, assumptions, and proclivities about future warfare, such as the penchant for striking first and attacking the enemy's vulnerabilities. They also reveal the kinds of longstanding weaknesses that the PLA is seeking to reverse, including logistics.

Policymakers should treat the lessons that Chinese strategists have learned as early warning signs of the PLA's future trajectory. Defense planners should ascertain whether China's military modernization will reinforce its doctrinal preference for surprise and first strike, which parallel that of Imperial Japan. As the Chinese navy builds a powerful expeditionary fleet, American strategists should think deeply about the prospect of a war at sea against a peer adversary, a contingency that the U.S. Navy has not encountered since the Battle of Leyte Gulf in late 1944. Defense officials should also examine the possibility of horizontal escalation in a war against China. Just as the Imperial Japanese Navy conducted deep raids into the Indian Ocean, so too, a globalized PLA might open new fronts beyond the Western Pacific. In short, Washington must undergo a change in mindset about future warfare and gird for an intensifying great power rivalry at sea.

CHAPTER 1

Introduction

China's quest to transform the People's Liberation Army (PLA) into a "world-class military" by mid-century will upend Asia's strategic balance and severely challenge U.S. regional strategy. Chinese military modernization, sustained since the 1990s, furnishes Beijing with warfighting options that were unavailable to it just a decade ago. China's armed forces will be expected to command the air and the seas, project power, and wage a far wider range of wars against rivals large and small, near and far.

More troubling, the PLA will reach parity with or achieve superiority over the U.S. armed forces in many warfare areas. The United States will need to seriously entertain the prospect of high-end combat, such as fleet-on-fleet and air-to-air engagements in an evenly matched contest against Chinese forces. As the PLA erodes America's military prowess, the character of great power war in Asia could shift radically over this decade. The U.S. policy community thus needs analytic tools to evaluate how the PLA thinks about future conflict.

One way to discern how China might fight the next war is to assess how Chinese strategists look to the past. Militaries study, or ought to study, history because it illuminates enduring principles of war. As historian Williamson Murray asserts, "The history of past military campaigns, of past military innovation in times of peace, and of the very nature of war is the only reliable source on which we can draw, if we indeed do want to understand what warfare and combat may look like. Thus, anyone who wishes to understand the profession of arms *must* study history."¹ The PLA wholeheartedly agrees. According to a Chinese National Defense University study:

Past wars...will not repeat themselves exactly. But to understand war's universal principles, it is essential to study military history. Wars taking place today and those that might take place in the future are our main objects of study...But the present is an extension of the past

¹ Williamson Murray, "Thoughts on military history and the profession of arms," in *The Past as Prologue: The Importance of History to the Military Profession*, Williamson Murray and Richard Hart Sinnreich, eds. (Cambridge: Cambridge University Press, 2006), p. 87.

and the future develops from the present. As such, to grasp military science, we must engage in a systemic study of war's historical evolution by linking the past, present, and future as an organic whole.²

As two historians at the PLA's Academy of Military Science affirm, "Military history is the foundation that helps to produce and develop military science. The study of military affairs in the past is the precondition for understanding today and foreseeing the future. The function of military history to grasp the essence of war and to explore war's patterns and trends possesses great meaning."³ Such receptiveness to the past is not surprising. The PLA is steeped in its own rich combat history and associated mythologies.⁴ It is equally committed to the study of foreign military histories. Therefore, learning how the PLA studies the past and discerning what lessons it might have drawn from them could yield insights about its expectations of the future. This historical sensibility is the jumping-off point for this study.

Military organizations also learn from history because wars break out infrequently. For most militaries, war might come once in a generation or once in a lifetime. This is especially true of great power wars, a rare breed of interstate conflict. Military professionals seldom get the chance to test operational concepts, employ weapons, and practice skills in wartime. This predicament contrasts sharply with other professions. Trial lawyers try cases repeatedly to obtain experience and hone techniques. Surgeons, too, operate on patients regularly to stay sharp. War's intermittent nature means that militaries must find other ways to prepare for the next conflict. They must theorize, experiment, study the past, and much else.

Consider the vaunted U.S. Navy. The last time it fought at sea against a true peer rival was the Battle of Leyte Gulf, the largest naval engagement of the Second World War, in late 1944. The massive clash inflicted crippling losses on the Imperial Japanese Navy from which it never recovered while it passed command of the sea and air to the United States. Yet the great American naval victory is nearly eight decades old. The U.S. Navy has not lost large numbers of capital ships to hostile fire delivered by a determined and dangerous foe in a long time. Its institutional memory of a genuine war at sea against a first-rate opponent—in which a single engagement could cost an entire fleet in an afternoon—is faded, if not fuzzy. Military history, including the deadly clashes at Leyte Gulf, serves as a useful—if imperfect—substitute for reenacting real combat. The close study of past conflicts thus partially remedies the episodic nature of war and may be especially important for militaries that have not had recent relevant operational experiences of their own.

2 王厚卿 主编 [Wang Houqing, ed.], 战役发展史 [*History of Campaign Development*] (Beijing: National Defense University, 2001), p. 2.

3 李成刚 吴鑫 [Li Chenggang and Wu Xin], 论新时期军事历史研究的现实价值和时代责任 [The Practical Value and Responsibility of Military History Research in the New Era], 军事历史 [*Military History*], no. 3, 2017, p. 23.

4 See, for example, 第四野战军战史编写组 [Editorial Team of the Fourth Field Army War History], 中国人民解放军第四野战军战史 [*War History of the Fourth Field Army of the Chinese People's Liberation Army*] (Beijing: Liberation Army Press, 1998) and 杨贵华 主编 [Yang Guihua, ed.], 中国人民解放军战史教程 [*Course Materials on the War History of the Chinese People's Liberation Army*] (Beijing: Military Science Press, 2013).

For the PLA, its last major conflict involving the extensive use of conventional weaponry was the Sino-Vietnamese border conflict in 1979. During the short but bloody incursion, the Chinese military employed infantry, tanks, and artillery, but refrained from using offensive airpower, a key element of modern warfare. Other notable fighting against foreign adversaries included the 1950–53 Korean War, the 1962 Sino-Indian border war, and the clashes along the Sino-Soviet border in 1969. The PLA has not waged a large-scale campaign for over forty years. The Sino-American war on the Korean Peninsula, in which Chinese armed forces fought directly against the U.S. military on a conventional battlefield, was some seven decades ago. It has engaged in brief naval clashes in 1974 and 1988 against South Vietnam and Vietnam, respectively, but it has never fought in sea battles comparable in scale to those of the Pacific War. By necessity, the PLA must turn to history for guidance as it peers into the future.

This report's premise is that the history of warfare teaches many valuable and enduring lessons that are relevant to the PLA, a warfighting organization that is expected to climb a steep learning curve as it takes on new roles and missions. Chinese interpretations of past great power wars can reveal much about the PLA's expectations and forecasts about the character of warfare in the coming years. By assessing mainland writings about previous conflicts and their possible implications for the twenty-first century, outside observers can catch glimpses of China's thinking about modern war and strategy.

This study surveys Chinese histories of the Pacific War to discern lessons that mainland analysts have drawn from the ocean-spanning struggle. Specifically, it examines the literature on the great battles at Midway, Guadalcanal, and Okinawa to identify the operational lessons that Chinese scholars and strategists, including those affiliated with the PLA, have learned from the war. The three campaigns involved warfighting, including carrier air warfare, contested amphibious landings, expeditionary logistics, and electronic warfare, that will likely feature prominently in a future Sino-American conflict. They represent rich historical case studies from which to mine timeless principles of strategy and war.

By looking at the conflict through Chinese eyes, there is an opportunity for the policy community to understand Beijing's evolving appraisals of a potential great power war against a peer rival. Chinese views of the Pacific War may provide policymakers clues about the PLA's operational thought and tactical preferences in a future war. Insights that Chinese observers have drawn from the Pacific War can deepen policymakers' understanding of the PLA as a learning organization. Chinese writings about the war may reveal whether analysts have sought to extract meaningful lessons or whether they have cherry-picked lessons to validate existing beliefs.

The Pacific War stands out as a particularly relevant case study for the Chinese military today. It was a titanic struggle at sea between two powerful navies. China today is constructing a well-balanced, modern blue-water navy at breakneck speed, one that is closing in on the U.S. Navy in quality. The Chinese navy has already gone global. Its flotillas regularly steam across bodies of water, including the Pacific and Indian Oceans, that were

the scenes of fierce clashes between the Imperial Japanese Navy (IJN) and allied navies during the Pacific War. As the Chinese navy extends its reach, it is working hard to master modern combat logistics at sea, a critical precondition for the kinds of expeditionary operations that took place in the Pacific eight decades ago. Chinese ground, air, naval, rocket, electronic warfare, space, and cyber forces are also learning to operate together in a joint campaign, an interservice aptitude that the U.S. military demonstrated with great effect against Imperial Japan's armed forces in the late stages of the conflict.

The Pacific War covered a geographic expanse that roughly overlaps with areas where the PLA would likely fight in the coming years. China's Rocket Force now boasts long-range missiles that can reach Guam while its diplomats are attempting to secure access across the Pacific Islands, the bloody battlegrounds of the Pacific War. The PLA has a permanent presence in the Indian Ocean, where the Imperial Japanese Navy conducted deep raids to oust the Royal Navy. Moreover, the Pacific War featured warfighting strategies and operational concepts that resonate with and appeal to the PLA. The emergence of anti-access tactics, the preparations for fierce contests over island terrain, and the development of new power projection technologies are as relevant to the PLA today as they were to Imperial Japan and the United States then.

Thanks to the proliferation of Chinese scholarship on the Pacific War, there are voluminous publicly available sources from which to examine the internal discourse on the mainland. The extensive literature covers all aspects of the naval conflict, ranging from the origins of the war to the conduct of the various campaigns to war termination. Importantly, many of the writings explicitly link the past to the present and future, extrapolating lessons for the PLA. By drawing on this extensive literature, this study offers three interrelated findings.

First, Chinese analysts have subjected the maritime conflict and its campaigns to scrutiny. The historical accounts render clear judgments about the sources of operational success that, in turn, reveal much about the PLA's views of strategy and war. Second, the extant literature explicitly draws lessons for the future of PLA warfighting. The writings frequently link the insights from the Pacific War campaigns to contemporary military affairs, including warfare in the information age, modern amphibious operations, airpower, and expeditionary logistics. Third, Chinese findings from these retrospectives offer tantalizing hints of the PLA's deeply held beliefs, assumptions, and proclivities about future warfare, such as the penchant for striking first and for attacking the enemy's vulnerabilities. They also reveal the kinds of longstanding weaknesses that the PLA is seeking to reverse, including logistics.

To explore Chinese interpretations of the Pacific War, this report adopts a case study approach to three campaigns: the battles at Midway, Guadalcanal, and Okinawa. Chapter 2 makes a case for examining Chinese views of the Pacific War. It describes the changing character of Chinese military power, the PLA's learning from the past, the deep study of the Pacific War in China, and the sources and methods underwriting the report. Chapters 3, 4, and 5 review the literature on the Midway, Guadalcanal, and Okinawa campaigns, respectively. The survey, although not exhaustive, identifies the main factors that Chinese analysts

believe contributed to the course and outcome of the three battles. Chapter 6 synthesizes the findings from the three campaigns, examines the quality of Chinese counterfactual analysis, illustrates the relevance of the three cases to future PLA warfighting, and critically evaluates the lessons from the literature. Chapter 7 concludes the study with suggestions for future research and some parting thoughts for the policy community.

CHAPTER 2

The Case for Studying the Pacific War

The analytic value of studying Chinese views of the Pacific War is derived from three factors. First, in the coming years, the PLA will emerge as a regional and global force. It will not be postured exclusively for defensive missions along China's immediate periphery and will likely be equipped to conduct offensive operations much farther from the mainland than in the recent past. It is now possible to imagine a future in which the Chinese military will be able to project power against the United States as a peer, much as the Imperial Japanese Navy was an equal to the U.S. Navy.

Second, the PLA has closely studied other nations' wars, particularly those waged by the United States against weaker adversaries over the past three decades. As the PLA continues its ascent and rapidly closes the power gap with the U.S. military, past conflicts involving great powers, rather than between overpowering and feeble opponents, will gain ever more salience. The Pacific War, which featured many characteristics that resemble the strategic and operational circumstances that China will likely face in the coming years, stands out as a major historical example worthy of close study.

Third, there is extensive literature in China about the Pacific War. Chinese sources, ranging from authoritative PLA studies to scholarly works intended for the general audience, have dissected the origins, conduct, and termination of the titanic maritime conflict. These writings are not merely meant to satisfy historical curiosity. Rather, many explicitly seek to draw lessons from the Pacific War as they relate to future PLA warfighting. These sources remain largely untapped in the West and thus present an opportunity for further exploration. The following elaborates on these three converging factors and explains the methodology for assessing Chinese views of the Pacific War.

China's Quest for a World-Class Military

General Secretary Xi Jinping unveiled his ambitious vision for the PLA at the 19th Party Congress in October 2017. At the all-important meeting, Xi pledged “to create a mighty force for realizing the Chinese Dream and the dream of building a powerful military.” Notably, he set a timetable: the PLA would “basically complete” its modernization by 2035 and be “fully transformed into a world-class military” by mid-century.⁵ During the 20th Party Congress in October 2022, Xi reaffirmed his commitment to raising the PLA to “world-class standards.”⁶ While the phrase “world-class military” remains undefined, the term implies parity with, if not superiority in various respects to, the U.S. armed forces. A world-class military also connotes the capacity to influence events and to project power far beyond China's shores.

As the PLA strives to become a world-class military, it will need to consider a far wider range of contingencies, roles, and missions than in the recent past. Its rapid modernization over the past three decades has furnished diverse means hitherto unavailable to Chinese statesmen and commanders. In addition to its formidable anti-access/area denial (A2/AD) capabilities, China will field a general-purpose expeditionary force capable of fulfilling many tasks closer to home and in distant theaters. In the coming decades, the PLA will possess the tools to selectively command the local commons, project power, and seize strategic terrain across the Indo-Pacific and beyond. An increasingly globalized PLA also suggests that a local war will not likely be geographically confined and could well horizontally escalate to extra-regional theaters.⁷

Furthermore, the PLA will grow in strength relative to others, opening new vistas in warfighting. Its expected superiority over local militaries in Asia will incline it to adopt offensive strategies designed to decisively defeat weaker frontline states.⁸ At the same time, Chinese defense planners will acquire more choices in potential high-end combat against peer adversaries like the United States. In a future crisis or war, the PLA will not crouch defensively to deny its great power rivals access to China's offshore waters. Rather, Chinese forces will meet their foes on the battlefield on far more equal terms than in the past.

Beyond Anti-Access/Area Denial

To achieve the status of a world-class military, China is building and fielding a large power projection force. The current modernization effort has expanded well beyond the anti-access

5 Xi Jinping, *Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era*, 19th National Congress of the Communist Party of China, October 18, 2017, p. 48.

6 Xi Jinping, *Hold High the Great Banner of Socialism with Chinese Characteristics and Strive in Unity to Build a Modern Socialist Country in All Respects*, Report to the 20th National Congress of the Communist Party of China, October 16, 2022, p. 47.

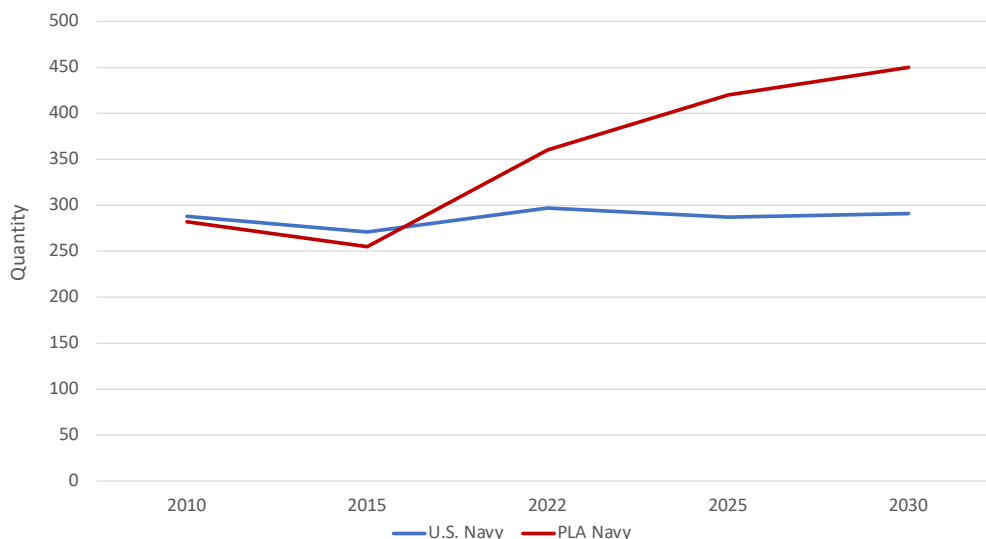
7 Toshi Yoshihara and Jack Bianchi, *Seizing on Weakness: Allied Strategy for Competing with China's Globalizing Military* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2021), pp. 2–4.

8 Toshi Yoshihara, *Dragon Against the Sun: Chinese Views of Japanese Seapower* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2020), pp. 53–76.

capabilities that Chinese defense planners have prioritized in recent years. In other words, the PLA will not remain a one-dimensional A2/AD-centered military for very long. A decade from now, if not sooner, China will likely possess a balanced force structure capable of fulfilling various missions. The PLA will likely have the modern forces it needs to conduct a joint offensive campaign to seize command of the near seas, overwhelm local frontline states across the Western Pacific, and open new fronts in theaters far from the Chinese homeland.

Consider the Chinese navy or the People's Liberation Army Navy (PLAN), which is a good proxy for the larger military modernization that has proceeded apace over the past two decades. The naval building spree has set the PLAN well on its way to asserting local sea control. By the 2030s, the Chinese navy would be in a strong position to bend opponents to China's will. By then, the near seas—namely, the Yellow Sea, the East China Sea, and the South China Sea—will become even more inhospitable than they are today. The Pentagon acknowledges that “the PLAN is numerically the largest navy in the world with an overall battle force of approximately 340 ships and submarines, including approximately 125 major surface combatants.”⁹ Most ships in the fleet are modern, perform multiple roles, and are equipped with advanced weaponry and sensors. This is the foundation upon which the Chinese navy will continue to build an even larger and more capable force.

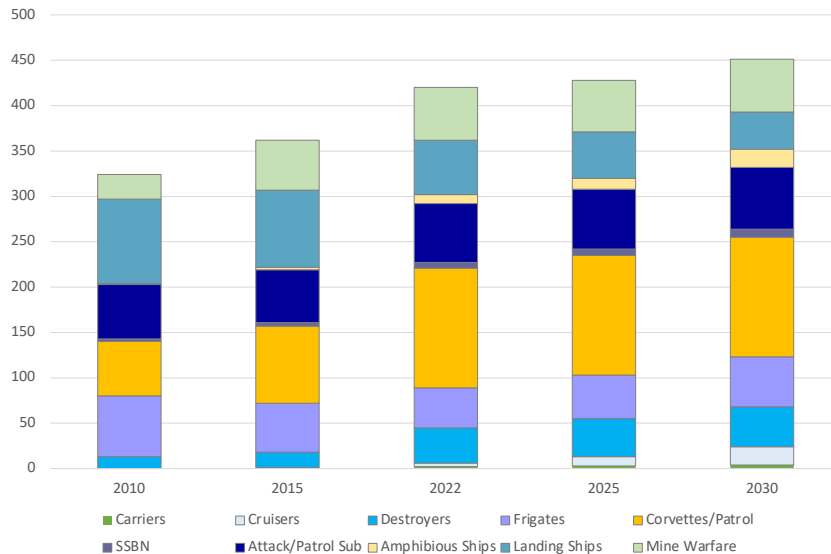
FIGURE 1: TOTAL BATTLE FORCE SHIPS OF U.S. NAVY AND PLAN



Source: Jack Bianchi, Madison Creery, Harrison Schramm, and Toshi Yoshihara, *China's Choices*, p. 45; U.S. Department of the Navy, *Report to Congress on the Annual Long-Range Plan for Construction of Navy Vessels for Fiscal Year 2023*, p. 16; Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities* (Washington, DC: Congressional Research Service, updated March 2022), pg. 9; U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China* (Washington, DC: U.S. Department of Defense, 2022), p. 49.

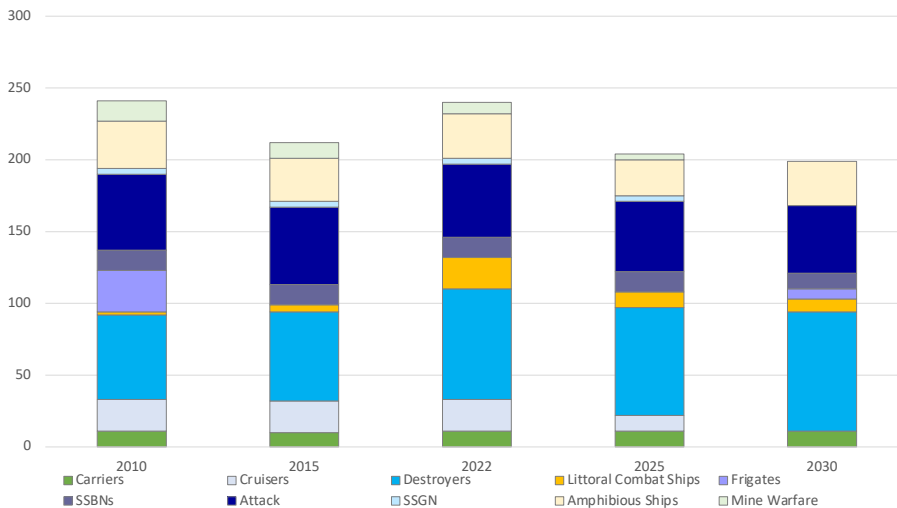
9 Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2022* (Arlington, VA: Department of Defense, November 2022), p. 50.

FIGURE 2: PLAN FORCE STRUCTURE 2010–2030

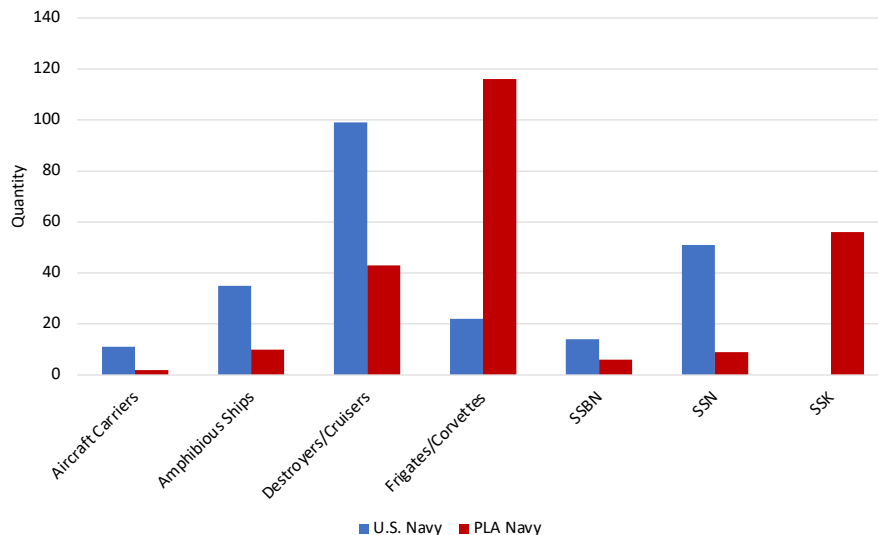


Source: Numbers, including projections, derived from CSBA report: Jack Bianchi, Madison Creery, Harrison Schramm, Toshi Yoshihara, *China's Choices: A New Tool for Assessing The PLA's Modernization* (Washington, DC: Center for Strategic and Budgetary Assessments, 2022), p. 45. Force structure categories generally reflect U.S. military classification of PLA platforms. (Type 055 Renhai-class ships are regarded here as cruisers even though the PLA defines them as destroyers.)

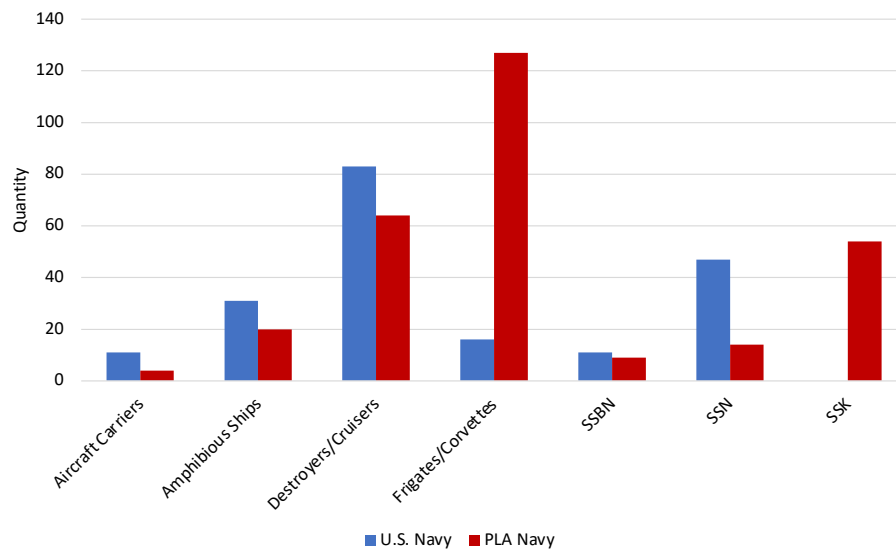
FIGURE 3: U.S. NAVY FORCE STRUCTURE, 2010–2030



Source: U.S. Department of the Navy, *Report to Congress on the Annual Long-Range Plan for Construction of Navy Vessels for Fiscal Year 2023* (Washington, DC: U.S. Department of the Navy, April 2022), p. 16, <https://www.secnavy.mil/fmc/fmb/Documents/23pres/PB23%20Shipbuilding%20Plan%2018%20Apr%202022%20Final.pdf>; "U.S. Force Ship Levels: 2000-present," Naval History and Heritage Command, accessed July 20, 2022, <https://www.history.navy.mil/research/histories/ship-histories/us-ship-force-levels.html#1938>; "U.S. Navy," *Jane's*, accessed July 20, 2022, <https://customer.janes.com/Janes/Display/JWNA0160-JWNA>.

FIGURE 4: SELECT U.S. NAVY AND PLAN BATTLE FORCE COMPARISON (2022)

Source: The Frigates and Corvettes category also includes the Littoral Combat Ship (LCS). See Jack Bianchi, Madison Creery, Harrison Schramm, and Toshi Yoshihara, *China's Choices*, p. 45; U.S. Department of the Navy, *Report to Congress on the Annual Long-Range Plan for Construction of Navy Vessels for Fiscal Year 2023*, p. 16.

FIGURE 5: SELECT U.S. NAVY AND PLAN BATTLE FORCE COMPARISON (2030)

Source: The Frigates and Corvettes category also includes the Littoral Combat Ship (LCS). Jack Bianchi, Madison Creery, Harrison Schramm, and Toshi Yoshihara, *China's Choices*, p. 45; U.S. Department of the Navy, *Report to Congress on the Annual Long-Range Plan for Construction of Navy Vessels for Fiscal Year 2023*, p. 16.

Projections of the Chinese navy's battle force ships vary, but they all point to a substantially larger force a decade hence. The Pentagon foresees the PLAN growing from 400 ships in 2025 to 440 ships by 2030.¹⁰ The U.S. Office of Naval Intelligence (ONI) estimates that the PLAN will grow progressively from 400 battle force ships in 2025 to 425 battle force ships in 2030.¹¹ A separate U.S. Navy forecast, which excludes some ship types counted by ONI, foresees the fleet growing from 276 ships in 2025 to 310 ships in 2030 to 333 ships in 2040.¹² The ONI and U.S. Navy findings are similar when comparing the same ship types. According to ONI, China's fleet of ballistic missile submarines, nuclear-powered attack submarines, diesel attack submarines, aircraft carriers, cruisers, destroyers, frigates, and corvettes will grow from 246 in 2025 to 276 in 2030. For the same ship types, the U.S. Navy predicts that the fleet will increase from 238 in 2025 to 268 in 2030 to 298 in 2040.

Unofficial forecasts paint a similarly grim picture. Rear Admiral Michael McDevitt, USN (ret.), expects the Chinese navy to field 425 ships by 2035. Within that fleet, 265 ships would be capable of conducting blue-water expeditionary operations, and 160 ships would be better suited for close-in operations in the near seas. McDevitt concludes that "By any measure this navy will have to be judged 'world class.'"¹³ Captain James Fanell, USN (ret.), estimates that the PLAN's total fleet size will be more than 560 ships by 2030, including over 452 surface combatants of all kinds and 108 submarines. Applying the same ship types for the ONI-U.S. Navy comparison, Fanell foresees a fleet of 275 ships in 2030.¹⁴ This figure is very close to the ONI's projection.

According to ONI, the U.S. Navy, and Fanell, comparable elements of the PLAN's fleet would grow by 65, 66, and 81 ships, respectively, averaging about 35 percent growth in size between 2020 and 2030. The U.S. Navy expects the Chinese navy to keep growing, though at a slower rate, throughout the 2030s. It should be noted that these figures do not include amphibious ships, missile patrol craft, minesweepers, and other auxiliaries, which would play essential roles in a major contingency. It is also unclear whether Beijing has an ideal fleet size in mind. Nevertheless, based on the projections above, the PLAN will be very large. By the 2030s, China could be within reach of a modern 600-ship navy. McDevitt tantalizingly notes that the Imperial Japanese Navy at its zenith in 1941 "provides a hint at what is possible in East Asia."¹⁵

10 Office of the Secretary of Defense, *Annual Report to Congress*, p. 52.

11 The unclassified ONI estimate is drawn from an information paper prepared for the Senate Armed Services Committee in February 2020. Ron O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress* (Washington, D.C.: Congressional Research Service, March 2022), p. 9.

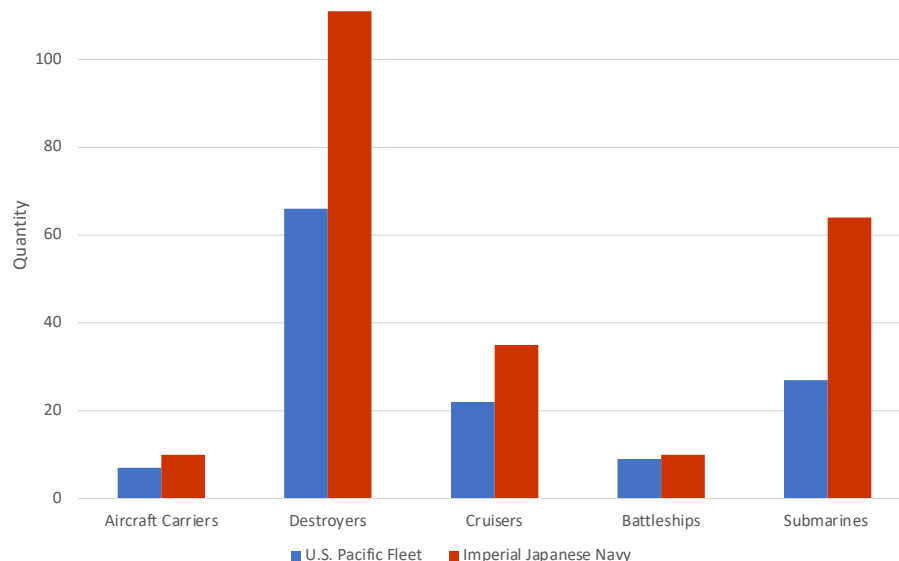
12 The forecast is based on U.S. Navy data provided by the Navy Office of Legislative Affairs to the Congressional Research Service. Ron O'Rourke, *China Naval Modernization*, p. 10.

13 Michael A. McDevitt, *China as a Twenty-First Century Naval Power: Theory, Practice, and Implications* (Annapolis, MD: Naval Institute Press, 2020), p. 183.

14 James E. Fanell, "China's Global Navy—Today's Challenge for the United States and the U.S. Navy," *Naval War College Review*, 73:4 (Autumn 2020), p. 25.

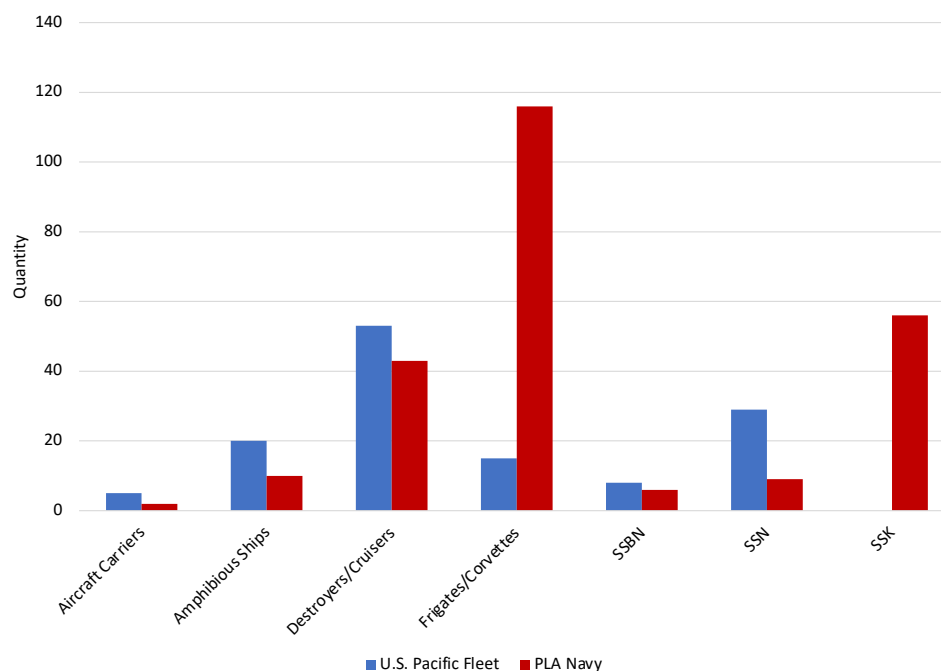
15 McDevitt, p. 71. See also Samuel Eliot Morison, *The Two-Ocean War: A Short History of the United States Navy in the Second World War* (New York: Little Brown, 1963), p. 39. According to Morison, on December 1, 1941, Japan possessed 10 battleships, 10 carriers, 35 cruisers, 111 destroyers, and 64 submarines while, for the Pacific theater, the United States had 9 battleships, 3 carriers, 24 cruisers, 80 destroyers, and 55 submarines.

FIGURE 6: U.S. PACIFIC FLEET VS. IMPERIAL JAPANESE NAVY (DECEMBER 1941)



Source: U.S. Navy total only reflects Pacific fleet numbers. Source: Samuel Eliot Morison, *The Rising Sun in the Pacific: 1931-April 1942* (Boston, MA: Little, Brown and Company, 1984), p. 58; "Commander Battle Force, Report of Pearl Harbor Attack," Naval History and Heritage Command, accessed June 14, 2022, <https://www.history.navy.mil/research/archives/digital-exhibits-highlights/action-reports/wwii-pearl-harbor-attack/commander-battle-force-action-report.html>.

FIGURE 7: SELECT U.S. PACIFIC FLEET VS. PLAN BATTLE FORCE SHIPS (2022)



Source: U.S. Navy total only reflects Pacific Fleet numbers. Source: Samuel Eliot Morison, *The Rising Sun in the Pacific: 1931-April 1942* (Boston, MA: Little, Brown and Company, 1984), p. 58; "Commander Battle Force, Report of Pearl Harbor Attack," Naval History and Heritage Command, accessed June 14, 2022, <https://www.history.navy.mil/research/archives/digital-exhibits-highlights/action-reports/wwii-pearl-harbor-attack/commander-battle-force-action-report.html>.

The PLA's Learning from the Past

China's swift and massive military buildup will furnish Chinese statesmen and commanders with more coercive and warfighting options to achieve their aims. How the PLA might best employ its forces in a future contingency will be a critical element in developing a world-class military. It will need doctrinal, operational, tactical, and organizational innovations to harness and maximize its new capabilities. In other words, China's military modernization is as much an intellectual endeavor as it is a material one. Chinese defense planners will need to revise their assumptions and thinking about future wars as the PLA positions itself to fight a potential great power war on an equal basis against the United States. As they do so, they will likely draw on their own past and traditions and from the experiences of other peer militaries.

The policy community has an opportunity to better understand how the PLA thinks about future wars in which it will likely have reached parity with the U.S. military in many warfare areas. One way to discern the Chinese military's projections about major conflicts in the coming decades is to assess how the PLA interprets past great power wars. Like all military organizations, the PLA looks at how others have performed on the battlefield to assess trends in—and enduring features of—warfare. Indeed, the Chinese military learns vicariously through the experiences of others. Strategists have studied voraciously other nations' wars, due in part to the PLA's lack of exposure to real combat since the 1979 Sino-Vietnamese War.

There is already a substantial body of scholarship in the West about the PLA's interest in studying foreign military experiences. America's quick, decisive victory in the First Gulf War and the subsequent debates about the revolution in military affairs captured the PLA's imagination, stimulating years of debate about the need for the PLA to win in the information age. Michael Pillsbury's collection of translated essays by senior PLA officers opened a window into Chinese military thought on future warfare in the 1990s.¹⁶ Many of the writings vividly demonstrated the deep impression that the First Gulf War made in the minds of Chinese strategists. David Shambaugh similarly illustrated how NATO's military operations in the Kosovo War shaped PLA thinking about the character of future warfare.¹⁷ Drawing from open sources, Lyle Goldstein examined Chinese writings about the Falklands War, which, for PLA analysts, serve as a "compelling strategic analogy" to a possible cross-strait conflict.¹⁸ An edited volume entitled *Chinese Lessons from Other Peoples' Wars* features

16 Michael Pillsbury, ed., *Chinese Views of Future Warfare* (Washington, D.C.: National Defense University, 1997).

17 David Shambaugh, "China's Military Views the World: Ambivalent Security," *International Security*, 24:3 (Winter 1999/2000), pp. 52–79.

18 Lyle Goldstein, "China's Falklands Lessons," *Survival*, 50:3 (June–July 2008), p. 66.

chapters written by topflight PLA scholars about the lessons that Chinese strategists have learned from regional conflicts to small wars since the 1980s.¹⁹

The PLA is undoubtedly dissecting the war in Ukraine after Russia's invasion in February 2022. Since the conflict's outbreak, Western analysts have speculated about the kinds of lessons that might appeal to Chinese strategists.²⁰ Although it is too soon to tell what specific insights the PLA may have drawn from the fighting in Ukraine, there is preliminary evidence that Chinese observers have assessed the war's various campaigns.²¹ Given the conflict's many potential implications for future warfare, the PLA will devote significant intellectual capital to understanding the war in all its dimensions in the years to come.²²

The regional wars of past decades and their lessons appealed to the PLA for good reason. The Falklands War, the First Gulf War, the Kosovo War, and the campaigns in Afghanistan and Iraq following the 9/11 terrorist attacks all involved a superior power fighting against a weaker opponent. These conflicts were particularly resonant when Chinese strategists assumed that China would fight from a position of relative and absolute weakness against the “powerful enemy (强敌)”—code for the United States.²³ These cases served as useful analogies for planners to consider possible contingencies in which China would face an opponent boasting superior naval, aerospace, and other military capabilities.

However, as the PLA closes the gap with the U.S. military, conflicts of the recent past—featuring sharp power asymmetries between the warring parties—are likely to lose their analytic salience. As illustrated above, the PLA has already emerged as a formidable regional military power that boasts an increasingly global expeditionary force. As it advances toward the goal of becoming a world-class military, the Chinese military will be expected to compete and fight with other great powers on an equal footing. As such, past great power wars, including the Pacific War, will hold ever more pertinent insights and lessons than the conflicts of the post-Cold War era when the United States dominated the military sphere.

19 Andrew Scobell, David Lai, and Roy Kamphausen, eds., *Chinese Lessons from Other Peoples' Wars* (Carlisle, PA: Strategic Studies Institute, 2011).

20 See Joel Wuthnow, “Rightsizing Chinese Military Lessons from Ukraine,” *Strategic Forum*, September 2022; David Finkelstein, “Beijing’s Ukrainian Battle Lab,” *War on the Rocks*, May 2, 2022; and Evan Montgomery and Toshi Yoshihara, “Leaderless, Cut Off, and Alone: The Risks to Taiwan in the Wake of Ukraine,” *War on the Rocks*, April 5, 2022.

21 For example, the June 2022 issue of *Naval and Merchant Ships*, a popular journal on naval and military affairs intended for a general audience, published a special multi-part series on the war in Ukraine. One article examines the first phase of the conflict. See 成梁 叶强 [Cheng Liang and Ye Qiang], 俄乌冲突第一阶段军事行动简评 [A Commentary on the First Phase of Military Operations in the Russia-Ukraine Conflict], 舰船知识 [Naval and Merchant Ships], no. 6, 2022, pp. 71–77.

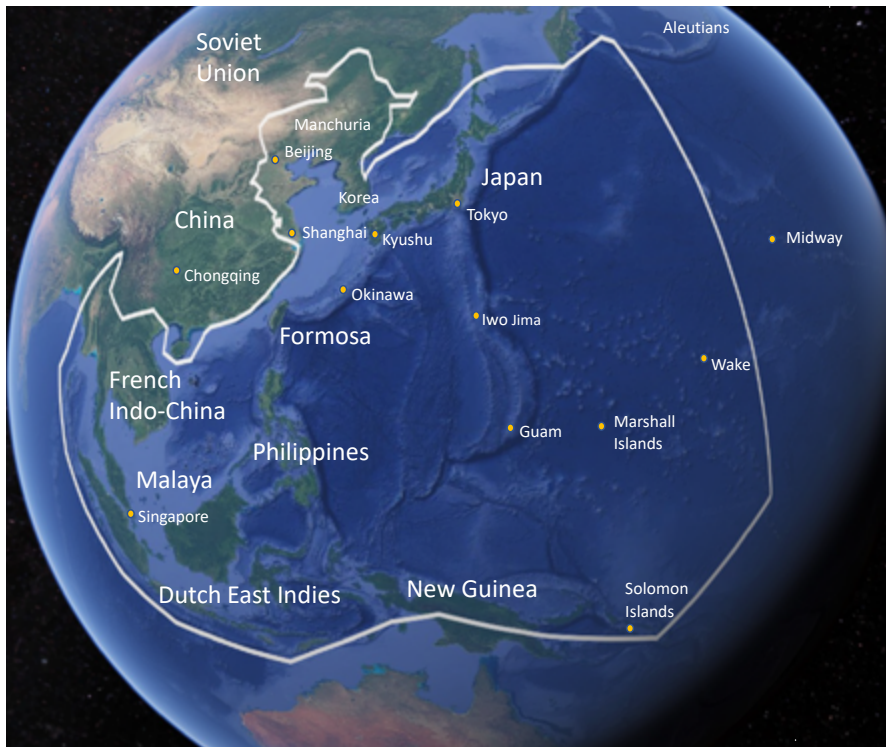
22 For an excellent analysis of the offense-defense balance in the Ukraine war and what that balance implies for future land wars, see Stephen Biddle, “Ukraine and the Future of Offensive Maneuver,” *War on the Rocks*, November 22, 2022.

23 For references to “powerful enemy,” see, for example, 寿晓松 主编 [Shou Xiaosong, ed.], 战略学 [Science of Military Strategy] (Beijing: Military Science Press, 2013), pp. 100–101.

The Pacific War Analogy

The Pacific War stands out for its growing salience to the PLA's future warfighting. Geographically, China expects to fight across a vast maritime expanse that roughly matches the maximum extent of Imperial Japan's conquests by the summer of 1942. Just as the United States fought an away game while Imperial Japan sought to hold off its opponent in offshore waters, the U.S. military would be fighting an expeditionary war while the PLA would be attempting to keep its adversary at arm's length from the homeland. Then, Japan employed shore-based firepower, including bombers and kamikaze attacks, to conduct maritime strikes. Today, China possesses an arsenal of land-based missiles and aircraft to hold surface combatants at risk. As the PLAN transforms itself into a world-class navy, it could increasingly resemble the well-balanced Japanese Combined Fleet on the eve of the Pearl Harbor surprise attack.

FIGURE 8: HEIGHT OF IMPERIAL JAPAN'S EXPANSION IN 1942

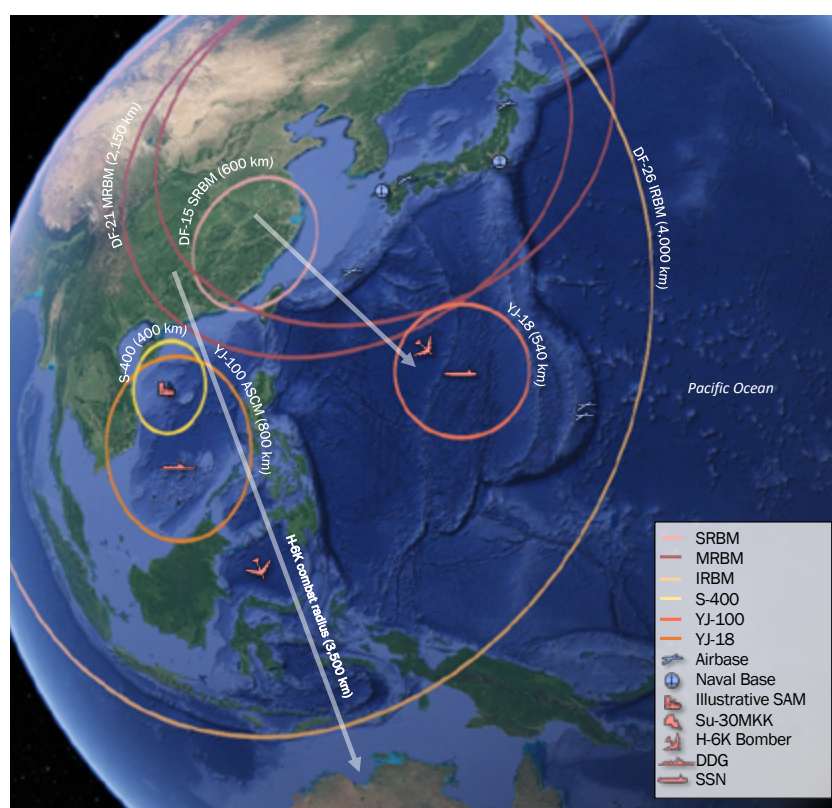


Source: Daniel Marston, *The Pacific War Companion: from Pearl Harbor to Hiroshima* (London, UK: Bloomsbury Publishing, 2011), pp. 84–85.

Western analysts and senior policymakers have turned to the Pacific War as a historical analogy for assessing a putative Sino-American conflict for well over a decade. They see Imperial Japan's planned progressive attritional strategy against the incoming U.S. Pacific

Fleet as an analog to the PLA's anti-access/area denial posture in the Western Pacific.²⁴ In 2008, Thomas Ehrhard and Robert Work published a monograph that draws on the Imperial Japanese and Soviet experiences to describe the emergence of a Chinese “maritime reconnaissance-strike complex.” The complex they describe involves an array of sensors and weaponry that can detect, track, target, and attack aircraft carriers cruising in the open ocean at very long ranges. As the authors warn, “For the first time since the late 1980s, and for only the second time since the end of World War II, U.S. carrier strike forces will soon face a major land-based threat that outranges them.”²⁵ In reference to China's modern anti-access strategy, Michael McDevitt similarly notes, “This is the third time in the last 75 years that the United States has faced the problem of an Asian power attempting to keep U.S. naval forces at bay.”²⁶

FIGURE 9: RANGES OF SELECT PLA FIREPOWER



Source: Hans M. Kristensen and Matt Korda, “Chinese Nuclear Weapons: 2021,” *Bulletin of the Atomic Scientists*, vol. 77, November 15, 2021, <https://www.tandfonline.com/doi/full/10.1080/00963402.2021.1989208>; “Missiles of China,” CSIS Missile Threat Defense Project, updated April 12, 2021, <https://missilethreat.csis.org/country/china/>.

-
- 24 Toshi Yoshihara, “Anti-Access Lessons from the Past,” *Proceedings*, 139:12 (December 2013).
- 25 Thomas Ehrhard and Robert O. Work, *Range, Persistence, Stealth, and Networking: The Case for a Carrier-Based Unmanned Combat Air System* (Washington, D.C.: Center for Strategic and Budgetary Analysis, 2008), p. 195.
- 26 Michael McDevitt, “The Evolving Maritime Security Environment in East Asia: Implications for the U.S.-Japan Alliance,” *PacNet*, no. 22, May 21, 2012, p. 2.

In 2011, in response to a reporter's query concerning China's rapid military developments, the then Chief of Naval Operations Admiral Gary Roughead replied, "You can go back and look at specific campaigns in World War II. The Japanese were trying to deny us access into the Western Pacific. So warfare is about anti-access."²⁷ In an essay explaining an early operational concept designed to counter China's anti-access capabilities, two Pentagon officials contend, "Such [anti-access] problems are not new. During World War II, for example, Imperial Japan possessed robust A2/AD capabilities in the form of air forces, surface fleets, submarine forces, naval minelayers, and air defenses. All had to be overcome by U.S. and Allied air and naval forces to make effective power projection possible."²⁸ Sam Tangredi holds up Imperial Japan's strategy in the Pacific War as an example of a failed attempt at anti-access.²⁹ Michael Pietrucha argues that the Pacific War provides a useful template for developing a U.S.-led maritime interdiction campaign in a potential conflict with China, likening Beijing's vulnerability to sea lane disruption to that of Imperial Japan's.³⁰ Abraham Denmark has commented more broadly about the applicability and the limits of the Pacific War as a historical analogy to the Sino-American competition.³¹

More recently, strategists have sought to draw insights from the various Pacific War battles. Christopher Rein examines five major battles in the Southwest Pacific Theater to highlight the A2/AD challenge and to make a case for implementing the concept of "multi-domain battle" in future wars.³² Marine Corps Brigadier General William Bowers and Benjamin Jensen authored an article highlighting the "enduring lessons" that the Guadalcanal campaign holds for twenty-first century warfare, including the need to "rapidly build and defend advance bases" in the teeth of China's A2/AD weaponry.³³ Ben Ho has examined the battles of Wake Island, the Bismarck Sea, and Leyte Gulf, as well as the Japanese

27 Admiral Gary Roughead, Chief of Naval Operations, Interview Transcript, Defense Writers Group, A Project for the Center for Media and Security, March 24, 2011.

28 Captain Philip Dupree and Colonel Jordan Thomas, "Air-Sea Battle: Clearing the Fog," *Armed Forces Journal*, June 1, 2012.

29 Sam J. Tangredi, *Anti-Access Warfare: Countering A2/AD Strategies* (Annapolis, MD: Naval Institute Press, 2013), pp. 141–149.

30 Michael Pietrucha "Re-Fighting the Wrong War: Applying the Pacific War Template Against China," *Leading Edge*, October 13, 2015 and Michael Pietrucha, "To Defeat China in Battle, America Should Study World War II," *War is Boring*, July 21, 2015.

31 Abraham M. Denmark, "The Promise and Perils of Historical Analogy: What the Pacific War Can, and Cannot, Tell Us About Asia Today," *Legacy of the Pacific War Series*, Wilson Center, August 2020.

32 Christopher M. Rein, *Multi-Domain Battle in the Southwest Pacific Theater of World War II* (Fort Leavenworth, KS: Army University Press, 2017).

33 Brigadier General William Bowers and Benjamin Jensen, "A World War II battle holds key lessons for modern warfare," *The Conversation*, July 25, 2019.

withdrawal from Guadalcanal, to derive possible implications for the PLA and the U.S. military.³⁴ Most notably, Lyle Goldstein was among the first to detect a growing interest in the titanic struggles at sea among Chinese analysts. In 2016, he published a piece that analyzes Chinese writings about the Battle of Midway and later summarized a Chinese naval journal article on the Guadalcanal campaign.³⁵

Most studies use the war as a historical analogy from the U.S. perspective, extrapolating events of the past to the present. They tend to focus on the war's relevance to the United States rather than to China. Moreover, the earlier analogies are mostly confined to understanding the PLA's anti-access/area denial strategy. They are premised on assumptions that the PLA would be fighting from a position of relative weakness and would be fighting primarily defensive battles near mainland shores. While the analogies about China's A2/AD strategy remain valid and are relevant to this study, they do not explicitly consider the possibility that the PLA might fight for command of the sea and air and might project power across significant distances to seize territorial objectives. They do not entertain the future possibility that the PLA might play the role of the United States rather than Japan in the Pacific War. Except for Goldstein's articles, Western analysts have not exploited the Chinese-language literature to discern how strategists in China interpret the Pacific War. But even Goldstein's excellent commentaries are based on a relatively small sample of Chinese writings. There is thus an opportunity to explore in greater depth how Chinese commentators appraise the Pacific War in all its dimensions and to identify the specific lessons they have learned from their own close study of the conflict.

Sources and Methods

The Pacific War has been a topic of interest to the PLA for decades. Serious scholarship on the Second World War, in general, and on the Pacific War, in particular, began to proliferate in the post-Mao era. As the PLA restored professional military education in the late 1970s following the upheavals of the Cultural Revolution, the military leadership reintroduced the study of military history as a major element of the curriculum. The directive to bring back history came from the very top. In January 1979, Marshal Xu Xiangqian, then serving as the defense minister and formerly the chief of staff of the PLA, spoke at a Central Military Commission symposium about the importance of history in military education. Xu stated:

Military affairs are a specialized science that is regulated by special rules. For those of us doing military work, we must study and research the theory of military science. Our cadres

-
- 34 Ben Ho, "Lessons from Operation Ke for the Marine Corps," *War on the Rocks*, November 23, 2020; Ben Ho, "The Value of Shore Based Air Power For Maritime Strike," *Asian Military Review*, March 26, 2020; Ben Ho, "Attaining Maritime Superiority in an A2/AD Era: Lessons from the Battle of Bismarck Sea," *Joint Forces Quarterly*, 96:1 (January 2020), pp. 96–104; and Ben Ho and Gary Lehmann, "The Next Pacific War: Lessons From Wake Island For The PLA," *Breaking Defense*, July 1, 2018.
- 35 Lyle Goldstein, "What China Learned from America's Biggest World War Two Naval Victory," *National Interest*, June 3, 2016 and Lyle Goldstein, "Why is China's Navy Studying the Battle of Guadalcanal?" *National Interest*, April 1, 2019.

must read more books on military theory and must study war history. While we need to learn our own history, we must also learn foreign histories, particularly the war history of the Second World War. If we do not study these histories, it will be difficult to command in modern wars.³⁶

The following month, Marshal Xu composed a letter to those leading the Academy of Military Science and the National Defense University, urging them to reinstate military history in their curricula. Xu wrote:

The military history course being set up by the Academy of Military Science should be viewed as one of the primary courses. Our military's mid- to high-level commanders do not know or are not proficient in the various classic case studies of Chinese, foreign, ancient, and contemporary wars, especially the war histories of the Second World War. This precludes an in-depth and skilled grasp and knowledge of the principles of war, which could become a major liability for the future of operational command.³⁷

Such high-level attention to the teaching of military history, particularly the Second World War, stimulated a major research effort by the PLA's various professional military education institutions and civilian universities that continues to this day. By the early-1980s, scholars began to publish authoritative works on the Second World War, including China's war of resistance against Japan, the European theater of operations, and the Pacific War. The fortieth, fiftieth, and sixtieth anniversaries of the global war's end in 1985, 1995, and 2005, respectively, became symbolic occasions for releasing significant contributions to the field. From 1980 to 2010, Chinese civilian and military academies published over 1,100 books, some 8,700 articles, and over 700 translations of foreign works on the Second World War.³⁸ During the same period, major universities and research institutes, including the Chinese Academy of Social Sciences, the Academy of Military Science, the National Defense University, Wuhan University, East China Normal University, and Capital Normal University, began to offer master's and doctoral degrees in military history focused on the Second World War.³⁹

Marshal Xu's call for instilling a historical sensibility among the officers resonated with his audience then and continues to deeply influence the PLA's study of the past. According to Ma Jun of the Chinese National Defense University, "An outstanding military decisionmaker

36 徐向前 [Xu Xiangqian], 徐向前军事文选 [*The Selected Military Writings of Xu Xiangqian*] (Beijing: Liberation Army Press, 1993), p. 160.

37 褚振江 [Chu Zhenjiang], 徐帅的一封亲笔信 [A Letter from Marshal Xu], 中国魂 [*Spirit of China*], no. 3, 2016, p. 63. The journal is published by the Spirit of Yen'an Research Association under the auspices of the Central Party School of the Chinese Communist Party.

38 沈永兴 [Shen Yongxing], "中国改革开放以来的二战史研究 [Research on the History of the Second World War Since China's Reform and Opening]," 中国社会科学报 [*Chinese Social Sciences Today*], August 9, 2010. The author is a researcher at the World History Research Center of the Chinese Academy of Social Sciences.

39 胡德坤 赵文亮 [Hu Dekun and Zhao Wenliang], "中国第二次世界大战史研究30年回顾 [A 30-Year Retrospective of China's Research on the Second World War]," 史学理论研究 [*Historiography Bimonthly*], no. 4, 2008, p. 96.

must possess the basic qualities of a historian, a rich knowledge of historical studies, and a strong ability to draw insights from history.⁴⁰ Ma argues that a military leader must consider the past throughout the decision-making process. Concurring, three analysts from the Nanjing Army Command College contend, “Only through deep and careful study of war history can one see through the numerous complex phenomena of war on the surface to discover the unchanging inner nature of war.”⁴¹ In other words, an intimacy with the past ensures commanders can draw from the experiences of others preceding them and discern enduring principles of strategy and war that are applicable across time. The PLA, then, has long sought to cultivate historical mindedness in the study of war. More importantly, there is a well-established and growing body of writings on the mainland that allows for an immersive reading to understand the Pacific War’s lessons through Chinese eyes.

To understand how Chinese commentators assess the Pacific War, this report engages a selection of this extensive literature to reproduce on-the-ground perspectives of the conflict. This study draws from various Chinese-language sources, including books for internal military use [军内] and unofficial works (see Appendix A for a list of publications). The PLA literature consulted includes: a five-volume study of World War II by the Academy of Military Science; a three-volume set on the history of military revolutions by the Academy of Military Science; a historical survey of military campaigns by the National Defense University; an in-depth account of Pacific War battles by a naval historian who worked at the Dalian Naval Academy and the Nanjing Naval Command College; internal and publicly available PLA studies on island warfare and amphibious operations; individual volumes from the graduate-level course material series by the Academy of Military Science that focus on military campaigns; and PLA studies on the future of campaigns and joint operations that rely on historical case studies.⁴²

The study also consults Chinese studies written mainly for the general reader. While these books are not as authoritative as the PLA sources, they contain useful interpretations of the conflict. In addition, this report cites various journals that reprise specific battles of the maritime conflict. The journal articles range from scholarly works published in PLA academic journals, such as *Military History* and *Military History Research*, to well-informed analyses in general interest naval periodicals, including *Navy Today* (formerly *Modern Navy*), *Modern Ships*, *Naval and Merchant Ships*, and *Shipborne Weapons*.

40 马骏 [Ma Jun], “Bringing Into Play the Role of Scientific History in Military Decision-Making [发挥历史科学在军史决策中的作用],” 军事历史 [Military History], no. 4, 1987, pp. 18–19.

41 张国宁 沈寿林 李继东 [Zhang Guoning, Shen Shoulin, and Li Jidong], 战斗复杂性的研究方法 [Research Methods for Complexity in Combat], 重庆理工大学学报 [Journal of Chongqing University of Technology], no. 9, 2010, p. 6.

42 To the extent possible, this study identifies the institutional affiliations and professional backgrounds of the authors and highlights the kinds of sources that Chinese scholars and analysts have used to produce their works on the Pacific War. I thank Brad Lee for suggesting research on the biographical details of the authors and the sources employed in the Chinese literature.

Given the enormity of the Pacific War as a research topic, it is essential to narrow the analytic scope and pay close attention to the appropriate level of analysis. This study examines Chinese writings about the military campaigns of the Pacific War. To focus on the operational level of war, this report adheres strictly to Carl von Clausewitz's definition of "engagement" as the study's central organizing principle. As Clausewitz observes, "Tactics teaches the use of armed forces in the engagement; strategy, the use of engagements for the objects of the war."⁴³ In other words, the focus is on fighting between opposing armed forces. While high politics, diplomacy, geopolitics, technology, and innovation are important contextual elements of the narrative, this study will zero in on Chinese writings about the key campaigns of the war. The analytical goal is to draw insights from the intersection of strategy, operations, and tactics.

The study of the campaign level is particularly pertinent to examining how the Chinese military learns. Operational art or the campaign [战役] is a central conceptual framework in the PLA's understanding of war. It is a foundational level of analysis and a basic analytical building block for Chinese military theory and practice. According to a graduate textbook by the Academy of Military Science, "The science of campaigns is the scientific study of campaigns and their guiding laws."⁴⁴ The study of campaigns not only furnishes insights about the enduring principles of and regular patterns in warfare, but it also helps strategists and commanders anticipate operational art's trajectory. As the Chinese National Defense University's *Science of Campaigns* explains, the study of campaigns provides "a systematic, complete, and scientific theoretical basis for obtaining victory in future campaigns."⁴⁵

The theory and history of campaigns thus constitute a core component of the PLA's institutional and doctrinal worldview. For example, the campaigns of the Chinese civil war loom large in the PLA's corporate memory. Chinese writings extol the decisive battles against the Nationalists, such as the Huai-Hai Campaign, as instances of superb operational art that should continue to inspire planners today. Students attending the PLA's command and staff colleges participate in staff rides to walk the civil war battlefields to obtain firsthand perspectives and to debate campaign design.⁴⁶ Since force employment is integral to any campaign, the PLA's interpretation of and learning from past campaigns, including those of the Pacific War, shed light on its thinking about the use of force as a world-class military in the years ahead.

43 Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret, (Princeton, NJ: Princeton University Press, 1984), p. 128.

44 乔杰 [Qiao Jie], 战役学教程 [Course Materials on the Science of Campaigns] (Beijing: Academy of Military Science, 2012), p. 1.

45 张玉良 主编 [Zhang Yuliang, ed.] 战役学 [The Science of Campaigns] (Beijing: National Defense University Press, 2006), p. 1. See also 江林 [Jiang Lin], 战役学导论 [Introduction to the Science of Campaigns] (Beijing: Liberation Army Press, 2010).

46 Larry Wortzel, "The Beiping-Tianjin Campaign of 1948-1949: The Strategic and Operational Thinking of the People's Liberation Army," in *Chinese Warfighting: The PLA Experience Since 1949*, Mark A. Ryan, David M. Finkelstein, and Michael A. McDevitt, eds. (New York: M.E. Sharpe, 2003), p. 57.

To examine Chinese commentaries about the Pacific War at the operational level of war, this study covers three pivotal naval battles and island campaigns. Specifically, the report surveys Chinese writings about the struggles at Midway, Guadalcanal, and Okinawa. Several factors informed the case selection. The three battles are among the most famous and are extensively documented in China. The campaigns involved different aspects of naval and island warfare. The Battle of Midway was a fleet-on-fleet clash, while the fights over Guadalcanal and Okinawa were combinations of air-sea actions and amphibious operations. They thus offer opportunities to discern Chinese perspectives about different types of maritime combat. Moreover, the chronology of the battles follows major shifts in the military balance from 1942 to 1945 as Japan became progressively weaker and as the United States obtained overwhelming material superiority. This opens a window into how the Chinese think about military strategies between peer rivals and stronger and weaker sides.

Importantly, the three cases could serve as analytic parallels to contingencies that the PLA might face in a future great power war. The Battle of Midway was a classic naval air engagement. As the PLAN continues its ascent, it will become better equipped to carry out meaningful carrier warfare. The Guadalcanal campaign was a struggle over an island feature between two roughly equal military powers at the scene of action. China, too, might have to fight against the United States over strategic terrain along and beyond the first island chain as a peer rival. The Battle of Okinawa showcased massive uses of Japanese shore-based airpower—in the form of kamikaze attacks—that inflicted frightful losses on the U.S. Navy. The PLA would likely rely heavily on land-based precision-strike weaponry to impose costs on American and allied forces in the Western Pacific during a major conflict.

Each case study details Chinese assessments of how both sides performed and of the main factors that contributed to the battle's outcome, including the tactical military balance, intelligence, airpower, command, logistics, and so forth. Each will draw attention to debates—many that continue to linger in the West—among mainland analysts. Each will examine Chinese counterfactual analysis about how alternative courses of action by either side might have changed the course or the result of the campaign.⁴⁷ Such critical analysis by Chinese commentators reveal insights related to the PLA's mindset, operational preferences, and proclivities. Each case will also identify specific lessons that analysts have learned from these operations and the contemporary relevance of those lessons for twenty-first-century warfare. The following three chapters on Midway, Guadalcanal, and Okinawa adhere to this analytic structure.

47 For the importance and the role of counterfactual analysis in the study of past campaigns, see Carl von Clausewitz, *On War*, eds. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), pp. 156–169.

CHAPTER 3

Battle of Midway

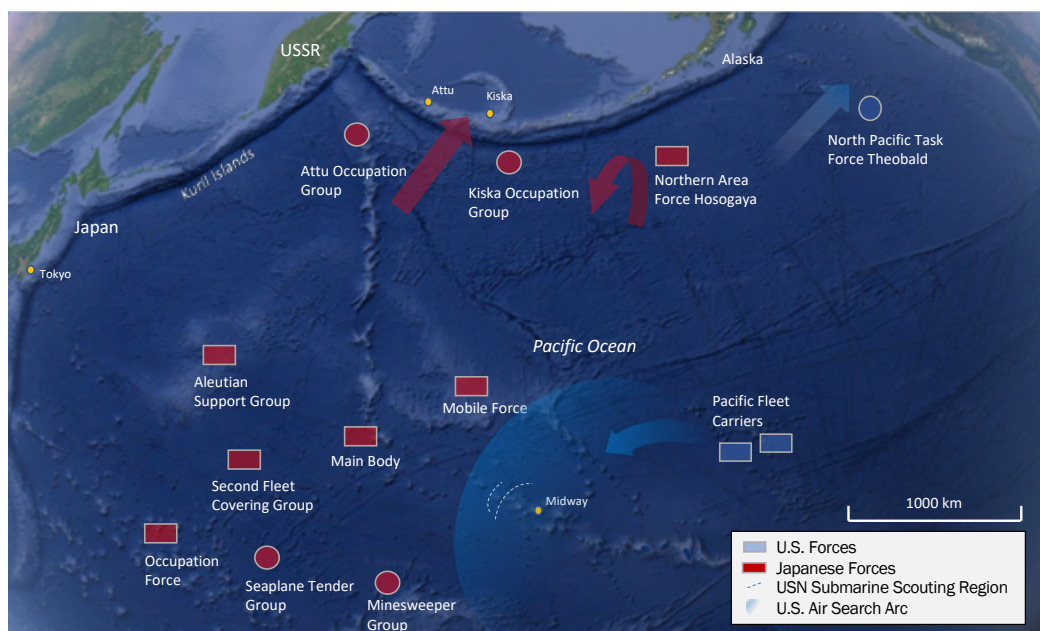
After the Pearl Harbor attack, the United States conducted a series of carrier raids against the Japanese in the southwest Pacific. The hit-and-run strikes in early 1942 were meant to keep the enemy off balance, regain the initiative, and build momentum for the expected counteroffensive. The raids, including the famous Doolittle bombing run on Tokyo, convinced Japanese leaders that they had to finish off the American fleet. Following the Battle of the Coral Sea, during which the U.S. Navy stymied the enemy's advance on Port Moresby, the Japanese high command turned to Midway. The plan was to use an attack on Midway as bait to draw out and annihilate the U.S. carrier fleet. The operation, involving a diversionary attack on the Aleutians, proved overly elaborate. It also dispersed the fleet destined for Midway, violating the principle of concentration.⁴⁸ The American side, aided by superior intelligence, anticipated the thrust toward Midway and positioned forces to spring a surprise on the incoming Japanese navy.

The engagement, a close-run thing, turned on calculated risk-taking, intelligence, timing, tactical error, courage, and luck. The duel, carried out entirely by carrier-based aviation, produced devastatingly lopsided results. The Imperial Japanese Navy lost four carriers, over 250 aircraft, and about 3,500 men, including Japan's best pilots. By contrast, the Americans lost one carrier, one destroyer, and over 130 land- and carrier-based aircraft. The defeat at Midway forced Japan onto the defensive for the rest of the war.⁴⁹ Tokyo's quest for a quick, decisive victory evaporated, giving way to a long war that the Japanese empire was ill-suited to wage. However, the loss by no means sealed Japan's fate. The Imperial Japanese Navy still boasted a powerful, balanced fleet that could deliver devastating blows. Three more years of hard fighting lay ahead.

48 Craig L. Symonds, *Decision at Sea: Five Naval Battles that Shaped American History* (Oxford: Oxford University Press, 2005), p. 220.

49 George W. Baer, *One Hundred Years of Sea Power: The U.S. Navy, 1890-1990* (Stanford, CA: Stanford University Press, 1993), p. 221.

FIGURE 10: BATTLE OF MIDWAY



Source: Adapted from Daniel Marston ed., *The Pacific War: From Pearl Harbor to Hiroshima* (Oxford, UK: Osprey Publishing, 2005), p. 90.

Intelligence and Reconnaissance

Chinese analysts attribute the U.S. victory in Midway in part to superior intelligence. They are uniformly impressed with the successful codebreaking that enabled the Americans to read the Imperial Japanese Navy's operational code, known as JN-25 code, and to divine their enemy's intentions. Multiple scholarly works recount the crucial work of Station Hypo, a team of cryptanalysts in Pearl Harbor led by Lieutenant Commander Joseph J. Rochefort, to discern the IJN's next moves. Hypo's tireless efforts helped reveal Japanese plans to attack Port Moresby, an attempt that was foiled at the Battle of the Coral Sea. The intelligence work also pointed to a much larger operation aimed at Midway. Many Chinese studies retell Rochefort's famous ploy to convince his superiors that Midway was Japan's intended target. The ruse involved sending an uncoded fake radio signal about a broken salt-water evaporator on Midway meant to be read by the enemy. An intercepted Japanese message that obligingly reported the island's shortage of drinking water removed any doubts about Rochefort's judgment.

More importantly, Chinese observers credit the U.S. side for establishing the infrastructure and institutions to obtain reliable and usable intelligence about—and to deny the same from—the adversary. The United States set up signals monitoring units across the Pacific, including Hawaii, Guam, the Philippines, and Alaska, and collaborated with allies in the

region to learn more about the Japanese force disposition and movements.⁵⁰ At the same time, the transpacific submarine cable that connected San Francisco, Hawaii, and Midway provided secure communications between Pearl Harbor and the defenders on Midway.⁵¹ The Americans invested in human capital that cultivated such talent as Rochefort, whose language skills, experience, and “unique thinking ability (独特的思维能力)” helped to discern Japanese plans.⁵² A deep understanding of the adversary, including its national character, allowed Rochefort and his team to better interpret the intelligence gleaned from Japanese communications. Indeed, Major General Yuan Wenxian of the Chinese National Defense University contends that Rochefort’s bogus radio message worked because he understood the enemy’s “psychological temperament (心理状态).”⁵³

By contrast, to Chinese eyes, the Japanese suffered from serious intelligence shortfalls. According to one study, Japan failed to fully grasp the intentions and capabilities of the opposing side during Midway. The IJN not only underestimated the fighting power of the American fleet, but it also assumed that the enemy would be largely reactive to its initiatives. Japanese assessments of the adversary had succumbed to “subjective thinking (主观)” or “wishful thinking (一厢情愿).”⁵⁴ These misinterpretations stood in stark contrast to the careful intelligence gathering and analysis that informed the Pearl Harbor attack and the campaigns to seize Southeast Asia. The study attributes the apparent disjuncture in assessments to victory disease.⁵⁵ In other words, previous successes clouded Japan’s judgment. Another article argues that Japanese intelligence institutions were relatively “shabby (简陋)” and severely lacked skilled intelligence personnel.⁵⁶ Moreover, bureaucratic rivalries between various intelligence departments undermined the efficiency and effectiveness of intelligence work. Finally, lax operational security hobbled Japan. According to this Chinese interpretation, Japanese leaders were overly confident in the integrity of their encrypted code. Numerous studies point to the failure to change the code in the months leading to Midway as a contributing factor to the IJN’s defeat at sea.⁵⁷

50 刘丽 [Liu Li], “Analysis of the U.S.–Japan Intelligence War during the Midway Sea Battle [浅析中途岛海战中的美日情报战],” 情报探索 [Information Research], no. 4, 2008, p. 116.

51 罗卫萍 [Luo Weiping], “从珍珠港到中途岛—太平洋战争前期日本情报失误研究 [From Pearl Harbor to Midway—Research on Japan’s Intelligence Failures during the Early Phases of the Pacific War],” 军事历史研究 [Military History Research], no. 2, 2008, p. 138.

52 王立刚 [Wang Ligang], 情报战: 美军治愈中途岛海战之关键 [Information War: The Key to the U.S. Military’s Solution in the Battle of Midway], 内蒙古农业大学学报 [Journal of Inner Mongolia Agricultural University], no. 1, 2007, p. 322.

53 袁文先 [Yuan Wenxian], “A Discussion of the Effects of Information Warfare from the Midway Sea Battle [从中途岛海战谈到信息战的妙用],” 现代军事 [Contemporary Military], no. 7, 2005, p. 29. From 2006 to 2011, Yuan was the director of the Information Operations and Command Department at the Chinese National Defense University.

54 Luo Weiping, “From Pearl Harbor to Midway,” p. 137.

55 Ibid., pp. 137–138.

56 Liu Li, “Analysis of the U.S.–Japan Intelligence War during the Midway Sea Battle,” p. 116.

57 王肖戎 邱婷婷 [Wang Xiaorong and Qiu Tingting], “中途岛海战日本情报失误研究 [Research on Japan’s Intelligence Failures during the Midway Sea Battle],” 社科纵横 [Social Sciences Review], no. 2, 2012, p. 141.

Chinese accounts further argue that the United States was superior to Japan in operational and tactical reconnaissance, which compounded the asymmetries in intelligence work. The U.S. Navy deployed submarines, shore-based aircraft, and carrier-based aircraft to provide layers of screens to detect the incoming enemy fleet. One article approvingly observes that Admiral Chester Nimitz, the commander-in-chief of the U.S. Pacific Fleet, prudently surged air reconnaissance assets, including the PBY Catalina flying boats and B-17 bombers, on Midway from just 24 planes to over 120 aircraft.⁵⁸ The PBY patrol craft were able to conduct search missions 700 miles from Midway. This early preparation enabled the United States to successfully conduct what the study calls a “retaliatory (反制)” operation—defined as “combat tactics that allow the other side to make the first move and then wait for the opportunity to counterattack to overpower the opponent.”⁵⁹ In other words, the early detection of the attacking enemy fleet, which made the first move, allowed the U.S. defenders to decide how they would conduct their riposte and thereby regain the initiative.

For one analyst, it was the process by which the United States obtained and passed on tactical intelligence to its forces that conferred an important advantage over its adversary. The combination of shore-based reconnaissance aircraft, radars on Midway, and continuous communications between sensors and local commanders enabled the American defenders to enjoy a better feel of the overall situation than the Japanese.⁶⁰ Notably, U.S. naval leaders were willing to deploy additional air assets to sense their surroundings, even if such sorties came at the expense of offensive airpower. According to one study, as much as a third of American airpower was dedicated to the reconnaissance mission.⁶¹

By contrast, Chinese commentators find that Japanese reconnaissance was poor. They repeatedly fault Admiral Chuichi Nagumo, the commander of the First Air Fleet, or the *Kido Butai*, for his failure to launch more scouts and to launch them earlier on the day of the engagement. They attribute this stinginess to the Japanese obsession with offensive operations. To two analysts from the PLA Air Force Engineering University, the IJN judged every noncombat sortie as a major opportunity cost to the air assault and thus devoted only a tenth of its air assets for scouting.⁶² Had Japan devoted more resources to reconnaissance, according to this reasoning, the IJN might have detected the American carrier fleet earlier and the Japanese fleet would not have been as reactive as it was. The Japanese also failed to obtain crucial tactical information about the larger theater of operations, especially the location of the U.S. carriers. The belief that the Americans had lost two carriers instead of one in the Battle of the Coral Sea compounded this error. One Chinese article is particu-

58 潘金宽 邹昊 [Pan Jinkuan and Zou Hao], “中途岛战役: 美军如何实施‘反制’作战 [The Midway Campaign: How the U.S. Military Implemented a ‘Counterattack’ Operation],” 舰载武器 [Shipborne Weapons], no. 6, 2003, p. 78.

59 Ibid., p. 77.

60 Liu Li, “Analysis of the U.S.-Japan Intelligence War during the Midway Sea Battle,” p. 117.

61 凌治彬 [Ling Zhibin], “太平洋战争的转折点: 中途岛海战 [The Turning Point in the Pacific War: The Battle of Midway],” 辽宁大学学报 [Journal of Liaoning University], no. 5, 1982, p. 71.

62 Wang Xiaorong and Qiu Tingting, “Research on Japan’s Intelligence Failures during the Midway Sea Battle,” p. 140.

larly scathing about the submarine screening force under Rear Admiral Marquis Teruhisa Komatsu's command. Owing to Komatsu's negligence, his submarine picket had failed to reach its station between Midway and Oahu in time to detect and report the passage of American carriers.⁶³

To Chinese analysts, the influence of intelligence and reconnaissance on the course and outcome of the battle holds many lessons for the PLA. For General Yuan, the struggle over Midway offers insights about how China should plan to fight and win future “information-ized wars (信息化战争).” As he sees it, the effective use of intelligence could improve the chances of success for the weaker side:

Today, information warfare is being applied broadly and has already become an important combat form in informationized wars. How information warfare will realize the goals of using the inferior to defeat the superior and using the weak to defeat the strong in informationized wars will become increasingly grim and urgent for our military. In the future, our military could potentially face a powerful opponent. How information warfare can be used to win wars is a topic we need to closely study...We should learn from the U.S. military's clever application of information warfare and psychological operations during the Battle of Midway.⁶⁴

Yuan's reference to a “powerful opponent” is code for the United States. He assumes that in a prospective Sino-American war, China would be fighting from a position of inferiority. To him, the U.S. Navy's performance in June 1942 shows that, through superior intelligence and its proper exploitation, the PLA can more than make up for its relative weakness in material power. The general further calls on the Chinese military to hone its techniques and methods in information warfare and to cultivate human talent in information warfare on a large scale.⁶⁵

Liu Li similarly observes that America's exceptional use of reconnaissance techniques and capabilities at Midway compensated for its inferiority in numbers and in the quality of its pilots. Looking ahead in the twenty-first century, the “two-way transparency (双向透明)” of the modern battlefield will further demand timely tactical intelligence through first-rate reconnaissance capabilities. As Liu explains:

In future wars, methods for deception, camouflage, and feints will increasingly diversify for both combatants. Moreover, electronic confrontation will flood the entire battlefield with real and false signals. Battlefield information will also become more numerous and complex, presenting a new situation. These factors will inevitably create struggles for information that would be unprecedented in intensity. Whether one can promptly, accurately, and continuously grasp real time battlefield information and whether one can gather, disseminate,

63 萧西之水 [Xiaoxizhishui (pseudonym)], “死板与灵活: 中途岛作战的漏洞与美军策略 [Rigidity and Flexibility: Loopholes and U.S. Strategy in the Midway Operations],” 国家人文历史 [National Humanity History], no. 22, November 2019, p. 61.

64 Yuan Wenxian, “A Discussion of the Effects of Information Warfare from the Midway Sea Battle,” p. 29.

65 Ibid., p. 29.

analyze, and decide on information in real time will be vital to obtaining the initiative in war and forming an advantageous combat posture.⁶⁶

Drawing from the lessons of Midway, Liu calls on the PLA to employ reconnaissance satellites, aerial warning aircraft, and land- and sea-based sensors to form an “omni-directional information-gathering network” that would allow it to better comprehend the battlefield situation in a future conflict.⁶⁷

Concentration and Disposition of Forces

Chinese analysts see the U.S. concentration of its forces and the contrasting Japanese dispersal of their fleet as a major factor in explaining the battle’s result. They are particularly impressed with how the American side maximized its limited resources for the coming fight. They note approvingly that Nimitz spared nothing to meet the IJN by deploying his three remaining carriers to the scene of action and by transferring sizable numbers of shore-based aircraft to Midway.⁶⁸ As an Academy of Military Science study observes, “While the U.S. military’s capabilities were limited, from the start it concentrated its forces to the maximum extent in the main theater of operations and in the main operational direction, thereby shrinking the power gap between itself and the opponent in the primary engagement.”⁶⁹ Another study explains, “Concentrating superior combat capabilities to annihilate the enemy’s effective strength is a basic military principle. In the Battle of Midway, the U.S. military was the weaker side, yet it achieved victory. The primary reason is that the U.S. military concentrated its forces to obtain local superiority, thereby turning passivity into initiative.”⁷⁰ In other words, the concentration of forces leveled the playing field, especially against an adversary that had dispersed its units.

Chinese commentators have paid special attention to the role of shore-based aircraft that had assembled on Midway. A two-part article published by the Academy of Military Science assesses the performance of the air defense effort on Midway. The piece observes that aircraft stationed on the island, including the F2A-3 Buffalo fighters and the SB2U-3 Vindicator dive bombers, prior to the buildup were largely inferior in performance to their

66 Liu Li, “Analysis of the U.S.-Japan Intelligence War during the Midway Sea Battle,” p. 117.

67 Ibid., p. 117.

68 One study observes that the U.S. ability to regenerate combat power enabled Nimitz to concentrate his fleet. The study marvels at how the heavily damaged *Yorktown* carrier was rapidly repaired and brought back into service in days to join the defense of Midway. See 李斌 刘奇韬 主编 [Li Bin and Liu Qitao, eds.], 后勤保障出战斗力 [Logistics Support Produces Combat Power], (Shantou, Guangdong: Shantou University Press, 2017), pp. 205–210.

69 李际均 主编 [Li Jijun, ed.] 第二次世界大战史 [History of the Second World War, Volume 3], (Beijing: Academy of Military Science, 2015), p. 362.

70 张京 周志刚 主编 [Zhang Jing and Zhou Zhigang, eds.], 世界著名海上作战点评 [Review of World’s Famous Sea Battles] (Beijing: Long March Press, 2011), p. 145.

Japanese counterparts.⁷¹ In late May, SBD-2 Dauntless dive bombers, F4F Wildcat fighters, additional PBV flying boats, B-26 bombers, and B-17 bombers arrived on Midway. Even so, the article reports that Nimitz had reservations about the reinforcements assembled on the island. Limited airfield capacity, inadequate numbers, inferior performance of older aircraft, poor accuracy of Army bombers against targets at sea, and relative inexperience of pilots were factors that set realistic expectations about what shore-based airpower could accomplish. Nimitz did not anticipate great operational feats from this air fleet. Rather, he sought to employ the aircraft in early strikes to “throw into confusion the enemy’s fleet formation and fighter screens while creating conditions for his own carrier-based air fleets to bring into play their capabilities.”⁷² In other words, shore-based airpower would enable subsequent and more decisive operations by carrier-based airpower. This judgment proved prescient.

As noted above, flying boats and bombers on the island provided a reconnaissance screen that was critical to detecting the incoming enemy fleet. On the morning of the battle, every available aircraft on Midway took to the air to meet the threat. The air strikes launched from the island were ineffective and failed to inflict damage against the Japanese fleet, while the attacking force suffered grievous losses. Nevertheless, the abortive attempts influenced the enemy’s tactical calculations that in turn contributed to the battle’s outcome. Fang Bing, a professor at the Chinese National Defense University, notes that the American raids knocked Nagumo and his subordinates off balance, thereby eroding their operational initiative.⁷³ Indeed, those failed attacks contributed to Nagumo’s infamous and fateful decision to rearm his aircraft that left his carriers vulnerable to the devastating blows from U.S. dive bombers.⁷⁴ Shore-based airpower, despite its various weaknesses, enabled the defender to complicate enemy operations. In explaining the battle’s outcome, the Chinese navy’s official encyclopedia states:

The U.S. military covertly deployed its limited combat capabilities and concentrated its forces against a singular object. In close coordination with shore-based aircraft on Midway, the U.S. side waited for the most opportune moment to attack the Japanese mobile fleet with all of its strength. As a result, aviation forces in the engagement area achieved local superiority, setting the material foundations for victory.⁷⁵

In short, the combined use of shore- and carrier-based aircraft against the enemy fleet tipped the scales sufficiently to achieve operational success.

71 爱澜 [Ai Lan], “菜鸟们的天空: 中途岛战役中陆基航空兵的奋战 上 [The Tough Fight by Shore-Based Aviation Units during the Midway Campaign, Part One],” 军事历史 [Military History], no. 4, 2006, p. 20.

72 Ai Lan, p. 23.

73 房兵 [Fang Bing], “决战决胜—扭转战局的中途岛海空决战 [Decisive Battle, Decisive Victory—The Decisive Air-Sea Battle at Midway that Turned the Tide],” 知识就是力量 [Knowledge is Power], no. 8, 2013, p. 38.

74 爱澜 [Ai Lan], “菜鸟们的天空: 中途岛战役中陆基航空兵的奋战 下 [The Tough Fight by Shore-Based Aviation Units during the Midway Campaign, Part Two],” 军事历史 [Military History], no. 5, 2006, p. 25.

75 石云生 主编 [Shi Yunsheng, ed.], 中国海军百科全书 [Encyclopedia of the Chinese Navy] (Beijing: Haichao Press, 1998), p. 1981.

Japan, by contrast, violated the basic principle of concentration on several levels. At the theater level, Admiral Isoroku Yamamoto, the commander-in-chief of the Combined Fleet, split up his forces to simultaneously seize two distinct objectives: the Aleutians and Midway. The Japanese operation for the Aleutians was meant to draw American attention from the main attack on Midway. However, the lure involved a substantial force, including two carriers with eighty-two aircraft embarked on them, three heavy cruisers, four light cruisers, twelve destroyers, and six submarines. Naval expert Liu Yi asserts that the diverted carriers sealed the fate of the Midway operation. He states, “From the basic military principle of force concentration, Yamamoto’s dispatch of the two carriers to the Aleutians was a fatal mistake. Nagumo’s fleet, reduced to four carriers for the primary combat area, was not large enough to simultaneously raid Midway and destroy the American main battle fleet of three carriers.”⁷⁶

According to Zhao Zhenyu of the Dalian Naval Academy, had the IJN concentrated its fleet for Midway, it would have had eight carriers, 11 battleships, 13 heavy cruisers, ten light cruisers, 65 destroyers, 21 submarines, and nearly 400 carrier-based aircraft.⁷⁷ By comparison, the U.S. Navy deployed three carriers, no battleships, nine heavy cruisers, four light cruisers, 28 destroyers, 25 submarines, and over 230 carrier-based aircraft to oppose the Japanese attackers. Given the sharp asymmetries in force size, the Chinese consensus is that a concentrated IJN fleet that focused exclusively on Midway might have overwhelmed the American defenders regardless of the advantages in intelligence and the role of luck.

To make matters worse, the IJN divided its Midway-bound force into multiple tactical groups. These formations were separated by distances that prevented mutual support. Moreover, Admiral Nagumo’s *Kido Butai*, the advance element of the campaign, was responsible for raiding Midway and destroying the enemy fleet. For Chinese observers, Nagumo’s fleet carriers lacked a focal point to concentrate their efforts. A Chinese National Defense University study faults the Japanese high command for failing to identify and aim for a single center of gravity.⁷⁸ To Captain Bao Yu of the Eastern Theater Command Navy, the *Kido Butai*’s mission was akin to “using one fist to hit two enemies (一个拳头打两个敌人).”⁷⁹

76 刘怡 [Liu Yi], 联合舰队 [*The Combined Fleet*] (Wuhan: Wuhan University Press, 2010), p. 190. Liu Yi is a regular contributor to the naval journal *Modern Ships*.

77 赵振愚 [Zhao Zhenyu], 太平洋海战史 [*History of Sea Battles in the Pacific*] (Beijing: Haichao Press, 1997), p. 236–237. In addition to his affiliation with the Dalian Naval Academy, Zhao was a faculty member of the Naval Command College. Professor Zhao was the primary contributor to the entries on the Pacific War in the Chinese navy’s official encyclopedia published in 1998. Zhao’s book draws extensively from translated English- and Japanese-language secondary sources. It also cites published Japanese archives held at the National Institute for Defense Studies (NIDS) in Tokyo, Japan.

78 Wang Houqing, ed., *The Historical Development of Campaigns*, p. 332.

79 包宇 [Bao Yu], “中途岛战役战例评析 [Analysis of Case Study on the Midway Campaign],” 军事史林 [*Journal of Military History*], no. 9, 2020, p. 52. Captain Bao was formerly the director of Military Theory Research Office of the East Sea Fleet. See <https://marxism.seu.edu.cn/2021/1129/c23305a392906/page.htm>.

The Japanese should have focused on one operational aim: the American carrier fleet. Liu Yi argues, “Whether it was the planned landing on Midway or the conquest of the Aleutians, they were both secondary tactical missions. The true objective was to lure out the main American fleet and to annihilate it.”⁸⁰ Two analysts from the Academy of Military Science concur that the IJN should have “unequivocally made the destruction of the American fleet the primary objective of the operation while ensuring that all other actions served this objective.”⁸¹ The seizure of Midway was accorded so much operational importance that it nearly eclipsed the original primary objective: the destruction of the enemy fleet. The conflation of two goals that were not necessarily complementary had a deleterious effect on the IJN’s operational design.

Chinese analysts have sought to explain why Japanese naval leaders produced such a byzantine operation that divided the fleet. To some observers, the plan bespoke overconfidence within the Japanese high command. The IJN’s risk calculus was deeply influenced by previous successes against allied navies since late 1941. One study sponsored by the Shijiazhuang Mechanized Infantry Academy claims that the string of victories in the preceding months had “swooned the brains of the Japanese naval commanders,” leading them to neglect basic principles of war.⁸² For another analyst, the IJN’s dominance at sea prior to Midway had “created and cultivated a kind of arrogant mindset that took the enemy lightly.”⁸³ Others hint at a peculiar Japanese way of war. Yamamoto’s plan, so goes this reasoning, reflected a deeply embedded institutional penchant for complexity and choreography. One analyst likens Japanese military planning to that of orchestrating a “complete Wagner-type opera (完整的瓦格纳式歌剧)” that contrasted sharply with the American style that was akin to jazz blues, characterized by improvisation and unpredictability.⁸⁴ The IJN’s institutional personality, then, influenced the way naval leaders conceived of their strategy and plans.

Operational and Tactical Command

Chinese observers have analyzed the differences in operational style between the American and Japanese navies. To them, the U.S. side clearly demonstrated superior tactical command. Captain Bao notes that American commanders at the theater and operational levels did not interfere in the conduct of the battle in ways that harmed their overall plans. Admiral Nimitz famously called on his subordinate commanders to abide “by the principle

80 Liu Yi, *The Combined Fleet*, p. 189.

81 王世忠 武建平 [Wang Shizhong and Wu Jianping], “战后日本对中途岛海战失败的反思 [Postwar Japan’s Reflections on the Failure during the Midway Sea Battle],” *军事历史* [*Military History*], no. 2, 2001, p. 73.

82 朱冬生 主编 [Zhu Dongsheng, ed.], *世界经典战例: 空袭与反空袭作战卷* [*World Classic Battles: Volume on Air Raid and Counter Air Raid Operations*] (Beijing: Liberation Army Press, 2010), p. 116.

83 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 244.

84 Xiaoxizhishui, “Rigidity and Flexibility: Loopholes and U.S. Strategy in the Midway Operations,” p. 61.

of calculated risk, which you shall interpret to mean the avoidance of exposure of your force to attack by superior enemy forces without prospect of inflicting, as a result of such exposure, greater damage to the enemy.” To one analyst, this “concise and powerful” directive demonstrated the U.S. Navy’s institutional preference for conferring autonomy to the tactical commanders.⁸⁵ Describing the interaction between the theater and operational commanders, the analyst is struck by how Nimitz delegated substantial tactical authority to the task force commanders, Admirals Frank Jack Fletcher and Raymond Spruance. The author expresses amazement that Nimitz entrusted Admiral William Halsey to choose Spruance—a surface warrior rather than a carrier man—as his replacement to command Task Force Sixteen after Halsey contracted a debilitating skin disease.⁸⁶

Nimitz’s physical location during Midway has also caught Chinese analysts’ attention. The admiral oversaw the battle from his headquarters ashore in Pearl Harbor. This command arrangement enabled the Pacific Fleet commander to stay atop of fast-moving events and to maintain close contact with his subordinates at sea. It reflected a proper understanding of the theater commander’s role and place within the campaign. By contrast, Admiral Yamamoto accompanied the Combined Fleet aboard the flagship *Yamato* during the battle. His presence was meant to boost the morale of officers and men. While well-intentioned, the command arrangement proved counterproductive. The fleet operated under radio silence, which precluded the fleet commander’s communications with his subordinates. Moreover, because the battlewagons were positioned well behind the *Kido Butai*, Yamamoto did not have a good sense of the situation at the forward point of contact. As two analysts from the Academy of Military Science conclude, “Obviously, this type of obsolete concept did not conform to the demands of modern war at sea.”⁸⁷ Had Yamamoto placed himself at headquarters ashore, according to this reasoning, he might have been in a better position to press for different and more prudent tactical decisions. The preceding findings about command style are in tension: Nimitz is credited for empowering his tactical commanders, while Yamamoto is blamed for not exercising enough control over Nagumo. The writings do not reconcile this apparent contradiction in judgments about command authority.

Chinese commentators have also ruthlessly critiqued the IJN’s fatal tactical errors. Admiral Nagumo’s decision to rearm his aircraft with different munitions is well known. While there was good reason to strengthen the offensive power of his air fleet, the precariousness of his situation warranted a different risk calculus. In such a situation, Nagumo should have sortied his aircraft armed with bombs even if they were less efficacious than torpedoes and even if they were unescorted by fighters.⁸⁸ The IJN, according to this logic, would have had some chance of inflicting damage on the American carriers. By insisting on a surer blow

85 Ibid., p. 61.

86 Ibid., pp. 60–61.

87 Wang Shizhong and Wu Jianping, “Postwar Japan’s Reflections on the Failure during the Midway Sea Battle,” p. 74.

88 Ibid., p. 73.

against the Americans, Nagumo forfeited any opportunity to strike the enemy altogether. To one scholar, Nagumo's quest for a decisive blow led to "one careless move that gave away the whole game (一着不慎, 全盘皆输)."89 In this case, tactical risk aversion—as opposed to risk acceptance at the strategic and operational levels—exposed the carrier fleet to even greater risk.

The Danger of Old Think

Chinese analysts are uniformly critical of the IJN's failure to fully embrace the revolutionary implications of carrier warfare. They contend that Japan remained stubbornly wedded to the battleship as the centerpiece of naval engagements, despite evidence from its own campaigns at Pearl Harbor and Malaya that carrier- and shore-based aviation had altered the character of combat at sea. Moreover, the preceding Battle of the Coral Sea, the first carrier engagement in history, should have alerted Japanese naval leaders to the potential decisiveness of airpower at sea. Yet the primacy of the battleship persisted.

An Academy of Military Science study notes that the IJN's force disposition for the attack on Midway bespoke an outdated mindset that clung to battleships.⁹⁰ Admiral Yamamoto's operational design sought to lure the U.S. Pacific Fleet into a decisive engagement in which Japanese battleships would deliver the coup de grace. The IJN's Combined Fleet comprised the Mobile Force, the Occupation Force, and the Main Body. Yamamoto intended the Mobile Force, composed of four carriers, two battleships, two heavy cruisers, one light cruiser, and sixteen destroyers, to obtain command of the air surrounding Midway and to draw out the Pacific Fleet. It would serve as the advance striking force that would attrite the enemy. The Occupation Force, with an assortment of carriers, battleships, cruisers, destroyers, and transports, would seize Midway. The Main Body, which Yamamoto commanded, included seven battleships, one light carrier, and a complement of cruisers. It would hang back until the opportune moment came to land a massive blow against the Americans.

The Academy of Military Science study sees this operational deployment as deeply misguided. The IJN should have combined the carriers and the battleships into a mutually supporting task force. The battleships' powerful anti-aircraft artillery would have significantly enhanced the air defense of the carriers. The separation of the two forces, which exposed each to the threat of American airpower, was a "fatal flaw (致命的缺陷)" in the Japanese strategy. By making the Mobile Force the advance formation in the overall assault, the four fleet carriers assumed virtually all the risks of an American counterattack. As the study explains:

89 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 243.

90 于江欣 主编 [Yu Jiangxin, ed.], 世界军事革命史 [History of Global Military Revolutions, Volume 2] (Beijing: Academy of Military Science, 2012), p. 1142.

Lacking air defense firepower, Nagumo's fleet [the Mobile Force] encountered a double flanking attack from U.S. combat aircraft deployed on Midway and from the American carrier task forces, leading to four carriers sunk. Lacking air cover, the Japanese Main Body could only watch the destruction of the carriers on the sidelines and was absolutely unable to play its part to turn around the combat situation.⁹¹

The study attributes this tactical mistake to the unwise and persistent Japanese notion that the battleship should only be reserved for the decisive engagement. Assigning the battleship for fleet air defenses represented a diversion, if not a waste, of resources to the IJN's leadership.⁹² In short, the supremacy of the battleship eclipsed a far sounder employment of forces. Had the Japanese navy combined the Main Body and the Mobile Force, according to one analyst at the Academy of Military Science, it could have better repelled the air offensives and drawn more enemy aircraft toward the fleet, thus creating opportunities for striking the American flattops.⁹³

By contrast, the U.S. Navy relied on two task forces organized around three carriers, eight cruisers, and fourteen destroyers and airpower on Midway, an “unsinkable aircraft carrier (永不沉没的航母),” for its operational scheme. American naval commanders coordinated and concentrated its carrier- and shored-based aircraft to deliver firepower against the Mobile Force, the “weak spot (薄弱部位)” of the Combined Fleet. The Academy of Military Science study states, “From the start of combat, the U.S. side made airpower the main force for the decisive battle. This was unlike Japan, which continued to treat naval guns as the main method for ending combat.”⁹⁴ It further concludes:

The Battle of Midway compelled both the U.S. and Japanese navies to reflect on the uses of aircraft carriers in future naval engagements and to accordingly make the necessary adjustments to fleet formations and tactical command. The Battle of Midway was not just a turning point in the Pacific War. It was also a turning point for transforming the model of naval combat.⁹⁵

Beyond the IJN's attachment to the battleship, the Japanese navy neglected to keep up with the times in key aspects of naval warfare. Captain Bao refers to the U.S. Navy's various innovations in defensive countermeasures as a basis for comparison. In particular, the Americans adopted radar and integrated the sensor technology widely across the fleet, paid close attention to damage control, including firefighting techniques and procedures, and improved fleet air defenses through advances in command and control, fire control,

91 Ibid., p. 1143.

92 Ibid., pp. 1142–1143.

93 董文静 [Dong Wenjing], “日军中途岛海战失败原因 [The Reasons Behind Japan's Failure in the Midway Sea Battle],” 军事历史 [Military History], no. 2, 2015, p. 17. The article's citations indicate that the author relied, in part, on a Chinese translation of published Japanese archives held at NIDS.

94 Yu Jiangxin, ed., *History of Global Military Revolutions, Volume 2*, pp. 1142–1143.

95 Ibid., p. 1143.

and automation. By contrast, the IJN lagged across all three critical areas so essential to fleet survivability.

Bao argues that Japan's relative backwardness can be attributed to its past operational successes. From the attack on Pearl Harbor to the lightning conquest of Southeast Asia, Japan had been fighting weaker, poorly equipped, and unprepared adversaries. Those initial victories were an inadequate basis for judging Japan's prospects against a powerful and resourceful opponent, and, more importantly, they disguised the need to stay on the cutting edge.⁹⁶ To Bao, the Japanese high command should have dug deeper to excavate its navy's shortcomings and to incorporate new technologies, techniques, and procedures. Instead, it succumbed to victory disease and permitted its problems and weaknesses to go undiagnosed. This overconfidence, combined with a lack of self-awareness and critical thinking, contributed to the Japanese disaster at Midway.

The captain indirectly warns Chinese statesmen and commanders about the dangers of hubris that could similarly infect the PLA. China may be more powerful than Taiwan and its other immediate neighbors. But it must not convince itself that such strength is a useful guide for planning against a peer adversary like the United States. The author then explains that "the real purpose of looking back on and thinking about this classic battle" is to better understand the future for the PLA. He asserts, "To strengthen our preparedness for war and to prepare for military struggle, we must possess a profound historical awareness. To devote ourselves to the construction of a world-class military and to fulfill the great rejuvenation of the Chinese nation, we must heed the profound call of duty."⁹⁷ Notably, Bao connects explicitly the lessons of Midway to China's quest for military greatness.

Converting Weakness into Strength

One of the themes to emerge from the writings above is the ability of the United States to win despite its obvious material inferiority. The literature identifies superb intelligence, force concentration, superior command, adaptability, and innovation as the key ingredients of American victory. Chinese analysts express amazement and even admiration for the U.S. Navy's determination and courage to see through the fight. Liu Yi, for example, firmly rejects the idea that luck determined the battle's outcome. To him, "exceptional planning and brilliant command were the true touchstone of victory."⁹⁸ Chinese judgments about the IJN's performance are correspondingly harsh. Commentators invariably point to hubris as the main culprit behind the many Japanese errors and failings. American successes, especially in intelligence, offer a model for emulation in future informationized wars, while Japanese mistakes, often attributed to unfounded overconfidence, serve as cautionary tales for the PLA.

96 Bao Yu, "Analysis of Case Study on the Midway Campaign," p. 54.

97 Ibid., p. 54.

98 Liu Yi, *The Combined Fleet*, p. 189.

CHAPTER 4

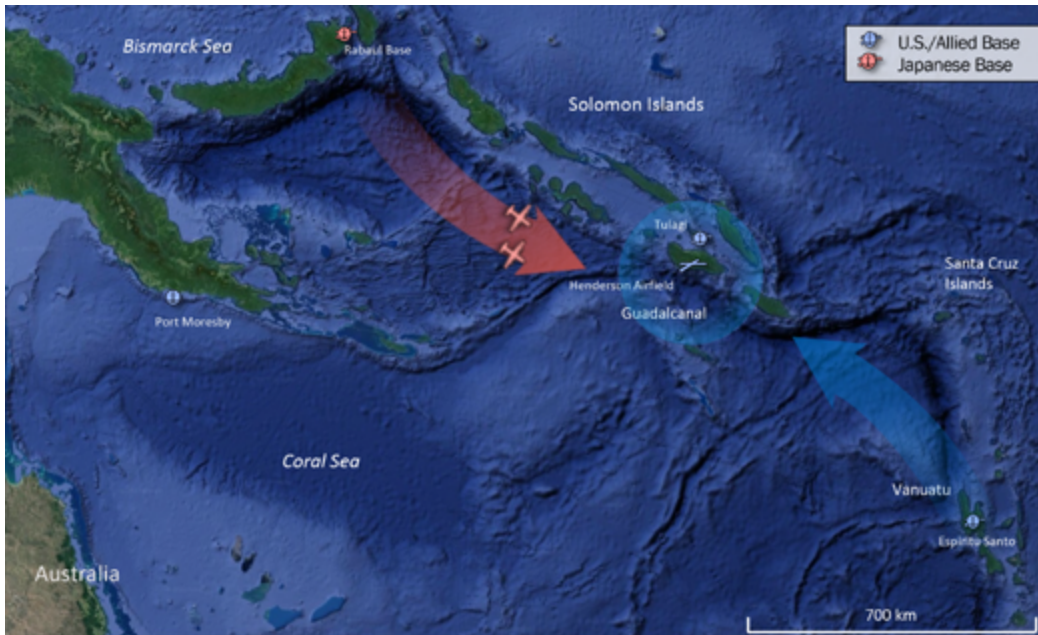
The Guadalcanal Campaign

The Guadalcanal campaign, which began two months after the Battle of Midway and lasted from August 1942 to February 1943, was a multi-dimensional military engagement. Over six months, the series of battles that took place on and around Guadalcanal Island—located on the southeastern edge of the Solomon archipelago—included “six major naval engagements, scores of ground actions involving thousands of men, and air combat that was almost continuous.”⁹⁹ It was a peculiar campaign in the sense that neither the Americans nor the Japanese expected a full-blown struggle over the island when their forces made initial contact. The campaign was a product of mutually escalating commitments after the two sides brushed against each other at Guadalcanal. The fight presented opportunities for both sides. Imperial Japan’s seizure of the island would have positioned it to threaten the east coast of Australia and the sea lanes that connected Australia to the American west coast. Conversely, U.S. possession would punch a hole through Japan’s defensive perimeter.

The campaign itself was a slugfest. It was an attritional, see-saw struggle that saw the U.S. Navy suffer one of the worst losses in its history at the Battle of Savo Island. It was also an early manifestation of a modern joint campaign in which airpower, naval power, and ground forces each played a crucial role. Referring to the U.S. side, Eric Larrabee notes, “Any one of the military arms of land, sea, or sky could have thrown away the issue; none alone could gain it.”¹⁰⁰ The result of this grinding campaign, which compelled the Japanese to withdraw, proved strategically significant. Both sides were bloodied, but the damage inflicted on Imperial Japan was far more severe because it was not able to make up for its losses. In the air, the Japanese lost more than 800 aircraft and many of their best pilots, which they could not replace. The U.S. success at Guadalcanal became a turning point that passed the initiative from the Japanese to the Americans.

99 Eric Larrabee, *Commander in Chief: Franklin Delano Roosevelt, His Lieutenants, and Their War* (Annapolis, MD: Naval Institute Press, 1987), p. 261.

100 Ibid., p. 261.

FIGURE 11: GUADALCANAL CAMPAIGN

Source: Adapted from Daniel Marston ed., *The Pacific War: From Pearl Harbor to Hiroshima* (Oxford, UK: Osprey Publishing, 2005), p. 82.

National Power and Strategy

Chinese analysts have pointed to the asymmetry in national power between the United States and Japan as a key variable in determining the latter's defeat at Guadalcanal. Zhao Zhenyu offers a cogent analysis of Japan's predicament. Zhao asserts, "The contradiction between Japan's strategic intent and inadequate national strength was one of the fundamental reasons for the failures in the Guadalcanal campaign."¹⁰¹ By 1938, America's industrial output was more than 32 percent of global industrial output, exceeding Japan's industrial output by about ninefold. By the end of 1942, the U.S. military output was roughly equal to that of Germany, Italy, and Japan combined. America's shipbuilding and aircraft production capacity were nearly four times and about six times larger respectively than that of Japan. The island nation's civilian industrial sector was also hard-pressed to support the war effort. For example, the diversion of limited commercial shipping to sustain expeditionary operations—an option that divided and rankled the Japanese high command—risked harming the overall Japanese economy. As a study by the Academy of Military Science notes, "The Guadalcanal campaign was the first comprehensive contest over national power, manpower, material power, transportation prowess, and strategic and tactical thought between the United States and Japan."¹⁰²

101 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 324.

102 Li Jijun, ed., *History of the Second World War*, Volume 3, p. 376.

At the same time, Japan was overextended in the South Pacific. After seizing Rabaul and northeastern New Guinea, Japan's plan to defend against the expected allied counteroffensive involved a defensive line along the Bismarck Archipelago. To Zhao, this perimeter was already "out of reach (鞭长莫及)" for Japanese forces.¹⁰³ Yet, the commitment to Rabaul meant that the Japanese high command felt compelled to contest enemy landings on Guadalcanal, since a U.S. foothold there would threaten Japan's defensive position. In short, commitments begat more commitments against which Japan lacked the resources to meet. Zhao further argues, "Japan's expansionist ambitions led its military offensive to grasp for more and to become insatiable."¹⁰⁴ He contends that this greed led Japan to violate a fundamental Clausewitzian principle: it had gone well beyond its culminating point of attack, the point at which the attacker, after advancing so far from its base of supplies, diminishes in strength to such an extent that it should transition to defense. Any further advance beyond this point would expose the attacker's long lines of communications, weakened flanks, and overstretched forces to the defender's counterattacks.

To Zhao, Japan's lack of comprehensive national power to compete with the American industrial behemoth, its geographic overextension across the South Pacific, and its combat losses at Midway and Coral Sea should have persuaded the Japanese high command to pursue a different course of action. He asserts that Japan should not have contested Guadalcanal in the first place. Instead, it should have withdrawn from the Solomons to tighten its defensive perimeter and concentrate its forces at more defensible positions.¹⁰⁵ While the author does not specify exactly where the Japanese should have retreated, it is clear to him that Japan held an untenable position that should have been abandoned at the outset.

Initial Campaign Assessment

Chinese analysts are uniformly critical of Japan's faulty assessment prior to the campaign. Bad assumptions and poor intelligence led to initial errors that placed Japanese forces at a significant disadvantage. According to Zhao Zhenyu, Japan misjudged American plans and capabilities in the theater of operations. As a result, it failed to properly anticipate the coming U.S. counteroffensive and neglected to build the infrastructure necessary to defend its overextended positions. Instead, Japanese forces leaped forward to build an airfield at Guadalcanal without establishing intermediary bases to support the island. This early mistake compounded Japan's subsequent difficulties. The lack of intermediary bases meant that Japan could only use its airfield in Rabaul, which was 570 nautical miles from Guadalcanal, to contest American airpower. Operating at such long ranges, Japanese aircraft could not stay on station for very long, limiting their effectiveness. American land-based airpower on Henderson Field, in turn, kept Japanese carrier-based air operations at

¹⁰³ Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 322.

¹⁰⁴ Ibid., p. 324.

¹⁰⁵ Ibid., p. 324.

arm's length and imposed significant risks on the IJN's surface fleet. Zhao contends that these constraints precluded Japan's command of the air and of the seas, setting the stage for its eventual defeat at Guadalcanal.¹⁰⁶

Furthermore, Japanese intelligence and reconnaissance failed to track U.S. movements and its force disposition in the South Pacific. Japan thus failed to deploy adequate forces to protect its presence and airfield construction on the island. When the Marines landed, the Japanese were unable to defend and hold the airfield, much less roll back the U.S. foothold on Guadalcanal. This setback allowed the Americans to secure land-based airpower, a critical enabler for the rest of the campaign. Had the Japanese army dispatched a larger defending force to protect the airfield, it might have significantly bloodied or even repulsed the Marine landings. If Japan had clung to the airfield, it might have changed the course of the campaign. In any event, after the Americans landed and secured Henderson Field, the Japanese underestimated the U.S. force presence and capabilities on the island. Japanese planners initially believed that the American attack was a minor reconnaissance action.¹⁰⁷ They concluded that, even if the U.S. military had intended to hold the island, their forces in the theater would have been more than adequate to re seize Guadalcanal. Such overconfidence would influence Japanese operations and tactics to retake the island with disastrous consequences for the army.

Ground Combat

Chinese analysts are particularly critical of the Japanese army's performance on Guadalcanal. The initial piecemeal effort proved to be ineffective and costly. Gao Xiaoxing, a professor at the Naval Command College, likens the token approach to adding oil to an oil lamp in increments just enough to keep the lamp alight.¹⁰⁸ The army allowed each deployed unit to conduct an offensive on its own with each wave suffering heavy losses. In August, the 17th Army dispatched a single regiment, numbering less than 1,000 troops, under the command of Colonel Kiyonao Ichiki to seize Henderson Field. Ichiki led a frontal assault that virtually annihilated his entire regiment. In September, the Japanese launched a second major offensive involving 6,000 troops under Major General Kiyotake Kawaguchi, commander of the 35th Infantry Brigade. Kawaguchi's frontal assaults were also repulsed, shattering his brigade. By the time the third wave of reinforcements had arrived in October,

106 Ibid., p. 326.

107 陈安刚 [Chen Angang], “太平洋战争的又一个转折点—美日瓜达尔卡纳尔岛争夺战 [Another Turning Point in the Pacific War—The U.S.-Japan Struggle over Guadalcanal Island],” 国防科技 [Defense Technology Review], no. 12, 2005, p. 87.

108 高晓星 [Gao Xiaoxing], “兵败瓜岛, 日本做错了什么 [Loss in Guadalcanal, What Did Japan Do Wrong],” 当代海军 [Navy Today], no. 12, 2017, p. 78. Professor Gao co-authored a primer on the Chinese navy that has been translated in multiple languages, including English, French, Spanish, Russian, and Arabic. See 高晓星 翁赛飞 周德华 [Gao Xiaoxing, Weng Saifei, and Zhou Dehua], 中国人民解放军海军 [The People's Liberation Army Navy] (Beijing: Wuzhou Media Press, 2012).

it was already too late to shift the tactical balance of power. By then, the U.S. defenders had already bulked up its airpower, supplies, and ground forces for a long fight.¹⁰⁹

Tactically, the attacker failed to build up and concentrate forces against a weak point along the American defensive perimeter around Henderson Field. A Chinese National Defense University study criticizes the Japanese for repeatedly dividing their forces to conduct dispersed, multi-pronged attacks.¹¹⁰ To make matters worse, the ground offensives lacked heavy artillery to deliver devastating firepower against the defender. The army's penchant for infantry charges proved ineffective against American defenses. Yet, it refused to adjust its tactics, which amounted to suicidal frontal assaults.¹¹¹ Moreover, the direct attacks frequently gave away Japanese positions, alerting the American defenders to an impending offensive. Clearly, the moral factor had its strict limits when it ran up against stout defenses and withering firepower. Gao Xiaoxing speculates that had the fanatical Japanese not been entranced by the spirit of the bayonet, they might have been more prudent in their uses of ground forces. The author contends that deception and surprise combined with concentrated assaults against key defending positions might have given the Japanese a better chance at seizing the airfield.¹¹²

To Chinese analysts, overconfidence and underestimation of the enemy accounted, in part, for Japan's poor showing. According to one commentator, the Japanese army suffered from victory disease stemming from a string of operational successes that preceded Guadalcanal. In early 1942, Japan prevailed over the Americans in the Philippines and the British in Malaya in stunning fashion. Those campaigns may have shaped Japanese expectations that future encounters would produce similar results. Japanese commanders were likely surprised that the enemy on Guadalcanal was a far more determined and capable foe than those that they had fought in previous months. Indeed, the analyst notes that General Kawaguchi's brigade had participated in a series of landing operations in Malaya and the Philippines.¹¹³ Another article speculates that the suicidal frontal charges ordered by Colonel Ichiki were based on his experiences in China, where he took part in instigating the Marco Polo Bridge Incident in 1937, which sparked the Second Sino-Japanese War.¹¹⁴

A further reason for the Japanese army's bad performance was the initial failure to repel the American landings in August. According to one study, Japan fell into a "vicious cycle (恶

109 吕贤臣 [Lu Xianchen], "太平洋战场的海上战略 (中) [Maritime Strategy of the Pacific Battlefield, Part 2]," 现代舰船 [Modern Ships], no. 23/24, December 2020, p. 163.

110 Wang Houqing, ed., *The Historical Development of Campaigns*, p. 339.

111 Ibid., p. 339.

112 Gao Xiaoxing, "Loss in Guadalcanal, What Did Japan Do Wrong," p. 78.

113 Chen Angang, "Another Turning Point in the Pacific War—The U.S.–Japan Struggle over Guadalcanal Island," p. 87.

114 丁顺发 [Ding Shunfa], "瓜岛上的生死决战—太平洋战场的‘斯大林格勒战役’ [The Life and Death Struggle on Guadalcanal—The ‘Stalingrad Campaign’ in the Pacific]," 军事文摘 [Military Digest], no. 6, 2019, p. 68.

性循环)” after it lost the airfield on Guadalcanal.¹¹⁵ Japanese shore-based aircraft could not wrest control of the air from American airpower on the island. Japanese ground forces were thus unable to obtain close air support in their assaults on Henderson. At the same time, the contested airspace exposed Japanese surface forces, particularly transports, to air interdiction. Losses in shipping and resupply, in turn, weakened the offensive power of the ground forces. As the campaign dragged on, the Japanese army found itself in an increasingly dire situation.

Still another factor that explained Japan’s difficulties on Guadalcanal was disunity of command. According to Zhao Zhenyu, the lack of trust, coordination, and communication between the army and navy proved to be a “fatal weakness (致命弱点).”¹¹⁶ Throughout the campaign, each service largely acted and fought on its own. In July, the army was not aware that the navy had dispatched forces to build an airfield on Guadalcanal, the initial move that triggered the contest with the Americans. In late October, the Japanese waged two separate battles on land and at sea. The 17th Army’s second major offensive in late October took place at roughly the same time as the navy’s engagement in the Battle of Santa Cruz. Yet, these operations unfolded in parallel, largely unconnected to each other. As Zhao notes, “Owing to the lack of a unified operational objective and the dispersal of forces, the Japanese failed to either seize the airfield or destroy the enemy fleet.”¹¹⁷ To him, this was a missed opportunity. In late October, Japanese ground forces were roughly equal in size to the American defenders on Guadalcanal while the IJN enjoyed a numerical advantage over the U.S. Navy. Zhao speculates that had Japan concentrated its troops against a single front and employed its naval and air forces in support of the ground assault, the army might have succeeded in overrunning the American defenders.

Intriguingly, Chinese sources note that the Japanese army’s mounting losses on Guadalcanal had an interactive effect on Japan’s massive commitment of ground forces to mainland China. At the outbreak of the Pacific War, according to a historian of China’s role in the Second World War, the Japanese army was only willing to spare 11 divisions to the effort in the Pacific because 35 out of its 51 divisions were already tied up in the China quagmire.¹¹⁸ Between 1942 and 1943, the mainland soaked up 64 percent of the Japanese army while it absorbed 45 percent of the air force.¹¹⁹ As a result, Japan’s performance in the maritime theater directly influenced its options on the continental front. In the summer of 1942, the army had planned for a major offensive to seize Nationalist strongholds in Chongqing and Chengdu in the following spring. It anticipated a force size that would have been twice

115 Zhang Jing and Zhou Zhigang, eds., *Review of World’s Famous Sea Battles*, p. 187.

116 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 328.

117 Ibid, p. 329.

118 屈小强 [Qu Xiaoqiang], “美日瓜岛之战与中国战场 [The U.S.-Japan Battle over Guadalcanal and the China Theater],” 文史杂志 [Journal of Literature and History], no. 4, 2015, p. 14. The author cites a Chinese translation of published Japanese archives held at NIDS.

119 Ibid., p. 15.

as large as the troops committed to the South Pacific at the end of 1942. However, as the fighting intensified around Guadalcanal, the high command decided to place a higher priority on the Pacific theater in October 1942. By December, Japan was forced to scrap its offensive against the Nationalists as it directed more of its attention and resources to the Pacific.

Another article recounts the Japanese army's initial plans to draw forces from China, Korea, and Japan to reinforce its troops in Guadalcanal in December 1942. The effort would have required the army to conscript 620,000 tons of shipping to transport the troops and materiel. Concerns that such a diversion of scarce resources would harm the Japanese economy—a move akin to “killing the chicken to take the egg (杀鸡取卵)” —the high command ditched the proposal.¹²⁰ Clearly, Japan faced tougher choices and sharper trade-offs between its two theaters of operations as the fighting raged on Guadalcanal.

In contrast to their writings about the Japanese, Chinese analysts heap praise on the U.S. military's defensive posture on Guadalcanal. It effectively employed combined arms tactics, including air-land coordination in defense of Henderson. One study applauds the American use of reserves to repulse Japanese ground offensives.¹²¹ Sustained and ample resupply enabled the United States to hold its position over many months. Another study organized by the Shijiazhuang Mechanized Infantry Academy points to a broader lesson: the attacker must carefully balance its offensive and defensive needs. An amphibious operation is offensive in character because it seeks to achieve positive operational aims by seizing and holding enemy territory. Yet, the attacker must not allow the offensive imperatives to cloud judgments about defense. The attacker must nimbly transition to defense to defeat anticipated enemy counterattacks, including counter-landing operations and tactical counteroffensives from the sea.¹²²

One analyst affiliated with the Military Research Office of the former Nanjing Military Region explicitly calls on the PLA to draw lessons from the U.S. experience in Guadalcanal.¹²³ In a future amphibious invasion against Taiwan, just as the Marines fought off the initial Japanese counteroffensives, the PLA must anticipate stiff resistance once its forces had landed on the enemy's beachheads. It must vigorously defend its footholds along the coast before pushing farther inland. The PLA must ensure continuous resupply even as the landing forces secure their beachheads and positions. Any interruption to the logistical effort would have severe consequences for the first echelon units and follow-on forces.

120 Ding Shunfa, “The Life and Death Struggle on Guadalcanal,” p. 69.

121 Wang Houqing, ed., *The Historical Development of Campaigns*, p. 339.

122 朱冬生 主编 [Zhu Dongsheng, ed.], 世界经典战例: 江河海岛作战卷 [World Classic Battles: Volume on River and Island Combat] (Beijing: Liberation Army Press, 2010), p. 59.

123 韦鼎标 [Wei Dianbiao], “瓜岛登陆作战及启示 [The Guadalcanal Landing Operations and Their Lessons],” 华北民兵 [North China Militia], no. 10, 2006, pp. 62–63.

Furthermore, the PLA must have superior intelligence to understand the fluid battlefield situation and the state of the enemy forces. It must build up enough combat power to (1) concentrate mass against the enemy; (2) preclude or breakthrough enemy encirclement of beachheads; (3) coordinate firepower to deal with different threats from different domains; and (4) defeat the enemy's counter-landing amphibious operations along its flanks. Finally, the PLA must possess comprehensive means to support operations ashore, including reconnaissance and intelligence, communications, engineering, meteorology, and transportation. In short, Chinese commanders must not leave anything to chance when launching a major amphibious campaign.

Naval Combat

Chinese analysts have subjected the naval engagements around Guadalcanal to close study. The Battle of Savo Island, which saw the U.S. Navy suffer one of its greatest defeats in the war, has drawn much scrutiny. To one author, the unpromising odds of Japanese success made the IJN's victory particularly notable. The newly established 8th Fleet under Vice Admiral Gunichi Mikawa comprised older heavy cruisers commissioned in the early 1930s and mid-1920s, two light cruisers, and one destroyer. During the planned night attack, the Japanese flotilla could not expect air cover from shored-based aviation in Rabaul. By contrast, the opposing force included six heavy cruisers, two light cruisers, and fifteen destroyers. On paper, the contest was akin to “dashing an egg against a rock (以卵击石).”¹²⁴ Yet, the Japanese navy sank four heavy cruisers and damaged one heavy cruiser and two destroyers at a relatively low cost to itself.

To Gong Chunke, the victory could be attributed to American inexperience and “paralysis and carelessness (麻痹大意)” as well as to Japanese boldness and skill.¹²⁵ The American and Australian navies had detected the 8th Fleet's approach, yet the allies did not proactively respond to the threat. The U.S. Navy also misused its shipborne radar, allowing the Japanese offensive to go undetected. At the same time, the IJN's surface combatants employed their night fighting skills, which they had honed into a significant tactical advantage.

Most Chinese observers concur that Mikawa committed a major blunder by withdrawing from the scene after the engagement. While he delivered a major blow against the enemy fleet, he missed an opportunity to attack the vulnerable transports that were left exposed after the allied defeat at sea. The unmolested transports were able to discharge their cargo, which was essential to sustaining the defensive battles to come. Chinese commentators believe that had Mikawa pressed on, he might have dealt a significant blow to America's ability to resupply the defenders on Guadalcanal. According to Jiang Hong:

124 宫春科 [Gong Chunke], “萨沃岛海战—美国海军不愿翻开的一页 [The Battle of Savo Island—A page that the U.S. Navy does not want to open],” 当代海军 [Navy Today], no. 3, 2018, p. 75.

125 Ibid., p. 76.

Even though the Japanese had sunk or damaged allied warships, Mikawa did not continue his attack against the transports at a time when the enemy's door was wide open [对手门户大开]. This can be considered the greatest failure in this battle. Had the Japanese swept the entire allied fleet from the slot, they would have certainly changed the entire course of the Guadalcanal campaign and the Pacific War, even if the war's ultimate outcome remained the same.¹²⁶

Jiang further argues that even if Mikawa had lost his entire fleet in a follow-on assault on the transports, such a sacrifice would have produced strategic benefits that far outweighed the cost. In his view, Mikawa should have assumed far more risk. To naval analyst Liu Yi, the failure to disrupt the American supply effort rendered Mikawa's naval victory "completely meaningless (毫无意义)." As he explains:

Those unremarkable transports determined the war's trajectory after the attritional campaign over Guadalcanal. The war was not to be dictated exclusively by the gains and losses of warships or islands. Rather, the war was about the ability to continue developing a nation's industrial potential and to convert that potential into the energy that could sustain frontline combat power in a long-term struggle.¹²⁷

In other words, strategic success went to the side that outperformed the opponent in logistics in a protracted war. To Liu, the destruction of the enemy fleet and the conquest of island territories, although critical, were not enough to win.

Other Chinese observers of Guadalcanal have similarly exhibited an acute sensitivity to the interrelationships and the distinctions between the strategic, operational, and tactical levels of war. They are all too aware that operational and tactical victories do not necessarily translate into strategic success. In the Naval Battle of Santa Cruz, the U.S. Navy lost the carrier *Hornet*, leaving the *Enterprise* the only carrier in the fleet. While the battle was a tactical loss for the Americans, the IJN suffered grievous losses in aircraft and pilots that it could not replace. By contrast, the United States was in a much better position to produce more aircraft and train new pilots to make up for its losses.¹²⁸ To Jiang Hong, the Japanese "won in form but lost in substance (名胜实败)."¹²⁹

In the Naval Battle of Guadalcanal, the United States succeeded at the strategic and tactical levels of war. The U.S. Navy's victory at sea had a major impact on the campaign's course. During the various engagements, the IJN lost two battleships, one heavy cruiser, three destroyers, eleven transports, sixty-four aircraft, and as many as 1,900 men. The American losses, though still significant, could be replaced or repaired, whereas Japanese losses

126 江泓 [Jiang Hong], 决战铁底湾: 六次所罗门海战 [*The Struggle over Iron Bottom Sound: The Six Naval Battles of the Solomons*] (Wuhan: Wuhan University Press, 2016), p. 42. The book cites Chinese- and English-language secondary sources as well as translations of English-language secondary sources.

127 Liu Yi, *The Combined Fleet*, p. 206.

128 Li Jijun, ed., *History of the Second World War*, Volume 3, p. 372.

129 Jiang Hong, p. 153.

were beyond Japan's industrial capacity to replenish. More importantly, the defeat passed command of the air and the sea around Guadalcanal to the United States, allowing it to transition from defense to offense. The battle deeply shook Japan's confidence in retaking the island and marked the end of its repeated attempts at reseizing Guadalcanal.¹³⁰ As Jiang concludes, "Whether at the tactical level or at the strategic level, Japan's defeat in this naval battle was profound in its influence, determining directly the final heading of the Guadalcanal campaign."¹³¹

Interestingly, Chinese analysts have also paid attention to lesser-known battles, including the final naval engagement near Rennell Island. One article details the contest between the Japanese shore-based torpedo bombers and an American task force led by Rear Admiral Robert Giffen. The former was seeking to cover the evacuation of the Japanese army on Guadalcanal while the latter was screening a convoy that carried troops to take the place of defenders on the island. During the engagement, the Japanese air raids sank *Chicago*, a heavy cruiser, while the Americans shot down twelve bombers and, in the process, killed an outstanding air commander. The U.S. transports were able to put forces ashore without losses. The battle distracted the Americans enough for the Japanese to complete their withdrawal of over 10,000 troops undetected by the enemy. The author judges the battle as a minor tactical victory for Japan. Interestingly, the article critiques Giffen's tactical decisions, which contributed to the loss of *Chicago*. Giffen formed his task force to counter the IJN's submarines, thus leaving his fleet exposed to air attack. The author attributes Giffen's mistake to his convoy duties in the Battle of the Atlantic, which was largely an anti-submarine campaign against the German U-Boats.¹³² The admiral was predisposed to choose options that conformed to his prior experiences.

Gao Xiaoxing of the Naval Command College identifies the IJN's neglect of critical technologies and capabilities as a major factor in the campaign's outcome. To him, institutional rigidity explained the Japanese navy's failure to adopt new weaponry and doctrine. Gao argues that the IJN became overly wedded to old tactical concepts. For example, Japanese naval leaders devoted their energies to sharpening night fighting and visual contact of the enemy fleet and lagged in integrating shipborne radar technologies. Gao further argues that the IJN's cult of the offensive and the obsession with decisive battles at sea disinclined the naval service to embrace defensive capabilities, including shipborne air defense systems and anti-submarine warfare capabilities.¹³³ These shortcomings conferred significant tactical advantages to the U.S. Navy.

130 Li Jijun, ed., *History of the Second World War*, Volume 3, p. 374.

131 Jiang Hong, p. 206.

132 周丽娅 张艳明 [Zhou Liya and Zhang Yanming], "伦纳尔岛海战 [The Battle of Rennell Island]," *舰载武器* [Shipborne Weapons], no. 10, 2004, p. 84.

133 Gao Xiaoxing, "Loss in Guadalcanal, What did Japan do Wrong," p. 78.

Logistics

Chinese commentators have paid special attention to the crucial role of logistics during the Guadalcanal campaign. According to one analysis, “During the fight over Guadalcanal between the United States and Japan, the island struggle was a confrontation in material power in appearance, but its essence was a contest in logistics support.”¹³⁴ The authors argue that superior American logistics played an outsized role in determining the campaign’s outcome. They observe that the United States established a “maritime supply system (海上补给系统)” at the campaign’s outset.¹³⁵ This early effort, according to them, made up for the relative disadvantages in distance from the area of operations. Japan’s forward base in Bougainville was about 530 kilometers from Guadalcanal. By comparison, the closest American base, the Espiritu Santo Naval Base in New Hebrides, was about 900 kilometers from the contested island.

In August, U.S. forces established forward resupply stations in Noumea, New Caledonia and Espiritu Santo. They then employed “area screening (区域掩护)” and conveying to protect every stage of resupply and the deployment of reinforcements.¹³⁶ Partial control of the air from Henderson Field and naval escorts opened and secured a line of communications to the defenders on Guadalcanal. American air and naval forces thus covered the entire supply chain from the ports of embarkation in the rear to the transit routes to the points of debarkation in the combat zone. This defensive posture bought time for the island defenders to address severe supply bottlenecks on Guadalcanal’s beachheads, where materiel accumulated into an “iron mountain (铁山)” in the initial stages of the campaign.¹³⁷ The authors judge the coordinated use of air and naval power to cover the resupply effort to be highly efficacious.

In a study on logistics support to landing operations, Senior Colonels Zhang Liansong and Wang Qiyun, both hailing from the Logistics Command Academy, attribute the American logistical success to land-based airpower on Henderson Field, which furnished the defensive and offensive means to prevail in the contest. Compared to naval aviation, the larger shore-based aircraft enjoyed greater range and staying power and carried more fuel and payload, conferring tactical advantages to the United States. As the authors observe, “At the time, the performance of shore-based aircraft far exceeded those of shipborne aircraft. Under

134 郭渊斐 白文杰 郝骆铭 [Guo Yuanfei, Bai Wenjie, and Hao Luoming], “回顾瓜岛战役: 决定胜负的美日后勤保障较量 [Looking Back on the Guadalcanal Campaign: The U.S.-Japan Contest over Logistics Support that Determined Victory or Defeat],” 当代海军 [Navy Today], no. 8, 2020, p.72.

135 Another study notes that a key element of this system was the extensive use of chartered tankers to provide an adequate supply of fuel to the fleet. 周汉荣 张瑞泉 宋一鸣 [Zhou Hanrong, Zhang Ruiquan, and Song Yiming], “第二次世界大战太平洋战争美国海军海上机动后勤保障研究,” in 二战后勤启示录 [Lesson from Logistics in the Second World War], 张连松 杨庆华 主编 [Zhang Liansong and Yang Qinghua, eds.] (Beijing: National Defense University Press, 1996), p. 302. The authors are identified as members of the Logistics Department of the Chinese navy.

136 Guo Yuanfei, Bai Wenjie, and Hao Luoming, “Looking Back on the Guadalcanal Campaign,” p. 74.

137 Ibid., p. 76.

such circumstances, whoever possessed Henderson airfield obtained powerful air cover and thereby allowed for the smooth supply of combat forces on the ground.”¹³⁸

Defensively, U.S. land-based airpower kept Japanese carriers at bay and fended off Japanese land-based aircraft operating at their maximum ranges from Rabaul. Offensively, American aircraft interdicted enemy resupply. In mid-October, the Japanese dispatched six cargo ships under the escort of eight destroyers. American bombing and strafing from the air destroyed three transports while forcing the remaining three to depart without fully discharging their goods. During the Naval Battle of Guadalcanal in November, aircraft from Henderson Field and the carrier *Enterprise* delivered a devastating blow against Japan’s transports. Seven out of eleven ships were sunk. The remaining four ships and most of the supplies aboard them were destroyed on the beach by shore-based aircraft and artillery. The shipping and material losses deprived the Japanese army of the resources to feed its troops on the island, while the supplies that made it ashore were only enough to support a small portion of the ground forces. The two senior colonels contend that the logistical disaster “shattered the Japanese army’s plans to seize Guadalcanal.” They thus conclude, “Effective air cover is the precondition for conducting logistics support to amphibious operations.”¹³⁹

Conversely, Chinese analysts harshly judge Imperial Japan’s severe logistical shortcomings. Strategic misjudgments and repeated failures to reassess and to adapt to new circumstances compounded its logistical predicament. Initially, Japanese commanders neglected to appreciate America’s logistical prowess and underestimated the U.S. military’s capabilities and its will to fight. Over the course of six months, they refused to adjust their strategy and continued to pour resources into the campaign, despite the increasingly desperate logistical situation. Consequently, Japan “allowed a blocking action [阻击战] at sea to shift into a continuing war of attrition” that bled its troops and pilots and passed the command of the sea and the air to the Americans.¹⁴⁰

At the same time, Japan lacked the capabilities designed for complex and contested amphibious operations, including armored transports, landing ships, and amphibious tanks. As shipping losses mounted, Japan resorted to the use of warships for resupply, which was highly inefficient and proved to be a significant misallocation of scarce resources. As Colonels Zhang and Wang note, the improvised workarounds were “limited in scale, very costly, and unreliable.” They represented “measures of last resort (无奈举措)” for a force that had no good tactical options to stay in the field.¹⁴¹

138 张连松 王其云 主编 [Zhang Liansong and Wang Qiyun, eds.], 由海向陆的战争生命线 [War’s Lifeline from the Sea to Land] (Beijing: Haichao Press, 2005), p. 315. The authors cite translations and studies commissioned by the PLA’s then General Logistics Department.

139 Ibid., p. 316.

140 Guo Yuanfei, Bai Wenjie, and Hao Luoming, “Looking Back on the Guadalcanal Campaign: The U.S.-Japan Contest over Logistics Support that Determined Victory or Defeat,” p. 75.

141 Zhang Liansong and Wang Qiyun, eds., *War’s Lifeline from the Sea to Land*, pp. 318–319.

While the IJN may have inflicted losses against the U.S. Navy, those naval engagements had minimal impact on the landward struggle, which hinged on resupply. Japan repeatedly neglected to deliver a blow against vulnerable American transports and supply dumps even when it had the opportunity to do so.¹⁴² In particular, Japanese forces missed the chance to exploit the U.S. logistical vulnerabilities during the initial stages of the campaign when the beachheads were saturated with supplies and distribution problems created severe bottlenecks, forcing several pauses in the resupply effort. According to one study, the IJN failed to attack the exposed stocks of material, missing an opening to exploit U.S. logistical setbacks. If Japan had bombarded the iron mountain of supplies on Guadalcanal, such an offensive might have changed the course of the campaign.¹⁴³

As Zhao Zhenyu of the Dalian Naval Academy observes, the fundamental problem was that the Japanese misjudged “the basic character of the Guadalcanal campaign, which was a landing and counter-landing operation.” As he explains:

In an amphibious operation, transport units play a particularly important role. Should the counter-landing opponent completely or partially destroy the transports, it could smash the attacker’s landing plans or it could render the achievement of the attacker’s aims very difficult. Even if the first echelon of amphibious forces were to land, effective blows against follow-on transport units could “place on death ground [处于死地]” the first echelon or those blows could mire the first echelon in a serious predicament.¹⁴⁴

The destruction of the logistical tail would have cut off critical supplies destined for the U.S. defenders on the island, depriving them of the materiel needed to keep fighting and to survive. To Zhao, Japan’s failure to target American logistics, especially during the initial stages of the campaign was an egregious mistake. To him, the Japanese armed forces displayed an institutional penchant for counterforce operations that sought out battles against ships, aircraft, and troops while neglecting American transports, sea lanes, and supply depots. This institutional bias precluded a more productive use of Japan’s fighting prowess.

To some, the logistical aspects of the campaign hold relevant lessons for the Chinese navy today. As three analysts contend, “Research on the Guadalcanal campaign has important meaning to our navy’s far seas logistics support development.” To them, the island contest shows that future maritime wars and their logistical requirements must dovetail with China’s comprehensive national power. In particular, the Chinese navy must ensure that its logistical requirements for conducting expeditionary operations do not exceed China’s economic foundation and industrial base as they did for Japan. China thus must emulate the American example in Guadalcanal. To do so, the Chinese navy must develop comprehensive

¹⁴² Ibid., pp. 316–317.

¹⁴³ Guo Yuanfei, Bai Wenjie, and Hao Luoming, “Looking Back on the Guadalcanal Campaign: The U.S.-Japan Contest over Logistics Support that Determined Victory or Defeat,” p. 75.

¹⁴⁴ Zhao Zhenyu, *History of Sea Battles in the Pacific*, pp. 327–328.

logistical capabilities, including forward bases, abundant shipping, and various support facilities. Furthermore, according to the three authors, the PLAN needs to accumulate experience in resupply operations under wartime conditions through repeated training and exercises. Finally, the Chinese navy must ensure that it possesses the capabilities to obtain control of the sea lanes to provide a continuous supply of goods to forces deployed on distant islands.¹⁴⁵ In short, in a future contingency, warfighting and sea lane security will be intimately connected.

Looking Ahead to a Fight Between Peers

An article from a general interest military journal best summarizes the reasons behind Guadalcanal's outcome. The authors note that America's operational and tactical virtuosity enabled its forces to far outmatch the Japanese troops' fighting spirit and combat experience. They credit the U.S. military's close coordination between the air, sea, and ground forces—in conjunction with ample material support backed up by a massive defense industrial base—for “overwhelming the Japanese military” and for “producing the turning point in the entire war situation.” Looking to the future, the authors contend:

In the present era, a new military revolution is sweeping the world with great velocity. Integrated joint operations have become a fundamental combat style...Our military has basically completed reforms of its command structure and has further pushed forward reforms of its force structure and capabilities. Establishing a new joint organizational structure to win modern multi-domain wars is the most important topic before us. The Guadalcanal campaign's main features, including *fighting between two forces of relative parity* [emphasis added], a multi-domain battlefield, and complex command and control, provide important contemporary lessons for integrated joint operations. The operational gains and losses between the U.S. and Japanese sides are worthy of our deep study today.¹⁴⁶

To them, Guadalcanal illustrates the importance of combined arms and joint operations to the PLA as it prepares for future conflicts. It is notable that the authors assume China's military parity with its opponent as a major characteristic of a prospective great power war. They also foresee the PLA conducting a joint offensive campaign to seize and hold island terrain. These findings and the other writings surveyed in this chapter show that the Guadalcanal campaign holds many lessons for PLA warfighting and resonates deeply with Chinese strategists.

145 Guo Yuanfei, Bai Wenjie, and Hao Luoming, “Looking Back on the Guadalcanal Campaign: The U.S.–Japan Contest over Logistics Supply that Determined Victory or Defeat,” p. 76.

146 孙泽建 陈龙 [Sun Zejian and Chen Long], 瓜岛战役日军成败分析 [Analysis of the Japanese Military's Gains and Losses in the Guadalcanal Campaign] 军事文摘 [Military Digest], no. 2, 2018, p. 71.

CHAPTER 5

Battle of Okinawa

Okinawa was the last line of defense for Japan as well as the final stepping stone to the home islands for the United States. The struggle for the island was among the bloodiest of the Pacific War. The United States suffered more casualties there than at any other in the Pacific theater. On land, American dead and missing numbered 7,613 and the wounded reached nearly 32,000. At sea, almost 5,000 were killed and more than 7,000 were wounded, numbers that exceeded the toll of any campaign during the war's previous two years. Over 110,000 Japanese troops died on the island. The frightening costs were the result of changes in strategy, tactics, and geographic circumstances. The Japanese high command abandoned plans to stop the American advance and chose instead to extract as high a cost as possible on the adversary. On Okinawa, the Japanese defenders formed "a three-dimensional, multi-layered network of mutually supporting fire-sacks" that exposed the attackers to withering firepower.¹⁴⁷ The U.S. Army and Marine units were forced to dislodge enemy positions one by one at a great price. In the meantime, the U.S. Fifth Fleet, which covered the amphibious assault and provided close air support, came within range of Japan's shore-based airpower, including the kamikazes, launched from Kyushu, the Ryukyus, and Taiwan.

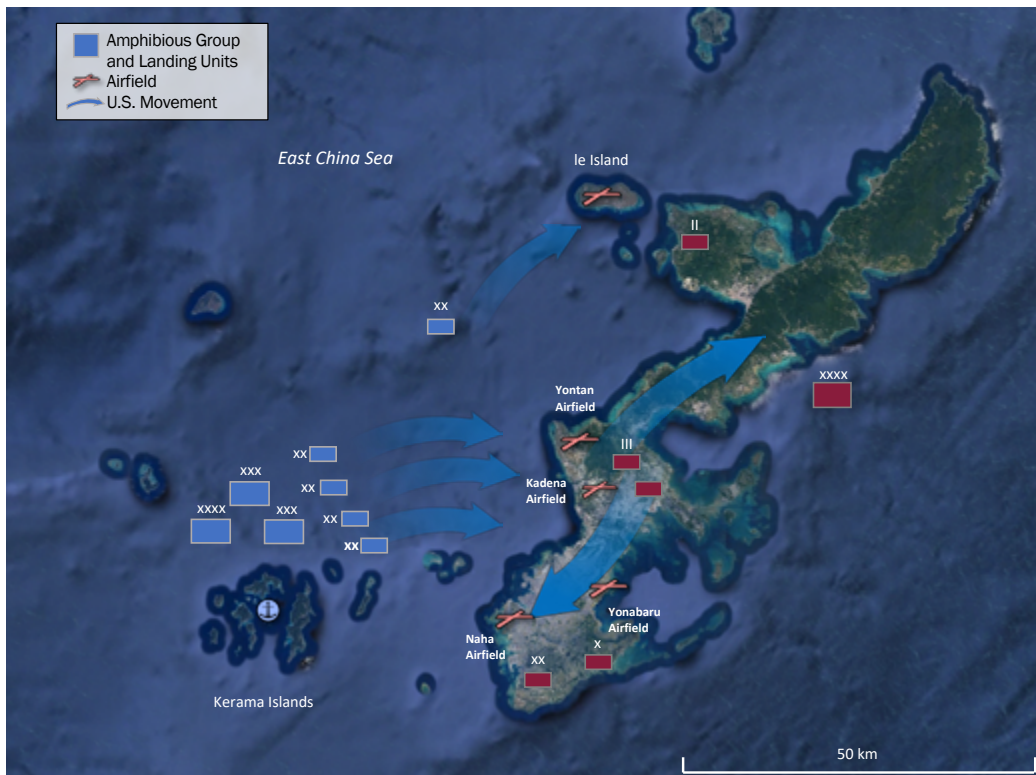
The air-sea battle produced atrocious losses on both sides. Japan unleashed ten major waves of kamikaze raids and over 400 individual sorties against the American fleet. The first suicide attack, involving 355 kamikaze aircraft, was part of a joint offensive effort to escort a task force organized around the super battleship *Yamato*.¹⁴⁸ The Japanese strike sank seven ships and damaged 17 more, of which seven had to be withdrawn from the scene of action. The *Yamato* group, however, did not survive the transit and its destruction spelled the end of Japan's surface force. Over the course of the battle, the U.S. Navy endured appalling losses:

¹⁴⁷ Bruce Gudmundsson, "The Island Experience: The Battle for Guadalcanal: April 1–June 21, 1945," in *The Pacific War Companion: From Pearl Harbor to Hiroshima*, Daniel Marston, ed. (Oxford: Osprey Publishing, 2005), p. 216.

¹⁴⁸ Williamson Murray and Allan R. Millet, *A War to be Won: Fighting the Second World War* (Cambridge, MA: Belknap Press, 2000), p. 515.

over 120 ships were sunk or damaged enough to be knocked out of the war or required significant repairs. The costs to the Japanese were horrendous as well; some 7,800 aircraft were lost in the fight around Okinawa.¹⁴⁹ The hard-won battle, the last of World War II, dragged on far longer and was far costlier than American planners had anticipated. Its conquest punctured Japan's innermost defense perimeter and positioned U.S. and allied forces at the doorstep of the Japanese home islands.

FIGURE 12: BATTLE OF OKINAWA



Source: Adapted from Daniel Marston ed., *The Pacific War: From Pearl Harbor to Hiroshima* (Oxford, UK: Osprey Publishing, 2005), p. 214.

Tactical Balance of Power

Chinese analysts see the Battle of Okinawa as a lopsided contest that heavily favored the American side. According to a study by the Academy of Military Science, the United States relied on “absolute superiority (绝对优势)” in forces to conduct the amphibious landings.¹⁵⁰

149 Phillips Payson O'Brien, *How the War was Won: Air-Sea Power and Allied Victory in World War II* (Cambridge: Cambridge University Press, 2015), p. 455.

150 李际均 主编 [Li Jijun, ed.] 第二次世界大战史 [History of the Second World War, Volume 4] (Beijing: Academy of Military Science, 2015), p. 461.

A total of 34 carriers carrying over 2,100 aircraft, some 400 surface combatants, and over 1,100 support vessels, including about 500 amphibious transports, joined the campaign. Zhao Zhenyu of the Dalian Naval Academy observes that the U.S. military boasted “overwhelming superiority (压倒优势)” in naval power with a fleet of some 1,200 ships, including at least 40 different types of vessels.¹⁵¹ The Fast Carrier Task Force responsible for “long-range support (远程支援)” to the amphibious forces comprised 16 carriers, eight battleships, 13 cruisers, 54 destroyers, and some 1,300 carrier-based aircraft. The massive fleet also included a significant British contingent of four carriers, some 250 carrier-based aircraft, two battleships, six cruisers, and fifteen destroyers.¹⁵² The ground forces under the U.S. Tenth Army numbered about 180,000 men.

In comparative terms, the United States deployed over four times more troops than the Japanese army, 32 times more ships than the IJN, and about the same number of planes of superior quality than Japan’s naval and army air forces. The disparity in naval power was the result of the engagements in the Marianas and in Leyte Gulf that had decimated the Combined Fleet. One study evocatively likens the overmatch to “using a bull-slaughtering knife to kill a chicken (牛刀杀鸡).”¹⁵³ The numerical and qualitative superiority over Japan allowed the United States to make use of the air and the seas surrounding Okinawa as it saw fit. Such unfettered access was an essential precondition for U.S. amphibious operations. As Zhao Zhenyu explains:

Possessing command of the air and command of the sea around the Ryukyu Archipelago created the conditions that allowed for launching amphibious operations against Okinawa and for conducting combat on the island after the landings. It was only by the firm grasp of air superiority and sea control that aerial and naval firepower could support the landing forces, that logistics units and supplies could reach the front in a timely fashion, and that interdiction could cut off various support to the enemy defenders from beyond the island.¹⁵⁴

Another study concurs that the United States relied on “absolute superiority in naval and air capabilities” to command the seas and air around the Ryukyus, which cut off Japanese reinforcements to Okinawa and enabled U.S. warships and aircraft to provide “firepower support (火力支援)” to the ground forces.¹⁵⁵

151 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 630.

152 Ibid., p. 630.

153 Zhang Liansong and Wang Qiyun, eds., *War’s Lifeline from the Sea to Land*, p. 151.

154 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 643.

155 王文清 梁玉师 郁汉冲 任全运 刘玉清 张开锋 薛玉江 [Wang Wenqing, Liang Yushi, Yu Hanchong, Ren Quanyun, Liu Yuqing, Zhang Kaifeng, and Bi Yujiang], 中外岛战 [Chinese and Foreign Island Campaigns] (Beijing: Liberation Army Press, 2009), pp. 44–45.

Shore-Based Airpower

Like their writings about the Midway and Guadalcanal campaigns, Chinese analysts show an appreciation for the lethality of shore-based airpower. Not surprisingly, they pay close attention to Japan's massive employment of kamikazes, which were, in essence, land-based manned cruise missiles, and its operational impact during the struggle over Okinawa. To one analyst, the expanding use of suicide attacks as the war neared its end was inevitable. American fleet air defenses were effective and formidable, while the decline in the quality and combat experience of Japanese pilots significantly increased the loss rates in penetrating the enemy's air defense networks. It thus became far cheaper and easier to redirect resources and manpower toward one-way missions. In other words, Japan's turn to the kamikaze was a calculated response to the changing offense-defense balance in naval warfare.¹⁵⁶

The article goes on to compare the relative effectiveness of orthodox bombing and torpedo tactics against that of kamikaze methods. The success rate of the former was frequently less than 10 percent, while the chances of hitting the target with suicide attacks exceeded 40 percent and even neared 50 percent in some cases. Using conventional tactics, the Japanese would have expected to lose 220 aircraft to land blows against 12 ships. By contrast, a kamikaze raid would have lost about 60 planes to hit the same number of enemy combatants.¹⁵⁷ From October 1944 to April 1945, about 2,900 Japanese aircraft assaulted the American fleet. Among them, over 2,100 employed bombing and torpedo tactics while just under 800 were used for kamikazes. The former method produced 58 hits and 356 losses while the latter reached their targets 216 times and paid the price of 568 planes shot down. In other words, one out of three kamikazes succeeded, while only one of six conventional strikes struck its target. There was thus good reason for Japan to bet on kamikazes in the defense of Okinawa.

To attack enemy fleets in offshore waters, the Japanese high command ordered the start of Operation Kikusui, a series of large-scale kamikaze raids meant to exact a high cost on allied naval forces. The IJN and the Japanese army employed their shore-based aircraft to contest American use of the seas. They launched ten major waves of air attacks. The first assault from April 6–7, involved 699 planes, including 355 kamikazes. The attack sank three destroyers, one tank landing ship, and two ammunition ships while damaging one battleship, eight destroyers, one frigate, and one minelayer. The Japanese lost 335 planes. The second wave, from April 12–13, took place with 392 aircraft, including 202 kamikazes. The strike sank one destroyer and one landing ship and damaged one battleship, six destroyers, three frigates, and one landing ship. The attacker lost 205 planes. The raids, which employed as many as 300 kamikazes in early May, continued until the end of the campaign. According

156 I thank Trent Hone for reinforcing this idea.

157 胡德 [Hu De], “太平洋战争末期美国海军与‘神风特攻’的较量 [The Contest between the U.S. Navy and the ‘Kamikaze Special Attack’ in the Final Phase of the Pacific War],” 舰载武器 [Shipborne Weapons], no. 10, 2021, p. 91.

to Zhao Zhenyu, over the course of Operation Kikusui, the kamikazes accounted for 26 out of some 30 ships sunk and most of the damage inflicted against some 360 combatants.¹⁵⁸

Some Chinese commentators zero in on the tactical effects of successful kamikaze hits. One article retells the first American encounter with the Kikusui attack on the destroyers *Bush* and *Calhoun*.¹⁵⁹ Another describes how a manned missile, the Oka plane, slammed into the *Mannert L. Abele*, ripping the ship in two.¹⁶⁰ Still another details the heroic resistance of the *Hugh W. Hadley* and the *Evans* against repeated Japanese air raids.¹⁶¹ One author recounts the kamikaze strikes that temporarily put the fast carriers *Bunker Hill* and *Enterprise* out of action, forcing Vice Admiral Marc Mitscher, the commander of Task Force 38, to transfer his flagship twice in four days.¹⁶² These accounts capture the physical destruction and the psychological terror that the kamikazes inflicted on the American fleet.

The literature also explicitly links the destruction of the super battleship *Yamato* to shore-based airpower. Naval analyst Liu Yi, a fierce critic of the decision to sortie *Yamato* and its escorts, notes that the absence of air cover condemned the Japanese fleet to annihilation. Liu recounts that the Fifth Air Fleet's escorts from Kanoya airbase in Kyushu were only able to provide limited air cover owing to the lack of fuel.¹⁶³ More importantly, the first Kikusui operation, which took place simultaneously with the *Yamato*'s dispatch, consumed much of Japanese shore-based airpower. This parallel action ensured that the "Surface Special Attack Force" was assigned to an "absolutely suicidal" operation.¹⁶⁴ For the U.S. side, the timing and location of the air raids against the *Yamato*-led flotilla were determined in part by calculations about the land-based air threat. The enemy fleet had to be drawn out beyond the reach of Japanese aircraft on Kyushu and beyond the point where retreat was no longer possible.¹⁶⁵

For the U.S. side, Chinese analysts uniformly agree that the successful landings on the Hagushi beaches, which cut off the defender's north-south communications, enabled the attackers to quickly seize the nearby Yontan and Kadena airfields.¹⁶⁶ These aerodromes proved invaluable: they became launch pads from which the Americans could employ

158 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 638.

159 施征 [Shi Zheng], "1945冲绳岛海空上的硝烟 上 [Gun Smoke Over the Sea of Okinawa in 1945, Part One]," 舰载武器 [Shipborne Weapons], no. 1, 2004, p. 85.

160 Ibid.

161 许春林 [Xu Chunlin], "冲绳岛防护线上的攻防战 [The Offensive and Defensive Battles Along Okinawa's Defensive Line]," 军事史林 [Journal of Military History], no. 9, 2019, pp. 76–78.

162 Shi Zheng, "Gun Smoke Over the Sea of Okinawa in 1945, Part Two," pp. 85–86.

163 Liu Yi, *The Combined Fleet*, p. 437.

164 Wang Wenqing, et. al., *Chinese and Foreign Island Campaigns*, p. 31.

165 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 639.

166 Wang Houqing, ed., *The Historical Development of Campaigns*, p. 367.

their shore-based aircraft to support ground operations.¹⁶⁷ Equally important, U.S. tactical aircraft at Yontan and Kadena conducted combat air patrols around Okinawa to intercept Japanese kamikazes, downing hundreds of enemy planes. Longer-range fighters on those airfields performed deep sweeps against airbases on Kyushu, forcing the Japanese to redeploy their aircraft to bases located beyond the range of U.S. shore-based airpower on Okinawa. In short, the presence or absence of shore-based aircraft had a sizeable impact on the conduct of the campaign. Both sides acutely felt the danger of the land-based air threat.

Counterair Operations

Chinese analysts have assessed how the United States responded to the air threat as the Okinawa operation brought its forces within range of Japanese shore-based airpower. To them, American air and naval power employed offensive and defensive means to effectively blunt Japan's air offensives. They recognize, however, that the Japanese still managed to inflict significant harm on U.S. forces, particularly against the surface fleet. The weaker side was able to harness its diminishing resources and options to impose heavy costs.

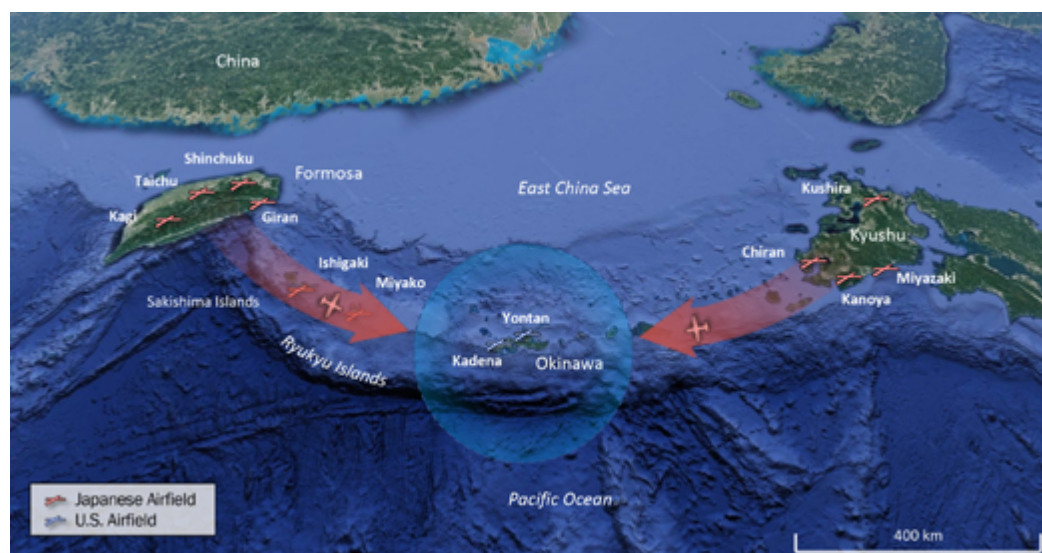
Prior to the landing operation, the allied fleet unleashed its airpower to engage in a theater-wide campaign to degrade Japanese air forces. Carrier-based aircraft bombarded enemy airbases on Kyushu, Shikoku, the Ryukyus, and Taiwan to isolate the battlefield and cut off Okinawa's air communications in advance of the invasion.¹⁶⁸ The British contingent, designated Task Force 57, contributed to the air suppression effort by striking Japanese airfields on the Sakishima Islands, the southern portion of the Ryukyus, and northern Taiwan.¹⁶⁹ On March 18, American fast carriers operating off the coast of Kyushu conducted raids against enemy airbases. Vice Admiral Matome Ugaki's Fifth Air Fleet launched a counterstrike, lightly damaging the carriers *Enterprise* and *Yorktown*. The following day the Japanese struck the carriers *Wasp* and *Franklin*. The former was able to continue operations before withdrawing for repairs, while the latter suffered grievous blows that severely damaged the ship, killed 724 men, and wounded 265 others. These encounters were a foretaste of the deadly air assaults to come.

¹⁶⁷ Li Jijun, ed., *History of the Second World War*, Volume 4, p. 467.

¹⁶⁸ Wang Houqing, ed., *The Historical Development of Campaigns*, p. 367.

¹⁶⁹ Zhao Zhenyu, *History of Sea Battles in the Pacific*, pp. 633–634.

FIGURE 13: OKINAWA'S NORTHERN AND SOUTHERN FLANKS



Source: Google Earth

While the carrier raids destroyed hundreds of Japanese aircraft on the ground and in the air and temporarily weakened Japan's ability to conduct counteroffensives by air, Chinese studies point out that U.S. forces were not able to knock out the air threat from Kyushu. There were simply too many airfields that were widely dispersed and relatively well defended by anti-aircraft artillery for the United States to eliminate Japanese airpower on the southern main island.¹⁷⁰ Consequently, the U.S. Navy kept its fast carriers and escort carriers in Okinawa's nearby waters to provide a protective umbrella over the amphibious operations. This in turn exposed these carriers and associated combatants to subsequent Japanese air raids. To Zhao Zhenyu, Japanese shore-based airpower compelled U.S. mobile assets to remain fixed in their places, preventing them from fulfilling other missions elsewhere.¹⁷¹

Japanese shore-based airpower, particularly the kamikazes, compelled the Americans to develop elaborate layered defenses to protect their surface fleet and island operations. During the campaign, the U.S. Navy deployed a shipborne radar picket comprising multiple stations around Okinawa. At the center of each early warning post were destroyers equipped with sensors to detect incoming hostile aircraft and communications gear to direct U.S. carrier-based combat air patrols. Heavily armed landing craft support ships provided additional firepower to the air screening effort. Before land-based radars were set up on Okinawa

170 周明 [Zhou Ming], "冲绳战役中的海空战 [The Air-Sea Battle During the Okinawa Campaign]," 国际展望 [World Outlook], no. 9, 2001, p. 90.

171 Zhao Zhenyu, *History of Sea Battles in the Pacific*, pp. 643–644.

to relieve the seaborne picket, the U.S. Navy set up more than a dozen stations, each involving two to four destroyers and two to four landing ships.¹⁷²

From February to May 1945, these destroyer pickets took the brunt of the kamikaze raids, as described above. Among the suicide attacks, 36 were directed at battleships and cruisers, 54 were aimed at carriers, and 193 headed for the destroyers, constituting nearly 40 percent of all attempts. Of the 101 destroyers that participated in the air defense scheme, ten were sunk and 32 were damaged, representing a casualty rate of over 40 percent.¹⁷³ Nevertheless, the Americans exacted a heavy toll on Japanese airpower, scoring some 1,000 kills.

Chinese analysts have explicitly applied what they see as precursors to modern offensive and defensive counterair operations around Okinawa to contemporary circumstances. An internal PLA study describes the U.S. air suppression campaign preceding the landings on Okinawa as an early manifestation of a “saturation-type air raid (饱和式空袭).”¹⁷⁴ It contends that American air strikes against airfields and naval bases in Kyushu, Shikoku, Taiwan, and Okinawa produced “severe Japanese losses and allowed the U.S. military to quickly obtain command of the air.”¹⁷⁵ Such air superiority permitted the American forces to conduct follow-on operations against the Japanese defenders on Okinawa.

In a twenty-first-century island campaign, a saturation air raid would “comprehensively attack all the important military targets, especially air defense systems and C4ISR [command, control, communications, computers, intelligence, surveillance, and reconnaissance] systems, across the island’s frontlines and rear areas.”¹⁷⁶ The study further explains that a saturation air raid “seeks to destroy in one fell swoop and to deny the opponent breathing room and the opportunity to counterattack, thereby setting the campaign’s course. It is an air raid style whereby the strong attacks the weak and when the strong enjoys absolute superiority in airpower and is very well prepared.”¹⁷⁷ The PLA study sees the American air campaign in the First Gulf War as a quintessential modern saturation air raid.

A PLA volume on island campaigns by the Shijiazhuang Mechanized Infantry Academy describes the radar pickets around Okinawa as an early manifestation of integrated air defense at sea that allowed the defender to detect and respond quickly to air threats. The effective use of radar to sense the surroundings was particularly crucial to success. The study credits the U.S. Navy for “forming a circular early warning radar network and an

172 Xu Chunlin, “The Offensive and Defensive Battles Along Okinawa’s Defensive Line,” p. 76.

173 Hu De, “The Contest between the U.S. Navy and the ‘Kamikaze Special Attack’ in the Final Phase of the Pacific War,” p. 94.

174 陈新民 徐国成 罗峰 主编 [Chen Xinmin, Xu Guocheng, and Luo Feng, eds.], 岛屿作战研究 [Research on Island Warfare] (Beijing: Academy of Military Press [military circulation], 2002), p. 148.

175 Ibid., p. 149.

176 Ibid., p. 148.

177 Ibid., p. 148.

anti-air firepower system that fully reflected the operational concepts of joint air defense and integrated defense.¹⁷⁸ It further argues that the air defense effort foreshadowed the importance of “commanding the electromagnetic spectrum (制电磁权)” in modern warfare, a priority mission for the PLA today.

To one analyst hailing from the Military Research Office of the former Nanjing Military Region, the Okinawa campaign shows that “if the landing side cannot seize and maintain command of the air, then it will be very difficult to achieve success in the amphibious operation.”¹⁷⁹ The lesson for the PLA, according to the author, is to adopt an “offensive air defense (攻势防空)” posture in future landing campaigns.¹⁸⁰ The PLA must be prepared to “defeat the enemy at the earliest opportunity (先机制敌)” and to “defeat the air on land (制空于地).” Specifically, it “must seek to destroy and effectively suppress such important targets as main airbases and aviation groups in one fell swoop.” To do so, the PLA must bombard airbases with conventional ballistic missiles, conduct large-scale air raids to catch enemy airpower on the ground, and employ special operations forces to attack or sabotage airfield facilities.

Another element of offensive air defense is to seize command of the electromagnetic spectrum, the medium through which combat units communicate with each other, sense the operational environment, and guide munitions to their targets. In a contested landing, the PLA must establish an “electromagnetic barrier (电磁屏障)” using various electronic jamming methods in the air, at sea, and on the ground to degrade the adversary’s situational awareness.¹⁸¹ At the same time, the PLA must employ electronic warfare to conduct feints to misdirect and confuse the opponent. In addition, it must erect a “three-dimensional early warning (立体预警)” system with ground, naval, and air forces to detect incoming air threats.¹⁸²

Finally, the PLA must develop various tactics to conduct “key point strikes (重点打击)” against the enemy’s command and control systems.¹⁸³ In particular, it must concentrate

178 Zhu Dongsheng, ed., *World Classic Battles: Volume on River and Island Combat*, p. 249.

179 张坤平 [Zhang Kunping], “积极防空—冲绳岛登陆战及启示 [Active Air Defense—The Okinawa Amphibious Operation and Its Lessons],” *华北民兵 [North China Militia]*, no. 12, 2006, p. 63.

180 The concept of offensive air defense is echoed in other authoritative PLA writings. For example, the 2006 *Science of Campaigns* calls for “determined counterattacks” against enemy air bases to eliminate the source of air raids against PLA targets. See Zhang Yuliang, *Science of Campaigns*, pp. 602–605. See also Michael P. Flaherty, “Red Wings Ascendant: The Chinese Air Force Contribution to Antiaccess,” *Joint Forces Quarterly*, issue 60 (1st Quarter 2011), pp. 98–99.

181 Zhang Kunping, “Active Air Defense,” p. 63.

182 *Ibid.*, p. 63.

183 The concept of key-point strikes refers to attacks against critical targets of such operational importance that, when destroyed, could lead to enemy paralysis. The targets include the adversary’s command and control systems, logistical hubs, communication networks, critical infrastructure, transportation centers, and so forth. See 李有升 [Li Yousheng], *联合战役学教程 [Course Materials on the Science of Joint Campaigns]* (Beijing: Academy of Military Science, 2012), pp. 203–204.

efforts to destroy the adversary's early warning aircraft, a key link to combat effectiveness. Significant disruptions to the opponent's ability to sense its surroundings could "influence its overall performance and even lead to paralysis."¹⁸⁴ Such an operation would seek to disarm, deceive, detect, and deafen the adversary's airpower and thereby set more favorable conditions for an amphibious operation. This view is consistent with the PLA's doctrine that calls for seizing command of the information domain and obtaining air superiority at the outset of a major campaign.¹⁸⁵

Logistics

Like their assessments of the Guadalcanal campaign, Chinese observers hold in high esteem the U.S. military's logistical prowess during the battle. One article approvingly describes the Okinawa campaign as a "maritime logistics war (海上后勤战)."¹⁸⁶ The author notes that, among the over 1,400 ships involved, more than 1,100 of them were support vessels, far exceeding their warfighting counterparts in numbers. Of the support ships, nearly 460 were transports and amphibious craft to support operations ashore. In the early phases of the battle, this logistics fleet carried over 840,000 tons of material and supplied nearly 190,000 tons of ammunition and over 1.2 million tons of fuel. Another observer marvels that about 2.7 million packs of cigarettes and over 24 million pieces of mail were delivered to troops during the battle.¹⁸⁷ Ji Fuwan finds, "Tremendous firepower, meticulous preparations, command of the sea and the air, and outstanding logistics support were the key factors behind the U.S. military's success."¹⁸⁸

Chinese commentators have paid close attention to the role of supply chains involving great distances across the Pacific Ocean. They note that about 6,250 nautical miles separated ports on the West Coast from Okinawa, requiring more than 25 days to transit the distance. Most of the materiel originating from such port cities as San Francisco and Seattle must pass through Hawaii then reach transshipment hubs in the Marianas before the goods were transported to frontline troops. According to one study, the entire process for a single shipment to reach the combat theater took about 120 days. According to Fu Linguo, a staff member of the then General Logistics Department, orders for the goods and preparations for the orders took about 30 days, the acquisition and loading of goods required about 60 days,

184 Zhang Kunping, "Active Air Defense," p. 63.

185 Li Yousheng, *Course Materials on the Science of Joint Campaigns*, pp. 214–215.

186 季伏枥 [Ji Fuwan], "冲绳岛战役片断 [Snapshots of the Okinawa Island Campaign]," 兵器知识 [Ordnance Knowledge], no. 2, 2003, p. 53.

187 黄金生 [Huang Jinsheng], "血战冲绳: 美军的'破门之役' [Bloody Battle in Okinawa: The U.S. Military's Campaign to 'Break Down the Door']," 国家人文历史 [National Humanity History], no. 1, 2015, p. 75.

188 Ji Fuwan, p. 53.

and the shipping of goods was another month.¹⁸⁹ Given such timelines, meticulous planning and coordination were essential to success. Significant disruptions to the supply chain could have had significant knock-on effects on the fighting ashore.

Senior Colonels Zhang Liansong and Wang Qiyun see the U.S. military's seizure of the Kerama Islands as a key logistical component that completed the supply chain. The island group, located about 24 kilometers west of the Naha coast, was an "ideal forward base (理想的前进基地)" for the amphibious operation.¹⁹⁰ The islands provided logistical support to ships, a sheltered anchorage that could accommodate 75 large vessels, and a permanent resupply base near the combat zone. To Zhang and Wang, the Keramas provided a reliable endpoint to the long supply line that stretched across the Pacific, a stable and firmly planted forward base for ships, aircraft, and troops, and a logistical anchor located within the area of operations. Moreover, the bold decision to capture the islands at the outset of the campaign knocked the Japanese off balance and deprived them of a launch pad for suicide boat attacks. Heaping praise on the Americans, the two senior colonels effusively conclude, "In sum, the conquest and use of the Kerama Islands, whether to support U.S. combat or logistics, were a masterstroke that had a wide salutary influence on the battle. They were the pièce de résistance in American military strategic planning."¹⁹¹

Zhang and Wang further point to the massive amphibious and logistics fleets that the U.S. Navy assembled for the operation as key ingredients to the campaign's success. The amphibious assault forces consisted of eight transport groups. Each group was typically composed of 15 attack transports, six attack cargo ships, 25 tank landing ships, ten medium landing ships, and a dock landing ship. In addition to managing a large fleet, planners had to coordinate the loading of troops and materiel that were scattered across the Pacific Ocean, including the West Coast, Hawaii, New Caledonia, Espiritu Santo, the Solomons, the Philippines, and the Marianas. For example, they had to coordinate the initial launch of 13 ships from San Francisco and Seattle carrying 3,000 troops and 30,000 tons of supplies, 39 ships from Oahu ferrying 12,000 troops and 60,000 tons of goods, and 60 ships from the Marianas transporting 30,000 men and 80,000 tons of materiel. Ensuring that the entire armada, which carried about 180,000 men and 747,000 tons of supplies, arrived near Okinawa at the right time from disparate locations was an immensely complex organizational undertaking.

The logistics support flotilla comprised oilers, ammunition ships, hospital ships, repair ships, floating dry docks, ocean fleet tugboats, aircraft transports, and survey ships. Escort carriers and destroyers screened this fleet against enemy threats. As Zhang and Wang note,

189 符林国 [Fu Linguo], "论太平洋战争美军岛屿进攻作战后勤保障的主要特点 [On the Main Characteristics of Logistics Support in U.S. Military's Offensive Island Campaigns during the Pacific War]," 军事历史 [Military History], no. 4, 2009, p. 19.

190 Zhang Liansong and Wang Qiyun, eds., *War's Lifeline from the Sea to Land*, p. 129.

191 Ibid., p. 153.

“In practice, the fleet was a floating maritime support base.”¹⁹² Enormous fuel consumption required a network of storage facilities across the Pacific—stretching from the West Coast to Hawaii to the Marianas to Ulithi—to keep the U.S. forces in the fight. About 40 oilers shuttled between Ulithi and Okinawa at any given time during the campaign.¹⁹³ From April 4 to 20, the oilers provided 167,000 barrels of heavy diesel and 385,000 gallons of aviation fuel to the fleet. By the end of May, the oilers had transferred nearly 8.5 million barrels of heavy diesel, 259,000 gallons of light diesel, and 477,000 gallons of aviation fuel.¹⁹⁴

Resupply to meet ammunition needs was another major effort. The campaign’s initial stage alone required three times the munitions expended to take the Marianas. At sea, the Gunfire and Covering Task Force bombarded targets ashore to support ground operations. Over the course of the battle, its warships fired over 572,000 rounds of shells that were 5 inches or larger in caliber. The high consumption rates required prodigious resupply. Indeed, Zhang and Wang describe the volume of at-sea ammunition replenishment to the fleet as “mind boggling.”¹⁹⁵ During the battle, ammunition ships delivered over 112,000 rounds of large caliber shells, over 42,000 bombs, 83 torpedoes, and 810 depth charges to the Fast Carrier Task Force, just one of seven task forces.

Zhang and Wang see the logistics support ashore as another element of the campaign’s success. The U.S. military quickly established debarkation points on the beachhead to efficiently unload and transport large quantities of supplies to frontline combat units. From early April to late June, the supply points unloaded just over two million tons of materiel.¹⁹⁶ As troops advanced south, forward supply stations were established to reach the frontlines. After heavy rains washed out main roads in May, tank landing ships and tracked amphibious vehicles delivered supplies ashore at new debarkation points near forward depots and dumps along the coast. Zhang and Wang find that the concentrated use of landing craft to directly unload supplies at the beachheads significantly improved the speed and suddenness of American operations.

Key Decision Points

Chinese analysts uniformly recognize that the outcome of the battle was not in question. The preponderance of American military power and resources by the time of the Okinawa battle

192 Ibid., p. 153.

193 Ulithi Atoll, a set of islets located between Guam and Palau, was a major staging area for U.S. forces in the Pacific. Ulithi’s coral outcroppings formed a big lagoon that served as an anchorage for hundreds of U.S. naval vessels. By early 1945, the atoll had emerged as the largest and busiest forward naval base in the world.

194 Zhang Liansong and Wang Qiyun, eds., *War’s Lifeline from the Sea to Land*, p. 135.

195 Ibid., p. 139.

196 冬初阳 刘海丰 [Dong Chuyang and Liu Haifeng], 炼狱之门: 冲绳战役 [The Gates of Purgatory: The Okinawa Campaign] (Wuhan: Wuhan University Press, 2017), p. 537. The book draws extensively from English- and Japanese-language sources, including the published archives held at NIDS.

was simply overpowering. Nevertheless, mainland commentators render their judgments about the errors in decisions or alternative courses of action that might have influenced the battle's conduct on both sides. Most of these verdicts are uncontroversial and consistent with Western scholarship.

For example, they concur that the Japanese 32nd Army's general counteroffensive on May 4 was a major blunder. In this attack, Lieutenant General Matome Ushijima, the commander of the defenders on Okinawa, launched a counter-landing behind American lines and a frontal assault preceded by artillery fire. The amphibious forces were detected and destroyed while the infantry units caught in the open were devastated by American bombardment from land, air, and sea. The Japanese army suffered grievous losses and consumed vast amounts of ammunition without gaining any ground. One study attributes the attack to desperation, likening the defenders to a cornered beast fighting back.¹⁹⁷ Another believes that the lack of American progress gave Ushijima false confidence that he could go on the offensive, which dovetailed with the army's institutional proclivities.¹⁹⁸ The defense-in-depth posture was achieving its intended aim by exacting a high cost on U.S. ground forces. Had Ushijima stuck with the defensive attritional approach, he might have had more manpower and firepower available to inflict even greater harm on the advancing Americans.¹⁹⁹

Huang Limin considers whether the U.S. military could have been more creative in its campaign design to minimize the attritional costs that the Japanese were imposing on it. He assesses the benefits and risks of three alternative strategies to defeat the dug-in opponent.²⁰⁰ First, the U.S. Tenth Army could have conducted amphibious landings on southern Okinawa to get behind Japanese lines, as some American commanders had suggested at the time. But Huang finds that enemy counterattacks, including artillery bombardment, would have likely exposed the lodgments to undue risk. Second, the attackers could have settled for a siege to exhaust Japanese firepower and starve out the defenders. However, Huang assesses that it would have taken far too long for the 32nd Army to give up, especially given the need to quickly turn to the invasion of the Japanese home islands. Third, improved technical means, including precision bombing, could have been another option to destroy enemy fortifications. Huang expresses skepticism that better weapons might have overcome the geographic features that favored the defenders. To Huang, there was simply no shortcut to victory.

Intriguingly, some studies are puzzled by Imperial Japan's strategy for defending Okinawa. They criticize the 32nd Army's shift from forward defense to defense-in-depth as either a mistake or a missed opportunity. To some observers, Ushijima's decision to withdraw and concentrate his forces in southern Okinawa was too passive and ceded the initiative to the

197 Zhao Zhenyu, *History of Sea Battles in the Pacific*, p. 642.

198 Wang Wenqing, et. al., *Chinese and Foreign Island Campaigns*, p. 39.

199 Dong Chuyang and Liu Haifeng, *The Gates of Purgatory: The Okinawa Campaign*, pp. 389–390.

200 黄力民 [Huang Limin], *太平洋岛屿战 [Island Warfare in the Pacific]* (Beijing: China Yan Shi Press, 2018), pp. 339–340.

Americans. They contend that the Japanese should have attacked the enemy at the landing beaches. Others fault the navy and the army for delaying their air attacks as the American fleet neared the island. The Japanese air forces should have, according to this offensive logic, launched a concerted assault on the allied navies in offshore waters in concert with their army counterparts. Moreover, the timing of the air offensive and the absence of coordination with the 32nd Army were major blunders.

For example, one study blames the Japanese for starting the air raids too late on April 6, failing to coordinate their air and ground operations, and missing the chance to destroy American landing forces on the beachhead.²⁰¹ The decision to adopt a defense-in-depth posture, according to another study, “not only lost the effects of completely destroying the enemy, but it also provided the U.S. military the perfect opportunity [绝好的机会] to smoothly get through the most difficult phase of seizing the beachhead and landing forces.”²⁰² Similarly, two histories by the National Defense University and the Academy of Military Science respectively argue that the shift from a forward defense and the delays in the air attacks placed Japan in a reactive position throughout the campaign.²⁰³ A study on island campaigns by the Shijiazhuang Mechanized Infantry Academy concurs that the kamikaze attacks were not launched in concert with the defenders on the island. As a result, “the Japanese counteroffensive was not able to produce a decisive effect on the overall war situation.”²⁰⁴

These verdicts, which verge on consensus, are left largely unexplained and run counter to Western assessments of Japan’s options.²⁰⁵ As noted above, fast carrier raids against Japan’s airbases had knocked back its airpower. Even if the navy and army were able to preserve its air fleets for an earlier offensive and had the air branches coordinated their attacks with the defenders on the island, it is highly doubtful that their air attacks would have inflicted enough harm to sweep the allied fleets from the waters around Okinawa. These findings do not account for the removal of the elite 9th Division from Okinawa to Taiwan, which compelled the 32nd Army to embrace the plan to redeploy to the south. Moreover, any attempt to drive the American ground forces from the beaches without first destroying U.S. naval power would have exposed the Japanese army to withering air and naval bombardment. In any event, it is notable that just as some Japanese planners at the time held out hope for a decisive engagement against their foe, contemporary Chinese writings

201 王伟 张德彬 主编 [Wang Wei and Zhang Debin, eds.] 渡海登岛战例与战法研究 [Research on Case Studies and Methods for Cross-Sea Island Landings] (Beijing: Academy of Military Science [military circulation], 2002), pp. 172–173.

202 Zhang Liansong and Wang Qiyun, eds., *War’s Lifeline from the Sea to Land*, pp. 143–144.

203 Li Jijun, ed., *History of the Second World War*, Volume 4, p. 467 and Wang Houqing, ed., *The Historical Development of Campaigns*, p. 367.

204 Zhu Dongsheng, ed., *World Classic Battles: Volume on River and Island Combat*, p. 247.

205 I thank Brad Lee and Nick Sarantakes for casting doubt on the wisdom and efficacy of an early Japanese air and ground offensive against the assembling allied fleet.

appear to believe that Japan had conceded a viable and promising offensive plan to defeat its adversary.

Japan's Cost-Imposing Campaign

Unlike the struggles over Midway and Guadalcanal, the military balance surrounding Okinawa had shifted overwhelmingly in favor of the United States. While Japan's ability to change the outcome was severely limited by attrition and defeats in preceding battles, such as that at Leyte Gulf, the defender still possessed the means to punish and impose costs on the Americans. Chinese analysts have paid especially close attention to the role of Japanese shore-based airpower, particularly the kamikazes, and its impact on the U.S. operation. They have also examined American air defense efforts and the hard, deadly fighting required to blunt the repeated Japanese offensives. At the same time, the literature acknowledges that, like Guadalcanal, superlative American logistics was a crucial enabler of U.S. naval and ground operations. Notably, the possible lessons drawn from Okinawa appear applicable to the PLA as an attacker against Taiwan or as a defender to contest American use of the air and seas near the mainland.

CHAPTER 6

Assessing Chinese Views of the Pacific War

The Chinese literature surveyed in the preceding three chapters covers issues as wide-ranging as overextension, airpower, combined arms tactics, intelligence, logistics, and hubris. To make sense of the many lessons from the Pacific War battles, this chapter synthesizes, interprets, and critically analyzes the writings. First, this chapter identifies topics that drew the most attention among Chinese analysts, including the role of jointness, shore-based airpower, logistics, force concentration, and intelligence. Second, it revisits how Chinese strategists have imagined alternative decisions by the Japanese that could have altered the courses and outcomes of the campaigns. Third, it highlights the relevance of the Pacific War lessons to contemporary PLA warfighting. Finally, the chapter speculates about the underlying factors that may have influenced the way Chinese commentators have studied the Pacific War and the lessons they have chosen to draw from the conflict.

Select Common Themes

Chinese writings about the Midway, Guadalcanal, and Okinawa battles converge on several major themes. One aspect of the Pacific War that has attracted considerable interest is the importance of combined arms, inter-service coordination, and joint operations in island campaigns. At Midway, although operational and tactical coordination between the air arms of the three services were non-existent and the land- and sea-based air components fought their own battles, the aerial clashes illustrated the importance of unity of effort.²⁰⁶ At Guadalcanal, the Navy, Marine Corps, and Army Air Force units conducted close air support, interdiction, air defense, and maritime strike. The Battle of Okinawa was a truly

206 As a RAND study notes, “The Battle of Midway in June 1942 was the first major joint combat air operation conducted by forces of the Navy, Marine Corps, and Army Air Force.” James A. Winnefeld and Dana J. Johnson, *Command and Control of Joint Air Operations: Some Lessons Learned from Four Case Studies of an Enduring Issue* (Santa Monica, CA: RAND, 1991), p. 10.

joint operation in which the Navy led an air-sea-land task force while the Army oversaw a landing force comprising Army and Marine units.

To Chinese analysts, the integration of jointness and amphibious operations is a particularly notable feature of the Second World War. As one Academy of Military Science study observes:

American and British forces conducted numerous landings that had operational and strategic meaning. They exhibited the following main features: all campaigns required months of preparation, and all were conducted by joint sea-land-air forces against the enemy under the conditions of comprehensive superiority...Despite the unique conditions of each maritime combat zone, the campaign missions were frequently completed jointly by the capabilities of all the services.²⁰⁷

The *Science of Campaigns* by the National Defense University contends that joint operations enabled the large-scale amphibious operations that featured so prominently in the European and Pacific theaters. The study explains:

In the Second World War, the most important impact of the full development of the joint campaign is that mankind experienced landing and counter-landing operations that were the largest in scale, the most numerous, the most dimensional, and the most advanced of all joint operations of services and branches in world military history. According to statistics, the belligerent states launched about 600 landing operations of varying scale, of which several dozen were at the scale of a campaign.²⁰⁸

According to the *Science of Campaigns*, “The Army, Navy, and Air Force coordinated closely to fight, establishing a new type of joint campaign model for three-dimensional combat across land, air, sea, and undersea domains.” Such jointness allowed the United States to launch its invasion of Okinawa, “a large-scale amphibious combat operation, which not only extended the war onto Japanese territory, but also hit the Japanese navy and air force with a destructive force.”

Another topic of interest across the literature is the role of shore-based airpower and its influence on the conduct of the three campaigns. At Midway, less capable and older aircraft on the island performed critical duties that contributed to the American success. Long-range reconnaissance by flying boats and modified bombers provided an early warning screen and detected the incoming enemy fleet, buying precious time for the defenders to respond. While the aircraft launched from Midway were tactically ineffective against the Japanese carriers, they knocked the attacking fleet sufficiently off balance to pry open an opportunity to deliver a decisive blow by carrier aviation.

207 李际均 主编 [Li Jijun, ed.] 第二次世界大战史 [History of the Second World War, Volumes 5], (Beijing: Academy of Military Science, 2015), p. 654.

208 Zhang Yuliang, *Science of Campaigns*, p. 280.

At Guadalcanal, the American seizure and successful defense of Henderson airfield were crucial to victory. The contest for control of the airfield became the focal point of the island campaign and the object over which the Japanese army suffered mounting and eventually unsustainable losses. American aircraft launched from the airfield provided close-air support to ground operations, blunted Japanese air offensives, interdicted enemy resupply, and kept the IJN flattops at arm's length. By contrast, owing to the distance separating the airbase at Rabaul from the scene of action, Japanese aircraft were unable to stay aloft long enough to influence the course of the conflict.

During the struggle over Okinawa, Japan's shore-based airpower had a telling impact on the battlefield. Once the American fleet fell within the range of Japanese aircraft, including the kamikazes, on Kyushu, the Ryukyus, and Taiwan, it came under unrelenting and deadly air assaults. At the same time, the U.S. carrier fleet's inability to suppress Japanese airbases meant that the air threat persisted. Conversely, the American capture of two airfields on Okinawa at the outset enabled U.S. airpower to provide close air support, fight off enemy air raids, and conduct deep sweeps against airbases on Kyushu, thereby forcing the Japanese to relocate their aircraft beyond the range of American fighters.

The centrality of logistics to American operational success is another thread across the Chinese writings. Superior logistics enabled the United States to sustain the fight on Guadalcanal. American forward basing, convoying, and effective defense of sea lines of communications by sea and air allowed for the constant flow of materiel and men to the island. Moreover, effective interdiction against enemy resupply significantly eroded the sustainability of Japanese ground operations, leaving many troops to starve and run out of ammunition in the campaign's closing months. The Japanese, by contrast, were ill-equipped to resupply their forces on Guadalcanal, a predicament made worse by American interdiction. Chinese analysts repeatedly point to the IJN's missed opportunity to attack vulnerable American resupply efforts and exposed supply dumps during the campaign's early stages as a major failing. As Professor Ren Qingyu of Peking University concludes, "The Japanese military's loss in the struggle over Guadalcanal can be said to be a failure in strategic logistics (战略后勤)."²⁰⁹

Similarly, Chinese commentators extol the ability of the United States to bring to bear its overwhelming logistical prowess during the conquest of Okinawa. Forward basing at the Kerama Islands, the entire logistical infrastructure across the Pacific, the at-sea replenishment fleet, the massive amphibious assault force, and the follow-on resupply efforts to keep the ground offensive going were deemed extraordinarily impressive by Chinese observers. The administrative and logistical effort needed to sustain the supply chain that stretched from the West Coast through various intermediary bases to Okinawa were equally

209 任清玉 [Ren Yuqing], "太平洋战争的进程及日军先盛后衰的原因 [The Course of the Pacific War and Reasons for Japan's Early Successes and Subsequent Failures]," in 太平洋战争新论 [New Perspective on the Pacific War], 李玉 骆静山 主编 [Li Yu and Luo Jingshan, eds.] (Beijing: China Social Sciences Press, 2000), p. 363.

awe-inspiring. Ren Yuqing observes that the U.S. capacity to resupply forces across such vast distances was akin to a “miracle” and reflected America’s overwhelming superiority in comprehensive national power.²¹⁰

To Chinese observers, concentration of force by the U.S. military and the Japanese failure to do the same was another major ingredient in explaining the results of the three campaigns. At Midway, the Americans spared nothing in the defensive battle. All three available carriers were thrown into the fight, and shore-based aircraft surged to the island. By contrast, the IJN’s offensive operation violated the principle of concentration by dividing the fleet between two theaters of operations and by dividing the fleet yet again for the main strike against Midway. The latter decision, which made Japan’s four fleet carriers the tip of the spear, exposed the capital ships to the enemy’s airpower without adequate air defenses from the battlewagons. In Chinese eyes, American concentration and Japanese dilution leveled the playing field.

From the beginning, the Americans landed and concentrated a sizeable ground force to seize and hold Henderson airfield on Guadalcanal. Chinese analysts criticize the Japanese for failing to amass a sufficiently large force to retake the airstrip. Instead, during the initial stage, the attacker committed small units in suicidal frontal assaults that produced catastrophic losses. Subsequent attempts involved multipronged thrusts, which divided the force, to break through the defensive perimeter. None of the individual prongs were strong enough to tie down, much less overcome, the defenders and thus unraveled the overall scheme. Moreover, the Japanese navy and army neglected to coordinate their plans and concentrate their forces in late October 1942, representing another missed opportunity to dislodge the Americans. Japan’s faulty strategy, which lacked unity of effort, set up Japanese forces for piecemeal defeat.

Another theme to emerge from the Chinese writings is the pivotal role of intelligence and reconnaissance. Analysts appear enthralled by the codebreaking effort and Rochefort’s famous ploy to confirm Japan’s next move to attack Midway. They are equally harsh about poor Japanese intelligence. The American willingness to expend scarce resources on reconnaissance, which paid off handsomely, stood in apparent contrast to the Japanese reluctance to spare assets that, if diverted, were thought to undermine their offensive potential. At Guadalcanal, Japanese intelligence had failed to appreciate the scale of the coming American counteroffensive and the size of the force defending Henderson airfield. Japan was thus unprepared to contest the initial Marine landings and launched futile ground assaults with vastly outnumbered forces, which placed it at a significant disadvantage at the outset.

Chinese observers attribute Imperial Japan’s many failings during the Midway and Guadalcanal campaigns to overconfidence. They frequently refer to victory disease in their diagnosis of poor Japanese performance. To them, the string of operational successes

²¹⁰ Ibid., p. 363.

during the first six months of the Pacific War had a distorting cognitive effect on judgment. The victories over the Americans in the Philippines and the British in Malaya had set overinflated expectations that the Japanese would steamroll its adversaries in subsequent encounters. Those earlier triumphs, according to this Chinese narrative, seduced the high command into overestimating its own forces and underestimating that of the opponent. They also negatively influenced Japan's risk calculus, leading to imprudent planning and slow adaption to new circumstances on the battlefield.

At Guadalcanal, the Japanese not only misjudged the scale of the initial American operation and erroneously believed that the landings were a reconnaissance-in-force to probe their defenses, but they also confidently assumed that their existing forces in the theater were enough to push the Marines back into the sea. Chinese analysts explicitly attribute the suicidal ground offensives against Henderson airfield to the previous successes in China and Southeast Asia. Japanese commanders wrongly assumed that the spirit of the bayonet, which had proved so efficacious in past engagements, would shatter the opponent's will and surmount the enemy's firepower. Regarding Midway, Chinese commentators evince the belief that hubris was the source of Japan's lax operational security, the elaborate operational design, the dispersed disposition of the IJN's fleet, and the penchant for the offense that invariably came at the expense of defense.

Chinese writings show a keen appreciation for the character of modern naval warfare. The engagements at Midway, Guadalcanal, and Okinawa demonstrated the lethality of combat at sea. Ships, submarines, and aircraft inflicted staggering losses on each other. Large numbers of capital ships were lost in a single morning at Midway and a single night at the Battle of Savo Island. Defending forces, too, proved deadly. American fleet defenses, augmented by radar, imposed heavy costs on Japanese air forces. As Hu De argues in Chapter 5, Japan's adoption of kamikaze tactics was a calculated response to the U.S. Navy's effectiveness in fending off air raids.²¹¹ Chinese observers clearly recognize that tactics, weaponry, and interaction on the battlefield can tilt the offense-defense balance.

Finally, Chinese analysts have paid close attention to the attrition of forces on both sides, owing to enhanced lethality on the battlefield and to the inability of Imperial Japan to rapidly reconstitute its forces. They find that Japan's lack of industrial depth and personnel to sustain and recover from combat losses was a critical factor in the conduct and the outcome of the war. The loss of pilots at Midway and Guadalcanal had a particularly baneful impact on Japanese warfighting. The destruction of transports and ground forces at Guadalcanal accelerated the consumption of scarce resources and compounded Japan's overextension. The cumulative effects of attrition spilled over into Japanese campaign plans on the Asian continent, compelling Tokyo to call off offensives against Nationalists positions in southcentral China. Attrition thus sharpened Japan's dilemma of fighting in a two-front

211 Hu De, "The Contest between the U.S. Navy and the 'Kamikaze Special Attack' in the Final Phase of the Pacific War," p. 91.

war.²¹² To Chinese observers, the Japanese struggle with material and manpower shortfalls illustrates the centrality of comprehensive national power in fighting protracted great power wars.

An Evaluation of Chinese Writings

Chinese analysts recognize the contingent nature of wars. A different decision by either side at any given moment of a battle might have produced a different set of interactions leading to different—or even reversing—tactical and operational outcomes. Commentators have thus explicitly engaged in counterfactual analysis to consider alternative courses of action that could have had a meaningful impact on the three battles. Given Japan’s many mistakes and failures that contributed to its defeats, the literature is mostly devoted to hypothesizing various alternative Japanese choices.

Chinese observers contend that had the Japanese concentrated their fleet against Midway instead of dividing their forces between two geographically distinct operational objectives, then the IJN would have stood a far better chance of defeating the American defenders. Equally important, the Japanese high command should have fixed its crosshairs on the opponent’s fleet rather than conflate the conquest of Midway with the destruction of Nimitz’s carriers. Indeed, according to one study, no amount of superior intelligence, concentration of force, and luck would have saved the U.S. Navy from such an overwhelming force focused on finding and engaging the fleet. Beyond material overmatch, an integrated Japanese fleet in which the battleships’ air defenses provided a protective screen around the fleet carriers could have blunted the enemy’s shore- and carrier-based aircraft. Presumably, mass might have also made up for the IJN’s own shortcomings in intelligence and reconnaissance.

Chinese writings have similarly speculated about different Japanese choices during the Guadalcanal campaign. Zhao Zhenyu of the Dalian Naval Academy argues cogently that the Japanese empire was severely overextended by the summer of 1942, especially following the battles at Coral Sea and Midway. Given the asymmetries in national power, which were growing ever sharper with U.S. mobilization, Japan should have avoided contesting the Solomons altogether. Instead, the Japanese military should have withdrawn to more defensible positions and shortened its lines of communication. Had Japan done so, it might have been in a better position to engage in an attritional battle against the coming American counteroffensive. It is notable, however, that Zhao does not specify exactly where or how far the Japanese should have fallen back.

Once Japan decided to establish a presence on Guadalcanal, it should have deployed adequate forces to defend its position there. Some writings suggest that had the Japanese dispatched a larger ground force to secure the airfield then under construction, they might have been able to offer stiffer resistance against the Marine landings and even foiled

212 I thank John Maurer for his observations about the role of lethality and attrition in the Pacific War.

American attempts to take what would become Henderson airfield. Chinese commentators repeatedly lament Mikawa's decision to withdraw his fleet after dealing a devastating blow against the allied navies. Instead, he should have risked his surface combatants to attack the vulnerable transports unloading at Guadalcanal and the exposed supplies on the beachheads. Even if Mikawa's forces were destroyed in the attempt, the prospect of crippling the American logistics effort—so goes this reasoning—would have been worth the danger. Finally, some Chinese analysts believe that had the Japanese patiently amassed a large force, ordered concentrated ground assaults, and coordinated army-navy offensives against Henderson, then they might have had a better chance of breaking through the American defensive perimeter.

In Okinawa, the absolute mismatch in military power significantly reduced Japan's ability to change the course and outcome of the campaign. Nevertheless, Chinese observers judge that the Japanese missed several opportunities to impose even more costs on the Americans. Ushijima's counteroffensive, which exacted a heavy toll on his own forces without achieving appreciable gains on the battlefield, is deemed an unnecessarily costly move. Instead, the general should have stuck to the defensive plan to preserve his troops and firepower for the attritional battles to come.

Most intriguing, some Chinese writings assert that the Japanese missed a reasonable chance to significantly disrupt the U.S. amphibious assault. They blame the defenders for their indecision, defensive posture, and belated air offensive. According to an Academy of Military Science study:

During the entire campaign, Japan's guideline for island defense changed again and again and it ultimately abandoned the plan to annihilate the enemy on the beachhead. Japanese aviation forces delayed their counteroffensive until April 6 and once again lost an advantageous opportunity to strike the U.S. military, thereby placing Japan's entire counter-landing operation in a very passive situation.²¹³

The alternative strategy would have seen the Japanese army and navy coordinate their air forces for an early and concentrated assault against U.S. naval forces assembling off Okinawa. At the same time, a forward defense of the beaches would have, according to this theory, thrown off American landings and created opportunities to push the troops back into the sea. As noted in Chapter 5, this counterfactual, repeated across multiple PLA publications, is asserted without further explanation. It is also highly problematic given the likely ineffectiveness of the air raids and the vulnerability of the Japanese ground troops operating in the open to American firepower.

213 Li Jijun, ed., *History of the Second World War*, Volume 4, p. 467.

Relevance to Contemporary Warfighting

Chinese writings have explicitly referenced the three battles' potential lessons for the Chinese military's future operational requirements. The importance of intelligence and reconnaissance at Midway is viewed as particularly relevant to the PLA in modern wars. China's military doctrine emphasizes the need to fight and win "informationized local wars (信息化局部战争)" in which information technologies are expected to play an outsized role in all aspects of warfare. Some see the effective use of information as an equalizer for China as it prepares to fight a stronger United States, just as intelligence helped to even the odds for the U.S. Navy at Midway. Others see American reconnaissance efforts, which furnished the defenders valuable early warning, as a case of effective scouting on the battlefield. The PLA must not only invest in advanced sensors to improve its awareness of its surroundings, but it must also develop capabilities and tactics to avoid detection by the enemy. Still another lesson is that the deep study and knowledge of the opponent could give one side the critical insights necessary to manipulate the adversary's cognitive processes and thereby achieve a tactical advantage.

The vicious ground combat at Guadalcanal resonates deeply with Chinese analysts. There is an expectation that, in future amphibious operations, the PLA will face resourceful and resolute defenders, such as those in Taiwan, that boast capabilities equal, if not superior, to it. In this context, the see-saw struggles on Guadalcanal are viewed as particularly apt, and they hold pertinent lessons for Chinese commanders and planners. One study sees the need for the PLA's landing forces to quickly transition to a defensive posture once it captured key enemy terrain. Just as the Marines dug in and clung to Henderson, the Chinese military may have to fight off repeated counteroffensives, including counter-landing operations in which the opponent employs amphibious assaults to outflank the PLA's position. As the counterfactual analysis summarized above suggests, the U.S. hold on the airfield was by no means a forgone conclusion had the Japanese made different choices. Chinese analysts believe that, like the American experience, concentrated mass, defense-in-depth, combined arms coordination on land, at sea, and in the air, and superior logistics would be crucial to future PLA success.

Another study finds much to learn from the U.S. logistical efforts at Guadalcanal. As the PLA goes global, it will increasingly need to develop the infrastructure and capabilities to support expeditionary operations in peacetime and in conflict. To fulfill missions taking place far from the mainland, the Chinese military must establish forward bases, field significant numbers of modern transports and logistical vessels capable of withstanding the rigors of wartime conditions, and set up various supporting facilities at home and abroad. The PLA must not only deploy forces that can credibly engage in sea lane defense and interdict enemy supply lines, but it must also demonstrate those skills in peacetime through repeated exercises and training. Notably, the study cautions that the PLA must not plan for expeditionary operations that exceed the sinews of China's national power, as Imperial Japan did

at Guadalcanal. It should be noted that many of these insights are as applicable to close-in campaigns as they are to distant ones.

To Chinese observers, the contest in the air around Okinawa established many precedents worthy of close study for the PLA today. One study sees the U.S. carrier raids to suppress Japanese airpower in preparation for the amphibious invasion as a precursor to modern offensive counterair operations. To replicate such an air campaign, the PLA would need to employ a variety of precision-strike systems to bombard enemy airbases with overwhelming force, destroying as many aircraft on the ground as possible. Others see the sea-based radar pickets around Okinawa as a forerunner to an integrated early warning network. To them, the U.S. Navy's success in blunting the Japanese air raids demonstrated the importance of dominating the electromagnetic spectrum, a medium central to sensing the operational environment and communicating tactical combat information. They also see value in denying or disrupting the enemy's effective use of the electromagnetic spectrum by launching concerted strikes against the opponent's command and control systems and airborne early warning aircraft to deafen and blind it. These lessons dovetail with and reinforce those concerning the centrality of intelligence and reconnaissance at Midway.

Although not explicitly referenced in the writings surveyed above, the Pacific War battles offer additional points of departure for thinking about the PLA's strategy. The three cases demonstrate the pivotal role of shore-based airpower. In each battle, shore-based aircraft contributed to the outcomes in various ways, including early warning, interdiction, maritime strike, close air support, defensive counterair, offensive counterair, and air superiority. Importantly, surface forces were invariably vulnerable and frequently came to grief when they steamed within range of the enemy's land-based airpower. Conversely, combatants operating beyond the effective cover of friendly shore-based aircraft, such as the *Yamato*-led task force, lost a critical defensive layer that made them more vulnerable to adversary strikes. The Pacific War battles also show how the side that loses an airfield, thereby passing control of the air to its enemy, usually suffers severe consequences. At the same time, the side that possesses airbases located too far from the scene of action loses the staying power in the air necessary to oppose its adversary.

The PLA's investments in anti-access/area denial capabilities over the past three decades conform to the logic that shore-based firepower confers significant advantages to the attacker and the defender. China's doctrine of waging a joint firepower strike campaign relies heavily on precision-strike missiles launched from the mainland. The PLA has deployed large numbers of missiles that would be launched from trucks and shore-based bombers to strike targets at sea and on offshore territories. In wartime, American and allied surface forces, including carriers, operating within the range of these weapons would assume substantial operational risks. Moreover, Kadena airbase on Okinawa, the hub of American airpower in the Western Pacific, is well within range of the PLA's A2/AD systems. In 2015, it was estimated that a Chinese attack against Kadena, employing a combination of ballistic

and cruise missiles, could shut down the airbase for two weeks or longer.²¹⁴ Given China's continued missile buildup since 2015, it is likely that it can keep Kadena inoperable over an even longer duration. The PLA could use that time when American airpower is degraded or even crippled to advance its operational aims.

It is thus no longer a stretch to imagine a conflict scenario in which China knocks out American airbases, including those on the Japanese main islands, while it keeps U.S. carrier-based airpower at arm's length. Should it become impossible or too risky for American land- and carrier-based airpower to launch sorties from offshore areas surrounding the Chinese mainland, the United States would have to rely on aircraft based on more distant bases, including Guam and Hawaii. China's deployment of the DF-26 intermediate-range ballistic missile suggests that even Guam may no longer enjoy its sanctuary status. As American airpower is pushed farther and farther away from Chinese shores, the U.S. military increasingly faces a predicament that resembles the dilemma that dogged Japanese aircraft on Rabaul during the Guadalcanal campaign.

Some of the counterfactual analyses point to similarly relevant scenarios in a putative Sino-American war. Chinese analysts believe that Mikawa should have pressed his attack against vulnerable U.S. transports and exposed supply dumps during the initial stages of the Guadalcanal campaign. They assess that a significant disruption to American logistics support would have deprived the ground forces of the necessary materiel to stay in the fight, thereby endangering the entire mission at the outset. PLA strategists have drawn the same conclusion about Iraq's choices during the First Gulf War. They contend that Saddam Hussein should have launched preemptive strikes when the United States and its allies were deploying and assembling forces in the region for the counteroffensive. To them, the lengthy preparation phase offered many opportunities to cut off supply lines or to disrupt resupply against an enemy that was still not ready to fight.²¹⁵ The resulting dislocations, according to this line of reasoning, might have unraveled U.S. operational plans altogether.

The PLA's current doctrine for conducting a counter-logistics campaign parallels this type of thinking. In future informationized local wars, combatants will consume huge quantities of materiel, especially precision-guided munitions, placing enormous burdens on the logistical system. Each side will be highly dependent on a well-functioning logistical infrastructure that can sustain the flow of goods. Disruptions to resupply could slow the enemy's momentum enough for it to lose the initiative on the battlefield. Chinese doctrine thus calls for physical and network attacks against the adversary's logistical facilities and nodes to undermine its warfighting capabilities.²¹⁶ The theory is that an effective strike against

214 Eric Heginbotham, et. al., *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power* (Santa Monica: RAND, 2015), p. 69.

215 Roger Cliff, et. al., *Entering the Dragon's Lair: Chinese Antiaccess Strategies and Their Implications for the United States* (Santa Monica: RAND, 2007), pp. 32–34.

216 于川信 [Yu Chuanxin], 联勤概论 [Introduction to Joint Logistics] (Beijing: Academy of Military Science, 2011), p. 122.

the opponent's logistical foundations would cut off the critical supplies needed to keep its frontline combat units fighting, much as Mikawa might have done to the American defenders on Guadalcanal had he risked his fleet.

Interrogating Chinese Lessons

Not all history lessons are made equal. The quest for lessons may be motivated by many factors that have little to do with seeking the ground truth. Frequently, lessons are invoked to advance an argument for a preferred policy or outcome. Policymakers often cherry-pick lessons from the past that suit their agenda. PLA strategists who study the Pacific War may be similarly seeking lessons that fit their worldviews and priorities. It is thus important not to take all the lessons identified above at face value. It also behooves Western observers to entertain the possibility that preferences, biases, and even blind spots may have influenced the research and findings among the various authors. The lessons from the three battles, as the Chinese understand them, may reveal as much, if not more, about what the PLA values—or does not value—as the quality of the historiography.

Some commentators may gravitate to areas that are correlated with the PLA's strengths, institutional proclivities, or existing programs and capabilities. They may find certain lessons particularly appealing because they align with the logic of Chinese strategy. As noted above, the operational and tactical effects of shore-based airpower during all three Pacific battles were very similar to those that China's shore-based precision-strike weaponry seeks to produce in future conflicts. Those steeped in PLA doctrine and capabilities may thus view the reinforcing lessons from the past use of land-based airpower as attractive and worthy of attention. Others may find relevance in intelligence and reconnaissance because those factors resonate with the dominant paradigm about warfare. Informationized warfare has been an essential element of PLA discourse about future combat since the early 1990s. Therefore, it is not surprising that some observers notice the parallels in the use of intelligence and reconnaissance during the Pacific War. Still others may be drawn to topics that address China's enduring weaknesses. Extensive Chinese discussions about superior American logistics and jointness could reflect internal recognition that the PLA needs to improve well-known shortcomings.²¹⁷

The tenor of the writings about Imperial Japan's strategy and operations is distinctly negative. The literature tends to be unsympathetic, condescending, and even hostile toward the Japanese high command and operational leaders. Of course, given that Japan lost at Midway, Guadalcanal, and Okinawa, criticisms about its conduct of the war are warranted. However, the deep antipathy many Chinese feel about Japan and the Japanese today may have colored and skewed the analyses. Indeed, prejudice frequently animates Chinese

²¹⁷ See Roger Cliff, *China's Military Power: Assessing Current and Future Capabilities* (Cambridge: Cambridge University Press, 2015), pp.37–59 and 139–161.

assessments of Japan's contemporary security policy and defense strategies.²¹⁸ As noted above, commentators render harsh judgments about Mikawa's apparent missed opportunity to strike vulnerable American transports at Guadalcanal. Yet, there was good reason for the Japanese admiral to pull his punches. Mikawa did not know that the American carriers had withdrawn from the scene of action. He rightfully feared that pressing his attack into daybreak would have exposed his fleet to American airpower. The fog of war, ever present in any conflict, was a major contributing factor to Mikawa's calculus.²¹⁹ The literature appears to lack such empathy for the admiral.²²⁰

The insistence that Japan's shortcomings and mistakes in the Pacific War were attributable to hubris could be another expression of analytical bias. The writings frequently refer to victory disease as a sweeping explanation for Japanese errors, ranging from faulty tactics to the lack of innovation. While the idea that arrogance and overconfidence influenced Japan's behavior may fit Chinese preconceptions about the Japanese national character, it is overly simplistic and highly problematic. A better explanation for Japanese adaptation or lack thereof is the institutional processes that facilitate learning and the feedback loop. The organizational structures and decision-making contexts of the Japanese armed forces were far more significant barriers to adaptation than victory disease.²²¹ There thus appears to be a tendency among Chinese analysts to look for satisfying answers that conform to their presumptions and biases. This disinclination to give Japanese decision makers the benefit of the doubt could in turn distort interpretations of past events, reinforcing faulty lessons.

Chinese counterfactual analysis about American and Japanese choices, while valuable, tends to focus narrowly on the operational and tactical levels of war. Most authors stop at the water's edge and do not address the broader consequences if either side had made different decisions about force employment. For example, it is plausible that Japanese fleet concentration at Midway, as some have argued, might have driven off or even destroyed the American fleet. But, Chinese analysts do not push further to consider whether a Japanese victory at Midway might have changed the larger course and outcome of the war. Could Japan have moved on to Hawaii, the South Pacific, or Australia? Could Tokyo have influenced the political results of the war? The commentators are largely silent on these critical questions.

As historians Jonathan Parshall and Anthony Tully convincingly argue, in this hypothetical Japanese victory at Midway, Japan would have advanced unimpeded on the South Pacific and might have even threatened Northern Australia. But it was in no position to take Hawaii given the anticipated size of the American garrison there and Japan's limited capacity to project and sustain power at those distances. Most importantly, Parshall and Tully contend,

218 Toshi Yoshihara, *Dragon Against the Sun*, pp. 46–52.

219 I thank Larry Wortzel for this insight.

220 For an exception, see 赵国栋 [Zhao Guodong], “萨沃岛悲歌: 美军历史上损失最严重的海战 [Tragedy at Savo Island: The Greatest Loss in a Sea Battle in U.S. Military History],” 国际展望 [World Outlook], no. 7, 2003, p. 83.

221 I thank Trent Hone for this observation.

“win or lose at Midway, it was extremely unlikely that the Americans were going to lose the war in the Pacific, and it was equally unlikely that the Japanese were going to win.”²²² The sharp asymmetries in national power and Japan’s severe economic, industrial, and geographic overextension would have precluded a different result. Similar types of counterfactual analysis by Chinese analysts could reveal the extent to which they have thought deeply about the strategic effects of campaigns.

As referenced above, PLA writings have converged around an intriguing yet problematic counterfactual that Japan should have pursued an early air and ground offensive against the Americans at Okinawa. They assert that a coordinated effort by the Japanese army and navy could have pushed U.S. landing forces back into the sea and could have delivered heavy blows against the gathering fleet. Yet, this hypothetical, resting as it does on many questionable assumptions, goes undefended. At a minimum, Chinese commentators could have constructed a more detailed storyline about how Japan might have accomplished such a feat. What explains this farfetched alternative course of action, bordering on wishful thinking, when others seem more plausible by comparison?

It is possible that this hypothetical reveals more about the PLA’s institutional proclivities than about the feasibility of the hypothesized counteroffensive. As noted previously, Chinese analysts have repeatedly admonished Mikawa for his missed opportunity at Guadalcanal. They have similarly chided Saddam Hussein for his passivity in the face of the American buildup during the First Gulf War. In both cases, observers hold great confidence that swift and early action before the enemy was ready would have thrown its plans into disarray. This perspective is consistent with contemporary Chinese military doctrine that emphasizes striking first, if not preemptively, and a preference for seizing the initiative and breaking the enemy’s momentum.

In particular, the concept of active defense, which traces its origins to Mao Zedong’s writings in the 1930s, remains central to the PLA’s doctrinal outlook.²²³ Active defense calls for the use of offensive operations and tactics in the service of strategically defensive goals. The early, all-out Japanese air and ground offensives at Okinawa, as hypothesized by Chinese analysts, fit the principle of active defense. The conviction that a hammer blow at the outset could have thrown the assembling American forces into disarray may reflect deeply ingrained ideas about warfare within the PLA. Put another way, Chinese commentators may be applying contemporary doctrinal frameworks to understand and interpret past events.²²⁴ In short, a shared belief about the promise of the offensive may have predisposed analysts to imagine a way out for the Japanese defenders at Okinawa. While the counterfactual analysis

222 Jonathan B. Parshall and Anthony P. Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Washington, D.C.: Potomac Books, 2005), p. 428.

223 M. Taylor Fravel, *Active Defense: China’s Military Strategy since 1949* (Princeton: Princeton University Press, 2019), pp. 61–63.

224 I thank Chris Yung for this insight.

may be problematic, it potentially reveals much about the Chinese military's mindset and assumptions about the efficacy of force.

There is no doubt that the PLA draws insightful lessons from the experiences of others. However, it is far less clear whether and to what extent those lessons have had a meaningful influence on Chinese doctrine and strategy. In other words, there is a distinction between *knowing* a lesson and *learning* a lesson. The literature survey in this report shows that Chinese strategists have identified many potential lessons. But for these lessons to be truly learned, they must be institutionalized through changes in military organization and doctrine, processes that can be complex, time-consuming, arduous, and opaque. Discerning learning is hard enough. For outsiders without access to firsthand knowledge of the PLA's inner workings, any analytical effort to trace and validate inputs of PLA learning is fraught with uncertainty. As three American scholars rightly caution, "Observers must be wary of an overly deterministic linkage between the lessons the PLA has or has not learned, and what it may or may not be doing about them."²²⁵ Indeed, PLA experts in the West have frequently misattributed seemingly obvious lessons learned for the Chinese military. In some cases, they may have wrongly assumed the impact of the lessons that the PLA seemed to have learned from its own operational experiences.

Consider the 1979 Sino-Vietnamese border war. Western scholarship has typically attributed PLA reforms and modernization in the 1980s to the lessons that Chinese leaders apparently drew from the conflict. The heavy losses that the PLA suffered in that campaign, so goes this narrative, convinced Beijing to reorient the military toward modern warfare. More recent writings contend that outside observers may have overblown the impact of China's brief incursion into Vietnam on the PLA. For example, Taylor Fravel argues that China's adoption of a new military strategy in 1980 was primarily a response to the Soviet threat rather than a reaction to the PLA's poor showing in Vietnam.²²⁶ Similarly, Xiaoming Zhang reveals that Chinese military leaders did not judge the PLA's performance against the Vietnamese to be as disastrous as many in the West were led to believe. According to Zhang, Chinese commanders, based on their own measures of effectiveness, came away from the war convinced that they had taught their enemy a painful lesson.²²⁷ Zhang further pushes back against the narrative that the border conflict prodded Beijing to reevaluate its ability to fight modern wars in the 1980s. These revisionist interpretations suggest that Western analysts should be careful not to casually infer what the PLA may or not have learned from the past.

²²⁵ Andrew Scobell, David Lai, and Roy Kamphausen, "Introduction," in *Chinese Lessons from Other Peoples' Wars*, Andrew Scobell, David Lai, and Roy Kamphausen, eds. (Carlisle, PA: Strategic Studies Institute, 2011), p. 20.

²²⁶ M. Taylor Fravel, *Active Defense*, pp. 163–165.

²²⁷ Xiaoming Zhang, *Deng Xiaoping's Long War: The Military Conflict between China and Vietnam, 1979–1991* (Chapel Hill, NC: University of North Carolina Press, 2015), p. 108.

A Balanced Approach to the Literature

The foregoing shows that the writings reveal valuable insights about what Chinese analysts believe are important takeaways from the conflict. Many authors have converged around themes that parallel PLA strengths, weaknesses, and views about future warfare. Others have engaged in counterfactual exercises that conform to existing doctrine, such as the preference for early strikes against the adversary's logistical vulnerabilities. Nevertheless, the literature reveals potential biases and historiographical shortcomings that should give readers pause. At the same time, it is important not to assume that these apparent lessons necessarily hold sway in the PLA's institutional learning processes. Consumers of these Chinese accounts should not accept the lessons at face value even as they discern the possible implications of these lessons for future PLA strategy.

CHAPTER 7

Conclusions

This report represents a preliminary step toward understanding Chinese views of the Pacific War. It covers just three of the many hard-fought campaigns between Imperial Japan and the United States, and is by no means the final word on the topic. Moreover, the study focuses on the operational level of war and does not address such critical areas as prewar planning, the underlying and proximate causes of the war, and conflict termination. Nevertheless, the rich literature on Midway, Guadalcanal, and Okinawa—and the many insights that the writings have produced—demonstrate the feasibility and analytic value of surveying Chinese interpretations of the past. The foregoing survey offers a proof of concept for future researchers and practitioners alike.

Relevance to U.S. Strategy

The lethality of modern naval warfare, the interaction between offensive and defensive means, and attrition in a protracted war—as documented in Chinese writings—are as relevant to U.S. military strategy today as they were eight decades ago. The proliferation of long-range conventional precision-strike weaponry in recent years has rendered the operational environment increasingly inhospitable to American naval surface forces.²²⁸ Notably, the PLA has fielded a large, sophisticated, well-balanced missile force that can be launched from the air, the sea, and land to threaten combatants at long ranges. Aided by a network of sophisticated sensors, Chinese strategists anticipate the use of saturation tactics involving massive salvos of cruise and ballistic missiles to overwhelm adversary defenses.²²⁹ Moreover, the accuracy, reach, and speed of the missiles are expected to deliver quick, decisive blows

228 Thomas G. Mahnken, “Weapons: The Growth & Spread of the Precision-Strike Regime,” *Daedalus*, 140, no. 3 (Summer 2011).

229 Toshi Yoshihara and James R. Holmes, *Red Star over the Pacific: China’s Rise and the Challenge to U.S. Maritime Strategy* (Annapolis, MD: Naval Institute Press, 2018), pp. 220–247.

against U.S. and allied fleets.²³⁰ Just as the IJN and the U.S. Navy inflicted heavy losses on each other in single encounters, it is conceivable that a future engagement involving the PLA could be decided in an afternoon.

The diffusion of precision-guided munitions and advanced sensors increasingly favors the attacker at the tactical level of war. This trend has, in turn, sparked debates about how the United States can restore the offense-defense balance. American strategists have proposed a range of options to blunt the effectiveness of the opponent's long-range precision strike systems and to enhance the survivability of the U.S. surface fleet. The various counters include fleet dispersal over a wider battlespace to complicate the adversary's ability to detect targets at sea; a shift away from larger, more vulnerable warships to smaller and unmanned ones; the extensive use of decoys and jammers to clutter the operational environment and to deceive enemy sensors; changes to the composition of air and missile defenses to intercept larger numbers of incoming threats; and more weight toward the antishipping mission for the surface fleet.²³¹ It is notable that the expected contest to find and hide from the opponent—as exemplified by Chinese accounts of the Battle of Midway—will influence American calculations about risking the fleet in a future war at sea.

The lethality of modern naval warfare and the potential for significant losses at sea have stimulated U.S. policy discourse about the prospect of attrition in a protracted war. As the 2018 National Defense Strategy Commission warns, “Against an enemy equipped with advanced anti-access/area denial capabilities, attrition of U.S. capital assets—ships, planes, tanks—could be enormous.”²³² A RAND study postulates that a hypothetical Sino-American war in 2025 involving “severe fighting for one year” would produce heavy material losses on both sides. Such prolonged combat would lead to “a sizable depletion in overall U.S. military capabilities and an even larger depletion in overall Chinese military capabilities.”²³³ However, the losses would likely not be enough to knock out either side, leaving both forces in the field to keep up the slugfest. As the RAND analysts speculate, “Yet with no clear winner, neither side able to gain control, and heavy losses causing deep anger on both sides, prospects for agreement to foreshorten the war could be lower than they are now.”²³⁴ They thus conclude that such a conflict would settle into a protracted war of attrition.

230 The advent of the precision-strike regime has also made large-scale amphibious operations, such as those at Normandy in 1944 and at Inchon in 1955, very risky. I thank Brad Lee for this insight. For a detailed and pessimistic account of the dangers to amphibious forces in the era of precision strike, see Robert Haddick, *Fire on the Water: China, America, and the Future of the Pacific*, 2nd ed. (Annapolis, MD: Naval Institute Press, 2022).

231 Bryan Clark and Timothy A. Walton, *Taking Back the Seas: Transforming the U.S. Surface Fleet for Decision-Centric Warfare* (Washington, D.C.: CSBA, 2019), pp. 21–44.

232 Eric Edelman and Gary Roughead, *Providing for the Common Defense: The Assessment and Recommendations of the National Defense Strategy Commission* (Washington, D.C.: USIP, 2018), p. 14.

233 David Gompert, et. al., *War with China: Thinking Through the Unthinkable* (Santa Monica, CA: RAND, 2016), p. 40.

234 *Ibid.*, p. 40.

There are growing fears about the U.S. Navy's capacity to sustain and make up for its losses in a prolonged war at sea. According to one analyst, the naval service's continuing shipbuilding woes have led to "a lost generation of shipbuilding, leaving the Navy unready at a time when China has already built the world's biggest fleet, with more hulls splashing off its slipways every year."²³⁵ Naval historian Jerry Hendrix worries that the current trajectory "will produce a fleet too small to protect the United States' global interests or win its wars." He forecasts a dire outcome in which "the U.S. shipbuilding base and repair yards will atrophy to a point where they will not be able to meet the demand for new ships nor provide repairs when war almost inevitably comes."²³⁶ More broadly, as Conrad Crane observes, "It has been a long time since the United States fought a high-intensity war of attrition, and the Pentagon, despite its renewed focus on large-scale combat operations, is not ready for it...The resources for a longer and more brutal conflict have atrophied or been forgotten."²³⁷ Hal Brands points to the wartime and postwar risks of a weakened U.S. defense industrial base, warning, "The loss of large numbers of ships or planes might make it difficult to win a protracted war in the Western Pacific; even if Washington did prevail, those losses might leave the military crippled for years."²³⁸ These concerns raise unsettling questions about whether the United States, in a putative naval war against China, could encounter the same kinds of material constraints that Imperial Japan confronted in the Pacific War.

Areas for Future Research

Future research could fruitfully explore other areas to tell a more complete story. The Chinese literature on the string of Japanese victories in the first six months of the war, including the attack on Pearl Harbor, the conquest of the Philippines, and the Malaya Campaign, is worthy of close study. There are plentiful writings about General Douglas MacArthur's campaign in New Guinea, the great air battle in the Philippine Sea, the Battle of Leyte Gulf, the close-in blockade of Japan, the strategic bombing campaign, the planning for the Kyushu invasion, and the atomic bombings of Japan.²³⁹ Beyond the major campaigns, future research could examine broader political and strategic factors that influenced the war. For instance, a review of how the literature covers the origins of the conflict and the road to war might reveal the kinds of triggers, turning points, or provocations that could convince the Politburo or the Central Military Commission to conclude that war is the only or best recourse to a given dilemma.²⁴⁰ A survey of Chinese writings about war termination might also illuminate Beijing's attitudes about the kinds of wartime conditions—either

²³⁵ Alexander Wooley, "Float, Move, and Fight," *Foreign Policy*, Fall 2021, p. 32.

²³⁶ Jerry Hendrix, "Sea Power Makes Great Powers," *Foreign Policy*, Fall 2021, p. 41

²³⁷ Conrad Crane, "Too Fragile to Fight: Could the U.S. Military Withstand a War of Attrition," *War on the Rocks*, May 9, 2022.

²³⁸ Hal Brands, "Ukraine War Shows the US Military Isn't Ready for War with China," *Bloomberg*, September 18, 2022.

²³⁹ I thank Trent Hone, John Maurer, Mike McDevitt, and Chris Yung for recommending campaigns for follow-on research.

²⁴⁰ I thank Larry Wortzel for this insight.

advantageous or unfavorable to China—that could prod the leadership to wind down the fighting or draw the conflict to a close.

By assessing different phases and aspects of the Pacific War, moreover, it is possible to discern the objectivity or partiality of Chinese authors. This study examines American victories in which U.S. forces turned the tide at Midway and Guadalcanal and established a major staging area for the invasion of the Japanese home islands in Okinawa. It thus illustrates how analysts on the mainland perceive American successes and Japanese failures. Indeed, Chinese writers heap praise on the U.S. conduct of the campaigns while they level severe criticisms against Japan's commanders and planners. As speculated in the previous chapter, the hostility that many feel toward the Japanese today may have shaped and even prejudiced the discourse. To test this hypothesis, future research could examine how mainland observers credit Japan's operational victories beginning in December 1941. Whether Chinese authors render fair judgments about Imperial Japan's lightning conquests could reveal the extent to which prejudice has influenced their assessments. If the literature shows a tendency to cast the Japanese in a bad light, then it might point to potential analytical blind spots within China's larger strategic community about Japan.

A more comprehensive literature survey could reveal how Chinese analysts interpret the conflict's larger trends and patterns. An analytic shortcoming of a campaign-oriented study such as this one is that assessments of individual battles tend to overlook the interrelationships between the various engagements. A focus on discrete military encounters, for instance, masks the larger phenomenon of attrition. At the beginning of the Pacific War, the U.S. Navy and the IJN boasted seven and six fleet carriers, respectively, the main strike forces for waging the war at sea. By the end of 1942, each side had lost four fleet carriers. The United States lost one carrier at Coral Sea, one at Midway, and two in the Solomons, while Imperial Japan lost four at Midway. Without the means to carry out major offensive operations by either belligerent, stalemate ensued on the battlefield. It was not until early 1944, after the massive American naval buildup furnished a significant margin of superiority, that the U.S. Navy was able to launch a counteroffensive across the Pacific. A future study could thus examine how Chinese strategists connect the dots and evaluate trajectories that isolated events do not adequately capture.²⁴¹

As noted in Chapter 2, the PLA has been studying the Second World War since the era of reform and opening. It has not only learned from the Pacific War but also subjected the European theater of operations to scrutiny. Just as the survey of Midway, Guadalcanal, and

241 I am grateful to John Maurer for highlighting the limits of a campaign-focused study and for offering the terrific example of attrition in the first year of the Pacific War. This paragraph draws extensively from the author's interview, workshop conversation, and email exchanges with John Maurer. Another related area for future research is the role of economic warfare, including the unrestricted submarine campaign and the close-in blockade of Japan by the United States, in influencing the course and outcome of the Pacific War. A survey of the Chinese literature on economic warfare could reveal how strategists on the mainland understand, evaluate, and interpret the cumulative effects of economic warfare over time. I thank Brad Lee for this insight.

Okinawa in the preceding chapters has revealed many germane and reinforcing lessons, it is very likely that a review of how the Chinese judge Allied and Axis performances in Europe would yield similar insights. Campaigns of relevance to the PLA include the famous amphibious landings in North Africa, Sicily, and Normandy. The literature on the German invasion of Norway in April 1940 and the Battle of Crete in May 1941 may also offer valuable findings about Chinese views of lesser-known campaigns.

A much broader survey could yield deeper insights. For example, a more complete picture of how Chinese analysts view American warfighting in the Second World War could reveal how PLA strategists perceive the United States as an adversary today. For example, do the writers detect a broader pattern in U.S. strategic thought, behavior, and preferences from the global war? If so, do they discern an American way of war—a set of deeply institutionalized proclivities—that continues to influence the U.S. armed forces today? If so, what do they think are the strengths and weaknesses of this American way of war? How might the PLA avoid those apparent strengths and exploit those weaknesses? Even tentative answers to these questions could show how Chinese strategists and planners potentially perceive or misperceive the U.S. military as a warfighting organization.

Another potential line of research is to survey how Chinese strategists are observing recent U.S. efforts to learn from the Pacific War. As noted in Chapter 2, American scholars and practitioners have begun to revisit the battles against Imperial Japan to draw relevant lessons for future maritime warfare. Interestingly, the Chinese side appears eager to learn what the Americans are learning. For instance, the naval journal *Modern Ships* translated a student paper by Major Brian Spillane, USMC, who was enrolled in the Maritime Advanced Warfighting School at the U.S. Naval War College.²⁴² The paper examines the lessons from the Battle of Wake Island and their relevance to a new Marine Corps operational concept designed for a prospective maritime conflict against China.²⁴³ A two-sided literature review could allow for comparisons between American and Chinese lessons from the Pacific War. Divergences in judgments may potentially reveal insights about how the PLA thinks differently about future warfare.

Looking Ahead

Over the past decade, the policy community's attention has been riveted to China's anti-access/area denial challenge. The PLA's A2/AD strategy aims to complicate and impose costs on U.S. and allied operations along the offshore waters of the Chinese mainland. It relies on asymmetry in tactics and weaponry to hold at risk key pillars of America's strategy in the Western Pacific, including its expeditionary forces and forward bases. Yet, the speed and

242 老鸭 [Lao Ya (pseudonym)], “美军新作战概念如何借鉴威克岛战役的经验教训? [How Can the U.S. Military's New Operational Concept Learn from the Lessons of the Battle of Wake Island],” 现代舰船 [Modern Ships], no. 1, 2022, pp. 87–95.

243 Major Brian P. Spillane, USMC, What can the Marine Corps learn about EABO from the Battle of Wake Island?

scale of China's military ascent suggest that it will soon be inadequate to describe the PLA as a primarily localized anti-access threat confined to the Western Pacific.

China's military modernization has entered a new phase. Its defense industries are now producing modern power projection forces at breakneck speed. In the coming years, the PLA will field a large, well-balanced expeditionary force capable of fulfilling a far wider range of roles and missions at home and abroad than in the recent past. At the same time, China has already obtained access to bases and dual-use facilities near critical sea lanes, including a major base in Djibouti, even as it continues to prospect for more new locations across the Indo-Pacific. Beijing's attempts to extend its influence over the Pacific Islands, for example, have already evoked parallels to Imperial Japan's presence in the region during the interwar period.²⁴⁴ Chinese statesmen and commanders will expect their forces to fight the United States and other advanced militaries on an equal footing across many areas of warfighting and to operate in far-flung theaters. Indeed, the literature surveyed above conforms to this expectation. Tellingly, many writings see the United States rather than Japan in the Pacific War as a surrogate for China in a future war.²⁴⁵ Chinese analysts foresee a PLA that will perform on par with the U.S. military in such areas as power projection and logistics.

As they look ahead, Washington and allied capitals should anticipate an even less hospitable operational environment than today. It is imperative that the policy community girds for new realities as China strives to emerge as a world-class military. Policymakers should be alert to the prospective changes in the PLA's posture and warfighting strategy as it bulks up on a steady diet of conventional military capabilities. They must revise their assumptions and expectations about what a major conflict with China would look like a decade hence. Just as Chinese strategists have turned to the Pacific War for guidance, so too should American defense planners become reacquainted with past great power wars as relevant historical analogies. They should regain fluency in the language of great power conflict by turning to the past.

One place to start is professional military education.²⁴⁶ The service academies, command and staff colleges, and war colleges should reinvigorate the study of past great power wars, including the Pacific War, in their curricula. The Sino-U.S. rivalry is as much an intellectual contest as it is a material competition. The next generation of senior military leaders must be well-versed in the dynamics of great power wars, including wars at sea between peer navies, as it prepares for a far more powerful PLA in the coming years.

Policymakers should treat the lessons of the Pacific War—and those that Chinese strategists may have learned—as early warning signs of the PLA's future trajectory and plans. American defense planners should ascertain whether China's military modernization will reinforce its

244 See Hiroyuki Akita, "Is China following Japan's prewar path in the South Pacific?" *Nikkei Asia*, June 15, 2022.

245 I thank Tom Mahnken for this insight.

246 I thank John Maurer for this insight.

doctrinal preference for surprise and first strike, which parallel that of Imperial Japan. As the Chinese navy builds a balanced and powerful expeditionary fleet, American strategists should think deeply about the prospect of a war at sea against a peer adversary, a contingency that the U.S. Navy has not encountered since the Battle of Leyte Gulf in late 1944. Defense officials should also prepare for the possibility of horizontal escalation in a local war against China. Just as the Imperial Japanese Navy conducted deep raids into the Indian Ocean, so too a globalized PLA might open new fronts in theaters far beyond the Western Pacific. The U.S. Marine Corps' pursuit of new operational concepts reflects a recognition that contests for island terrain, like those in the Pacific War, could feature prominently in a future fight against China.²⁴⁷ In short, Washington must undergo a change in mindset about future warfare and gird for an intensifying great power rivalry at sea.

247 Jeff Schogol, "Inside the U.S. military's modern 'island hopping' campaign to take on China: History doesn't repeat itself, but it often rhymes," *Task and Purpose*, June 16, 2022.

APPENDIX A

Bibliography of Chinese Sources

爱澜 [Ai Lan]. “菜鸟们的天空: 中途岛战役中陆基航空兵的奋战 上下 [Rookies of the Sky: The Tough Fight by Shore-Based Aviation Units during the Midway Campaign, Two-Part Series].” 军事历史 [Military History], no. 4 and 5 (2006): 18-27 and 16-25.

包宇 [Bao Yu]. “中途岛战役战例评析 [Analysis of Case Study on the Midway Campaign].” 军事史林 [Journal of Military History], no. 9 (2020): 45-54.

兵人 [Bing Ren]. 瓜岛战役 [The Guadalcanal Campaign]. Harbin: Harbin Press, 2016.

曾苏南 于坤 孙夕华 殷浩 [Ceng Sunan, Yu Kun, Sun Xihua, and Yin Hao]. 渡海登陆作战历史与未来 [The History and Future of Cross-Sea Landing Operations]. Beijing: Academy of Military Science [military circulation], 2001.

陈安刚 [Chen Angang]. “太平洋战争的又一个转折点—美日瓜达尔卡纳尔岛争夺战 [Another Turning Point in the Pacific War—The U.S.-Japan Struggle over Guadalcanal Island].” 国防科技 [Defense Technology Review], no. 12 (2005): 86-89.

陈静静 [Chen Jingjing]. “冲绳战役及其遗产 [The Okinawa Campaign and Its Legacy].” 军事历史 [Military History], no. 3 (2020): 108-115.

陈培军 [Chen Peijun]. 瓜岛战役—可怕的消耗战 [The Guadalcanal Campaign—The Frightening War of Attrition]. Wuhan: Wuhan University Press, 2013.

陈新民 徐国成 罗峰 主编 [Chen Xinmin, Xu Guocheng, and Luo Feng, eds.]. 岛屿作战研究 [Research on Island Warfare]. Beijing: Academy of Military Press [military circulation], 2002.

崔利波 [Cui Libo]. “从中途岛战役看美日情报工作 [An Assessment of U.S. and Japanese Intelligence Work during the Midway Campaign].” 辽宁大学学报 [Journal of Liaoning University], no. 1 (1990): 35-38.

丁顺发 [Ding Shunfa]. “瓜岛上的生死决战—太平洋战场的‘斯大林格勒战役’ [The Life and Death Struggle on Guadalcanal—The ‘Stalingrad Campaign’ in the Pacific].” 军事文摘 [Military Digest], no. 6 (2019): 66-69.

丁一平 [Ding Yiping]. 世界著名海战述评 [*Review of Famous Sea Battles around the World*]. Beijing: Haichao Press, 2013.

冬初阳 刘海丰 [Dong Chuyang and Liu Haifeng]. 炼狱之门: 冲绳战役 [*The Gates of Purgatory: The Okinawa Campaign*]. Wuhan: Wuhan University Press, 2017.

董文静 [Dong Wenjing]. “日军中途岛海战失败原因 [The Reasons Behind Japan's Failure in the Midway Sea Battle].” 军事历史 [*Military History*], no. 2 (2015): 16-18.

窦超 [Dou Chao]. “小岛攻防: 透视我国可能面临的小岛争夺战 [Offense and Defense over Small Islands: An Analysis of Our Possible Struggles over Small Islands].” 舰载武器 [*Shipborne Weapons*], no. 5 (2010): 17-28.

杜金玲 胡兆才 [Du Jinling and Hu Zhao Cai]. 中外名将经典战役 [*Famous Chinese and Foreign Generals and Classic Campaigns*]. Shanghai: People's Press, 2016.

杜立平 [Du Liping]. “大登陆—20世纪最著名的六次重大登陆战役 [Great Landings: The Six Most Famous Major Amphibious Campaigns of the 20th Century].” 军事历史 [*Military History*], no. 5 (1999): 17-21.

二战经典战役编委会 [Editorial Committee on Classic Campaigns of the Second World War]. 喋血瓜岛 [*Bloody Guadalcanal*]. Beijing: China Railway Press, 2015.

二战经典战役编委会 [Editorial Committee on Classic Campaigns of the Second World War]. 鏖兵大洋: 二战三大海战 [*Hard Fighting on the Oceans: Three Great Naval Battles of the Second World War*]. Beijing: China Railway Press, 2017.

房兵 [Fang Bing]. “决战决胜—扭转战局的中途岛海空决战 [Decisive Battle, Decisive Victory—The Decisive Air-Sea Battle at Midway that Turned the Tide].” 知识就是力量 [*Knowledge is Power*], no. 8 (2013): 36-39.

符林国 [Fu Lingguo]. “论太平洋战争美军岛屿进攻作战后勤保障的主要特点 [On the Main Characteristics of Logistics Support in U.S. Military's Offensive Island Campaigns during the Pacific War].” 军事历史 [*Military History*], no. 4 (2009): 15-19.

高晓星 [Gao Xiaoxing]. “兵败瓜岛, 日本做错了什么 [Loss in Guadalcanal, What did Japan do Wrong].” 当代海军 [*Navy Today*], no. 12 (2017): 76-78.

葛妍 [Ge Yan]. “中途岛海战: 日本称霸太平洋的企图被截止在中途 [Battle of Midway: Japan's Intent to Dominate the Pacific Stopped at Midway].” 军事文摘 [*Military Digest*], no. 7 (2015): 67-71.

宫春科 [Gong Chunke]. “萨沃岛海战—美国海军不愿翻开的一页 [The Battle of Savo Island—A page that the U.S. Navy does not want to open].” [*Navy Today*], no. 3 (2018): 74-77.

郭彩虹 [Guo Caihong]. “殊死的制空权之战 [The Desperate Battle for Air Supremacy].” 国际展望 [*World Outlook*], no. 2 (2004): 80-85.

郭渊斐 白文杰 郝骆铭 [Guo Yuanfei, Bai Wenjie, and Hao Luoming]. “回顾瓜岛战役: 决定胜负的美日后勤保障较量 [Looking Back on the Guadalcanal Campaign: The U.S.-Japan Contest over Logistics Support that Determined Victory or Defeat].” 当代海军 [*Navy Today*], no. 8 (2020): 72-76.

何国治 [He Guozhi]. 美日马里亚纳航母大战 [Great U.S.-Japan Carrier Battle in the Marianas]. Wuhan: Wuhan University Press, 2014.

侯小河 [Hou Xiaohe]. 太平洋战争 [The Pacific War]. Beijing: Military Science Press, 2000.

胡德 [Hu De]. “太平洋战争末期美国海军与‘神风特攻’的较量 [The Contest between the U.S. Navy and the ‘Kamikaze Special Attack’ in the Final Phase of the Pacific War].” 舰载武器 [Shipborne Weapons], no. 10 (2021): 91.

黄金生 [Huang Jinsheng]. “血战冲绳: 美军的‘破门之役’ [Bloody Battle in Okinawa: The U.S. Military’s Campaign to ‘Break Down the Door’].” 国家人文历史 [National Humanity History], no. 1 (2015): 74-81.

黄力民 [Huang Limin]. 太平洋岛屿战全书: 1941-1945 [Complete Study on Island Warfare in the Pacific: 1941-1945]. Beijing: China Yanshi Press, 2018.

黄玉张 唐志刚 丁梦奇 张海麟 韩高润 吴广权 [Huang Yuzhang, Tang Zhigang, Ding Mengqi, Zhang Hailin, Han Gaorun, and Wu Guangquan]. 第二次世界大战 [The Second World War]. Beijing: World Affairs Press, 1984.

霍小勇 [Huo Xiaoyong]. 论战役战斗与联合作战 [On Campaigns, Combat, and Joint Operations]. Beijing: National Defense University Press, 2007.

季伏枥 [Ji Fuwan]. “冲绳岛战役片断 [Snapshots of the Okinawa Island Campaign].” 兵器知识 [Ordnance Knowledge], no. 2 (2003): 53.

贾不贾 [Jia Bujia]. “石破天惊的伊江岛单机鱼雷攻击战 [The Shocking Single-Plane Torpedo Attack at Iejima].” 世界展望 [World Outlook], no. 6 (2004): 85-87.

江林 [Jiang Lin]. 战役学导论 [Introduction to the Science of Campaigns]. Beijing: Liberation Army Press, 2010.

李杰 卫东 主编 [Li Jie and Wei Dong, ed.]. 中国和欧洲著名海军将领 [Famous Naval Leaders in China and Europe]. Guangzhou: Guangdong Economic Press, 2011.

李际均 主编 [Li Jijun, ed.]. 第二次世界大战史 [History of the Second World War, Volumes 1-5]. Beijing: Academy of Military Science, 2015.

李有升 主编 [Li Yousheng, ed.]. 联合战役学教程 [Course Materials on the Science of Joint Campaigns]. Beijing: Academy of Military Science, 2012.

李玉 骆静山 主编 [Li Yu and Luo Jingshan, eds.]. 太平洋战争新论 [New Perspective on the Pacific War]. Beijing: China Social Sciences Press, 2000.

梁芳 主编 [Liang Fang, ed.]. 海战史与未来海战研究 [Research on Sea Battle History and the Future of Sea Battle]. Beijing: Haiyang Press, 2007.

凌治彬 [Ling Zhibin]. “太平洋战争的转折点: 中途岛海战 [The Turning Point in the Pacific War: The Battle of Midway].” 辽宁大学学报 [Journal of Liaoning University], no. 5 (1982): 67-71.

刘建飞 主编 [Liu Jianfei, ed.]. 太平洋战争与中美关系 [*The Pacific War and Sino-U.S. Relations*]. Beijing: Contemporary China Press, 2013.

刘杰 主编 [Liu Jie, ed.]. 水面舰艇史话 [*History of Surface Combatants*]. Beijing: Haichao Press, 2012.

刘靖鑫 [Liu Jingxin]. “瓜岛战争: 最为惨烈的岛屿争夺战 [Guadalcanal Campaign: The Most Tragic Island Battle].” 军事文摘 [*Military Digest*], no. 9 (2015): 71-75.

刘丽 [Liu Li]. “Analysis of the U.S.-Japan Intelligence War during the Midway Sea Battle [浅析中途岛海战中的美日情报战].” 情报探索 [*Information Research*], no. 4 (2008): 116-117.

刘怡 [Liu Yi]. 联合舰队 [*The Combined Fleet*]. Wuhan: Wuhan University Press, 2010.

吕贤臣 [Lu Xianchen]. “太平洋战场的海上战略 上中下 [Maritime Strategy in the Pacific Theater, Three-Part Series].” 现代舰船 [*Modern Ships*], no. 21/22 and 23/24 (2020 and 2021): 145-153, 153-164, and 148-156.

罗卫萍 [Luo Weiping]. “从珍珠港到中途岛—太平洋战争前期日本情报失误研究 [From Pearl Harbor to Midway—Research on Japan’s Intelligence Failures during the Early Phases of the Pacific War].” 军事历史研究 [*Military History Research*], no. 2 (2008): 134-139.

潘金宽 [Pan Jinkuan]. “瓜岛战役日军‘抱瓜丢瓜’ [Guadalcanal Campaign: The Japanese Military ‘Embraces Guadalcanal Then Abandons Guadalcanal’].” 当代海军 [*Navy Today*], no. 8 (2018): 74-77.

潘金宽 邹昊 [Pan Jinkuan and Zou Hao]. “中途岛战役: 美军如何实施‘反制’作战 [The Midway Campaign: How the U.S. Military Implemented a ‘Counterattack’ Operation].” 舰载武器 [*Shipborne Weapons*], no. 6 (2003): 77-79.

乔杰 主编 [Qiao Jie, ed.]. 战役学教程 [*Course Materials on the Science of Campaigns*]. Beijing: Academy of Military Science, 2012.

屈小强 [Qu Xiaoqiang]. “美日瓜岛之战与中国战场 [The U.S.-Japan Battle over Guadalcanal and the China Theater].” 文史杂志 [*Journal of Literature and History*], no. 4 (2015): 12-16.

任道南 刘楚龙 [Ren Daonan and Liu Chulong]. “初战瓜达尔卡纳尔岛 [First Engagement at Guadalcanal Island].” 现代舰船 [*Modern Ships*], no. 1 (1997): 38-39.

石云生 主编 [Shi Yunsheng, ed.]. 中国海军百科全书 [*Encyclopedia of the Chinese Navy*]. Beijing: Haichao Press, 1998.

施征 [Shi Zheng]. “1945冲绳岛海空上的硝烟 上下 [Gun Smoke Over the Sea of Okinawa in 1945, Two-Part Series].” 舰载武器 [*Shipborne Weapons*], no. 1 and 2 (2004): 82-86 and 84-87.

施征 [Shi Zheng]. “瓜岛争夺战 [The Battle for Guadalcanal].” 海洋世界 [*Ocean World*], no. 6 (2005): 37-40.

寿晓松 主编 [Shou Xiaosong, ed.]. 战略学 [*Science of Military Strategy*]. Beijing: Military Science Press, 2013.

宋宜昌 [Song Yichang]. 火与剑的海洋: 帝国的崛起与衰弱 [*An Ocean of Fire and Sword: The Rise and Decline of Empires*]. Shanghai: Shanghai Popular Science Press, 2007.

孙剑波 主编 [Sun Jianbo, ed.]. 岛屿战争 [*Island Warfare*]. Beijing: China North Industries Press, 2003.

孙晓翔 [Sun Xiaoxiang]. “石油与日本帝国, 1941-1945 [Oil and the Japanese Empire, 1941-1945].” 现代舰船 [*Modern Ships*], no. 9 (2019): 60-70.

孙晓翔 [Sun Xiaoxiang]. “美国海军的反攻之路 1943-1945 [The U.S. Navy's Counteroffensive, 1943-1945].” 舰载武器 [*Shipborne Weapons*], no. 7 (2020): 86-95.

孙泽建 陈龙 [Sun Zejian and Chen Long]. “瓜岛战役日军成败分析 [*Analysis of the Japanese Military's Gains and Losses in the Guadalcanal Campaign*].” 军事文摘 [*Military Digest*], no. 2 (2018): 69-71.

王厚卿 主编 [Wang Houqing, ed.]. 战役发展史 [*The Historical Development of Campaigns*]. Beijing: National Defense University, 2001.

王立刚 [Wang Ligang]. “情报战: 美军治愈中途岛海战之关键 [Information War: The Key to the U.S. Military's Solution in the Battle of Midway].” 内蒙古农业大学学报 [*Journal of Inner Mongolia Agricultural University*], no. 1 (2007): 321-323.

王生荣 [Wang Shengrong]. 海权对大国兴衰的历史影响 [*The Influence of Sea Power Upon the Rise and Fall of Great Powers*]. Beijing: Haichao Press, 2009.

王生荣 [Wang Shengrong]. 海洋大国与海权争夺 [*Maritime Powers and the Struggle for Sea Power*]. Beijing: Haichao, 2013.

王世忠 武建平 [Wang Shizhong and Wu Jianping]. “战后日本对中途岛海战失败的反思 [Postwar Japan's Reflections on the Failure during the Midway Sea Battle].” 军事历史 [*Military History*], no. 2 (2001): 72-75.

王伟 张德彬 主编 [Wang Wei and Zhang Debin, eds.]. 渡海登岛战例与战法研究 [*Research on Case Studies and Methods for Cross-Sea Island Landings*]. Beijing: Academy of Military Science [military circulation], 2002.

王文清 梁玉师 郁汉冲 任全运 刘玉清 张开锋 薛玉江 [Wang Wenqing, Liang Yushi, Yu Hanchong, Ren Quanyun, Liu Yuqing, Zhang Kaifeng, and Bi Yujiang]. 中外岛战 [*Chinese and Foreign Island Campaigns*]. Beijing: Liberation Army Press, 2009.

王肖戎 邱婷婷 [Wang Xiaorong and Qiu Tingting]. “中途岛海战中日本情报失误研究 [Research on Japan's Intelligence Failures during the Midway Sea Battle].” 社科纵横 [*Social Sciences Review*], no. 2 (2012): 140-141.

王永梅 主编 [Wang Yongmei, ed.]. 喋血瓜岛 [*Bloody Guadalcanal*]. Beijing: Petroleum Industry Press, 2014.

王永生 主编 [Wang Yongsheng, ed.]. 中途岛大海战 [*Battle of Midway*]. Beijing: Petroleum Industry Press, 2014.

韦鼎标 [Wei Dianbiao]. “固守登陆战—瓜岛登陆作战与启示 [Contested Amphibious Operations—The Guadalcanal Amphibious Operations and Their Lessons].” 华北民兵 [North China Militia], no. 10 (2006): 62-63.

吴传瑞 石洪波 主编 [Wu Chuanrui and Shi Hongbo, eds.]. 潜艇史话 [History of Submarines]. Beijing: Haichao Press, 2012.

肖天亮 主编 [Xiao Tianliang, ed.]. 战略学 [Science of Military Strategy]. Beijing: National Defense University, 2015.

萧西之水 [Xiaoxizhishui (pseudonym)]. “死板与灵活: 中途岛作战的漏洞与美军策略 [Rigidity and Flexibility: Loopholes and U.S. Strategy in the Midway Operations].” 国家人文历史 [National Humanity History], no. 22 (November 2019): 56-61.

许春林 [Xu Chunlin]. “冲绳岛防护线上的攻防战 [The Offensive and Defensive Battles Along Okinawa's Defensive Line].” 军事史林 [Journal of Military History], no. 9 (2019): 73-78.

杨建超 陈浩 李博 郭磊 [Yang Jianchao, Chen Hao, Li Bo, and Go Lei]. “美日舰载机对比论 上中下 [On Comparison Between U.S. and Japanese Carrier-Based Aircraft, 1940-1945, Three-Part Series].” 现代舰船 [Modern Ships], no. 1, 3, and 7/8 (2020): 28-71, 30-70, and 28-56.

于江欣 主编 [Yu Jiangxin, ed.]. 世界军事革命史 [History of Global Military Revolutions, Volumes 1-3]. Beijing: Academy of Military Science, 2012.

俞天任 [Yu Tianren]. 浩瀚大洋是赌场 [The Vast Ocean is a Casino]. Changsha, Hunan: Hunan People's Press, 2019.

袁文先 [Yuan Wenxian]. “A Discussion of the Effects of Information Warfare from the Midway Sea Battle [从中途岛海战谈到信息战的妙用].” 现代军事 [Contemporary Military], no. 7 (2005): 28-29.

张京 周志刚 主编 [Zhang Jing and Zhou Zhigang, eds.]. 世界著名海上作战点评 [Review of World's Famous Sea Battles]. Beijing: Long March Press, 2011.

张坤平 [Zhang Kunping]. “积极防空—冲绳岛登陆战及启示 [Active Air Defense—The Okinawa Amphibious Operation and Its Lessons].” 华北民兵 [North China Militia], no. 12 (2006): 62-63.

张连松 王其云 主编 [Zhang Liansong and Wang Qiyun, eds.]. 由海向陆的战争生命线 [War's Lifeline from the Sea to Land]. Beijing: Haichao Press, 2005.

张连松 杨庆华 主编 [Zhang Liansong and Yang Qinghua, eds.]. 二战后勤启示录 [Lesson from Logistics in the Second World War]. Beijing: National Defense University Press, 1996.

张培高 主编 [Zhang Peigao, ed.]. 联合战役指挥学 [Science of Joint Campaign Command]. Beijing: Military Science Press, 2005.

张培高 主编 [Zhang Peigao, ed.]. 联合战役指挥教程 [Course Materials on Joint Campaign Command]. Beijing: Academy of Military Science, 2012.

张晓林 [Zhang Xiaolin]. “美国太平洋反攻战略的演变及其原因探讨 [Analysis of the Evolution and Sources of America's Counteroffensive Strategy in the Pacific].” 军事历史研究 [Military History Research], no. 2 (1987): 187-194.

张艳茹 [Zhang Yanru]. “太平洋战争期间日本的战争指导大纲 [Japan's General Guidelines for War during the Pacific War].” 军事历史研究 [Military History Research], no. 5 (September 2016): 74-86.

张玉良 主编 [Zhang Yuliang, ed.]. 战役学 [The Science of Campaigns]. Beijing: National Defense University Press, 2006.

赵炯郎 [Zhao Jionglang]. 通俗太平洋战争史 [A Popular History of the Pacific War]. Shanghai: Shanghai Bookstore Press, 2018.

赵振愚 [Zhao Zhenyu]. 太平洋海战史 [History of Sea Battles in the Pacific]. Beijing: Haichao Press, 1997.

周丽娅 张艳明 [Zhou Liya and Zhang Yanming]. “伦纳尔岛海战 [The Battle of Rennell Island].” 舰载武器 [Shipborne Weapons], no. 10 (2004): 82-87.

周明 [Zhou Ming]. “冲绳战役中的海空战 [The Air-Sea Battle During the Okinawa Campaign].” 国际展望 [World Outlook], no. 9 (2000): 86-90.

周晓宇 主编 [Zhou Xiaoyu, ed.]. 战役研究 [Campaign Research]. Beijing: National Defense University, 2014.

朱艾华 孙龙海 主编 [Zhu Aihua and Sun Longhai, eds.]. 近岸岛屿封锁作战 [Near Coast Island Blockade Operations]. Beijing: Academy of Military Science [military circulation], 2002.

朱冬生 主编 [Zhu Dongsheng, ed.]. 世界经典战例: 战役卷 [World Classic Battles: Volume on Campaigns]. Beijing: Liberation Army Press, 2010.

朱冬生 主编 [Zhu Dongsheng, ed.]. 世界经典战例: 江河海岛作战卷 [World Classic Battles: Volume on River and Island Combat]. Beijing: Liberation Army Press, 2010.

朱冬生 主编 [Zhu Dongsheng, ed.]. 世界经典战例: 空袭与反空袭作战卷 [World Classic Battles: Volume on Air Raid and Counter Air Raid Operations]. Beijing: Liberation Army Press, 2010.

朱贵生 王振德 张椿年 [Zhu Guisheng, Wang Zhende, and Zhang Chunnian]. 第二次世界大战史 [History of the Second World War]. Beijing: People's Press, 2007.

朱文泉 [Zhu Wenquan]. 岛屿战争论 上中下 [On Island Warfare, Volumes 1-3]. Beijing: Military Science Press, 2014.

LIST OF ACRONYMS

A2/AD	Anti-access/area denial
IJN	Imperial Japanese Navy
LCS	Littoral combat ship
NIDS	National Institute for Defense Studies
ONI	Office of Naval Intelligence
PLA	People's Liberation Army
PLAN	People's Liberation Army Navy
USMC	United States Marine Corps
USN	United States Navy



Center for Strategic and Budgetary Assessments

1667 K Street, NW, Suite 900

Washington, DC 20006

Tel. 202.331.7990 • Fax 202.331.8019

www.csbaonline.org